HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY
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Coimbatore - 641 032

DEPARTMENT OF BIOMEDICAL ENGINEERING

PATENTS

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S.No.	Name of the Inventor(s)	Name of the Applicant(s)	Title of the Patent	Patent Application No.	Date of filing	Patent Status	Date Published / Granted
1.	Dr. Ganga M Dharshini Elavarasi Jenifer Jafreena Sujith Kumar	Hindusthan College of Engg. & Tech.	Assistive glove For Visually Impaired	202441015753 A	05.03.2024	Published	15.03.2024
2.	Dr.Ganga M Deva Sheela Cathrin R Jayasurya.S Navaneeth Krishnan.K Nehemiah Jennings	Hindusthan College of Engg. & Tech	Drone Doc at Emergency Servicetor	202441015755 A	05.03.2024	Published	15.03.2024
3.	Dr.Saravana Sundaram S K S Monish Kumar Dr.Ganga M Devakumar N. Mahalakshmi.R A Lakshana.R Vasumithra. A	Hindusthan College of Engg. & Tech	smart Blind Stick using Sounmd Sensor	202441015756 A	05.03.2024	Published	15.03.2024
4.	Dr.Ganga M Aakash S Srinithi N Thilipan R Vignesh P	Hindusthan College of Engg. & Tech.	Rehabilitation Orthopedic Device	202341056436 A	23.08.2023	Published	06.10.2023

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(19) INDIA
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(21) Application No.202441015755 A
(43) Publication Date : 15/03/2024

(54) Title of the invention : DRONE DOC AT EMERGENCY SERVICETOR

(51) International classification :B64C0039020000, A61B0005000000, A61B0005024000, G05D0001100000, A61M0025090000
(86) International Application No :NA
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Filing Date :NA

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(57) Abstract :
ANNEXURE 3 As planned, the drone will the patient’s location and analyse file various parameters of the patient using'ECG sensor, Pulse rate sensor. Just like this, the drone can be used by doctors to reach the region where roadways are not good for transport. While making this drone, major issues arose during connecting the Node MCU to the flight controller. Also, when the drone was taking off, it was quite unstable‘and because of that, the drone was tilted towards one side. So, to overcome the issue, the flight controller was programmed again and reduced the previous values. After these changes, the drone was able. to successfully-take off. The drone can carry around 1 kilogram including the med-kit box containing the medicines.

No. of Pages : 5 No. of Claims : 5

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(19) INDIA
(22) Date of filing of Application :05/03/2024

(21) Application No.202441015753 A
(43) Publication Date : 15/03/2024

(54) Title of the invention : ASSISTIVE GLOVE FOR VISUALLY IMPAIRED

(51) International classification :A61H0003060000, G01S0015930000, G09B0021000000, A61F0009080000, G01S0007521000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
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(57) Abstract :
ANNEXURE 3 The project proposed the design and architecture of a flew concept of Smart Electronic Guiding glove for blind people. The advantage of the system lies in the fad that it can prove to be a very low cost solution to millions of blind people worldwide. The proposed combination of various working units makes a real time system that provides feedback making navigation more safe and secure Small glove for the blind project is to help blind people walk and estimate the distance from obstacles. Main components for this project are Arduino UNO, Vibrator motor and ultrasonic sensor.

No. of Pages : 5 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/03/2024

(21) Application No.202441015756 A
(43) Publication Date : 15/03/2024

(54) Title of the invention : SMART BLIND STICK USING SOUND SENSOR

(51) International classification :A61H0003060000, A61B0005110000, G09B0021000000, A61B0005053100, G05B0019042000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
The 'idea proposed the design and architecture of a new concept of Smart Electronic Guiding Stick for blind people. The advantage of the.system lies in the fact that it can prove to be very low cost solution to millions of blind person worldwide.~The proposed combination‘ of various working limits makes a Areal systematization that monitors position of the user and provides dual feedback making navigation more Safe and secure. It can be further improved to have more decision taking capabilities by employing varied types of sensors and thus could be used for different applications. It aims to solve the problems faced by the blind people in their daily life. The system also takes measures to ensure their safety.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/08/2023

(21) Application No.202341056436 A
(43) Publication Date : 06/10/2023

(54) Title of the invention : REHABILITATION ORTHOPEDIC DEVICE

(51) International classification	:A61F0005010000, A61H0001020000, G16H0020300000, A61H0003000000, A61B0017740000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Sports and exercises plays a vital role in all stages of ages. By active participation in sports leads to healthy lifestyle. In the other hand people may also come across lots of injuries due to misguidance of playing sports, especially knee injuries. Knee Injury in sports person has become usual in all ages. And they feel very difficult to identify the type of injury sooner by their symptoms. Still now, in market, to f maintain and avoid the pain of knee injury, only knee braces and wearable sensors have been in practice. This can take longer time period. And the patient can know the type of Injury only by scanning. *This product work focused on to detect the type of' Injury in knee in shorter time period. This will also' detect the types of' Injury painless. The main sensors used here IS accelerometer sensor and gyroscopic sensor respectively. This product will sense the injuries with the movement of limbs (leg) without giving severe pain to 'the patient. The main cause of the knee injuries are because of the torn in ligaments present in the limbs. The use of accelerometer sensor in' this product is that it will measure the 'acceleration, the seismic activity of,the body. The use of'gyroscope sensor Will sense the angular velocity of the limbs per rotation. By moving the limbs, we measure the axis of the leg, in the arrangement of x, y, z axis. Now we will fix a threshold value, by this if the patient is not able to move above the fixed value, then it is detected that the patient is undergoing some type of_knee injuries.

No. of Pages : 5 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/08/2023

(21) Application No.202341053965 A
(43) Publication Date : 29/09/2023

(54) Title of the invention : AN EXPERIMENTAL INVESTIGATION ON CONCRETE BY USING PLASTIC WASTES AND E-WASTES AS AGGREGATES

(51) International classification :C04B0028040000, C04B0111000000, C04B0028000000, C04B0028020000, B29B0017000000
(86) International Application No :NA
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(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
The electronically and plastic waste generation in India is at an alarming rate. They pose serious threat to the environment: The main objective. of this work is to utilize the electronic waste (E-- waste) and plastic waste iri the manufacture of 'construction materials like concrete and concrete blocks. Non- reactive E— waste (as coarse aggregates) and plastic waste (as fine aggregates) 1n suitable proportions and sizes are added with cement as the binder to manufacture concrete and concrete blocks. The cement, fine aggregate and coarse aggregate are mixed in 1: 1 .46. 2. 57 ratio and the mixture is placed In moulds and allowed to harden. To reduce the use of M- sand, plastic waste will be tested as a fme aggregate. The plastic waste is crushed and' used as a fine aggregate with M- sand, while the plastic fibers are further processed and used with cement in a 1: 1. 46: 2. 57 ratios. The mixture is thoroughly mixed before being placed in the mould and hardened. The methodology that is utilized to make concrete blocks is based on the general techniques that are used to make concrete. Compressive strength, Flexural strength, Tension test and Hardness test are among the tests that are performed on the products. The ‘ Plastic wastes are crushed and used 1n the proportion of 0%, 5%, 10%, 15%, and 20% with fine aggregate M- Sand. The E- Wastes are crushed and used In the proportion of 0%, 5%, 10%, 15%, and 20% with coarse aggregate. The 5% replacement of wastes into the concrete gives the optimum strength than the conventional. concrete. The wastes with the replacement of' 5% give the compfessive strength value bf 25.74 Ni/mm2 whereas the conventional concrete giv‘e's the compressive strength of 25. 36 N/mmz. The 10% replacements of wastes give the compressive strength of N/mm2 .This shows that the strength 18 higher 1n the 5% replacement, so- it can be used as a concrete for all the purposes Further application of this process is that it can be used to make a concrete block which 18 used as a pavement block and m RCC structures. Key Words: Plastic Wastes, E-Wastes, Concrete and Concrete blocks, Compressive strength, ' F lexural strength, Tension test and Hardness test.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/04/2023

(21) Application No.202341026664 A
(43) Publication Date : 05/05/2023

(54) Title of the invention : EXPERIMENTAL INVESTIGATION OF FLY ASH BRICKS BY USING GRANITE SAW DUST

(51) International classification :A01G 242300, B23D 590000, B27G 030000, C04B 180800, C04B 331320
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
ANNEXUKE-III The backbone of India's infrastructure development is the construction industry. Indian businesses produce a variety of byproducts that contribute to pollution. It significantly contributes to the nation's healthier environment. Different percentages of fly ash, granite dust, and lime are used in different fly ash brick combinations: Large amounts of fly ash and granite dust are produced in India by thermal power stations and the granite industry. Since industrial waste is inherently toxic, its disposal is a big challenge. Recycling such wastes and using them as construction materials is a reasonable approach to the pollution problem. Economy and energy conservation are given a lot of attention. The purpose of this research is to assess and contrast the strength of the blocks utilizing various flyash and granite sawing powder waste percentages. Different mix ratios were used in the inquiry, and laboratory tests like the compression test and water absorption test were used. When comparing the features of strength, the results revealed that blocks' water absorption values were good and that compression strength increased gradually.

No. of Pages : 5 No. of Claims : 1

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(19) INDIA
(22) Date of filing of Application :11/04/2023

(21) Application No.202341026665 A
(43) Publication Date : 05/05/2023

(54) Title of the invention : EXPERIMENTAL STUDY ON PAVER BLOCK USING STEEL FLAKES

(51) International classification :A01K 670200, C25D 035600, E01C 194800, F16C 336200, H04N 191760
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
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(57) Abstract :
ANNEXURE-III The blocks make up the wearing surface and a significant portion of the pavement's load-spreading structure in interlocking concrete block pavement. The wearing surface is constructed of small paving units embedded and connected in sand as opposed to continuous paving, which is how it varies from other traditional forms of pavement. The substructure underneath the bedding sand resembles a flexible pavement. As an alternative to concrete and asphalt pavements, the interlocking concrete block pavement (1CBP) has quickly gained favour in many international nations. However, due to a lack of established indigenous design and construction knowledge, the obvious benefits of ICBP have not yet been completely realized in India. There are no existing IRC or IS codes for its specification and design. The building ingredients for the blocks included Portland cement, steel Hakes, ash. and fine aggregate. The producer used the necessary amount of water along with a 1:2:3 ratio of the materials. Research on interlocking pavers using 5%. 10%. 15%, and 20% by weight of cement with steel flakes. Compressive strength tests were performed after 7, 14, and 28 days. For testing, a sample of the building blocks and materials were gathered. Paving block compressive strength must be increased in order to produce stronger blocks. To evaluate the behavior of concrete blocks with respect to their shape, thickness, laying pattern, etc., a straightforward laboratory size test setup can be used.

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(12) PATENT APPLICATION PUBLICATION
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(22) Date of filing of Application :11/04/2023

(21) Application No.202341026667 A
(43) Publication Date : 05/05/2023

(54) Title of the invention : EXPERIMENTAL STUDY ON SISAL FIBER REINFORCED CONCRETE

(51) International classification :A01K 150200, C04B 033000, E04H 121200, G01M 090600, G01N 170000
(86) International Application No :NA
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(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
ANNEXURE-III The project's goal is to assess the compressive, tensile, and flexural strengths of concrete as well as the strength of sisal fibre reinforced concrete (SFRC), which uses sisal fibre as a reinforcement material. Sisal fibre is a material that is widely accessible and can be used to create reinforced concrete. In this project, sisal fibre is added as 0.5%, 1%, or 1.5% of the mass of cement to the nominal M25 grade concrete. The concrete samples underwent standard moist curing at room temperature. At days 7, 14, and 28, the compressive, flexural, and tensile strengths were assessed. The optimal percentage of sisal fibre addition to concrete is discovered by comparing the strengths of regular M25 grade concrete with fibre reinforced concrete. Results indicate that sisal fiber-infused concrete has increased compressive strength and improved concrete durability.

No. of Pages : 5 No. of Claims : 1

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DEPARTMENT OF INFORMATION TECHNOLOGY

PUBLICATION – PATENT

ACADEMIC YEAR: 2023 - 2024

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1.	Dr. Sabrigiriraj M	Smart Heartbeat Analyzer Using Artificial Intelligence AND IOT	202441041374	28-05-2024	31-05-2024	Published
2.	Dr. Beaulah David	An Artificial Intelligence Based System for Providing Empirical Investigation of the Determinants of Corporate Capital Structure Decision and Method Thereof	202341060771 A	10-09-2023	06-10-2023	Published
3.	Ms. Athira S	A New Framework for Automatically Recognizing Indian Traffic Signs Along the Road by Using Deep Learning and Machine Learning Algorithms	202341038667	06-06-2023	18-08-2023	Published
4.	Ms. Priyadharshini T. R	Sensor Based Intelligent Vehicle Tyre Wrapping and Controlling	386470-001	17-05-2023	17-08-2023	Published

		System				
5.	Ms. Masilamani M	IOT Based Monitoring System for Inland Vessels Using Sensor Networks	202341042373		07-07-2023	Published

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :28/05/2024

(21) Application No.202441041374 A

(43) Publication Date : 31/05/2024

(54) Title of the invention : SMART HEARTBEAT ANALYZER USING ARTIFICIAL INTELLIGENCE AND IOT

(51) International classification	:A61B0005000000, A61B0005024000, G16H0040670000, G16H0050300000, A61B0005020500
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The Smart Heartbeat Analyzer is an innovative heart rate monitoring system that integrates artificial intelligence (AI) and Internet of Things (IoT) technologies to provide comprehensive heart health analysis. This portable device captures electrocardiogram (ECG) signals using high-precision sensors, processes the signals through amplification and filtering, and digitizes the data for real-time analysis. AI algorithms analyze the ECG data to determine heart rate, detect anomalies, and offer health insights. The system features wireless communication modules for data transmission to cloud-based platforms, enabling long-term data storage, remote monitoring, and advanced analytics. The user interface, accessible via a mobile application, provides real-time heart rate data, alerts, and personalized health recommendations. This integration of AI and IoT enhances heart rate monitoring capabilities, making it a valuable tool for personal fitness, healthcare monitoring, and remote patient care.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/09/2023

(21) Application No.202341060771 A
(43) Publication Date : 06/10/2023

(54) Title of the invention : AN ARTIFICIAL INTELLIGENCE BASED SYSTEM FOR PROVIDING EMPIRICAL INVESTIGATION OF THE DETERMINANTS OF CORPORATE CAPITAL STRUCTURE DECISION AND METHOD THEREOF

(51) International classification :G06Q0040000000, G06Q0040020000, G06Q0010060000, G06Q0040060000, G06N0020000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to an artificial intelligence (AI) based system for providing empirical investigation of the determinants of corporate capital structure decision and method thereof. The present system and method comprise of utilizing machine learning modules for the analysis of historical data and delivering suggestions to enhance capital structure optimization, continuously monitoring market dynamics and their impact on capital structure, thereby generating adaptive recommendations aimed at improving financial performance and modifying recommendations to match a company's specific financial objectives and the prevailing market conditions. Further, allowing companies to adjust their financing strategies in response to evolving economic landscapes and shifting business requirements and financing strategies over time to maximize the company's long-term profitability and overall value.
Accompanied Drawing [FIG. 1-2]

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/06/2023

(21) Application No.202341038667 A
(43) Publication Date : 18/08/2023

(54) Title of the invention : A New Framework for Automatically Recognizing Indian Traffic Signs along the road by using Deep Learning and Machine Learning Algorithms

(51) International classification :G01C 213600, G06K 096200, G06N 030400, G06N 030800, G06N 200000
(86) International Application No :PCT//
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(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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Filing Date :NA

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(57) Abstract :
A New Framework for Automatically Recognizing Indian Traffic Signs along the road by using Deep Learning and Machine Learning Algorithms Abstract: Due to the variety of driving styles and environmental factors, Advanced Driving Assistance Systems must be able to perceive and comprehend everything around the vehicle. The majority of automobiles on the road today are equipped with high-tech driving assistance systems that make time spent behind the wheel more relaxing and delightful. By incorporating artificial intelligence (AI) into Advanced Driver Assistance Systems and/or Automated Driving Systems such as the Traffic Sign Recognition system, automakers can now produce intelligent, self-driving vehicles. AI has made this possible for the automobile industry. Currently, TSR solutions are designed to detect only particular types of signs. TSR includes additional categories of road signs, including Warning, Regulatory, Mandatory, and Priority signs. The objective is to develop an intelligent, real-time system capable of analysing, detecting, and classifying traffic signs. We must implement this strategy for the aforementioned reasons. The proposed solution is founded on a comprehensive analysis of existing traffic sign detection and classification technologies. The objective is to identify and implement methods that provide the optimal balance of precision and processing speed. The proposed method therefore integrates the Haar cascade method with a deep CNN model classifier. The GTSRB dataset is used to train the newly developed TSC model, which is then evaluated against a number of traffic indicators. During testing, the objective was achieved 99.56 percent of the time. To improve classification performance, we propose employing a new attention-based deep convolutional neural network. With an F1-measure rate of 99.9% and a testing accuracy of 99.91%, the outcomes outperform previous studies on how to classify traffic signs. In other terms, the results are enhanced. Using a Raspberry Pi 4, the freshly assembled TSR system on a board is tested. Experiment results demonstrate that the provided procedure is always effective.

No. of Pages : 11 No. of Claims : 8

INTELLECTUAL PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

सत्यमेव जयते

ORIGINAL
क्रम सं/ Serial No. : 142331

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डिजाइन के पंजीकरण का प्रमाण पत्र | Certificate of Registration of Design

डिजाइन सं. / Design No. : 386470-001

तारीख / Date : 17/05/2023

पारस्परिकता तारीख / Reciprocity Date* :

देश / Country :

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो *SENSOR BASED INTELLIGENT VEHICLE TYRE WRAPPING AND CONTROLLING SYSTEM* से संबंधित है, का पंजीकरण, श्रेणी 15-10 में 1.Bommaraju Srinivasa Rao 2. Dr. Rajasekar V 3.Dr Renuka Snehal Nifadkar 4.Dr. D. Sundaranarayana 5.T. R. Priyadharshini 6.Dr. Sushma Jaiswal के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 15-10 in respect of the application of such design to *SENSOR BASED INTELLIGENT VEHICLE TYRE WRAPPING AND CONTROLLING SYSTEM* in the name of 1.Bommaraju Srinivasa Rao 2. Dr. Rajasekar V 3.Dr Renuka Snehal Nifadkar 4.Dr. D. Sundaranarayana 5.T. R. Priyadharshini 6.Dr. Sushma Jaiswal.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि :
Date of Issue : 17/08/2023

महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/06/2023

(21) Application No.202341042373 A
(43) Publication Date : 07/07/2023

(54) Title of the invention : IOT BASED MONITORING SYSTEM FOR INLAND VESSELS USING SENSOR NETWORKS

(51) International classification :B01L 030000, H04L 090800, H04L 430852, H04L 671200, H04W 841800
(86) International Application No :PCT//
Filing Date :01/01/1900
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The Internet of Things (IoT) can be used to monitor the performance of inland vessels in a cost-effective and efficient way. This paper presents an IoT-based monitoring system for inland vessels utilizing sensors networks. The system includes a sensor network embedded on the vessel, a communication network linking the sensors, and a remote monitoring server. The sensor network is composed of temperature, humidity and pressure sensors. These sensors gather information about the ship environment such as temperature, air humidity and air pressure. The collected data are transmitted to the remote monitoring server via a 4G Cellular Network, allowing the administrator to monitor the vessel's health conditions in real time. The developed system is evaluated by running tests on an actual vessel loaded with IoT-enabled sensors. The results show that the system is able to collect high-quality data and make accurate predictions of the vessel's condition. The proposed system can also be used for other type of vessel and can be enhanced with additional features to improve the monitoring capabilities.

No. of Pages : 9 No. of Claims : 7

PATENT PUBLICATIONS FOR AQAR 23-24

ACADEMIC YEAR 2023-2024

Sl. No	Date of Filing the Application	Name of the Inventor(s)	Title of the Patent	Patent Application Number	Patent Status - Patent Registered or Patent Published	Date of Published Patent Journal
PATENT 2023-2024						
1	12.5.23	Dr.S.Shankar Dr.S.Uma G.Deebanchakkarawarthi	Design of an NLP and Machine Learning Based Automated Acupressure Therapy for Curing Diseases	202341033490	Published	16.6.23
2	12.5.23	Dr.S.Uma Dr.S.Shankar Dr.S.Kousalya Devi	Artificial Intelligence Powered Predictive Lead Scoring Invention for Customer Relationship Management(CRM)	202341033522	Published	16.6.23
3	12.5.23	Dr.S.UmaDr.S.Shankar	Design of a Virtual Reality Based System for Stress Relief	202341033511	Published	16.6.23
4	12.5.23	Dr.S.Uma Dr.S.Shankar S.Sathya N.Bharathi	Cryptanalysis System for Generating Alert Mails for Suspicious Decode Activities	202341033508 A	Published	16.6.23

		Kannan Dr.J.Prakash K.V.Karthikeyan				
5	02.05.23	Dr.S.Shankar Dr. S. Uma K.V. Sreelekha N.Bharathi Kannan M.Priyadharsan	Secure Satellite Communication using Quantum Cryptography and Blockchain	202341031164 A	Published	16.6.23
6	02.05.23	Dr.S.Shankar Dr.S.Uma K.V.Sreelekha B.Reena V.Devi G.Deebanchakka rawarthi	Computer Vision Based Real Time Threat Identification and Prevention of Risk in Suspicious Facial Biometrics for Secure Atm Transactions	202341031162 A	Published	16.6.23
7	02.05.23	Dr.S.Shankar Dr.S.Uma K.V. SreelekhaB.Reen aN.PriyaG.Deeba nchakkarawarthi	Machine Learning and Natural Language Processing Based Agriculture Smartbot	202341033504 A	Published	16.6.23
8	02.05.23	Dr.S.Shankar Dr. S. Uma Ms.K.V. Sreelekha Ms.B.Reena Ms.V.Devi	Machine Learning Based Skin Cancer Prediction System	202341033619 A	Published	16.6.23
9	10.02.24	Dr.D.Satheesh Kumar	A Study on Analysing the Role of Design-Oriented Pedagogy and Machine	202411009085 A	Published	16.2.24

			Learning in Transforming College Education			
10	04.02.24	Dr.D.Satheesh Kumar	The Role of Machine Learning in Predicting Positive Emotions at Work and its Impact on Teachers' Job Satisfaction and Well-Being	202411007523 A	Published	16.2.24
11	26.03.24	Dr.S.Shankar Dr.S.Uma	Index Based Searchable Encryption on Cloud Data Using Asymmetric Encryption	202441023796	Published	05.04.24
12	26.03.24	Dr.S.Shankar Dr.S.Uma R.Gayathri	Guardian Vault: Confidential Data Management with ECC Encryption andCloud-Based Verifiable Sharing	202441023813	Published	05.04.24
13	26.03.24	Dr.S.Uma Dr.S.Shankar Dr.S.Kousalya Devi	Multivendor Online Platform for Listing, Selling Old Books	202441023810	Published	05.04.24
14	26.03.24	Dr.S.Shankar Dr.S.Uma N.Priya	Dynamic Toll Plaza Control	202441023791	Published	05.04.24
15	26.03.24	Dr.S.Shankar Dr.S.Uma D.Magesh	Enhanced Security Intelligence using Sonic Key	202441023790	Published	05.04.24
16	26.03.24	Dr.S.Shankar Dr.S.Uma TKP. Rajagopal	Face Recognition Based Person Identification using Hybrid Classifier	202441023787	Published	05.04.24
17	26.03.24	Dr.S.Shankar Dr.S.Uma Dr.M.RamyaDevi	Global Id Medcare Model: Blockchain-Driven Patient	202441023786	Published	05.04.24

			Authentication System with Qr Code Data Storage			
18	26.03.24	Dr.S.Shankar Dr.S.Uma	Adaptive Visual Recommender Dynamic Image Clustering for Real-Time Recommendation Systems	202441023785	Published	05.04.24
19	26.03.24	Dr.S.Shankar Dr.S.Uma	Secure Guard Pro Tech: Advanced Smart Door Security System with Face Recognition, Mask Detection and Criminal Identification	202441023783	Published	05.04.24
20	03.06.24	Dr.S.Shankar Dr.S.Uma K.V.Sreelekha	Machine Learning-Driven Pcos Dectection and Personalized Recommendations System	202441042985 A	Published	14.06.24
21	03.06.24	Dr.S.Shankar Dr.S.Uma K.V.Sreelekha	Yolov8-Based Driver Drowsiness Detection System: Enhancing Road Safety	202441042950 A	Published	14.06.24
22	30.05.24	Dr.S.Shankar Dr.S.Uma Dr. K. Karthikeyan	Advanced Vegetation Management in Power Transmission Lines Through Satellite Imagery and Machine Learning	202441041978 A	Published	14.06.24
23	30.05.24	Dr.S.Shankar Dr.S.Uma V.Devi	AI Based Livestock Healthcare Monitoring System Using Computer Vision	202441042000 A	Published	14.06.24
24	30.05.24	Dr.S.Shankar Dr.S.Uma Dr. K. Karthikeyan	Airrealm:Computer Vision Based Gesture Controlled Desktop Application	202441042013 A	Published	14.06.24
25	30.05.24	Dr.S.Shankar Dr.S.Uma P.Arul Selvam	APTIT: AI-Powered Technical Interview Trainer	202441041977 A	Published	14.06.24

26	03.06.24	Dr.S.Shankar Dr.S.Uma Dr.D.Satheesh Kumar	Architecture Layout Design using Machine Learning	202441042951 A	Published	14.06.24
27	30.05.24	Dr.S.Shankar Dr.S.Uma P.Arul Selvam	Google Playstore Insights: Deciphering User Patterns for Business Growth(GPIB)	202441041976 A	Published	14.06.24
28	30.05.24	Dr.S.Shankar Dr.S.Uma V.Devi	Intelligent Traffic Signal Timing and Automation:Optimizing Urban Traffic Flow Leveraging Yolov8	202441041983 A	Published	14.06.24
29	30.05.24	Dr.S.Shankar Dr.S.Uma Dr.S.Kousalya Devi	Learn-Up:An Interactive Game Based Learning Application	202441042008 A	Published	14.06.24
30	30.05.24	Dr.S.Shankar Dr.S.Uma Dr.S.Kousalya Devi	Machine Learning Based Advanced Cyber-Attack Detection System (ACADS)	202441041999 A	Published	14.06.24
31	30.05.24	Dr.S.Shankar Dr.S.Uma Dr. K. Karthikeyan	Medtechpro:Transforming Hospital Operations for Optimal Efficiency and Improved Patient Outcomes	202441041988 A	Published	14.06.24
32	30.05.24	Dr.S.Shankar Dr.S.Uma V.Devi	Mindtech:AI-Enhanced Mental Health Care System	202441041994 A	Published	14.06.24
33	30.05.24	Dr.S.Shankar Dr.S.Uma Dr.S.Kousalya Devi	Nutriguide: AI-Powered Food Analysis and Dietary Recommendations System	202441042042 A	Published	14.06.24

34	30.05.24	Dr.S.Shankar Dr.S.Uma Dr.S.Kousalya Devi	Pedalpredict: Machine Learning-Based Bike-Sharing Demand Prediction Model	202441042043 A	Published	14.06.24
35	30.05.24	J.JayaS.UmaS.ShankarB.ReenaNaveenraj M	A Co-Located Virtual Machine Creation using Migration Approach with Efficient Data Sharing	202441041998	Published	14.06.24
36	30.05.24	Dr.S.Uma Dr.Shankar M.Ravikumar Nataraj M Mohamed Arshad J Yokeshwaran S Mukesh G	Policy-Integrated Smart Farming Application for Enhanced Efficiency and Sustainability	202441059258	Published	14.06.24

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(54) Title of the invention : A STUDY ON ANALYSING THE ROLE OF DESIGN-ORIENTED PEDAGOGY AND MACHINE LEARNING IN TRANSFORMING COLLEGE EDUCATION

(51) International classification :G06Q0050200000, G06N0020000000, G09B0007000000, G06K0009620000, G09B0019000000
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(57) Abstract :
A study on analysing the role of design-oriented pedagogy and machine learning in transforming college education is the proposed invention. The proposed invention focuses on understanding the role of design-oriented pedagogy and machine learning in transforming college education. The invention focuses on transforming the college education using algorithms of Machine Learning.

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(22) Date of filing of Application :26/03/2024

(21) Application No.202441023785 A
(43) Publication Date : 05/04/2024

(54) Title of the invention : ADAPTIVE VISUAL RECOMMENDER DYNAMIC IMAGE CLUSTERING FOR REAL-TIME RECOMMENDATION SYSTEMS

(51) International classification :G06Q0030060000, G06Q0030020000, G06F0021620000, G06K0009620000, G06F0016953600
(86) International Application No :NA
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Filing Date :NA
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(57) Abstract :
With significant societal implications, the "Adapt_ive Visual Recommender: Dynamic Image Clustering for Real-time Recommendation Systems" represents a revolutionary advancement in digital experiences. Its real-time responsiveness and adaptive clustering redefine user engagement by providing 5 customized digital experience that changes in response to users' changing preferences. This leads to increased user satisfaction and strengthens the bond between users and the digital content they interact with. The system's capacity to offer quick, personalized product recommendations for e-commerce could have a big impact on conversion rates and client loyalty, which would help the industry flourish. By integrating cutting—edge privacy-preserving techniques, data security concerns are being addressed, building trust and establishing moral guidelines for responsible data practices. Additionally, by adjusting to new trends, the system makes sure users are aware of the most recent advancements, which promotes innovation and relevance. The "Adaptive Visual Recommender" is essentially a force that goes beyond technology development to influence digital‘ interactions, empower businesses, resolve privacy issues, and keep society aware of changing trends—all of which contribute to improving the quality of our digital lives as a whole

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/05/2023

(21) Application No.202341033522 A
(43) Publication Date : 16/06/2023

(54) Title of the invention : ARTIFICIAL INTELLIGENCE POWERED PREDICTIVE LEAD SCORING INVENTION FOR CUSTOMER RELATIONSHIP MANAGEMENT(CRM)

(51) International classification :G06N 050200, G06N 050400, G06Q 201000, G06Q 300000, G06Q 300200
(86) International Application No :NA
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(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
Due to its capacity to streamline sales procedures and spur revenue growth, the usage of predictive lead scoring powered by Artificial Intelligence (AI) in Customer Relationship Management (CRM) is becoming more and more popular on a global scale. The purpose of this innovation is to analyse multiple data points associated with each lead in order to determine which leads are the most promising for a business. Typically, lead scoring is determined by variables including demographic data, purchasing patterns, and interaction with marketing materials. Beyond these conventional variables, an Al-powered predictive lead scoring innovation employs machine learning algorithms to analyse data from many sources, including as social media, website interactions, and customer care enquiries. This enables the innovation to find patterns and correlations that human analysts might not see right away. The prediction model identifies crucial markers of a high-quality lead using a combination of supervised and unsupervised learning techniques. In supervised learning, the algorithm learns to recognise patterns that are predictive of known results (e.g., which leads ultimately became customers) by training on a dataset of known outcomes. On the other hand, unsupervised learning entails studying data without any predetermined results and searching for patterns that appear on their own. Once trained, the model can be used to score fresh leads according to their traits and behaviours. Each lead is given a score by the innovation, indicating how probable it is that they will convert to a customer. Then, based on this data, sales teams may focus their efforts on the leads with the highest scores and the best chances of conversion. Compared to conventional lead scoring techniques, an Al-powered predictive lead scoring model has a number of benefits. First, it can analyse a wider range of data points, and detect patterns that human analysts might overlook, making it more accurate and effective. Second, it makes sales teams more effective since they can concentrate their efforts on the most promising leads and stop spending time on leads that are not likely to convert. Finally, it is more scalable since it can swiftly arid automatically analyse enormous amounts of data, freeing up human analysts to concentrate on higher-level tasks.

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(19) INDIA
(22) Date of filing of Application :02/05/2023

(21) Application No.202341031162 A
(43) Publication Date : 16/06/2023

(54) Title of the invention : COMPUTER VISION BASED REAL TIME THREAT IDENTIFICATION AND PREVENTION OF RISK IN SUSPICIOUS FACIAL BIOMETRICS FOR SECURE ATM TRANSACTIONS

(51) International classification	:B07C 053600, B33Y 100000, G06F 215600, G06K 096200, G06Q 204000
(86) International Application No Filing Date	:NA :NA
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(57) Abstract :
Performing Facial Biometric Authentication enhances the security measures. This invention concentrate on refining the security for banking by developing a valid facial recognition for ATM users. This technology improves the transaction method as it record all the transaction process in the bank database server. As it made easy to trace and examine the suspicious and disreputable activities in the future. Basically, it's a two-way verification process which uses facial authentication and clickbait link so that the user can able to get the correct information about the transaction process. This invention is helpful to the people who faced fraudulent transaction in past and this will remind them to be cautious. The advantage of our invention is that it captures the picture of the person who is trying to make a transaction and sends a clickbait link to the client. If this person is an authorized person as mentioned by the client, then the client will authenticate him/her to carry out the transaction. If the client wants the authorized person to carry out the transaction, he will be permitted to do so. Else he will be declined to carry out the transaction in the ATM. The system also analysis how often the fraud transaction is tried to get successful, it will record all those suspicious trials and detect the threat beforehand. This helps in reducing the risk of fraudulent access and unauthorized transactions. Some of the theft activities like 'shoulder surfers' where the stranger can peek over the card holder to muddle through the PIN numbers, this can be avoided while doing facial authentication and it will ensure the card holder to be cautious.

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(54) Title of the invention : CRYPTANALYSIS SYSTEM FOR GENERATING ALERT MAILS FOR SUSPICIOUS DECODE ACTIVITIES

(51) International classification :H04L 090000, H04L 090600, H04L 510000, H04W 120330, H04W 121220
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(57) Abstract :
The major issues faced by people worldwide are significant security issues that result in significant amounts of sensitive data leakages at the cloud storage layer due to management ignorance and deliberate attacks. This rapid increase of recent privacy attacks has significantly decreased trust on behalf of the users, so in this invention we are introducing a web application system that monitors network traffic for suspicious activity and issues alerts when such activity is discovered immediately. As this application software provides strong encryption scheme which is Encode-Order Revealing Encryption (ORE) and Hybrid ORE which is evolved from existing related encryption techniques which has comparatively more limitations such as confidentiality leakages at some point, but this invention will not leak confidential data at any time, even when an unauthorized person tries to steal the data. In our invention, registered clients/users are directed to the upload page after logging in where they have to upload their data which is to be protected privately. The registered clients/users apply some key for identification purpose and also a basic encryption from user end, after uploading the data successfully. Next, the data set will be split into 6 blocks and enciphered and these blocks will be stored into three different cloud storages which all can be accessed by the authorized users. At the time of retrieving the data, the generated secured key will be received by the user as one time password to their registered mobile number/e-mail to proceed further to download the protected contents/data. If any unauthorized person tries to access or any other suspicious activity is detected it will be notified to the respective e-mail/mobile number of the registered client about this activity. As there is no cent percent security for our data and suspicious activities are intimated to the clients only after the occurrence of the malicious activities, this invention is a step ahead to attempt from our side to give the strong encryption.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/05/2023

(21) Application No.202341033511 A
(43) Publication Date : 16/06/2023

(54) Title of the invention : DESIGN OF A VIRTUAL REALITY BASED SYSTEM FOR STRESS RELIEF

(51) International classification :A61P 090000, A61P 150000, A61P 250000, C07D 051400, G06F 030100
(86) International Application No :NA
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(57) Abstract :
In recent years, virtual reality (VR) has become a promising technique for managing stress and anxiety. Users can enter a simulated environment through virtual reality (VR) that either replicates real-world situations or offers soothing and pleasant experiences to encourage relaxation and lower stress levels. This invention uses the potential of virtual reality (VR) as a stress and anxiety treatment option and to create a revolutionary system that leverages VR to offer patients individualised and efficient stress management. Millions of people all over the world suffer from typical mental health issues like stress and worry. Despite the fact that there are numerous efficient treatment alternatives available, many patients do not get the support they require because conventional treatments are inaccessible, expensive, or stigmatised by society. VR offers a special chance to overcome these obstacles and give patients a secure, practical solution for stress management. Depending on their preferences and needs, patients will be able to enjoy the VR experiences either from the comfort of their own homes or in a clinical setting. A qualified healthcare expert will be on hand to help patients navigate the system, offer assistance, and give them feedback on how they are doing. One of the main benefits of the invention, VR-based stress management system is its capacity to offer each patient individualised and customised therapy alternatives. Each patient's tastes and wants can be catered to in the VR experiences, enabling a more individualised and successful treatment strategy. The device will also be able to give the patient real-time feedback on their physiological responses, allowing adjustments to be made to the VR environment to enhance their experience with stress management.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/05/2023

(21) Application No.202341033490 A
(43) Publication Date : 16/06/2023

(54) Title of the invention : DESIGN OF AN NLP AND MACHINE LEARNING BASED AUTOMATED ACUPRESSURE THERAPY FOR CURING DISEASES

(51) International classification :A61H 390400, A61P 010400, G06F 403000, G06N 050400, G06N 200000
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(57) Abstract :
Acupressure is a healing technique that involves applying light pressure to certain body locations. Around 3,000 years ago, this treatment method was created as a component of Traditional Medicine. The method stimulates the body to heal itself by applying precise finger placement and pressure on the designated healing areas. Pressing firmly but softly in an up-and-down motion or a rotating . motion for several minutes at a time is the proper way to apply pressure. It is important to be in a relaxed position, breathe deeply, and close your eyes when . applying acupressure to acupoints. This enables healing by allowing the tissues to release. Pain relief is acupressure's most popular application. The body has . acupoints ah throughout it, and many of them might not be close to the source of discomfort. Acupressure can stimulate and encourage greater blood flow, as was already mentioned. The tissues and organs of the body will deteriorate and die if there is not enough blood flow. In order to maintain the health of your tissues and organs,. acupressure stimulates blood flow. This invention offers patients an automated, NLP-based acupressure therapy due to the limited availability of acupressure therapists.

No. of Pages : 7 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/03/2024

(21) Application No.202441023791 A
(43) Publication Date : 05/04/2024

(54) Title of the invention : DYNAMIC TOLL PLAZA CONTROL

(51) International classification :G07B0015060000, G06Q0020320000, G06Q0020400000, G06Q0040000000, G07B0015040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This invention, the Dynamic Toll Plaza Control (DTPC) uses number plate recognition and .represents a transformative advancement in toll booth management and fee collection. The main parts of this system are the following: a large database with vehicle and toll rate information; automated payment gates; secure payment processing mechanisms; high resolution cameras strategically positioned at toll booths; and DTPC ‘software that reliably recognises vehicle number plates. The cameras in the system record the license plate of a car as it approaches the toll booth. Based on camera quality, distance can be measured. DTPC captures the number plate at day or flight time and analyzes the data as an image. Number plate data comparison is done with the help of character segmentation and character recognition using Optical Character Recognition algorithm. After successful comparison, one time password is generated and sent to the user’s mobile phone. The automatic payment gate opens and pemiits uninterrupted vehicle passage if the car's number plate is connected to a working payment method using OTP verification system. The user receives a payment confirmation after a toll fee is automatically subtracted. By doing away with the necessity for cash ' transactions, this method not only improves security but also drastically cuts ddwn on the time and effort needed for toll collection. It also accepts a second mobile phone number for secondary access in toll entry system. OTP will be sent to both the mobile phones. If there is delay in OTP or wrong OTP means, the vehicle is stolen, Under such circumstances, DTPC will automatically send an alert to the police about the Theft vehicle. This Dynamic Toll Plaza Control provides an efficient, scalable, and user-friendly solution for contemporary toll booth management with the integration of secure payment processing and the capacity to manage an extensive database of cars and their associated toll fees

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/03/2024

(21) Application No.202441023790 A
(43) Publication Date : 05/04/2024

(54) Title of the invention : ENHANCED SECURITY INTELLIGENCE USING SONIC KEY

(51) International classification	:G06N0003040000, G06N0003080000, G10L0025630000, G06F0003010000, G06N0007000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The critical challenges of developing an invention for emotion detection from voice with . integration into security systems poses several critical challenges. Firstly, the accurate labeling and annotation of emotional states in the dataset 'are essential but can be subjective and context- , dependent. Ensuring a consistent and reliable labeling process across diverse speakers and scenarios is crucial for the model's ability to generalize effectively. Additionally, the availability of a comprehensive dataset with a sufficiently large and diverse set of emotions may be challenging, impacting the model's robustness and real—world applicability. Secondly, selecting an optimal deep learning architecture, such as LSTM networks, introduces challenges related to model complexity and overfitting. LSTMs, while effective in capturing long-term dependencies, may be prone to overfitting, especially with smaller datasets. Balancing model complexity with generalization capability is essential, and tuning hyper parameters requires careful consideration to prevent the model from memorizing specific instances in the training data rather than learning meaningful patterns representative of emotional expressions. Furthermore, the integration of emotion detection into a security framework introduces challenges related to real-time processing and system responsiveness. Implementing a seamless interaction between the emotion detection model and security measures requires careful consideration of latency, resource utilization, and the potential impact of false positives or negatives on security outcomes.‘Striking a balance between accuracy and real-time performance is crucial to ensure the practicality and reliability of the system in dynamic security scenarios. Addressing these challenges will be integral to the ‘ successful implementation of an emotion-aware security system

No. of Pages : 5 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/03/2024

(21) Application No.202441023787 A
(43) Publication Date : 05/04/2024

(54) Title of the invention : FACE RECOGNITION BASED PERSON IDENTIFICATION USING HYBRID CLASSIFIER

(51) International classification	:G06K0009620000, H04N0007180000, G08B0013196000, G06K0009000000, G06T0007110000
(86) International Application No Filing Date	:NA :NA
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(57) Abstract :
Face recognition plays a significant role in various applications, including video surveillance systems, biometrjc authentication, and human-computer interaction. Facial feature extraction and recognition are fundamental tasks in computer vision. However, the effectiveness of face recognition algorithms heavily relies on the availability ofdiscriminativc and robust features extrzicted from facial images. This invention uses Hybrid classifiers for facial feature extraction and recognition; It is a novel approach for person identification using hybrid face récognition, which aims to improve the accuracy .and reliability of face recognition systems. This invention ieverages the Hybrid m a mathematical representation oflhe space of. linear subspéces, to model and extract intrinsic features from facial images. The Hybrid classifier is a machine leaming-based algorithm that uses a cascade of weak classifiers to detect specific patterns or objects in an image. It is particularly well-suited for detecting facial features such as eyes: nose, and‘mouth due to its ability to capture distinctive patterns and shapes. The classifier is trained using positive and negative samples, where positive samples represent facial features and negative samples represent background regions. The experimental evaluations demonstrate its effectiveness and superiority over conventional methods. This invention has the potential to significantly contribute to the advancement of face recognition techno]ogies and their practical applications in various domains such as real-time video surveillance.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/03/2024

(21) Application No.202441023786 A
(43) Publication Date : 05/04/2024

(54) Title of the invention : GLOBAL ID MEDCARE MODEL: BLOCKCHAIN-DRIVEN PATIENT AUTHENTICATION SYSTEM WITH QR CODE DATA STORAGE

(51) International classification :G16H0010600000, G06F0021600000, G06F0021620000, G06F0021320000, G06Q0010100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Annexure 3 Implementing a system for patient verification using national identity-and storing data with QR codes on a blockchain network presents multifaceted challenges. The critical balance between data security and privacy concerns arises, as healthcare information is inherently sensitive. Ensuring accurate identity verification is paramount, necessitating additional layers of validation. QR code security must address potential tampering risks, and blockchain scalability concerns arise due to the high volume of healthcare transactions. Regulatory compliance is a central challenge, requiring alignment with healthcare regulations and standards. User adoption and training are critical for successful implementation, demanding comprehensive programs to Familiarize stakeholders with the system's benefits and functionality. The successful integration of such a system hinged on user acceptance, requiring effective communication about the benefits and functionalities of the technology Striking a balance between these technical, regulatory, and ethical challenges is pivotal for the seamless and responsible implementation

No. of Pages : 5 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/03/2024

(21) Application No.202441023813 A
(43) Publication Date : 05/04/2024

(54) Title of the invention : GUARDIAN VAULT: CONFIDENTIAL DATA MANAGEMENT WITH ECC ENCRYPTION AND CLOUD-BASED VERIFIABLE SHARING

(51) International classification :G06F0021620000, H04L0009320000, H04L0009300000, G06F0021600000, G06F0021640000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
Cloud computing is the most feasible approach for implementing Digital Twin (DT) services since it has prodigious advantages. It provides on-demand services, computing resources, ubiquitous network access, etc‘, making it suitable for the next-generation information technology architecture. In cloud-assisted DT environments, the data owners generate data from physical assets and disseminate it to the cloud sewer, simulating DT in virtual space and sharing the simulation results with the owner‘ At the same time, the user can access the data upon request. However, putting DT technology into practice faces several obstacles. The biggest challenge is finding a secure way to share simulation and real-time data. The numerous fields in which DT technology is being studied are manufacturing, construction, healthcare, and space industries. IoT and mobile devices have recently been added to the DT technology’s application range. For instance, autonomous dri\‘/ing can be achieved in a vehicular environment, and precise and detailed remote medical treatment can be carried out in a medical environment. Serious privacy implications are to be faced if the sensitive information transmitted by the data owner gets held by the adversary. Evidently, the below-illustrated points are necessary for the deployment of DT ‘ ' environment: (a) there is a strong .urge to develop a secure medium for efficiently sharing the transmitted data. (b) There must be a procedure for validating the transmitted data; that is, verification of data integrity is required (c) Security prerequisites such as traceability, anonymity, and confidentiality should be guaranteed. Most authentication mechanisms are designed employing traditional public cryptosystems and identity-based cryptosystems. However. these cryptosystems have some loopholes, The loopholes in the paradigms created using the public cryptosystem and the identity—based crypto system are the complex certificate management, storage, and key escrow problem, respectively. This invention, Guardian Vault introduces a product which is a cloud-based user authentication system using secret key verification and ECG encryption. This product enhances security by reducing unauthorized access and identity'theft. ECC encryption ensures data confidentiality with smaller key sizes. The verification-based data sharing approach allows users to share encrypted data with specific recipients, maintaining control over access. This invention reduces storage overhead and exposes sensitive information, as only encrypted data is stored in the cloud.

No. of Pages : 5 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/03/2024

(21) Application No.202441023796 A
(43) Publication Date : 05/04/2024

(54) Title of the invention : INDEX BASED SEARCHABLE ENCRYPTION ON CLOUD DATA USING ASYMMETRIC ENCRYPTION

(51) International classification :G06F0021620000, H04L0009300000, H04L0009080000, G06F0021600000, H04L0009320000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
Annexure 3 With the increasing adoption of cloud storage services, ensuring the privacy and security of data stored in the cloud has become a critical concern. One approach to address this issue is the use of encryption techniques, where data is encrypted before being uploaded to the cloud. However, traditional encryption methods hinder the ability to search and retrieve specific information from the encrypted data, as the data needs to be decrypted first. This limitation hampers the usability and efficiency of cloud storage systems. To overcome this challenge, this invention proposes a novel approach for keyword search on encrypted data in cloud storage using an Elliptic Curve Cryptography (ECC) encryption approach. By leaveraging the ECC encryption approach, the proposed solution ensures the confidentiality of data stored in the cloud while enabling efficient keyword-based search operations without {he need for decryption. This invention utilizes a combination of cryptographic techniques such as ECC encryption and index structures to enable efficient keyword search operations on the encrypted data. Also, it implements a secure search scheme supporting multikeyword ranked search over encrypted cloud data. A secure index is generated during the encryption process, which allows for efficient retrieval of encrypted data related to specific keywords‘ Based on the search keyword ranking method, the index of the keyword was dynamically updated. The encrypted data remains confidential, as only authorized users possess the necessary decryption keys to retrieve the plain text information. The results demonstrate that the keyword search on encrypted data in cloud storage using the ECC encryption approach achieves a balance between data privacy and search functionality. The solution offers an effective means to securely store and retrieve data from the cloud while ensuring that sensitive information remains protected from unauthorized access.

No. of Pages : 5 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :28/05/2024

(21) Application No.202441041374 A

(43) Publication Date : 31/05/2024

(54) Title of the invention : SMART HEARTBEAT ANALYZER USING ARTIFICIAL INTELLIGENCE AND IOT

(51) International classification	:A61B0005000000, A61B0005024000, G16H0040670000, G16H0050300000, A61B0005020500
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The Smart Heartbeat Analyzer is an innovative heart rate monitoring system that integrates artificial intelligence (AI) and Internet of Things (IoT) technologies to provide comprehensive heart health analysis. This portable device captures electrocardiogram (ECG) signals using high-precision sensors, processes the signals through amplification and filtering, and digitizes the data for real-time analysis. AI algorithms analyze the ECG data to determine heart rate, detect anomalies, and offer health insights. The system features wireless communication modules for data transmission to cloud-based platforms, enabling long-term data storage, remote monitoring, and advanced analytics. The user interface, accessible via a mobile application, provides real-time heart rate data, alerts, and personalized health recommendations. This integration of AI and IoT enhances heart rate monitoring capabilities, making it a valuable tool for personal fitness, healthcare monitoring, and remote patient care.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/09/2023

(21) Application No.202341060771 A
(43) Publication Date : 06/10/2023

(54) Title of the invention : AN ARTIFICIAL INTELLIGENCE BASED SYSTEM FOR PROVIDING EMPIRICAL INVESTIGATION OF THE DETERMINANTS OF CORPORATE CAPITAL STRUCTURE DECISION AND METHOD THEREOF

(51) International classification :G06Q0040000000, G06Q0040020000, G06Q0010060000, G06Q0040060000, G06N0020000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to an artificial intelligence (AI) based system for providing empirical investigation of the determinants of corporate capital structure decision and method thereof. The present system and method comprise of utilizing machine learning modules for the analysis of historical data and delivering suggestions to enhance capital structure optimization, continuously monitoring market dynamics and their impact on capital structure, thereby generating adaptive recommendations aimed at improving financial performance and modifying recommendations to match a company's specific financial objectives and the prevailing market conditions. Further, allowing companies to adjust their financing strategies in response to evolving economic landscapes and shifting business requirements and financing strategies over time to maximize the company's long-term profitability and overall value.
Accompanied Drawing [FIG. 1-2]

No. of Pages : 19 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
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(22) Date of filing of Application :06/06/2023

(21) Application No.202341038667 A
(43) Publication Date : 18/08/2023

(54) Title of the invention : A New Framework for Automatically Recognizing Indian Traffic Signs along the road by using Deep Learning and Machine Learning Algorithms

(51) International classification :G01C 213600, G06K 096200, G06N 030400, G06N 030800, G06N 200000
(86) International Application No :PCT//
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(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
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Filing Date :NA

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(57) Abstract :
A New Framework for Automatically Recognizing Indian Traffic Signs along the road by using Deep Learning and Machine Learning Algorithms Abstract: Due to the variety of driving styles and environmental factors, Advanced Driving Assistance Systems must be able to perceive and comprehend everything around the vehicle. The majority of automobiles on the road today are equipped with high-tech driving assistance systems that make time spent behind the wheel more relaxing and delightful. By incorporating artificial intelligence (AI) into Advanced Driver Assistance Systems and/or Automated Driving Systems such as the Traffic Sign Recognition system, automakers can now produce intelligent, self-driving vehicles. AI has made this possible for the automobile industry. Currently, TSR solutions are designed to detect only particular types of signs. TSR includes additional categories of road signs, including Warning, Regulatory, Mandatory, and Priority signs. The objective is to develop an intelligent, real-time system capable of analysing, detecting, and classifying traffic signs. We must implement this strategy for the aforementioned reasons. The proposed solution is founded on a comprehensive analysis of existing traffic sign detection and classification technologies. The objective is to identify and implement methods that provide the optimal balance of precision and processing speed. The proposed method therefore integrates the Haar cascade method with a deep CNN model classifier. The GTSRB dataset is used to train the newly developed TSC model, which is then evaluated against a number of traffic indicators. During testing, the objective was achieved 99.56 percent of the time. To improve classification performance, we propose employing a new attention-based deep convolutional neural network. With an F1-measure rate of 99.9% and a testing accuracy of 99.91%, the outcomes outperform previous studies on how to classify traffic signs. In other terms, the results are enhanced. Using a Raspberry Pi 4, the freshly assembled TSR system on a board is tested. Experiment results demonstrate that the provided procedure is always effective.

No. of Pages : 11 No. of Claims : 8

INTELLECTUAL PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

सत्यमेव जयते

ORIGINAL
क्रम सं/ Serial No. : 142331

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डिजाइन के पंजीकरण का प्रमाण पत्र | Certificate of Registration of Design

डिजाइन सं. / Design No. : 386470-001

तारीख / Date : 17/05/2023

पारस्परिकता तारीख / Reciprocity Date* :

देश / Country :

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो *SENSOR BASED INTELLIGENT VEHICLE TYRE WRAPPING AND CONTROLLING SYSTEM* से संबंधित है, का पंजीकरण, श्रेणी 15-10 में 1.Bommaraju Srinivasa Rao 2. Dr. Rajasekar V 3.Dr Renuka Snehal Nifadkar 4.Dr. D. Sundaranarayana 5.T. R. Priyadharshini 6.Dr. Sushma Jaiswal के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 15-10 in respect of the application of such design to *SENSOR BASED INTELLIGENT VEHICLE TYRE WRAPPING AND CONTROLLING SYSTEM* in the name of 1.Bommaraju Srinivasa Rao 2. Dr. Rajasekar V 3.Dr Renuka Snehal Nifadkar 4.Dr. D. Sundaranarayana 5.T. R. Priyadharshini 6.Dr. Sushma Jaiswal.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन प्रावधानों के अनुसरण में।

In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि :
Date of Issue : 17/08/2023

महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/06/2023

(21) Application No.202341042373 A
(43) Publication Date : 07/07/2023

(54) Title of the invention : IOT BASED MONITORING SYSTEM FOR INLAND VESSELS USING SENSOR NETWORKS

(51) International classification :B01L 030000, H04L 090800, H04L 430852, H04L 671200, H04W 841800
(86) International Application No :PCT//
Filing Date :01/01/1900
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
The Internet of Things (IoT) can be used to monitor the performance of inland vessels in a cost-effective and efficient way. This paper presents an IoT-based monitoring system for inland vessels utilizing sensors networks. The system includes a sensor network embedded on the vessel, a communication network linking the sensors, and a remote monitoring server. The sensor network is composed of temperature, humidity and pressure sensors. These sensors gather information about the ship environment such as temperature, air humidity and air pressure. The collected data are transmitted to the remote monitoring server via a 4G Cellular Network, allowing the administrator to monitor the vessel's health conditions in real time. The developed system is evaluated by running tests on an actual vessel loaded with IoT-enabled sensors. The results show that the system is able to collect high-quality data and make accurate predictions of the vessel's condition. The proposed system can also be used for other type of vessel and can be enhanced with additional features to improve the monitoring capabilities.

No. of Pages : 9 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/05/2023

(21) Application No.202341033504 A
(43) Publication Date : 16/06/2023

(54) Title of the invention : MACHINE LEARNING AND NATURAL LANGUAGE PROCESSING BASED AGRICULTURE SMARTBOT

(51) International classification :G06F 402840, G06F 403000, G06N 030400, G06N 030800, G06N 200000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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Filing Date :NA

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(57) Abstract :
The primary objective of this invention is to provide machine learning based solutions to agricultural queries using Natural Language Processing. To respond to new age farmers in an audio format for better understanding, To estimate the future cost of agricultural products using Auto Regressive Integrated Moving Average (ARIMA), To input the query in a shortest manner irrespective of grammatical mistakes, this invention provides a fruitful solution. Chatbots are conversational virtual assistants which automate interactions with end users. Artificial intelligence powered chatbots, using machine learning techniques, understand natural language and interact with users in this invention with respect to agricultural queries and national schemes. The input query by the farmer follows a format in which the farmer just need to know the crop name in which he/she has the doubt followed by a underscore and the keyword of the doubt, (eg: ragiirrigation). The system provides voice-based response. This can enhance the usability of the system. It also uses the prediction algorithm 'ARIMA5 which is the statistical time-series machine learning algorithm to predict the future cost of the agricultural products using the moving average technique, so that the farmer can plan their activities prior to harvesting and maximize their earnings.

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(12) PATENT APPLICATION PUBLICATION
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(22) Date of filing of Application :12/05/2023

(21) Application No.202341033619 A
(43) Publication Date : 16/06/2023

(54) Title of the invention : MACHINE LEARNING BASED SKIN CANCER PREDICTION SYSTEM

(51) International classification :A61B 050000, A61P 350000, G06N 030800, G06N 200000, G11C 294200
(86) International Application No :NA
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(87) International Publication No : NA
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(57) Abstract :
In many nations, skin cancer is the cancer that is most frequently diagnosed, and the majority of instances are avoidable. Skin cancer can be disfiguring or even fatal, and it has a significant impact on.quality of life. Skin cancer medical care comes at a significant expense to individuals, families, and the country as a whole. Skin cancer incidence rates have been rising in recent years, and it is estimated that more people than all other cancers combined have experienced skin cancer at some point in the past three decades. The most common disease to be identified in many countries is skin cancer, and the majority of cases are preventable. Skin cancer has a substantial influence on quality of life and can be disfiguring or even lethal. The method for identifying and categorizing skin lesions as various types of skin cancer is proposed by this invention. Skin cancer's kind and prompt detection have significant therapeutic ramifications. In most cases, using a number of complementary imaging modalities is required to make an accurate diagnosis. With the use of patient photos and machine learning algorithms, this invention can detect skin cancer.

No. of Pages : 7 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/06/2024
(21) Application No.202441042985 A
(43) Publication Date : 14/06/2024

(54) Title of the invention : MACHINE LEARNING-DRIVEN PCOS DECTECTION AND PERSONALIZED RECOMMENDATIONS SYSTEM

(51) International classification	:G06N0003080000, A61B0005000000, G06N0003040000, A61B0008080000, G16H0050200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :
ANNEXURE 3 This invention, "'Machine 'Learning-Drivefi PCOS Detection and' Personalized Recommendations System" utilizes Convolutional Neural ' Networks (CNNs) to tackle Poly Cysticavary Syndrome (PCOS) diagnosis and ' management. A CNN.modél is developed and trained on a large' dataset of labeled ultrasound images. The objective is fér this model to automatically defect PCQS in these images, differentiating betw-een healthy and PCOS ovaries. Further more this invention goes beyond just deflection. It aims to explore the model's ability to classify. the severity of PCOS basgd on the information it extracts from the images. This would allow for a more nuanced understanding . of the Condition, providing more than a simple yes or no diagnosis. With the knowledge from the forrfi, the system aims to generate personalized management plans for each patient. These plans could encompass various aspects of PCOS management, including pérsonalized diet and exercise routines; weightl management strategies, and potentially connecting patients with specialists. I_t is important to note that these suggestions are intended to empower patients and should hot replace professional medical advice. ,Overall, the system aims to 'revolutionize' PCOS diagnosis through deep learning. This could lead to '3 improved efficiency, accessibility of diagnosis, potentially earlier detection, and Better patient outcomes. The ultimate vision is a future where women can take control. of their health with'the knowledge gained from this approach. This invention goes beyond'building a model; it aims to build a bridge to a brighter future for women's health.

No. of Pages : 5 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
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(21) Application No.202441023810 A
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(54) Title of the invention : MULTIVENDOR ONLINE PLATFORM FOR LISTING, SELLING OLD BOOKS

(51) International classification	:G06Q0030060000, B42C0015000000, G09B0005060000, G16H0030200000, H04L0041022000
(86) International Application No Filing Date	:NA :NA
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(57) Abstract :
A prominent challenge that students face while pursuing their education is the ever increasing cos; of textbooks. To address this issue and simplify the liVes of young learners, we propose the use ofa multi-vendor e-commerce platform. This platform allows students to sell their used textbooks to their peers at reduced prices, creating a mutually beneficial situation. This multi—vendor e-commerce system facilitates the buying and selling of textbooks at discounted rates, providing students with a means to alleviate their financial burdens and become more self—reliant. On the other hand, graduated students can sell their textbooks at a fair price, allowing them to recover a portion of their initial investment in these books. Additionally, the platform enables studénts to sell their handwritten notes and other study materials related to competitive exams, providing them with an opportunity -to earn money. This sysfem is developed using advanced technologies such as Laravel and Flutter, and it is accessible both on the web arid through mobile devices, particularly Android. This accessibility ensures that students can easily use the platform, making their daily_lives more convenient than ever.

No. of Pages : 5 No. of Claims : 5

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(19) INDIA
(22) Date of filing of Application :30/05/2024
(21) Application No.202441042043 A
(43) Publication Date : 14/06/2024

(54) Title of the invention : PEDALPREDICT: MACHINE LEARNING-BASED BIKE-SHARING DEMAND PREDICTION MODEL

(51) International classification :G06N0020000000, G06N0003080000, G06N0003040000, G06Q0030020000, G06Q0010040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
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Filing Date :NA
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Filing Date :NA

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(57) Abstract :
Annexure 1 This invention, known as "PedalPredict," is a machine learning-based bike-sharing demand prediction model that employs cutting-edge techniques to tackle the complex challenges of urban transportation management. PedalPredict incorporates Graph-Based Spatial Analysis, which maps bike station connections using graphs and allows for demand prediction based on spatial interconnections. In addition, Temporal Attention Models detect daily, weekly, and seasonal variations, allowing for a more nuanced understanding of time-dependent patterns in demand forecasting. Furthermore, PedalPredict uses CAN-generated synthetic data for data augmentation, which increases the model's resilience and adaptability to changing circumstances, The model uses Sequence-to-Sequence with Attention mechanisms to identify dependencies between past and future demand, allowing for more accurate demand sequence forecasting. PedalPredict's Hybrid Recommenders provide personalized route recommendations by combining previous usage data with user preferences, thereby improving user experience and system efficiency. Furthermore, using Multi-task Learning and Transfer Learning techniques, PedalPredict ‘can train on multiple related tasks at the same time, leveraging information from relevant areas to improve overall performance. PedalPredict uses Dynamic Pricing Strategies to optimize bike distribution by adjusting prices based on current demand estimates, resulting in efficient resource allocation. Finally, Federated Learning for Privacy protects user privacy by collaborating with operators to train models, demonstrating PedalPredict‘s commitment to ethical and responsible data handling in urban transportation management.

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(19) INDIA
(22) Date of filing of Application :26/03/2024

(21) Application No.202441023783 A
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(54) Title of the invention : SECURE GUARD PRO TECH: ADVANCED SMART DOOR SECURITY SYSTEM WITH FACE RECOGNITION, MASK DETECTION AND

(51) International classification :G08B0013196000, G06F0021570000, G06F0021550000, G06F0021620000, G07C0009370000
(86) International Application No :NA
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(87) International Publication No : NA
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(57) Abstract :
The critical challenge of ensuring foolproof security and access control to restricted areas is a concern effectively tackled by the SecureGuard ProTech: Advanced Smart Door Security with Face Recognition, Mask Detection, and Criminal Identification System. Conventional security measures often prove inadequate, leaving vulnerabilities that lead to unauthorized access and potential security breaches. This invention addresses these vulnerabilities by deploying cutting-edge face recognition technology. It serves as a robust solution to the core problem of unauthorized entry by rigorously verifying individuals seeking access. Furthermore, in the event of an unidentified person being detected, the system is programmed to send an alert to authorized personnel. This alert includes details on the number of occurrences this individual has appeared, providing crucial insights to authorized personnel for enhanced security measures and informed decision-making. Additionally, it specifically addresses the complexity posed by face masks, prompting necessary actions for accurate identification, thereby ensuring precise recognition. Moreover, it goes beyond access control by incorporating a sophisticated criminal detection process via surveillance, facilitating the swift identification of potential threats and enabling proactive reporting to the cyber forensics department for immediate action‘ This invention provides a comprehensive approach to mitigating multifaceted security challenges, providing a robust and versatile solution for ensuring stringent access control and enhancing overall security in restricted areas.

No. of Pages : 5 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/05/2023

(21) Application No.202341031164 A
(43) Publication Date : 16/06/2023

(54) Title of the invention : SECURE SATELLITE COMMUNICATION USING QUANTUM CRYPTOGRAPHY AND BLOCKCHAIN

(51) International classification :H04B 071850, H04B 072040, H04L 090600, H04L 090800, H04L 093200
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
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Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
Annexure-3 Because satellite networks are open, communications can be easily intercepted by unauthorised or malevolent intruders. Mechanisms that ensure secure communication within satellite networks are critical to attaining security within satellite network systems. As a result, a quick and efficient access verification protocol called SatChain must be developed by merging post quantum cryptography with quantum key distribution and blockchain technology. QKD can be used to safeguard data privacy. To greatly increase satellite communications security and protection. In order to achieve this goal, an architecture comprised of both conventional and limited devices linked to the blockchain via a wireless heterogeneous network is deployed. As a result, the goal is to separate data and data authority, and a decentralised personal data management system can be realised by incorporating blockchain technology into the satellite communication network and merging blockchain technology with an off-chain database.

No. of Pages : 5 No. of Claims : 5

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(19) INDIA
(22) Date of filing of Application :04/02/2024

(21) Application No.202411007523 A
(43) Publication Date : 16/02/2024

(54) Title of the invention : THE ROLE OF MACHINE LEARNING IN PREDICTING POSITIVE EMOTIONS AT WORK AND ITS IMPACT ON TEACHERS' JOB SATISFACTION AND WELL-BEING

(51) International classification :G06N0020000000, G06K0009620000, G06Q0050000000, G10L0025630000, H04W0004029000
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(61) Patent of Addition to Application Number :NA
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(57) Abstract :
The role of machine learning in predicting positive emotions at work and its impact on teachers' job satisfaction and well-being is the proposed invention. The proposed invention focuses on understanding the functions of impact on teachers' job satisfaction and well-being. The invention focuses on analyzing the parameters of job's positive emotion using algorithms of machine learning.

No. of Pages : 12 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/06/2024
(21) Application No.202441042950 A
(43) Publication Date : 14/06/2024

(54) Title of the invention : YOLOV8-BASED DRIVER DROWSINESS DETECTION SYSTEM: ENHANCING ROAD SAFETY

(51) International classification	:G08B0021060000, G06K0009620000, A61B0005180000, B60K0028060000, G06N0003080000
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(57) Abstract :
ANNEXURE 3 This invention, "YOLOV8-Based Driver Drowsiness Detection System: Enhancing Road Safety" tackles the challenge of drowsiness detection using YOLOV8, a cuttingedge object detection model; The primary objective is to develop a real-time system capable of identifying signs Of driver fatigué "and triggering audio alarms to warn the user. By leveraging YOLOv8's powerful object recognition capabilities, the system will be trained to detect specific facial features and postures indicative of drowsiness, such as prolonged eye closure or excessive head nodding. The potential applications of this invention extend far beyond these initial examples, offering a versatile solution for- promoting alertness land safety in various contexts. By utilizing YOLOV8's advanced object detection capabilities, we aim to develop a reliable and efficient drowsiness detection system that can significantly reduce the risks associated with fatigue. The success, of this invention paves the way for further advancements in drowsiness detection technology, ultimately contributing to a safer and more vigilant society. Key components include the utilization of YOLOV8 for its advanced object recognition capabilities and the system's training to detect indicators of drowsiness. Additional considerations include the system's capability to monitor and detect fatigue in real-time, leveraging machine learning for accurate detection, and enhancing safety through timely alerts.

No. of Pages : 5 No. of Claims : 5

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

List of Patents

Inventor/s Name	Dept	Title	Application Number	Date of Filing	Date of Publishing	Status	Link
Dr. Jaya J	ECE	Biodegradable Toilet seat Cover	201841049523	04/11/2024	02/07/2024	Published	https://drive.google.com/file/d/1AIO3xaqc0ZhLxONHiQ1NjuUUKmMMKIJN/view?usp=drive_link
Dr.M.Pravin Kumar Dr.V.Chandrasekaran Dr.Venkatachalam Kuppusamy Mr.R.Gopalan Mrs.S.Karpakam Mr.N.Senthilkumar Ms.Menakadevi.N Dr.S.Deepa Dr.V.Rajeswari Ms.C.Santhini Ms.R.Hemalatha Ms.M.Ruba	ECE	Synthetic Intelligence –Based Scripting System For Health service Waste Identity And Removal	202441051672	05/07/2024	12/7/2024	Published	https://drive.google.com/file/d/13hUipjQAr8WOivUK_hv3ziZz_X1ww9OG/view?usp=drive_link
Dr. Vijayalakshmi P Dr. Jaya J Dr. Ramya J	ECE	Dual-Decoder based System for Segmentation of CXR Images into Chest Infection and Lung Lobes	202341076496	09/11/2023	22/12/2023	Application Waiting for Examination	https://drive.google.com/file/d/1d1fVxxZPLJI_aVxbfNxhFR4ULYkwN7qi/view?usp=drive_link

HOD/ECE

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PUBLICATION OF THE PATENT OFFICE

INTRODUCTION

In view of the recent amendment made in the Patents Act, 1970 by the Patents (Amendment) Act, 2005 effective from 01st January 2005, the Official Journal of The Patent Office is required to be published under the Statute. This Journal is being published on weekly basis on every Friday covering the various proceedings on Patents as required according to the provision of Section 145 of the Patents Act 1970. All the enquiries on this Official Journal and other information as required by the public should be addressed to the Controller General of Patents, Designs & Trade Marks. Suggestions and comments are requested from all quarters so that the content can be enriched.

(PROF. (DR) UNNAT P. PANDIT)
CONTROLLER GENERAL OF PATENTS, DESIGNS & TRADE MARKS

16th august, 2024

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EARLY PUBLICATION (KOLKATA)	:	**73068-73096**
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INTRODUCTION TO DESIGN PUBLICATION	:	**74149**
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THE PATENT OFFICE
KOLKATA, 16/08/2024
Address of the Patent Offices/Jurisdictions
The following are addresses of all the Patent Offices located at different places having their Territorial Jurisdiction on a Zonal basis as shown below:-

1	Office of the Controller General of Patents, Designs & Trade Marks, Boudhik Sampada Bhavan, Near Antop Hill Post Office,S.M.Road,Antop Hill, Mumbai – 400 037 Phone: (91)(22) 24123311, Fax : (91)(22) 24123322 E-mail: cgpdtm@nic.in	4	The Patent Office, Government of India, Intellectual Property Rights Building, G.S.T. Road, Guindy, Chennai – 600 032. Phone: (91)(44) 2250 2081-84 Fax : (91)(44) 2250 2066 E-mail: chennai-patent@nic.in ❖ The States of Andhra Pradesh, Telangana, Karnataka, Kerala, Tamil Nadu and the Union Territories of Puducherry and Lakshadweep.
2	The Patent Office, Government of India, Boudhik Sampada Bhavan, Near Antop Hill Post Office,S.M.Road,Antop Hill, Mumbai – 400 037 Phone: (91)(22) 24137701 Fax: (91)(22) 24130387 E-mail: mumbai-patent@nic.in ❖ The States of Gujarat, Maharashtra, Madhya Pradesh, Goa and Chhattisgarh and the Union Territories of Daman and Diu & Dadra and Nagar Haveli	5	The Patent Office (Head Office), Government of India, Boudhik Sampada Bhavan, CP-2, Sector –V, Salt Lake City, Kolkata- 700 091 Phone: (91)(33) 2367 1943/44/45/46/87 Fax: (91)(33) 2367 1988 E-Mail: kolkata-patent@nic.in ❖ Rest of India
3	The Patent Office, Government of India, Boudhik Sampada Bhavan, Plot No. 32., Sector-14, Dwarka, New Delhi – 110075 Phone: (91)(11) 25300200 & 28032253 Fax: (91)(11) 28034301 & 28034302 E.mail: delhi-patent@nic.in ❖ The States of Haryana, Himachal Pradesh, Jammu and Kashmir, Punjab, Rajasthan, Uttar Pradesh, Uttaranchal, Delhi and the Union Territory of Chandigarh.		

Website: www.ipindia.nic.in
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पेटेंट कार्यालय
कोलकाता, दिनांक 16/08/2024
कार्यालयों के क्षेत्राधिकार के पते

विभिन्न जगहों पर स्थित पेटेंट कार्यालय के पते आंचलिक आधार पर दर्शित उनके प्रादेशिक अधिकार क्षेत्र के साथ नीचे दिए गए है:-

1	कार्यालय : महानियंत्रक, एकस्व, अभिकल्प तथा व्यापार चिहन, एंटोप हिल डाकघर के समीप, एस. एम. रोड, एंटोप हिल, मुम्बई- 400 037, भारत, फोन: (91) (22) 24123311 फ़ैक्स: (91) (22) 24123322 ई. मेल: cgpdtm@nic.in	4	पेटेंट कार्यालय, भारत सरकार इंटेलेक्चुअल प्रॉपर्टी राइट्स बिल्डिंग, इंडस्ट्रियल इस्टेट एसआईडीसीओ आरएमडी गोडाउन एरिया एडजसेन्ट टु ईगल फ्लास्क, जी. एस. टी. रोड, गायन्डी चेन्नई - 600 032. फोन: (91)(44) 2250 2081-84 फ़ैक्स: (91)(44) 2250-2066 ई. मेल: chennai-patent@nic.in ❖ आन्ध्र प्रदेश, तेलंगाना, कर्नाटक, केरल, तमिलनाडु तथा पुडुचेरी राज्य क्षेत्र एवं संघ शासित क्षेत्र, लक्षदीप
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3	पेटेंट कार्यालय, भारत सरकार बौद्धिक संपदा भवन, प्लॉट सं. 32, सेक्टर- 14, द्वारका, नई दिल्ली- 110 075. फोन: (91)(11) 25300200, 28032253 फ़ैक्स: (91)(11) 28034301, 28034302 ई. मेल: delhi-patent@nic.in हरियाणा, हिमाचल प्रदेश, जम्मू तथा कश्मीर, पंजाब,राजस्थान, उत्तर प्रदेश, दिल्ली तथा उत्तरांचल राज्य क्षेत्रों, एवं संघ शासित क्षेत्र चंडीगढ़		

वेबसाइट: http://www.ipindia.nic.in
www.patentoffice.nic.in

पेटेंट अधिनियम, 1970 तथा पेटेंट (संशोधन) अधिनियम, 2005 अथवा पेटेंट (संशोधन) नियम, 2006 द्वारा वांछित सभी आवेदन, सूचनाए, विवरण या अन्य दस्तावेज़ या कोई शुल्क पेटेंट कार्यालय के केवल उपयुक्त कार्यालय में स्वीकृत होंगे।

शुल्क: शुल्क या तो नगद रूप में या Controller of Patents के नाम में देय बैंक ड्राफ्ट या चेक के द्वारा भेजी जा सकती है जो उसी स्थान के किसी अनुसूचित बैंक में प्रदत्त हो जहाँ उपयुक्त कार्यालय स्थित है ।

SPECIAL NOTICE

18 Months publication as required under Section 11A of the Patents Act, 1970 as amended by the Patents (Amendment) Act, 2005.

Notice is hereby given that any person at any time before the grant of Patent may give representation by way of opposition to the Controller of Patents at appropriate office on the ground and in a manner specified under section 25(1) of the Patents (Amendment) Act, 2005 read with Rule 55 of the Patents (Amendment) Rules, 2006.

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SPECIAL NOTICE

Under the new provision of the Patents Act, 1970 as amended by the Patents (Amendment) Act, 2005 and Rules there under, Publication of the matter relating to Patents in the Official Gazette of India Part III, Section 2 has been discontinued and instead The Official Journal of the Patent Office is being published containing all the activities of The Patent Office such as publication of all the patent applications after 18th months , grant of patents & all other information in respect of the proceedings as required under the provisions of the Patents (Amendment) Act, 2005 and Rules thereunder on weekly basis on every **Friday**.

The Journal is uploaded in the website every Friday. So Paper form and CD-ROM form of the Journal are discontinued from 01/01/2009.

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The following patent applications have been published under section 11A (2) of The Patents (Amendment) Act 2005 and rule 24A of The Patents (Amendment) Rules, 2006. Any person may file representation by way of opposition to the Controller of Patents at the appropriate office against the grant of the patent in the prescribed manner under section 25(1) of the Patents (Amendment) Act 2005 read with the rule 55 of The Patents (Amendment) Rules, 2006:

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202311052376 A

(19) INDIA

(22) Date of filing of Application :03/08/2023

(43) Publication Date : 16/08/2024

(54) Title of the invention : AN OPTICAL FIBER-BASED FLUORIDE DETECTION AND QUANTIFICATION SENSOR DEVICE AND A METHOD THEREOF

(51) International classification	:G01N21/77, F21V8/00, G01N21/47
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

The present invention generally relates to an optical fiber-based fluoride detection and quantification sensor device comprised of a polymer optical fiber(102)having atapered-coil-shaped probe region containing a sensing probe (104)bent to form a tapered coil shape to allow more lights wave available for absorbance; wherein the sensing probe is kept within a cylindrical cuvette (106) filled with diluted Al-EBT complex reagent; a collimating lens (108) connected to a proximal end of the polymer optical fiber for receiving light rays emitted by a light source (110)parallelly; a detector (112)connected to a distal end of the optical fiber for detecting the remaining light radiation to measure the concentration of fluoride ions in the sample solution; and wherein a fraction of light proportional to fluoride ion concentration gets absorbed by fluoride ions within the sensing region, and the residual light is detected and calculated by acontrolling unit (114).

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/03/2024
(21) Application No.202411015720 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SOLAR POWERED AUTONOMOUS HUMANOD ROBOT SPACE TRAVERSAL

(51) International classification :G05D0001020000, F21S0009030000, H02J0007350000, F25B0027000000, C02F0001140000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Solar powered autonomous humanoid robotspace traversal, is an invention to mechanically fit a solar panel on the torso back of the humanoid robot. The solar panel mimic the solar angles used in the geo-stationary orbit satellites. The solar panel help the autonomous humanoid robot traverse any celestial body or the outer space with the help of solar charging of the humanoid robot battery.

No. of Pages : 4 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/03/2024
(21) Application No.202411020503 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : PREDICTIVE MAINTENANCE ALGORITHMS FOR COMMERCIAL VEHICLE FLEETS

(51) International classification	:G05B0023020000, G07C0005080000, G07C0005000000, G06Q0010000000, G06Q0010060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A predictive maintenance system for commercial vehicle fleets is presented, featuring a data collection module in each vehicle to gather operational data from various components. The data is transmitted to a central processing unit, which analyzes said data and employs a predictive maintenance algorithm to forecast upcoming maintenance needs. A maintenance scheduling module, informed by the algorithm's predictions, orchestrates maintenance activities for the fleet. Additionally, a communication interface within the central processing unit dispatches maintenance schedules and alerts to fleet management, optimizing vehicle uptime and efficiency. The system proactively manages fleet maintenance, ensuring timely service and reducing operational disruptions.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/03/2024
(21) Application No.202411020506 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM FOR CREATING VIRTUAL REALITY ARCHITECTURE VISUALIZATIONS

(51) International classification	:G06F0003010000, G06F0030130000, G06T0019200000, G06T0017000000, G06T0019000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract The present invention is a system and method for creating virtual reality (VR) architecture visualizations. The system includes a VR headset, a content database comprising a variety of architectural elements, textures, materials, and environmental features, and a user input interface to receive architectural design data such as floor plans, elevations, sections, and three-dimensional models. The processor generates a VR architecture visualization by constructing a three-dimensional environment using the received architectural design data and the content database. The output module transmits the VR architecture visualization to the VR headset for display to the user.

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/03/2024
(21) Application No.202411020508 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : METHOD FOR GENERATING AUGMENTED REALITY ENGINEERING SIMULATIONS

(51) International classification	:G06T0019000000, G02B0027010000, G06F0030200000, G06F0030130000, G06F0030000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract The present invention relates to a method and system for generating augmented reality (AR) engineering simulations. The method includes receiving input data representing an engineering model that comprises multiple components, geometries, and physical properties. The input data is processed to create a three-dimensional (3D) virtual representation of the engineering model. This virtual representation is then overlaid onto a real-world environment using an AR display device. The behavior of the engineering model is simulated in the real-world environment, considering the physical properties of the components and the interaction between the components and the environment. The method also includes receiving user input to manipulate the 3D virtual representation, modifying component geometries, altering physical properties, and adjusting component positions. The AR display device can be any device capable of displaying augmented reality, such as an AR headset, smartphone, tablet, or head-up display. Real-time data from sensors placed in the real-world environment is received to update the simulation, and a collaborative platform is provided for multiple users to concurrently view, interact with, and manipulate the AR engineering simulation. The system includes an input module, processor, and output module to generate and transmit the AR engineering simulation to the AR display device for visualization by a user. The invention can be applied to various engineering models, such as mechanical, electrical, fluid dynamics, and structural systems. A report summarizing the simulation results is also generated, including visual representations, graphs, numerical values, and textual explanations.

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/03/2024
(21) Application No.202411020509 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : BRAIN-COMPUTER INTERFACE FOR REAL-TIME MONITORING AND DETECTION OF DROWSINESS IN DRIVERS

(51) International classification	:A61B0005000000, G06F0003010000, G06N0020000000, A61B0005180000, G08B0021060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract The disclosed brain-computer interface (BCI) system enables real-time monitoring and detection of drowsiness in drivers to prevent accidents. It consists of a sensor array that detects and records neural activity from the driver's brain. A signal processing unit translates the neural activity into a digital signal, while a machine learning model embedded within the unit interprets and classifies the signal into alertness states. An alerting interface activates an alert mechanism upon detecting drowsiness. The system includes various embodiments, such as using an electroencephalography (EEG) cap or non-invasive sensors embedded in a headrest for the sensor array. Noise reduction algorithms within the signal processing unit improve signal quality. The machine learning model is trained using supervised learning techniques on a dataset of neural signals and alertness states. The alerting interface employs visual, auditory, or haptic feedback mechanisms. The method involves detecting neural activity, translating it, interpreting and classifying the digital signal, and activating the alert mechanism. The method can also adaptively retrain the machine learning model over time based on driver feedback and ongoing neural recordings to enhance system performance. Overall, the BCI system and method provide an innovative solution for real-time drowsiness detection and prevention of accidents in drivers.

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2023
(21) Application No.202311006016 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A HERBAL SYNERGISTIC COMPOSITION FOR MANAGEMENT OF CISPLATIN INDUCED NEPHROTOXICITY

(51) International classification :A61K0036540000, A61K0033243000, A61K0036670000, A61P0035000000, A61P0039000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention relates to novel herbal compositions for management of nephrotoxicity induced by cisplatin and other chemical synthetic drugs. More particularly, the present invention relates to synergistic herbal compositions comprising effective amounts of Cinnamomum zeylanicum extract and Piper cubeba extract for management of nephrotoxicity.

No. of Pages : 29 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/01/2024
(21) Application No.202411000806 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : MOLECULAR DYNAMICS FOR SUSTAINABLE PEST MANAGEMENT

(51) International classification :A01N0063300000, C12N0001140000, C12R0001645000, A01N0037460000, G16B0005000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to an unlocking the Genetic Secrets of the Cabbage Webworm, Hellula undalis: Transcriptome Sequencing, Functional Analysis, and Pest Management Implications. This invention introduces a transformative approach to sustainable pest management by conducting an in-depth transcriptomic analysis of the cotton bollworm, Helicoverpa armigera, upon infection with the entomopathogenic fungus Metarhizium anisopliae. Employing cutting-edge sequencing technologies to identify key genes and pathways crucial for immune responses and fungal pathogenesis. The resulting dataset serves as a foundation for innovative and targeted biocontrol strategies, aiming to reduce reliance on chemical pesticides and foster ecological balance in agricultural systems.

No. of Pages : 15 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/03/2024
(21) Application No.202411022165 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : EXPLAINABLE DIGITAL TWINS (XDTS) AND ENHANCED EXPLAINABLE DIGITAL TWINS (EXDTS)

(51) International classification	:G06N0005040000, G06N0003040000, G06N0020000000, G06N0003080000, G06N0005020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present disclosure discloses a system for developing and implementing a digital twin (DT) of a physical asset. The system includes sensors collecting data on the asset, a cloud storage for data management using big data techniques, and an artificial intelligence module for training models to predict or recommend actions concerning the asset. An explainable AI module and a reasoner combine to provide interpretable explanations for these predictions, supported by evidence from a knowledge base. An analysis and decision-making interface enable stakeholders to understand predictions, facilitating informed decisions. A feedback mechanism allows stakeholders' decisions to enact changes in the asset's state via the DT.

No. of Pages : 27 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/03/2024
(21) Application No.202411022166 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AI BASED AUTISM SPECTRUM DISORDER (ASD) CARE AGENT FOR SOCIAL INTERACTION TRAINING IN B2C BUSINESS MODEL

(51) International classification	:G06Q0030060000, A61P0025000000, G06Q0020400000, G06Q0020320000, G06Q0020340000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The disclosed system aims to enhance social interaction skills in individuals with autism spectrum disorder (ASD). The system comprising an ASD care agent that guides users through structured interactions with sellers, including greeting, expressing needs, and navigating various purchasing outcomes. The system comprises a dialogue management module for verifying item details like manufacturing date and company, and a scenario handling module to manage responses based on item availability. Additionally, a payment assistance module provides help to ASD subject with bill confirmation, validation, and digital payment selection, plus a transaction completion module that prompts the user to request a payment receipt post-payment.

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/03/2024
(21) Application No.202411020510 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM FOR CREATING VIRTUAL REALITY ART THERAPY EXPERIENCES

(51) International classification	:G06F0003010000, G06Q0050100000, G06T0019000000, A61M0021020000, G06F0003035400
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract A system and method for creating virtual reality (VR) art therapy experiences, enabling users to engage in therapeutic art activities within immersive and customizable virtual environments. The system comprises a VR headset, input devices, a VR art therapy application, and a backend server for providing content, analytics, and personalization services.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/03/2024
(21) Application No.202411020569 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ADAPTIVE ALGORITHMS FOR DEEP FAKE DETECTION IN MULTIMEDIA

(51) International classification	:G06Q0030020000, G08G0001017000, H04N0021478000, G06Q0010100000, G16H0020100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Proposed herein an advanced system for detecting deep fake alterations in multimedia content. Said system includes a processing unit and a memory unit in communication with each other. The memory unit stores an adaptive algorithm module, which is executed by the processing unit to analyze multimedia content for deep fake alterations. A database stores various deep fake indicators, aiding in the accurate identification of manipulated content. Additionally, a user-friendly interface communicates with the processing unit to display the results of the deep fake analysis.

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/03/2024
(21) Application No.202411022575 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM FOR REAL TIME TRAFFIC ANALYSIS AND PREDICTION IN IOT NETWORKS

(51) International classification	:G06N0020000000, H04L0041147000, G06N0007000000, H04W0036000000, G05B0013040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
A system designed to enhance the efficiency and predictability of Internet of Things (IoT) networks is presented. The system conducts real-time analysis of traffic flow within IoT networks, utilizing a dynamic monitoring module to continuously capture and assess data transmissions between connected devices. Leveraging advanced machine learning algorithms, the system processes the real-time data to identify patterns, congestion points, and potential network vulnerabilities. Based on the analyzed data, the system provides predictive insights regarding traffic trends and potential bottlenecks. Additionally, the system offers adaptive recommendations to optimize network configurations, ensuring seamless data flow and heightened security in dynamic IoT environments.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/03/2024
(21) Application No.202411022582 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AI ENHANCED POWER MANAGEMENT FOR PORTABLE COMPUTING DEVICES

(51) International classification	:G01R0031392000, G06F0001320600, G06F0001323400, H02J0007000000, H04W0052020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The disclosed study encapsulates a sophisticated power management system for portable computing devices that integrates artificial intelligence (AI) to elevate energy efficiency. The centerpiece of the system is an AI module that is adept at learning the user's behavior and forecasting power consumption patterns with high precision. A power control unit, in operational harmony with the AI module, leverages said predictions to dynamically orchestrate power distribution across the device's myriad components, thereby enhancing overall power efficiency. The system also encompasses a battery management subsystem that communicates with the power control unit, meticulously calibrating charging cycles and maintaining battery health. A network of sensors feeds the AI module with real-time data on device operation, ambient environmental conditions, and the current state of the battery. Further enriching the user experience is an adaptive power-saving interface, which presents tailored power usage insights and practical recommendations, all based on the nuanced analysis conducted by the AI module. The interactive system not only optimizes energy consumption but also extends the battery lifespan, ensuring that the device operates at peak efficiency while catering to the user's specific usage patterns.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/02/2023
(21) Application No.202311012755 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A DEVICE WITH THE ABILITY TO GENERATE VARYING LEVELS OF DRAG (FRICTION) EFFECTS ON REAL SURFACES

(51) International classification :H01L0051520000, H05H0001240000, A61B0017290000, G03G0015080000, H01L0049020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present disclosure provides a device for generating on-surface drag effects with adjustable intensities. The device is comprised of two components: a first device and a regulating board. The first device consists of a substrate made of insulating material, with two metal electrodes positioned on it and separated by a dielectric layer. The regulating board, which is connected to the two metal electrodes through output terminals, has the capability to amplify the input supply to a controllable boosted voltage. This device allows for the production of on-surface drag effects with varying intensities, making it a useful tool in various applications.

No. of Pages : 35 No. of Claims : 14

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/12/2023
(21) Application No.202311085806 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AN ELECTROMAGNETIC FIELD ASSISTED REVERSIBLE MOTION-WIRE ELECTROCHEMICAL SPARK MACHINING DEVICE

(51) International classification	:H01J0037320000, B22F0010200000, B23H0011000000, B23K0026700000, B23H0003000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT An electromagnetic field assisted reversible motion-wire electrochemical spark machining device (100), comprises a frame (1), a power supply unit (2), an electrolyte tank (7) filled with an electrolyte, and a plurality of pulleys (12). The frame (1) includes a wire drum (3), a work piece curvilinear feed unit (14) and an adjustable fixture for nozzle unit (17). The workpiece curvilinear feed unit (14) includes a work piece holder (9) to hold a work piece (8). The power supply unit (2) is connected to the anode plate (6) and the cathode wire (4) through a carbide block (5) generating an electrochemical reaction which forms a sparking zone. The work piece (8) is placed for cutting in said sparking zone wherein an electromagnetic field generator (18) is placed near said workpiece (8) which generates an electromagnetic force to displace melted material ions from said cathode wire (4) and said work piece (8). Figure 1 on sheet no. 1 of the drawings may accompany the abstract when published.

No. of Pages : 40 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/03/2024
(21) Application No.202411022716 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD TO PREDICT A MONSOON RAINFALL PATTERN

(51) International classification	:G06N0003040000, G06Q0010040000, G06N0003080000, G06K0009620000, G08G0001010000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The disclosure presents a system for predicting monsoon rainfall patterns in Indian Homogeneous Monsoon Regions (HMRs). Said system includes a data acquisition module that collects meteorological data. The system employs a data preprocessing module to decompose the collected data into intrinsic mode functions (IMFs) and a trend-free signal. A predictive analysis module uses a Long Short-Term Memory (LSTM) protocol to identify long-term temporal correlations within the trend-free signal. An integration unit modifies said LSTM protocol to incorporate the IMFs for dynamic pattern recognition, creating an EMD-LSTM forecasting model. Further, a processing unit executes said model to analyze IMFs and accurately predict rainfall patterns, enhancing monsoon forecasting accuracy and reliability. Fig. 1

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/03/2024
(21) Application No.202411022717 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : RAINFALL PREDICTION USING LSTM FOR INDUSTRIES

(51) International classification	:G06N0003040000, G06N0003080000, G06N0005020000, G06N0005040000, H04N0021258000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present disclosure pertains to a system designed for predicting rainfall patterns in diverse industries. The system comprises a climatic data collection unit that obtains climatic data, highlighting both temporal and spatial aspects of rainfall. Said data is processed using a data processor. Central to the system is a predictive analytics engine utilizing a Long Short-Term Memory (LSTM) network with 45 to 55 units per layer and a dense layer for regression. An optimizer module enhances LSTM performance using the Adam optimizer. Said system includes a training module for LSTM network training over 10 epochs with a minimum batch size of 32. Further, an output module delivers predictions.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :17/02/2024

(21) Application No.202411011124 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : NATIONAL EDUCATION POLICY 2020 IN THE CONTEXT OF INCLUSIVE EDUCATION OBSERVATION SYSTEM

(51) International classification :G06Q50/20, G06Q50/22, G06Q50/26, G09B19/00, G09B5/00, G09B7/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT While access and equity were discussed in earlier policies, education for women's equality, education of scheduled castes and tribes and other backward sections, education of minorities, and education for the handicapped2 were addressed as distinct sections with separate provisions in the National Policy on Education (NPE), 1986. The new education strategy offers a high-quality education system to all kids, regardless of where they live, with an emphasis on historically marginalized, underrepresented, and disadvantaged populations. It suggests that the greatest means of attaining inclusion, equality, and economic and social mobility is via education, which also acts as a great leveler. It states that, in spite of innate barriers, initiatives must be put in place to guarantee that every student from these groups has access to a variety of focused opportunities to enroll in and succeed in the educational system. In order to give greater access to high-quality education, it puts all of these categories together with additional groupings under this chapter.

No. of Pages : 12 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/03/2024
(21) Application No.202411022562 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : QUANTUM RESISTANT CRYPTOGRAPHY HARDWARE FOR PORTABLE COMPUTING DEVICES

(51) International classification	:H04L0009080000, H04L0009060000, H04L0009300000, H04L0009320000, H04L0009000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The disclosure unveils a pioneering system tailored for quantum resistant cryptography within portable computing devices. Central to the architecture is a post-quantum cryptographic (PQC) processing unit, expertly engineered to uphold quantum-resistant algorithms. The unit is complemented by an integrated secure memory compartment, diligently preserving cryptographic keys and pivotal algorithms. Enhancing security dynamics, a real-time key generation module operates on the tenets of post-quantum cryptography, ensuring robust key derivation. An embedded communication interface module acts as a bulwark, guaranteeing the fortified encryption and decryption of data transfers in the face of quantum threats. Augmenting the system's cryptographic robustness, a hardware-driven random number generator produces unpredictable cryptographic elements, fortifying the defenses of the PQC processing unit.

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/03/2024
(21) Application No.202411022563 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : REMOTE CONTROLLER WITH CUSTOMIZABLE INTERFACE FOR MOBILE GAMES

(51) International classification	:H04W0004800000, A63F0013920000, H04M0001020000, H04W0068000000, A63F0013240000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract The invention introduces a remote controller for mobile games, equipped with a communication module for wireless connection to mobile devices. The controller boasts physical control inputs and a memory unit storing interface configurations for various mobile games. Significantly, an embedded processor works in tandem with the memory unit, customizing the control inputs based on the game in play. The controller offers a potential Bluetooth connection, an optional touchscreen interface, and a dynamic configuration system pulling from online databases. Additionally, voice input, audio feedback, user preference-based responsiveness, and power optimization make the controller an adaptable and intuitive gaming peripheral.

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/03/2024
(21) Application No.202411022565 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : REAL-TIME FACIAL RECOGNITION SYSTEM USING IMAGE PROCESSING

(51) International classification	:G06N0003080000, G06N0003040000, G06F0016583000, G07C0009370000, G06T0007110000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
This invention relates to a real-time facial recognition system utilizing advanced image processing. The system captures image sequences in real-time, processes the images to isolate and normalize faces in each frame, and extracts a set of features from each face. The set of features is compared with known facial features stored in a database to identify matches. Unique features include capturing 3D depth information, compensating for lighting changes, using a convolutional neural network for feature extraction, and providing a probability score for matches. The system also triggers alerts for specific matches, updates the database in real-time, and manages privacy by anonymizing captured image data.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/03/2024
(21) Application No.202411022718 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD TO PREDICT IDIOPATHIC GENERALISED EPILEPSY

(51) International classification :G16H10/60, G16H20/70, G16H50/30, G06N3/08
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The disclosure describes a system for predicting idiopathic generalised epilepsy. The system includes a data input module that receives data related to various indicators such as patient data including family history, adverse drug reactions (ADR), anxiety, depression, stress, congenital birth defects (CBD), encephalitis, endocrine-metabolic-blood-immune disorders (EMBI), environmental heat and cold exposure (EHC), meningitis, dietary deficiency, poisoning, and substance abuse disorders (SAD). Said data is then processed by an Artificial Neural Network (ANN) for analysis. The system also features an output module that presents the prediction of idiopathic generalised epilepsy. Additionally, the data input module is equipped with dual interfaces one for manual entry and another for automated data import from electronic health records.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/03/2024
(21) Application No.202411022720 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM FOR ASSESSING THE EFFICIENCY OF SIMULATION TOOLS IN PARALLEL COMPUTING

(51) International classification	:G06F0017160000, G16H0050300000, G06F0015800000, G06Q0010060000, G06F0007544000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention introduces a system designed to assess the efficiency of simulation tools in parallel computing. This system comprises a processing unit that executes dense matrix multiplication algorithms and an evaluation module integrated with this unit. The evaluation module is responsible for comparing performance metrics across various simulation tools and analyzing their execution times in both sequential and parallel scenarios. Within the module is a performance metrics analysis unit, which analyzes these comparative results to ascertain the efficiency of the tools. This innovative system provides a comprehensive and accurate means to evaluate simulation tools, ensuring their effectiveness in parallel computing applications.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/03/2024
(21) Application No.202411022721 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM FOR PREDICTING NORTHEAST MONSOON RAINFALL

(51) International classification	:G06N0020000000, G06N0003080000, G01W0001100000, A61B0005000000, A61P0017060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present study discloses a system for predicting Northeast monsoon rainfall, primarily based on Sea Surface Temperature (SST) data analysis. The system comprises a data collection unit configured to collect SST data. A data processing unit is designed to preprocess said SST data for further analysis. A machine learning unit is equipped to analyze the SST data and identify patterns and correlations indicative of Northeast monsoon rainfall. Said processing unit employs a diverse array of techniques. Said techniques synergize to generate a prediction score for monsoon rainfall, enhancing the accuracy and reliability of monsoon forecasting.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/03/2024
(21) Application No.202411022722 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM FOR DETECTION OF CHRONIC VENOUS DISEASE

(51) International classification :G06T5/00, G01J5/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The disclosure introduces a system for the advanced detection of chronic venous disease using thermal imaging. The system incorporates a thermal imaging device and a remote server, with the latter applying a differential evolution algorithm to enhance image quality. The server further employs fuzzy entropy for multi-level thresholding, sharpening the distinction of affected regions. The result is a clear, detailed thermal image of the affected areas, displayed for diagnostic use. This innovative approach presents significant improvements over traditional methods, providing enhanced image clarity for early and accurate detection of chronic venous disease.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/03/2024
(21) Application No.202411022723 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : CYCLONE INTENSITY ANALYSIS AND EARLY WARNING SYSTEM FOR NATURAL DISASTER MANAGEMENT

(51) International classification	:H04L0065610000, G06T0005000000, H04L0067010000, G06Q0010060000, B04C0011000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The disclosure details a system for early detection of cyclone-intensive regions, aiding in the timely prediction and management of natural disasters. Central to this system is a computing device tasked with receiving satellite images of cyclones, which are then processed by a remote server. The server acquires these images and applies a modified differential evolution (DE) algorithm to each, creating segmented satellite images. These images are further refined for accuracy and smoothness using Renyi entropy within the modified DE algorithm, resulting in enhanced satellite imagery. The system also features a mechanism for segregating these images based on cyclone intensity levels. The enhanced and categorized images are displayed, facilitating the early identification of critical cyclone-intensive regions. This innovative approach, leveraging the modified DE algorithm and Renyi entropy, offers a significant improvement in the precision and timeliness of cyclone detection, making it an invaluable tool in natural disaster preparedness and response. Fig. 1

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/03/2024
(21) Application No.202411022724 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM FOR PREDICTING IDIOPATHIC EPILEPSY RELATED SEIZURE RECURRENCE IN INDIA BASED ON ENVIRONMENTAL STRESS

(51) International classification	:G06N0003040000, G06N0003080000, A61B0005000000, G16H0010600000, A61P0025080000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present disclosure provides a system for predicting idiopathic epilepsy related seizure recurrence, focusing on the impact of Environmental Heat and Cold Exposure (EHC). Said system includes a data gathering unit for collecting EHC data and a patient data module for acquiring patient-specific information. Said modules are linked to a data processing unit that processes both environmental stress and patient data. The system features a machine learning module, composed of an Artificial Neural Network (ANN), a Deep Short-Term Memory Neural Network (LSTM-NN), and a Decorrelated Neural Network Ensemble (DNNE). Said module analyzes the processed data to accurately predict idiopathic epilepsy related seizure recurrence, offering an approach in epilepsy management and prevention.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/03/2024
(21) Application No.202411022725 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : IMPACT OF CLIMATE CHANGE ON EPILEPSY AND OTHER NONCOMMUNICABLE DISEASES

(51) International classification	:G06F16/25, G06N3/08, G16H10/60, G16H50/20, G16H50/70
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present disclosure relates to a system designed for analyzing the impact of climate change on epilepsy and other noncommunicable diseases. The system incorporates a data retrieval module that gathers a first dataset comprising climate change parameters, and a medical data module that collects a second dataset concerning incidences of epilepsy and other noncommunicable diseases. Central to the system is a processing unit which is configured to analyse correlations between the two datasets, thereby elucidating potential relationships between climate change factors and the prevalence or severity of said diseases. FIG. 1

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/03/2024
(21) Application No.202411022726 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND A METHOD TO EVALUATE DERMATOLOGICAL CONDITION

(51) International classification :G06N3/0464, G06T1/00, G06T7/00, G06V10/82, G06V30/18
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
The present disclosure introduces a system for evaluating dermatological conditions through advanced image analysis. Said system includes an image acquisition unit for capturing skin condition images. A feature extraction unit utilizing a pre-trained convolutional neural network (CNN) model, specifically designed for dermatological data, to produce detailed feature maps. Said maps are further analyzed by a neural network analysis module. A classification engine is integrated with the neural network, computes probabilistic factor to accurately classify various skin conditions. Said system is supported by a memory unit for storing essential data and models, and an output interface generation module for visually presenting the classification results to the user. Fig. 1

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/03/2024
(21) Application No.202411022727 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD TO PREDICT INDIAN SUMMER MONSOON RAINFALL (ISMR)

(51) International classification	:G06N0003080000, G06N0003040000, G06Q0030020000, G06Q0010000000, G06Q0050180000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The current disclosure presents a system for predicting Indian Summer Monsoon Rainfall (ISMR), integrating meteorological data collection and processing techniques. The system includes a data collection module for gathering data related to Climate Predictors. A processing module, equipped with a De-correlated Regularized Random Vector Functional Link Neural Network Ensemble (DRRNE), analyses the gathered data. The DRRNE utilizes a unique combination of de-correlation and regularization techniques for enhanced data analysis. An analysis module interprets the processed data for ISMR prediction, while an output module provides the prediction results, thus offering a reliable approach for ISMR forecasting. Fig. 1

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/03/2024
(21) Application No.202411022728 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : RAINFALL PATTERNS USING LONG SHORT-TERM MEMORY AND REGRESSION TASK

(51) International classification	:G06N0003040000, G06N0003080000, G16H0040200000, G06Q0010040000, G06N0005020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present disclosure pertains to a system designed for predicting rainfall patterns. Said system integrates a data acquisition module for collecting climatic data. Said system further includes a data analytics engine, which processes the gathered climatic data. Central to the system's functionality is a predictive analytics module, which incorporates a Long Short-Term Memory (LSTM) network. Said network comprises at least two LSTM layers, each containing a minimum of 50 units, and is supplemented by a dense layer equipped for regression tasks. The LSTM network is finely tuned using an Adam optimizer. Additionally, a dedicated training module methodically trains the LSTM network using specific training data across a set number of epochs and batch sizes.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/03/2024
(21) Application No.202411022729 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM FOR IDENTIFICATION OF BREAST CANCER

(51) International classification :G06T7/00, G06T7/10, G06T7/136, G16H30/40
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
The disclosure relates to a system designed for early breast cancer detection by processing breast images with sophisticated algorithms. The system includes a computing device for receiving breast images and a server that performs advanced image segmentation. Utilizing a differential evolution (DE) algorithm, the server refines the segmented image, which is then processed with an Otsu technique to create a threshold segmented image. This image accentuates the contrasts within breast tissue, aiding in the early detection of potential cancerous changes. The threshold segmented image is then made available for analysis on the computing device, streamlining the diagnostic process and supporting healthcare professionals in early-stage cancer identification. This system provides an efficient, accurate, and user-friendly approach to breast cancer screening. FIG. 1

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/03/2024
(21) Application No.202411022774 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD TO PREDICT DISSOLUTION RATES OF POLY (LACTIC-CO-GLYCOLIC ACID) (PLGA) MICRO- AND NANOPARTICLES

(51) International classification	:G06F0030200000, G06N0003080000, E21B0043267000, C09K0008520000, A61K0009510000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The disclosure presents a system for predicting the dissolution rates of poly (lactic-co-glycolic acid) (PLGA) micro- and nanoparticles. The system comprises a data collection module that acquires both quantitative and qualitative characteristics of PLGA particles. A processing unit connected to the data collection module, employs a computational model to analyze said characteristics. Additionally, a prediction model within the processing unit assesses the analyzed characteristics to forecast the dissolution rates of PLGA micro- and nanoparticles. An output module then generates a user interface, effectively visualizing the predicted dissolution rates.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/03/2024
(21) Application No.202411023074 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SMART CITY DATA MANAGEMENT SYSTEM USING CLOUD COMPUTING

(51) International classification	:H04L0067120000, G06F0016290000, H04L0065403000, H04L0067306000, H04L0067100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The disclosure relates to a data management system tailored for optimizing smart city operations through a comprehensive cloud computing infrastructure that features distributed data storage solutions. The system integrates an extensive network of sensor nodes, dispersed throughout diverse city locales, with the express purpose of gathering real-time urban data. Within the cloud infrastructure resides a data aggregation engine, which serves the critical function of merging and pre-processing the amassed urban data. An analytics module, in synergy with the data aggregation engine, leverages artificial intelligence to meticulously analyze the integrated data, thereby generating practical insights. The capstone of the system is an integration platform, which forms a conduit between the analytics module and various city service applications, effectively enabling informed decision-making predicated on the analyzed data. The seamless interaction fosters a robust, data-centric approach to managing and enhancing the efficacy of smart city services.

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/03/2024
(21) Application No.202411023076 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AUGMENTED REALITY INTEGRATION IN PORTABLE COMPUTING DEVICES

(51) International classification	:G06F0003010000, G06T0019000000, H04N0005225000, H04N0005232000, G02B0027010000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Introducing a system designed to seamlessly integrate augmented reality (AR) capabilities into portable computing devices. The system utilizes a camera module that continuously captures real-time environmental visuals. The AR processing unit, in tandem with the camera, superimposes virtual entities or data onto the real-world imagery. Concurrently, a sophisticated display unit showcases the enriched visual amalgamation to the user, offering an immersive experience. To enhance authenticity and realism, an array of sensors continuously gauges device orientation, positional shifts, and environmental nuances, ensuring the AR overlays align precisely with real-world dynamics. Pivotal to user engagement, an interactive module is incorporated, granting users the capability to engage with, and adapt, the augmented elements displayed, thereby ensuring an interactive and transformative AR experience.

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/03/2024
(21) Application No.202411023079 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : QUANTUM COMPUTING ENHANCED SECURITY FOR ONLINE GAMING

(51) International classification	:G06N0010000000, H04L0009080000, G07F0017320000, H04L0009320000, G06F0021570000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The disclosure introduces a system designed to bolster security in the realm of online gaming, leveraging the unparalleled potential of quantum computing. At the heart of the system is a quantum processor, specifically configured to generate quantum-secure encryption keys, a quantum leap in data protection. An encryption module, operationally intertwined with the quantum processor, encrypts online gaming data employing said quantum-secure keys, rendering data virtually impregnable. In parallel, a decryption module, seamlessly integrated within the gaming server, decrypts the encrypted gaming data using corresponding quantum-secure decryption keys, ensuring data integrity and confidentiality. A secure communication channel, facilitated by the quantum processor, establishes a fortified conduit between the gaming client and server, further solidifying the system's defense against intrusion. Complementing the architecture, a security monitoring module, operationally linked to the gaming server, diligently surveils for potential quantum-based security threats. By pre-emptively addressing the vulnerabilities in traditional encryption methods, the system not only elevates the security standards of online gaming but also proof the online gaming against the emerging threats in the quantum era.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/03/2024
(21) Application No.202411022775 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : HEALTHCARE DECISION SUPPORT SYSTEMS

(51) International classification :A61B0005000000, A61B0005020500, G16H0040670000, A61B0005024000, A61B0005145500
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed herein a healthcare decision support system designed to enhance patient monitoring and emergency response in medical settings. Said system includes a plurality of wearable sensors that gather vital signs from patients, such as heart rate, blood pressure, and oxygen saturation. Said vital signs are then transmitted through a data transmission engine, ensuring secure and efficient data flow. The transmitted vital signs are received by a processing unit that is responsible for analyzing the received data, facilitating timely and accurate healthcare decision-making based on the patient's current health status.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/03/2024
(21) Application No.202411022776 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM TO ENCRYPT DATA

(51) International classification :H04L0009060000, H04L0009000000, H04L0009300000, G06F0021620000, H04L0009080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure relates to a system designed to enhance the security of Caesar Cipher encryption. It includes a computing device for receiving plaintext and a server arrangement for processing this plaintext. The server arrangement generates a random key and analyzes each plaintext character to identify its ASCII value. The system uniquely enhances encryption security by manipulating these ASCII values based on predefined ranges. It replaces or alters ASCII values, then conducts a series of arithmetic and modulus or division operations to generate a final encrypted value. This final value is stored and displayed as ciphertext, representing the encrypted form of the original plaintext. This system introduces an advanced level of security to the Caesar Cipher method, making it more resistant to modern cryptographic challenges while maintaining the integrity of the encrypted data. FIG. 1

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/03/2024
(21) Application No.202411022777 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : POWERED SQUARE BALER

(51) International classification	:A01F0015080000, A01F0015100000, A01F0015040000, A01F0015140000, F04B0009040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The disclosure presents a powered square baler designed for agricultural use, encompassing advanced mechanisms for efficient baling. The baler comprises a pick-up and pre-compression chamber for initial crop processing, a subsequent baling chamber, and a loading mechanism for transferring crop material. A reciprocating plunger assembly, featuring a slidably mounted plunger head and connecting arms, which enable effective compression within the baling chamber. The baler also includes a rotatably mounted flywheel and a unique plunger drive, consisting of dual planetary gear trains and a shared drive shaft. These gear trains, connected to the plunger assembly, cooperatively power the reciprocating motion of the plunger into and out of the baling chamber, applying the necessary compressive force to form bales. The proposed disclosure enhances the baling process, improving efficiency and reliability in agricultural baling operations. FIG. 1

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/03/2024
(21) Application No.202411022779 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM FOR IDENTIFYING DISEASES IN GARDEN PLANTS

(51) International classification	:H04N0007180000, G01C0021000000, H04N0019610000, G08B0013196000, H04N0009040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present study is a system for identifying diseases in garden plants, encompassing an integrated approach using an image sensor, a data transmission module, and a processing unit. The image sensor is tasked with capturing detailed images of garden plants. Said images are then transmitted via the operationally connected data transmission module. The processing unit receives said transmitted images. Said processing unit executes the task of analyzing and identifying potential diseases affecting the garden plants is executed. Fig. 1

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/03/2024
(21) Application No.202411022583 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : USER-FRIENDLY BRAIN-COMPUTER INTERFACE FOR IMPROVED ACCESSIBILITY IN ASSISTIVE TECHNOLOGY

(51) International classification	:A61B0005000000, G06F0003010000, A61B0005369000, A61B0005291000, G06N0020000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Abstract The present invention relates to a user-friendly brain-computer interface (BCI) system for improved accessibility in assistive technology. The system comprises a BCI device capable of detecting and interpreting brain activity using electroencephalography (EEG) sensors and a software program configured to translate the brain activity into actionable commands. The system also includes an assistive technology device capable of receiving and executing the commands, as well as a user interface module for adjusting settings and preferences of the BCI system. The user interface module includes a graphical user interface and voice recognition technology for ease of use. The BCI device further comprises a microcontroller for processing the detected brain activity, and the software program includes a machine learning module for improving the accuracy of the interpretation of brain activity. The system also includes a wireless communication module for transmitting data between the BCI device, the software program, and the assistive technology device. The invention provides a method for improved accessibility in assistive technology by detecting and interpreting brain activity, translating it into actionable commands, and transmitting them to the assistive technology device for execution.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/03/2024
(21) Application No.202411022591 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM FOR CREATING VIRTUAL REALITY INTERACTIVE STORYBOOKS

(51) International classification	:G06T0019000000, G06F0003010000, G06Q0050100000, G06Q0010100000, G09B0005060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention provides a system and method for creating virtual reality interactive storybooks that allow users to actively participate in the narrative and influence the outcome of the story. The system includes a database storing digital assets, an input module, a processing module, a storybook generation module, and a rendering module. The system may further include a narration module, a customization module, a progress tracking module, an analytics module, and a sharing module. The method involves receiving user input through the input module to select story elements, characters, and environments for the interactive storybook. The processing module retrieves the selected digital assets from the database, and the storybook generation module creates a VR scene using the digital assets, generating interactive objects and events based on pre-determined story elements. The rendering module then displays the VR scene on a user device capable of displaying virtual reality content, enabling the user to interact with the VR scene and engage with the interactive storybook. The system and method offer a new way to experience storytelling and provide an immersive and interactive experience for the user.

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/03/2024
(21) Application No.202411023359 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ULTRA LOW POWER SENSOR NETWORK FOR IOT APPLICATIONS

(51) International classification	:H04W0084180000, H04W0004380000, H04W0004800000, H04L0067125000, H04W0004700000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Introducing a sensor network tailored for the burgeoning realm of Internet of Things (IoT) implementations. The system uniquely amalgamates a suite of ultra-low power sensors, each meticulously engineered to record nuanced environmental metrics. Centrally orchestrating the vast sensory orchestra is a processing hub, characterized by the judicious energy-efficient data processing prowess. Bridging the symphony between sensors and the hub is a bespoke communication protocol, meticulously designed to champion low-power data transmissions, ensuring longevity and sustainability. Elevating the network's autonomy, each sensor is endowed with a pioneering energy harvesting module. The module, functioning as the lifeline of the sensor, adeptly harnesses power from the very environmental ambient sources said module monitors, creating a sustainable loop of energy consumption and data acquisition for the IoT landscape.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/03/2024
(21) Application No.202411023364 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ARTIFICIAL SKIN SENSORS FOR ROBOTIC APPLICATIONS

(51) International classification :A61B0090000000, A61L0027600000, A61B0005000000, G01L0005220000, G01L0001200000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
A system for tactile sensing in robotic applications includes an artificial skin sensor layer with pressure-sensitive elements replicating human skin sensitivity. A processing unit interprets tactile data received from the sensor layer, influencing the operation of a robotic component. The pressure-sensitive elements may be capacitive sensors, and the system can create a tactile map. The flexible substrate of the artificial skin layer is biocompatible and capable of detecting temperature changes and shear force. The system is applicable to robotic hands, enabling grip strength adjustments based on tactile data. The method involves covering a robotic component with the artificial skin sensor layer, collecting tactile data during operation, and interpreting it with the processing unit to influence subsequent robotic operations.

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/03/2024
(21) Application No.202411023365 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : BRAIN-COMPUTER INTERFACE FOR REAL-TIME DETECTION AND CLASSIFICATION OF SEIZURES IN EPILEPSY PATIENT

(51) International classification	:A61B0005000000, G06F0003010000, A61B0005291000, A61B0005369000, A61B0005374000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract The present invention relates to a brain-computer interface (BCI) system for real-time detection and classification of seizures in epilepsy patients. The BCI system comprises a plurality of electroencephalography (EEG) electrodes, an amplifier connected to the electrodes, a signal processing unit, a seizure detection module, a seizure classification module, and a user interface. The signal processing unit performs preprocessing steps on the amplified brain signals, such as filtering and artifact removal. The seizure detection module employs a machine learning algorithm to identify potential seizure events, and the seizure classification module classifies the identified seizure events into different types of seizures based on features extracted from the processed brain signals. The user interface presents the classified seizure events in a graphical format, and an alert system notifies the user or a caregiver when a seizure event is detected and classified. The EEG electrodes can be wireless and connected to the amplifier via a wireless communication protocol. The invention also encompasses a method for real-time detection and classification of seizures using the BCI system.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/03/2024
(21) Application No.202411023366 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ROBOT-ASSISTED REHABILITATION DEVICES FOR PATIENTS WITH MOTOR IMPAIRMENTS

(51) International classification	:A61H0001020000, A61B0034300000, A63B0021000000, G16H0020300000, A61B0090000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract The present invention discloses a robot-assisted rehabilitation device equipped with a robotic arm featuring adjustable resistance, a virtual reality (VR) system integrated with the user interface, and a control unit employing machine learning algorithms. This device aims to provide enhanced rehabilitation outcomes for patients with motor impairments by offering customizable resistance levels during movement assistance, immersive exercises and interactive games through VR integration, and adaptive assistance based on individual progress and performance.

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/03/2024
(21) Application No.202411023371 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : MAXIMIZING REMOVAL RATE COEFFICIENTS OF TARGETED POLLUTANTS THROUGH OPTIMIZATION OF FILLER MEDIA DEPTH IN HORIZONTAL FLOW CONSTRUCTED WETLANDS

(51) International classification	:C02F0003320000, G06N0003000000, G06N0020000000, G06Q0010040000, A61P0001040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
“Maximizing Removal Rate Coefficients of Targeted Pollutants through Optimization of Filler Media Depth in Horizontal Flow Constructed Wetlands” The present invention Varying the depth of HFCW media causes differences in the redox status within the system, and hence the community structure and diversity of bacteria, affecting removal rates of different pollutants. The key functional microorganisms of CWs that remove contaminants belong to the phyla Proteobacteria, Bacteroidetes, Actinobacteria, and Firmicutes. Secondary data of 111 HFCWs (1232 datasets) were analyzed to deduce the relationship between volumetric removal rate coefficients (KBOD, KTN, KTKN, and KTP) and depth. Equations of depth were derived in terms of rate coefficients using machine learning approach (MLR and SVR) (R2=0.85, 0.87 respectively). These equations were then used to find the optimum depth for pollutant(s) removal using Grey wolf optimization (GWO). The computed optimum depths were 1.48, 1.71, 1.91, 2.09, and 2.14 m for the removal of BOD, TKN, TN, TP, and combined nutrients, respectively, which were validated through primary data. This study would be helpful for the optimal design of HFCWs. These optimal depths would be helpful in a reduction in the area of constructed wetlands by 42% for BOD, 38% for TN, and 46% for TP. For HFCWs with an area exceeding 5 m2 up to 150 m2, the corresponding percentage reductions were 62% for BOD, 58% for TN, and 65 % for TP, respectively.

No. of Pages : 19 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/03/2024
(21) Application No.202411023404 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : METHOD FOR GENERATING AUGMENTED REALITY DISASTER RESPONSE TRAINING

(51) International classification	:G06T0019000000, G06F0003010000, A63B0071060000, G09B0019000000, G06F0003048150
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract The patent describes a method and system for generating augmented reality (AR) disaster response training using a location-enabled device. The method involves obtaining disaster scenario data from a database, user's location data, and generating an AR scene by overlaying disaster scenario data onto a real-world view captured by a camera. Interactive training elements are provided within the AR scene, and the AR scene is displayed on the location-enabled device. The system includes a database, location-enabled device, AR scene generation module, interactive training elements module, and display module. The method also includes customizing the AR scene based on user preferences, providing real-time feedback to the user, tracking user performance data, analyzing the data to provide personalized recommendations, and allowing collaboration between multiple users. The invention also allows for integration with external devices such as wearable devices, emergency response equipment, and communication devices.

No. of Pages : 27 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/03/2024
(21) Application No.202411023409 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : NEUROFEEDBACK TRAINING USING BRAIN-COMPUTER INTERFACE FOR TREATMENT OF ADHD

(51) International classification	:A61B0005000000, G06F0003010000, A61B0005375000, A61B0005369000, A61B0005160000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract The present invention relates to a neurofeedback training system for treating Attention Deficit Hyperactivity Disorder (ADHD) in a subject. The system comprises a brain-computer interface (BCI) that acquires real-time electroencephalographic (EEG) data from the subject, a processing unit that extracts relevant EEG features indicative of ADHD symptoms, a feedback module that generates neurofeedback stimuli based on the extracted EEG features, and a display unit that presents the neurofeedback stimuli to the subject. The system trains the subject to modulate their brain activity in response to the stimuli, reducing ADHD symptoms. The method involves positioning the BCI on the subject's head, acquiring real-time EEG data, processing the data, generating neurofeedback stimuli, and presenting them to the subject via the display unit. The intensity, frequency, or duration of the neurofeedback stimuli can be adjusted based on the subject's progress, and a customized training protocol can be tailored to the subject's specific ADHD symptomatology and neurophysiological characteristics. The invention provides a non-invasive and drug-free alternative to traditional ADHD treatments.

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/03/2024
(21) Application No.202411023410 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : PREDICTIVE GAME PERFORMANCE OPTIMIZATION FOR ONLINE GAMING

(51) International classification	:A63F0013790000, G07F0017320000, G06Q0030020000, G06N0005040000, A63F0013670000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Presenting a system crafted to revolutionize the realm of online gaming by harnessing predictive game performance optimization. Central to the system is the player behavior analytics module, meticulously designed to surveil and catalog the nuances of individual player activities and tendencies. Coupled with the analytics module, the predictive algorithm unit operates, drawing insights from historical gameplay data, thereby forecasting forthcoming player maneuvers. Acting on said predictions, the game resource allocation module dynamically reallocates in-game assets, ensuring a fluid and responsive gaming milieu tailored to anticipated player actions. An embedded feedback interface fosters a two-way dialogue, enabling players to voice their gameplay performance experiences, thereby refining system predictions. Underpinning the setup is the cloud-based synchronization hub, a pivotal component ensuring that the seamless gaming experience transcends sessions and is ubiquitously available across varied devices. The pioneering system is poised to redefine online gaming, merging predictive analytics with real-time adaptability.

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/03/2024
(21) Application No.202411022567 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : COGNITIVE ROBOTICS IN PERSONALIZED TUTORING APPLICATIONS

(51) International classification	:B25J0009160000, G06N0005020000, G06Q0030020000, G05D0001000000, H04W0072040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract The present invention relates to a cognitive robotic system for personalized tutoring applications. The system comprises an autonomous robotic device equipped with artificial intelligence capabilities, engagement sensors, and a communication interface. It also includes a remote control station for sending commands and receiving data, as well as a user interface for user-device interaction.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/03/2024
(21) Application No.202411022570 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : TELEPRESENCE ROBOTS FOR VIRTUAL MEETINGS

(51) International classification :B25J0009160000, H04N0007140000, B25J0011000000, G16H0040670000, B25J0005000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention discloses a telepresence robot system designed to enhance virtual meetings. The system comprises a mobile platform with wheels for navigation, an extensible robotic arm for physical interactions, a display screen for visual representation, a microphone and speaker for two-way audio communication, a camera for capturing video and images, a processor for controlling robot movement and processing input, and a network interface module for remote communication.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/03/2024
(21) Application No.202411022573 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : METHOD FOR GENERATING AUGMENTED REALITY SAFETY TRAINING

(51) International classification	:G06T0019000000, G06Q0050200000, G09B0009000000, G09B0019000000, A63B0024000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract The present invention discloses a method and system for generating augmented reality (AR) safety training content. The method involves receiving user input to select safety training scenarios and retrieving information from a database to create an AR scene using digital assets and pre-determined safety training parameters. Interactive AR elements are generated, including virtual hazards, safety equipment, and instructional cues, and rendered on a user device capable of displaying AR content. The system includes a monitoring feature that analyzes user performance and provides personalized feedback to enhance the effectiveness of the safety training program. The safety training scenarios are selected from a range of industries, and the database can be continuously updated, enabling continuous improvement and adaptation of the AR safety training content

No. of Pages : 27 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/04/2024
(21) Application No.202411028083 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ROBOTIC ASSISTANTS FOR THE VISUALLY IMPAIRED

(51) International classification	:G08B0021040000, A61H0003060000, A61B0005110000, G06Q0030060000, G05D0001020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present disclosure provides a shopping assistant robot for blind people, comprising: a navigation system that includes an infrared sensor and a light detection and ranging (LIDAR) sensor for obstacle detection and environmental mapping; a user tracking system that includes a Bluetooth module and an ultra-wideband (UWB) positioning system, to enable tracking of the distance and position between the shopping assistant robot and a remote operated by the blind user; a driving unit with omni-directional wheels, enabling a 360-degree rotation for maneuvering in diverse settings; a height adjustment system, featuring a telescopic column mechanism for height alteration; a fall detection system to detect sudden movements or tilts and trigger immediate safety responses; and a control unit for integrated operation of the navigation system, driving unit, and height adjustment mechanism, enabling coordinated and responsive movement and user interaction.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/04/2024
(21) Application No.202411028084 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ROBOTIC COOK AUTOMATED MEAL PREPARATION AND COOKING

(51) International classification	:B25J0009160000, B25J0011000000, B25J0009000000, B25J0005000000, G07F0017000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present disclosure provides an apparatus (100) for preparing food. The apparatus comprises at least one movable robot (102) comprising a multi-axis robotic arm (104) to move food containers between multiple positions within a cooking area and to stir food within a cooking pan. Interchangeable end effectors (106) attached to the multi-axis robotic arm perform multiple cooking tasks. A cleaning system (108) is included to clean the cooking pan post-cooking, operable by the multi-axis robotic arm (104). An automated dispensing system (110) for ingredients, connected to a food storage area, dispenses predetermined quantities of ingredients into the cooking pan as per cooking instructions. Additionally, a control unit (112) is programmed by a user to provide cooking instructions, wherein the control unit (112) controls the operation of the multi-axis robotic arm (104), interchangeable end effectors (106), cleaning system (110), and automated dispensing system (110) to prepare food according to the provided cooking instructions.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/04/2024
(21) Application No.202411028086 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : WEARABLE ASSISTIVE DEVICE FOR PARKINSON'S TREMORS

(51) International classification	:B60R0011020000, H02J0007000000, A61B0005110000, A61B0005000000, A63B0069000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present disclosure provides a walking induction improving device for a user with parkinsonism, comprising: a main mounting strap to secure around a user's limb, including a control insole for placement inside a footwear of the user, having a front surface, and a back surface; an outer installation rubber plate affixed to the front surface; a clamping mechanism disposed at the outer installation rubber plate, including a locking mechanism; an installation base plate movably connected within the outer installation rubber plate, positioned through the clamping mechanism to facilitate adjustable and secure placement relative to the movement needs of user; a ray emitter mounted on the installation base plate, with the adjustable ray emitter enabling customizable orientation and angle adjustment to optimize therapeutic efficacy based on individual user requirements; multiple pressure-sensitive insoles disposed within the control insole, measuring and responding to variations in pressure distribution as the user walks; a joint angle inductor located inside the main mounting strap at a joint area, to detect changes in a joint angle and provide data for the operational control of the ray emitter; and a speaker power pack affixed to the outer surface of the main mounting strap, with a speaker connected to the power pack and electrically linked to the joint angle inductor, providing an auditory feedback based on the detected changes and the measured variations in pressure distribution.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/04/2024
(21) Application No.202411028090 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : REMOTE SENSING APPLICATION FOR WATER QUALITY MANAGEMENT

(51) International classification	:G01D0005140000, G01R0015200000, G09G0005020000, G01R0033070000, H03K0017950000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :
ABSTRACT The present disclosure provides a remote sensing system for water quality management, comprising a base unit deployable in a water body; a valve mechanism within the base unit, movable between a closed position to block water sample intake, and an open position to allow water sample collection; a magnetic element, coupled with the valve mechanism, wherein the magnetic element aligns with a sensor bore of the base unit in the open position and to misalign in the closed position; an adjustable magnet mount, associated with the magnetic element, wherein the adjustable magnet mount incorporates a guided sensor track and a magnetic field enhancer, surrounding the sensor bore, wherein the adjustable magnet mount enables positional adjustments to optimize alignment with the sensor bore; a metal rod positioned within the sensor bore, to interact with the magnetic element and the magnetic field enhancer to indicate the position of the valve mechanism; and a hall effect sensor located within the base unit and aligned with the sensor bore, wherein the hall effect sensor is configured to be switch on when the magnetic element is aligned with the sensor bore in the open position of the valve mechanism, and to switch off when misaligned in the closed position.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/04/2024
(21) Application No.202411028047 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : VIDEO CONTENT ANALYSIS FOR ENHANCED SEARCH ENGINE OPTIMIZATION

(51) International classification	:G06F0016951000, G06F0016245700, H04N0021810000, G06F0016953500, G06F0016710000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A video content analysis system for enhanced search engine optimization is disclosed. The system comprises a video analysis module that analyzes video content and extracts relevant metadata. A keyword identification module identifies keywords and key phrases from the analyzed video content. A search engine optimization module optimizes the video content based on the identified keywords and key phrases. A performance tracking module monitors the impact of the optimized video content on search engine rankings. Finally, a reporting module generates reports on the search engine optimization performance of the video content. This system provides an efficient and automated approach to optimize video content for improved visibility and ranking on search engines, ultimately enhancing search engine optimization strategies for video-based content.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/04/2024
(21) Application No.202411028048 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AUTONOMOUS ROBOTIC SURGERY SYSTEM

(51) International classification	:A61B0034300000, A61B0017000000, A61B0034000000, A61B0090000000, A61B0017290000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT Disclosed is an autonomous robotic surgery system, comprising a base and a first arm connected to the base and rotatable about a first axis with a first radius of rotation. A second arm is connected to the first arm and is rotatable about a second axis with a second radius of rotation. A third arm connects the second arm to a handle, the third arm being rotatable about a fourth axis with a fourth radius of rotation, wherein the sum of the second radius and the fourth radius is greater than the first radius. The handle is rotatable about a third axis, wherein the first axis, the second axis, the third axis, and the fourth axis intersect at a point coinciding with the center of rotation of a wrist of a user when the handle is gripped. An adjustable arm length mechanism is incorporated in at least one of the first, second, or third arms, to enable alteration of the radii of rotation for enhanced reach. An articulation mechanism connects the first, second, and third arms, as well as at the base of the handle, providing improved movements of the robot. An enhanced mobility base comprises a mechanism for repositioning of the robotic surgery system, enabling optimal alignment with the surgical workspace and ease of transport within the surgical environment.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/04/2024
(21) Application No.202411028055 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM FOR CREATING VIRTUAL REALITY HISTORICAL REENACTMENTS

(51) International classification	:G06F0003010000, G06T0019000000, G09B0019000000, G06F0003048150, G06T0015000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract The present invention is a system and method for creating virtual reality (VR) historical reenactments. The system comprises a historical database containing information related to historical events, characters, and environments; a virtual reality engine configured to generate a virtual environment based on said historical information; an input module configured to receive user input for customizing said virtual environment; a rendering module configured to render said virtual environment and historical reenactment in VR; and a display module configured to display said rendered VR historical reenactment on a VR headset or compatible display device. The system also includes several additional modules, such as an AI module for simulating historically accurate behaviors, a multi-user module for enabling multiple users to participate simultaneously, and an educational module for providing contextual information and quizzes. The method involves accessing the historical database, generating the virtual environment, receiving user input, rendering the environment and historical reenactment in VR, and displaying it on a compatible device. The system and method enable users to experience and interact with historical events and environments in a virtual reality setting.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/03/2024
(21) Application No.202411023083 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : NON-INVASIVE BRAIN-COMPUTER INTERFACE FOR MOTOR IMAGERY-BASED CONTROL

(51) International classification	:G06F0003010000, A61B0005000000, A61B0005369000, A61B0005375000, A61B0005291000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Abstract A non-invasive brain-computer interface system for motor imagery-based control includes a headset with electroencephalography (EEG) sensors to detect user brain activity, a computing device for processing and analyzing the detected brain activity to generate control signals, a user interface for displaying feedback and interacting with the user, and a control module for receiving control signals and controlling external devices. The computing device employs signal processing techniques and machine learning algorithms, such as support vector machines, neural networks, or deep learning models, to classify brain activity into motor imagery categories. The user interface provides real-time feedback, and the control module utilizes an API to control various external devices. The system further comprises a training module for calibration and improved accuracy of control signals. A method for controlling external devices using the system is also disclosed, which includes training for recognizing user-specific brain activity patterns.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :14/04/2024
(21) Application No.202411030076 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : IMAGE PROCESSING TECHNIQUES FOR MICROSCOPY

(51) International classification	:F16C0032040000, G02B0021240000, G06T0007000000, H04N0001000000, G01N0035020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT Disclosed is an image processing system (100) for medical microscopic image analysis, comprising: a base structure (102) supporting the components of the image processing system (100), wherein the base structure (102) comprises a front section (102-A) and a rear section (102-B); a high-precision focusing mechanism (104) disposed at the front section (102-A), wherein the high-precision focusing mechanism (104) comprises an active magnetic bearing system (106) to facilitate vibration-free focal length adjustments for the multiple objective lenses; a high-resolution digital scanning camera (108) mounted on the high-precision focusing mechanism (104), aligned vertically downwards towards a scanning main light source (110), and comprising a plurality of piezoelectric actuators (112) for precise positioning and focusing adjustments; an automated sample movement mechanism (114) disposed at the rear section (102-B), wherein the automated sample movement mechanism (114) comprising a dynamic balancing system (116) to enable controlled movement of a sample slide (118) among multiple stations selected from a delivery station, a scanning station, and a global imaging station; a sample leveling mechanism (120) coupled to the automated sample movement mechanism (114), responsible for securing the sample slide (118) and ensuring the parallel alignment in the horizontal direction; and a control unit (122) for conducting the quantitative and qualitative assessments, feature detection, and morphological analysis of the captured microscopic images.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :14/04/2024
(21) Application No.202411030077 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : DETERMINE IMPACT OF PROLONG USE OF BRAIN-COMPUTER INTERFACE ON NEURAL FUNCTION AND PLASTICITY

(51) International classification :A61B0005000000, G06F0003010000, A61N0001360000, G06N0003080000, G06N0020000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
Abstract The described brain-computer interface (BCI) system is an innovative invention designed to assess the impact of prolonged BCI use on neural function and plasticity. It comprises a brainwave detection module, a data processing module, a neural analysis module, and a report generation module. The brainwave detection module acquires EEG signals using a non-invasive EEG headset over a specified duration. The data processing module converts the acquired EEG signals into interpretable data using machine learning algorithms. The neural analysis module assesses the impact on neural function and plasticity using neuroplasticity assessment algorithms. The report generation module generates comprehensive reports detailing the changes in neural function and plasticity over time, presented in a user-friendly manner. The system may include a user interface module, a predictive module, and an intervention recommendation module. Data privacy and user consent are ensured through a data encryption module and a user consent module. The system can be customized based on user preferences and integrated with other health monitoring systems. Compliance with standards and regulations is maintained throughout. This BCI system offers valuable insights into the effects of prolonged BCI use while prioritizing privacy and user control.

No. of Pages : 27 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :14/04/2024
(21) Application No.202411030080 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : DISEASE DETECTION AND MANAGEMENT SYSTEM

(51) International classification	:G06Q0010100000, G06N0020000000, G16H0010600000, G16H0040200000, G16H0040670000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present disclosure pertains to a healthcare system for the detection and prediction of diseases. The system comprises a data collection module for acquiring patient data, and a robust data processing engine. Said engine pre-processes the data, assembles a training dataset, and employs machine learning algorithms to develop a predictive model. The validity of said model is confirmed using a dataset subset, with the results indicating potential disease presence. Additionally, a conversational interface platform is integrated for dynamic patient communication, facilitating the prediction process. An appointment scheduling module is linked to the engine, arranging consultations with healthcare providers based on the diagnostic outcomes. Said system enhances early diagnosis and optimizes patient-provider coordination.

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :14/04/2024
(21) Application No.202411030085 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AUTONOMOUS TRANSPORTATION SYSTEM

(51) International classification	:B64C0039020000, B60T0007220000, G05D0001020000, G05D0001100000, H04W0004800000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present disclosure provides an autonomous transportation system (100) comprising a trailer drone vehicle (102) powered by hydrogen fuel cell technology, configured to convert hydrogen into electricity; a plurality of e-bogies (104) mounted to the trailer drone vehicle (102), each e-bogie capable of operating independently or in cluster mode, the e-bogies facilitating bi-directional movement of the trailer drone vehicle (102); a suite of sensors (106) integrated into the trailer drone vehicle (102), configured to collect data relevant to the vehicle's immediate surroundings; an artificial intelligence unit (108) embedded within the trailer drone vehicle (102), utilizing Proximal Policy Optimization algorithms for making decisions in response to critical situations and emergencies based on data collected by the suite of sensors (106); an autonomous emergency braking system (110) included within the trailer drone vehicle (102), configured to activate in response to detected obstacles or hazardous conditions; a momentum control system (112), adapted to manage the power output from the hydrogen fuel cell technology to ensure efficient acceleration and deceleration under varying load conditions; and an automated unloading system (114), to facilitate the disbursement of cargo from the trailer drone vehicle (102) without manual intervention.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/04/2024
(21) Application No.202411031976 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A COMPRESSED AIR PRIME-MOVER

(51) International classification	:F02B0021000000, F02C0001040000, B60K0006120000, F02C0006160000, F02D0041020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT A compressed air prime-mover The invention involves the transfer of compressed air from a tank (100) to supply conduits (400 and 500) via an injector regulator (300), with provision for pressure indication (200). These conduits connect to the prime-mover's cylinder chamber (600 and 700), where the compressed air drives pistons to generate mechanical work, such as vehicle propulsion or turbine rotation. Compressed air from the prime-mover passes through outlets or silencers (800 and 900) to an air compressor (1000), which compresses the air and returns it to the tank through pipes (1100). The tank features an outlet regulator (1200) and pipe (1300) for effective storage and supply of compressed air to the prime-mover. FIG. 1 is the reference figure.

No. of Pages : 23 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/04/2024
(21) Application No.202411028091 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ROBOTIC SAFETY SYSTEMS FOR AUTONOMOUS FACTORIES

(51) International classification	:B25J0009160000, A61B0018140000, G05D0001020000, B05B0001160000, B05B0012120000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT Disclosed is an autonomous factory robotic safety system comprising: a robotic cannon unit housed within a spherical housing, rotating to predetermined angles along horizontal and vertical axes through a base hinge mechanism for vertical movements and an integrated rotation system for horizontal movements; a multiple nozzle system mounted on the spherical housing, wherein each nozzle sprays multiple liquids, and the multiple nozzle system comprises a mechanism to facilitate diverse spray patterns and liquid types; an automated load balancing system integrated within the spherical housing, to adjust weight distribution during operation of the multi-nozzle system; quick-disconnect fittings coupled to the multiple nozzle system, facilitating maintenance and fluid replenishment; at least one direct current (DC) step motor, responsible for the precise and controlled rotation of the robotic cannon unit, ensuring accurate alignment and targeting; and a control unit for analyzing the plurality of input signals from a network of sensors and the input devices to identify hazardous conditions and targets within the factory environment and control a supply of electrical energy to each DC step motor.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :17/04/2024
(21) Application No.202411030707 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM FOR GENERATING PERSONALIZED MEDICAL RECOMMENDATIONS

(51) International classification	:G16H0010600000, G06N0003040000, G06N0003080000, G16H0050200000, G16H0050700000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract The present disclosure provides a system for generating personalized medical recommendations. The system comprises a patient database configured to store demographic data, medical history, symptom presence, and medical images for a plurality of patients; a data acquisition module configured to collect said demographic data comprising age, gender, and occupation, said medical history comprising a disease level rating, said symptom presence indicated by a binary value, and said medical images from said patient database; a deep learning architecture configured to extract features from said medical images to create a compact profile for each patient, wherein said deep learning architecture is selected from a group consisting of Convolutional Neural Networks (CNNs), Residual Networks (ResNets), U-Net, DenseNet, and Inception Networks; a feature fuzzification unit configured to apply fuzzy logic to said demographic data to transform at least one demographic parameter into a fuzzy set; an evolutionary technique configured to optimize weights assigned to each feature of patient profile; and a recommendation engine configured to employ similarity metrics to compare compact profiles of patients, identify similar patient profiles based on optimized feature weights, and generate personalized medical recommendations based on said similar patient profiles, wherein said recommendations include at least one of medicine prescriptions and early diagnosis suggestions, thereby enhancing the accuracy of early disease diagnosis.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/04/2024

(21) Application No.202411034098 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : WATER TREATMENT SYSTEM AND METHOD THEREOF

(51) International classification :C02F1/28, C02F1/32, C02F1/44, C02F9/20
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT ‘‘Water treatment system and method thereof” The present invention provides sophisticated water treatment and reuse system designed for residential and commercial applications aims to purify non-potable water sources, such as greywater from sinks, laundry facilities, and showers, for safe and efficient reuse.

No. of Pages : 15 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :18/04/2024
(21) Application No.202411031152 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SYSTEM FOR CASTING MOLD BUFFING AND METHOD THEREOF

(51) International classification	:B22C0009080000, B22C0009060000, F25B0001100000, A61B0090000000, H04W0052140000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention provides a system for buffing casting mold (100) and method thereof to perform buffing of the mold to improve the cooling rate of casted ingot and eventually increase the life of the casting mold. The system for mold buffing casting (100) comprises of plurality of adjustable base channels (102) provided with plurality of bearing blocks (104) defining an adjustable supporting structure for a buffing wheel (106) mounted on an adjustable shaft (108), and a motor (110) coupled to the adjustable shaft (108) to transmit power required to rotate the adjustable buffing wheel (106), wherein the angle and height of the buffing wheel (106) is adjusted by moving the bearing blocks (104), vertically up or down, either alone or together; and the width of the system for casting mold buffing (100) is adjustable via the adjustable base channels (102).

No. of Pages : 16 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :18/04/2024
(21) Application No.202411031159 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR MONITORING HEALTH OF USERS WITH PHYSICAL DISABILITY

(51) International classification	:A61B0005000000, A47G0009020000, H04N0021810000, A61B0005145000, A61B0005020500
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present disclosure provides a system (108) and a method for healthcare of users with physical disability. The system (108) includes sensor(s) (110) to detect one or more physiological parameters of a primary user (116) (patient) with physical disability, input device(s) (112) to detect an input from the primary user (116), and output device(s) (114) to generate an output from the system (108). The system (108) detects, the physiological parameters and the input (voluntary and involuntary) of the primary user (116), via the sensors (110) and the input devices (112) at predetermined periods, analyzes the physiological parameters and the input, using an Artificial Intelligence (AI) engine, detects and predicts issue(s) with a health of the primary user (116), and alerts secondary user(s) (102) via computing devices (104). The sensor(s) (110) may be configured with at least one of a bed sheet and a pillow cover.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/05/2024
(21) Application No.202411035697 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : NAMASTE-ENABLED SERVICE ROBOT IN THE HOSPITALITY INDUSTRY

(51) International classification :B25J0011000000, G06Q0050120000, G05D0001020000, G06Q0010060000, B25J0005000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The invention provides a Namaste-Enabled Service Robot in the Hospitality Industry. The service robot is designed to perform a range of tasks, including greeting guests, providing information about the hotel, delivering room service orders, and assisting with check-in and check-out processes. The hardware components include sensors, actuators, and a navigation system to enable the robot to move autonomously and interact with guests. The software components include artificial intelligence (AI) algorithms for speech recognition, natural language processing, and object recognition, enabling the robot to understand and respond to guests' requests. The robot can be controlled remotely using a smartphone application, allowing hotel staff to monitor its activities and intervene if necessary.

No. of Pages : 28 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/05/2024
(21) Application No.202411036644 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD FOR DEVELOPING A CHEMO-RADIO-RESISTANT CERVICAL CANCER CELL LINE

(51) International classification :A61K35/13, C12N5/071, C12N5/09
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention discloses a method for developing a chemo-radio-resistant cervical cancer cell line and the method claims that culturing cervical cancer cells in cell culture media under standard conditions of culture if exposed to fractionated doses of cisplatin and X-Rays results in a resistant cell population. The cultured cells at optimal confluency are at first sensitized with cisplatin prior to radiation therapy. Subsequently, the cells were treated with a graded increase in cisplatin concentration and X-Ray radiation. This procedure ultimately led to the development of a cell population resistant to 2.5 µM cisplatin and 50 Gy X-Rays and this was designated as HeLa-CRR. This invention can be applied as an in vitro platform for screening most effective drug combinations for treatment of chemo-radio-resistant cervical cancers.

No. of Pages : 21 No. of Claims : 0

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/05/2024

(21) Application No.202411036787 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AQUEOUS SOLUBILITY ENHANCEMENT OF TELMISARTAN THROUGH LIQUISOILD COMPACT DEVELOPMENT

(51) International classification :A61K9/20, A61K9/28, A61K47/38, A61K47/10, A61K31/4164
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Aqueous solubility enhancement of telmisartan through Liquisoild compact development is the proposed invention. Solubility enhancement strategies play a vital role in formulating effective drug products that ensure optimal absorption, bioavailability and therapeutic outcomes. A comprehensive understanding of aqueous solubility is crucial for the successful development of oral solid formulations with improved therapeutic outcomes. Various approaches are applied in formulation development for solubility enhancement of poorly aqueous soluble drugs, in which the development of the liquisolid compact is a promising approach for improving the solubility, dissolution and bioavailability of poorly soluble drugs. With their versatility and potential benefits, they have gained attention as a valuable tool in the formulation of oral solid dosage forms. Furthermore, liquisolid compacts can be conveniently compressed into tablets or filled into capsules, making them suitable for oral administration. Considering these advantages, this study aims to enhance the solubility of Telmisartan by developing liquisolid compacts using Polyethylene Glycol (PEG), Microcrystalline Cellulose (MCC), Colloidal Silica and Cross povidone as excipients.

No. of Pages : 23 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/05/2024
(21) Application No.202411041615 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ZINC OXIDE POLYMER NANOCOMPOSITE, ITS METHOD OF PREPARATION AND APPLICATIONS THEREOF

(51) International classification :B82Y30/00, B82Y40/00, C01G9/02, C08K3/22
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a zinc oxide polymer nanocomposite comprising: 40 to 60 % w/w of a ZnO nanoparticle of the total weight of the nanocomposite; and 40 to 60 % w/w of a polymer of the total weight of the nanocomposite. The present disclosure also relates to a method of preparation of zinc oxide polymer nanocomposite comprising: a) contacting 0.1 to 0.5 % w/w of a zinc salt in 3 to 5 % w/w of a plant extract with a base to maintain pH in the range of 11 to 13 under condition to obtain a zinc oxide nanoparticle; and b) adding 40 to 60 % w/w a polymer to the 40 to 60 % w/w of the zinc oxide nanoparticle under condition to form a zinc oxide polymer nanocomposite. The present disclosure provides method of applying a hydrophobic coating on a wall surface comprising: adding 15 to 25% of Zinc oxide polymer nanocomposites as defined above in a paint to form a mixture; and applying the mixture by using dip coating method on the wall surface to obtain a hydrophobic coating.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/06/2024
(21) Application No.202411043149 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AUTONOMOUS HUMANOID ROBOT ACTIVATE GANDHIAN PHILOSOPHY FOR ALIENS

(51) International classification	:B25J0015000000, F01D0019000000, B25J0009160000, B25J0019000000, B25J0019020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Autonomous Humanoid Rabat Activate Gandhian Philosophy for Aliens, explores space. If the robot encounters any kind of aliens, it tries to recognize them from human beings with transcriptory language, colour, body dimensions and appearance. If the robot recognizes them not to be human beings, the pre-programmed gandhian philosophy is activated not to harm either aliens or human beings. Thus, Mahatma Gandhi is introduced in external space.

No. of Pages : 4 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/06/2024
(21) Application No.202411043150 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : HUMANOID ROBOT DOPPLER EFFECT SATELLITE

(51) International classification	:B25J0015000000, A61B0008060000, H04B0007010000, G01S0019290000, B25J0009160000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Humanoid robot Doppler effect satellite, utilizes the Doppler effect blueshift and redshift, while travelling in space to find approaching objects and the objects moving away and also to hold and bring any satellite to the international space station, in space.

No. of Pages : 4 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/04/2024

(21) Application No.202411030499 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : "EGG BASED SWEET PRODUCT AND A METHOD OF PREPARATION THEREOF"

(51) International classification :A23L15/00, A23G3/34, A23G3/36, A23G3/46, A23L5/10, A23C9/152, A23L33/10, A23L7/143
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
The present invention, relates to food products, more particularly to the composition of a sweet product (peda) comprising of eggs, skimmed milk powder, condensed milk, oats flour, clarified butter, sugar and vanilla essence and a method of preparing the same. The incorporation of egg in the sweet results in a product which is rich in proteins, essential vitamins and minerals and oats flour which enhances its fibre content. This product caters to the changing preferences of consumers desiring the comfort of a cherished dessert along with the nutritional advantages of a contemporary, health-conscious choice.

No. of Pages : 15 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/04/2024

(21) Application No.202411031448 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR PREPARING TEA BASED ON INDIVIDUAL PREFERENCES

(51) International classification	:H04W0004029000, G16H0030400000, G06N0007000000, G06F0011300000, H04N0021450000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present disclosure provides a system (102) for tea preparation, including automation and advanced technology to meet individual preferences efficiently. The system (102) includes an assembly (104) equipped with multiple containers (106) to store both liquid and solid ingredients, alongside essential components such as a display unit (122), an image acquisition unit (112), and an audio unit (114). Through these components, users can input their tea preferences, whether they are present at the assembly or remotely accessing the system via a computing device 120. The system employs artificial intelligence to analyze inputs from various sources, extracting necessary information to prepare the preferred tea blend. Features like ingredient grinding, mixing, and temperature control ensure precise customization and optimal brewing conditions. Additionally, integrated mechanisms for residue collection, self-cleaning, and fault detection enhance user experience and system reliability. Thus, the system offers a convenient and personalized tea-making solution for modern settings.

No. of Pages : 30 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/04/2024
(21) Application No.202411032909 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM FOR MONITORING ACTIVE SAFETY OF A VEHICLE AND METHOD THEREOF

(51) International classification	:G08G0001160000, B60W0030095000, G06N0020000000, G06T0007000000, B60W0030090000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present disclosure provides a system and a method for monitoring active safety of a vehicle. The system (108) includes image detection unit(s) (112) configured with a vehicle to detect image(s) associated with an interior and exterior (surroundings) of the vehicle, and sensor(s) (114) configured with the vehicle to detect parameters associated with the vehicle and a movement of the vehicle to monitor for a vehicular safety. The system (108) receives, data including the image(s), and the parameter(s), via the image detection unit(s) (112) and the sensor(s) (114), at predetermined periods. The system (108) analyzes, the data, using an Artificial Intelligence (AI) engine, and detects, risk factors, based on the analysis of the data. The system (108) may predict driving parameter(s) based on the analysis of the data for safe driving.

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/06/2024

(21) Application No.202411045367 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AUTHENTICA: AI IMAGE INTEGRITY AND DOCUMENT VERIFICATION SYSTEM

(51) International classification :G06N0003080000, G06N0003040000, H04N0005225000, G01J0003280000, G06T0007000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT The Invention provides a system and method for AI Image and Document Verification. The present invention comprises a multispectral imaging unit configured to capture images across ultraviolet (UV), visible (RGB), and infrared (IR) spectrums, a central processing unit (CPU) configured to receive the captured multispectral images from the multispectral imaging unit, a deep learning framework integrated with the CPU, comprising a modified ResNet model, trained on a large database containing authentic and forged documents, and an image detection module configured to identify AI-generated content and searches for patterns and artifacts to distinguish between real photographs and altered or entirely fabricated AI-manipulated images.

No. of Pages : 20 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/06/2024
(21) Application No.202411043151 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : HUMANOID ROBOT LEVER PUSH/PULL SATELLITE

(51) International classification	:B25J0019020000, B25J0015000000, B25J0009160000, H03F0003300000, G11B0007090000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Humanoid Robot lever push/pull satellite, clears space debris by push/pull action of a satellite with a collapsible mechanical lever magnetised at the far end. The humanoid robot while traversing space goes to the garbage orbital and magnetically locks a satellite stainless steel parts and pulls or pushes it through space to the international space station ,for dis-assembly and parts reuse.

No. of Pages : 4 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/06/2024
(21) Application No.202411044506 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM FOR EXPLAINABLE AI (XAI) CERTIFICATION AND METHOD THEREOF

(51) International classification	:G06N0005040000, G06F0021620000, G06N0003040000, G06N0020000000, G06F0011340000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The disclosure presents a system (102) to certify explainability of artificial intelligence (AI) algorithms, ensuring transparency, reliability, and compliance in their operation. The system (102) employs a controller tasked with several functions including preparation of an XAI Benchmarking Framework for evaluation, the instrumentation of AI algorithms with standardized explainable APIs, their execution on predetermined datasets within a cloud-based framework, uploading data to an encrypted audit trail for non-repudiability and the subsequent analysis of internal decision-making processes of the AI algorithm to be certified. Additionally, the system (102) processes metadata, removes personally identifiable information (PII), cross-checks inferences, calculates performance metrics, and fact-checks outputs of GPT-based algorithms for potential hallucinations. Further, the system (102) generates reports detailing the inner workings, inference variations, accuracy scores, and operations performed by the AI algorithms, thereby ensuring their trustworthiness and providing detailed documentation.

No. of Pages : 35 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/06/2024

(21) Application No.202411044509 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SYSTEM AND METHOD FOR SECURING SENSING DEVICES FOR CUSTOM IOT APPLICATIONS

(51) International classification	:G06Q0020400000, G06F0003160000, H04W0012069000, G08B0021220000, H04W0012062000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Embodiments of the present disclosure relate to a system (102) for securing a sensing device for Internet of Things (IoT) applications. The system (102) is configured to verify a master device (104) docked to the sensing device (102-1). Further, the system (102) is configured to receive control signals from the verified master device (104) and send encrypted sensed data to a configured source address (108) based on the received control signals. Further, the system (102) is configured to detect tampering attempts on the sensing device (102-1). Thereafter, the system (102) is configured to trigger an alarm to notify a user of the detected one or more tampering attempts. The tampering attempts are detected upon detection of a drop in pressure in a pressure-sealed casing operatively coupled to the processor (202).

No. of Pages : 22 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/06/2024
(21) Application No.202411048557 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD FOR ENHANCED TANNASE PRODUCTION AND PURIFICATION FROM ASPERGILLUS NIGER FOR INDUSTRIAL APPLICATIONS

(51) International classification :C12N1/14, C12N9/14, C12N9/18
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The invention discloses a method for enhancing the activity and stability of tannase enzyme obtained from Aspergillus Niger. Through systematic experimentation, the impact of various metal ions on tannase activity was investigated, revealing calcium and magnesium ions as potent allosteric activators while heavy metal ions acted as 10 inhibitors. Furthermore, methods for reactivating inhibited tannase using chelating agents like EDTA and thiol compounds such as DTT were established. Structural analysis elucidated the mechanisms underlying metal ion interactions and their effects on enzyme stability. The optimized tannase enzyme demonstrates improved performance, making it suitable for diverse industrial applications in food, 15 pharmaceuticals, and beverage processing. This invention provides valuable insights into enhancing the catalytic properties of tannase, paving the way for its efficient utilization in biotechnological processes.

No. of Pages : 36 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :13/06/2024
(21) Application No.202411045744 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AN INTEGRATED HUMIDIFIER-ENABLED AUTOMATIC TEMPERATURE CONTROL ROOM HEATER

(51) International classification :F24F0003140000, F24F0110100000, F24F0011300000, G05B0015020000, G05D0023190000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
ABSTRACT An economically viable integrated humidifier-enabled automatic temperature control room heater system that performs multiple functionalities to maintain optimal indoor environmental conditions. The system comprises a humidifier unit capable of dynamically adjusting humidity levels, while the automatic temperature control unit efficiently regulates room temperature. The air quality monitoring unit tracks CO and CO2 levels, deactivating the heater upon detecting unsafe conditions. A safety unit with a GSM module sends alert notifications to a user's device, while an integrated buzzer provides audible warnings during critical air quality events. A programmable timer allows setting duration limits for heater operation before automated shut-off, preventing overheating hazards The user-friendly display presents real-time data and system parameters. The synergically integrated combination of humidity control, temperature regulation, air quality monitoring, programmable safety features, and informative user interface addresses key limitations of conventional room heaters. This innovative system provides an economically viable, optimal indoor environment, promoting energy efficiency, user convenience, and life safety across various applications.

No. of Pages : 19 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :18/06/2024

(21) Application No.202411046875 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : PREDICTIVE ANALYSIS OF NURSES' REPORTING BEHAVIOUR IN RESPONSE TO WORKPLACE VIOLENCE USING MACHINE LEARNING

(51) International classification :G06N0020000000, G06K0009620000, G06N0003080000, G06N0003040000, H04W0004029000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Predictive Analysis of Nurses' Reporting Behaviour in Response to Workplace Violence Using Machine Learning is the proposed invention. The proposed invention focuses on understanding how the behaviour of nurses will change depending on violence at workplace. The invention focuses on analyzing the parameters of Nurses Reporting Behaviour in Response to Workplace Violence using algorithms of Machine Learning.

No. of Pages : 12 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/06/2024
(21) Application No.202411049875 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AN ADAPTIVE BAR MEASUREMENT DEVICE FOR PHYSICALLY DISABLED PERSON

(51) International classification :G09B0021000000, G06F0003010000, A61B0034100000, A63B0071000000, G01B0011020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present invention relates to the adaptive bar measurement device for physically disabled person. This is an accessible, user-friendly device for people with physical disabilities to measure various objects in a bar or other location. The device is adjustable handle, have tactile measurement capacity, and liquid sensor motion to suit a variety of impairments while also ensuring simplicity of use. Published with Figure 1

No. of Pages : 23 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/06/2024
(21) Application No.202411050022 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : FERROPTOSIS INDUCERS AS ANTICANCER THERAPEUTICS AND PROCESS FOR PREPARATION THEREOF

(51) International classification	:A61K35/74, A61K47/48, A61P35/00, A61P43/00, A61K39/395
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present disclosure generally relates to ferroptosis inducers as anticancer therapeutics and process for preparation thereof. The disclosure relates to a development of chloro and bromo acetamide containing N-benzylaniline derivatives as an anticancer therapeutic. The said derivatives induce ferroptosis pathways in cancer cell lines. The disclosure particularly provides a compound of formula I, or stereoisomer, racemate, and pharmaceutically acceptable salt thereof. The compound exhibits an effective concentration (EC50) ranging from micromolar to nanomolar against multiple cancer cell lines, particularly 6nM and 7nM of EC50 in liver cancer cell lines.

No. of Pages : 92 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/05/2024
(21) Application No.202411035280 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A PAPER COUNTING SYSTEM AND METHOD THEREOF

(51) International classification :B65H0003060000, A63B0071060000, G06T0007600000, G07D0011100000, G01B0011040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present invention provides paper counting system designed to accurately and efficiently count sheets of paper which uses breadth-based counting technology. Instead of conventional roller mechanisms, it relies on measuring the width (thickness) of individual sheets passing through a feeder mechanism to determine the count. This approach simplifies the design, potentially reduces costs, and increases counting speed beyond the typical 40 sheets per minute limitation seen in existing machines.

No. of Pages : 14 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/05/2024

(21) Application No.202411036411 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SMART SPECTACLES FOR VISUALLY IMPAIRED INDIVIDUALS AND METHOD THEREOF

(51) International classification	:G09B0021000000, A61H0003060000, A61F0009080000, G02C0011000000, G02C0005220000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT ‘‘Smart spectacles for visually impaired individuals and method thereof” The present invention provides a pair of smart spectacles designed to assist blind individuals in navigating their environment safely and independently. The smart spectacles incorporate a range of sophisticated components and functionalities to achieve this goal.

No. of Pages : 15 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/06/2024

(21) Application No.202411044798 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : PRIMERS TARGETING MULTICOPY TRAN GENE OF ORIENTIA TSUTSUGAMUSHI FOR SCRUB TYPHUS DETECTION BY POLYMERASE CHAIN REACTION

(51) International classification :C12Q1/686, C12Q1/689, C12Q1/6851
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
We are disclosing the novel primer sequences to target an unexplored conjugative transfer multicopy gene of Orientia tsutsugamushi (Ot) by the Polymerase Chain Reaction. TraN is a conjugative transfer gene of Ot that has not been used before for scrub typhus detection in patients. From our study, the sensitivity of the real-time PCR targeting traN multicopy gene is 86.7% and the positivity rate is 56.8%, the highest of all the single copy gene PCRs; real-time as well as conventional platforms. The primer specificity wet lab experiment which was put up to see the analytical specificity of the novel primers showed that these oligomers are specific only to Orientia tsutsugamushi DNA, which shows that the chances of cross-reactivity are nil.

No. of Pages : 23 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/06/2024

(21) Application No.202411048865 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM FOR INTEGRATED CLOTHING CARE

(51) International classification	:G06Q0010100000, G06F0009451000, G06F0003160000, G16H0040670000, G16H0040200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present disclosure provides a system for integrated clothing care, comprising a plurality of devices, each configured to facilitate various clothing care services including dry cleaning, laundry, repair, ironing, stitching, shoe and bag repair, and accessory maintenance. A user interface accessible via web and mobile applications, configured to enable users to select services, schedule appointments, track order progress, and make payments securely. Means for activating said devices to initiate clothing care services. A processing unit configured to handle data transmission and interaction with external services. A database configured to store user information, service data, and other relevant information. Means for integrating with external service provider APIs and logistics services APIs. A backend server-side component configured to handle data processing and communication with said devices and user interface.

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :14/07/2024
(21) Application No.202411053614 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : APPARATUS, COMPOSITION AND METHOD OF PREPARATION OF FOOD-BASED NANO-SIZED CONDUCTIVE PASTE

(51) International classification	:H05K0001090000, B82Y0030000000, H01B0001220000, A23L0033105000, H01G0011240000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention provides an electronic apparatus, composition, and method of preparing food-based nano-sized conductive paste (204). In one embodiment, an electronic apparatus (200) includes a substrate (202), a food-based nano-sized conductive paste (204) applied on the substrate. The food-based nano-sized conductive paste (204) composition includes an activated carbon in the range of 20.0 % – 20.5 %, an edible binder in the range of 8.0 % - 8.5 %, and pasting liquids having electrolyte ions in the range of 71.0 % – 71.5 %. The food-based nano-sized conductive paste (204) consists of nano sized particles in the range of about 50 to 90 nm. The food-based nano-sized conductive paste (204) is having conductivity in the range of 1687 to 1887 S/m. FIG. 2

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202411051536 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : METHOD FOR DEVELOPMENT OF IN SITU GEL OF NATAMYCIN-LOADED MICROSPONGES FOR OCULAR THERAPY

(51) International classification :A61P17/02, A61K9/08, A61K31/7008, A61K31/7036, A61K47/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed herein is a method for development of in situ gel of natamycin-loaded microsponges for ocular therapy (fungal keratitis) (100) comprises preparing natamycin-loaded microsponges (102), wherein the microsponges are synthesized using a suitable polymer through a solvent evaporation or emulsion solvent diffusion method to encapsulate natamycin. The method includes dispersing the natamycin-loaded microsponges (104) into a biocompatible polymeric gel base, wherein the polymeric gel base is capable of forming a gel in situ upon contact with the ocular surface. The method also includes adjusting the pH and osmolarity (106) of the dispersion to be compatible with the ocular environment to ensure patient comfort and drug stability. The method also includes sterilizing the formulation (108) using a suitable sterilization technique to ensure it is free of microbial contamination. The method also includes packaging the sterilized formulation (110) into suitable single-dose or multi-dose containers for ophthalmic administration.

No. of Pages : 30 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/07/2024
(21) Application No.202411054488 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR ENHANCING THE PERFORMANCE AND EFFICIENCY OF MOBILE APPLICATIONS

(51) International classification	:G06F0009500000, G06Q0030060000, G06F0009480000, H04W0004600000, G06F0011300000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present invention relates to a system and method for enhancing the performance and efficiency of mobile applications comprises of a User Module serves as the interface for task initiation and real-time status monitoring via intuitive web and mobile interfaces, concurrently, the Middleware Module integrates the Service Info, Decision, and Communication Modules to gather application specifics, make informed offloading decisions, and ensure robust data exchange between mobile devices and the cloud server, the Decision Module optimizes task allocation based on runtime metrics and energy efficiency, choosing between local execution and cloud offloading, enhanced by the Communication Module's adaptive data transmission, tasks utilize Amazon EC2 resources efficiently, executing algorithms through the MACS Library and returning results for further processing or user interaction, advancing mobile computing efficiency and user experience. Ref Figure 1

No. of Pages : 16 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/07/2024
(21) Application No.202411054489 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR PROVIDING SECURE CLOUD-BASED DATA STORAGE

(51) International classification	:G06F0021620000, H04L0067109700, H04L0067109500, H04L0067100000, G06F0021550000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present invention relates to a system and method for providing secure cloud-based data storage comprises of a cloud storage system supports dynamic allocation of resources, enabling businesses to scale storage efficiently, it employs AES-256 encryption to protect data from unauthorized access, both at rest and in transit, users can access files anytime, ensuring high availability through web interfaces, mobile apps, and APIs, the security module adjusts security levels based on usage parameters, featuring continuous monitoring and parameter analysis for threat detection, a customizable security policy framework and a user interface module allow policy setting and log viewing, additional features include data replication for redundancy, key management, multi-factor authentication, end-to-end encryption, and synchronization for seamless data access across devices and platforms. .

No. of Pages : 14 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/07/2024
(21) Application No.202411053901 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : HUMANOID ROBOT MANUFACTURING FOR HIGH RISK APPLICATIONS

(51) International classification :B25J0015000000, B25J0009160000, B25J0019000000, B25J0019020000, B25J0009000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to Manufacturing of a robot that resembles the human body in shape is called a humanoid robot. The design may serve utilitarian goals like interacting with human tools and surroundings, experimental goals like researching bipedal movement, or other goals. More particularly, In order to relieve human workers of strenuous and hazardous activities, power plants are using humanoid robots for inspection, maintenance, and emergency response. Humanoid would be utilised in the following areas and applications like Disaster Response and Recovery, Nuclear and Hazardous Material Handling, Military and Defense, Space Exploration, Deep-Sea Exploration, Construction and Demolition, Healthcare in Contagious Environments, other type of Challenges and applications.

No. of Pages : 11 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/07/2024
(21) Application No.202411053902 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : REORIENT THE SATELLITE LAUNCHER

(51) International classification	:B64G0001100000, G06F0003048200, B64G0001640000, B64G0001400000, H04B0007185000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to Manufacturing of a Reorient the satellite launcher is a technique in aeronautical engineering that uses Whirl, spin, or rotation along the longitudinal axis, to stabilize a satellite or launch vehicle. The concept is based on the conservation of angular momentum in ballistics, where spin is frequently obtained through rifling. More particularly, Technology Whirl Launch is working on a kinetic energy space launch system that will lessen reliance on existing chemical rockets, with the goal of drastically lowering the cost of access to space while boosting launch frequency.

No. of Pages : 10 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/07/2024
(21) Application No.202411054285 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : THEFT PREVENTION DEVICE FOR ACCESSORIES

(51) International classification	:G06F0003041000, A61J0007040000, G06Q0040000000, G06F0003044000, G08B0013120000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present invention relates to a theft prevention device for accessories comprises of a body developed to be positioned within the accessories, wherein in case if there remains a possibility of the accessories getting theft, then the user presses a button for activating the device, wherein after successfully activating the device, the microcontroller linked with the button transmits a signal to a computing unit that is accessed by the user to choose multiple contacts, the user desired to notify regarding theft of the accessories, a GPS module for determining exact location of the accessories which further transmits exact location of the accessories to the user chosen contacts and the user's computing unit in order to prevent the accessories from getting theft

No. of Pages : 13 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/07/2024
(21) Application No.202411054286 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR MULTIPLE DISEASE DETECTION

(51) International classification :G16H0010600000, G16H0050200000, G06F0016215000, G06N0003080000, G16H0050700000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present invention relates to a system and method for multiple disease detection comprises of data Collection Module efficiently gathers medical data from diverse sources, including electronic health records (EHRs), MRI and CT scanners, and wearable health monitors, featuring a sophisticated data integration interface, it consolidates varied data types into a unified dataset, despite challenges such as noise and missing values, the Data Cleaning Module employs robust pre-processing techniques like data normalization and outlier detection to refine data quality, subsequently, the Machine Learning Model Training Module utilizes deep learning algorithms such as CNNs and RNNs to identify intricate disease patterns, validated models are integrated into the Prediction Module, delivering real-time diagnostic predictions accessible via computer or mobile devices, this innovative approach aims to enhance clinical decision-making by enabling simultaneous, accurate diagnoses of multiple diseases, ultimately improving patient care outcomes in healthcare settings. . Ref Figure 1

No. of Pages : 14 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/07/2024
(21) Application No.202411054287 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR PROVIDING LEGAL SERVICES TO USERS

(51) International classification	:G06Q0050180000, G06Q0010100000, G06N0020000000, G06F0040300000, G06F0016140000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present invention relates to a system and method for providing legal services to users comprises of an intuitive and accessible user interface (UI) designed for individuals without legal expertise, the UI includes a Chat Interface for typing legal questions and receiving conversational responses, a Form Submissions Interface for tasks like contract drafting and legal document review, and a Dashboard for task tracking and document management, the system's Natural Language Processing (NLP) Module processes user input, using Syntax and Semantics Analysis, Intent Recognition, and Entity Extraction to understand queries, an AI engine leverages machine learning to analyze data and generate legal advice, while the document processing module automates document creation and review, a compliance and update module ensures the legal knowledge base remains current and compliant. Ref Figure 1

No. of Pages : 16 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/07/2024

(21) Application No.202411054288 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SOLAR WATER DISTILLATION SYSTEM

(51) International classification :C02F1/14, B01D5/00, C02F1/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present invention relates to a solar water distillation system comprises of a basin crafted from high-absorptivity materials designed to maximize solar energy absorption, enhancing this absorption is a black liner within the basin, bolstering thermal efficiency, a 5 mm thick glazing glass transparent cover above the basin creates a greenhouse effect, transmitting over 90% of visible light to sustain heat retention, to minimize thermal losses, insulation surrounds the basin, the system is sealed with M-seal, putty, UV-glue, and silicon-glue to ensure complete airtightness and prevent leaks, features such as a condensate channel for distilled water collection, a robust supply and delivery system, a pine wood table with a plywood base for stability, an iron square box with anti-corrosive treatment, a reflector with a silver-coated mirror to maximize solar radiation, and a precise LM35 temperature sensor linked to an LCD display for accurate temperature monitoring throughout the distillation process.

No. of Pages : 14 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/07/2024
(21) Application No.202411054289 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR PREDICTING PARKINSON'S DISEASE (PD) RISK

(51) International classification	:G16H0050300000, G06N0020000000, G16B0020000000, G16H0010600000, G06N0005020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
ABSTRACT The present invention relates to a system and method for predicting Parkinson's Disease (PD) risk comprises of a data collection module that gathers a comprehensive dataset, including demographic information (age, gender, family history, lifestyle factors), detailed clinical evaluations (motor and non-motor symptoms, UPDRS, cognitive and mood assessments), and biomarkers (genetic markers from GWAS, CSF biomarkers, neuroimaging data), The machine learning module employs penalized logistic regression and XG Boost algorithms for developing accurate predictive models, The prediction module generates a PD risk score with an AUC of at least 0.94, utilizing olfactory function and polygenic risk scores as key predictors, The system includes continuous model updates, a user-friendly visualization tool, recommendations for further diagnostics, validation in diverse populations, EHR integration, and refinements for PD-related motor speech disorders. . Ref Figure 1

No. of Pages : 13 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/07/2024
(21) Application No.202411054490 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM FOR IMPLEMENTING A COLLABORATIVE AUGMENTED REALITY (AR) WHITEBOARD

(51) International classification	:G06F0003010000, G06T0019000000, G06Q0010100000, G06F0003034600, H04L0065403000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
ABSTRACT The present invention relates to a system for implementing a collaborative augmented reality (AR) whiteboard leverages advanced technologies to provide an immersive and interactive user environment, the core AR engine, using frameworks like Unity or AR Core, detects surfaces and overlays virtual content, enabling interaction with the virtual whiteboard as if it were a physical object, supporting various AR-compatible devices, including smartphones and AR glasses, the system utilizes gesture recognition enhanced by sensors like accelerometers and gyroscopes for precision, Real-time collaboration is facilitated by a network communication module using protocols like WebRTC or MQTT, the AI module recognizes and manipulates hand-drawn shapes or text and supports voice commands, security is ensured via end-to-end encryption and multi-factor authentication, while continuous user feedback drives iterative system improvements. Ref Figure 1

No. of Pages : 13 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/07/2024

(21) Application No.202411054491 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR FACILITATING ON-CAMPUS PLACEMENTS

(51) International classification	:G06Q0030020000, G06Q0010100000, G06F0009500000, G06Q0010060000, H04M0003420000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present invention relates to a system and method for facilitating on-campus placements comprises of a primary computing unit accessed by placement-coordinators for entering information regarding placements, a cloud database interlinked with a processing unit for storing information regarding placements, a secondary computing unit accessed by students for entering profiles, preferences, and qualifications, a personalized recommendation module interlinked with the secondary computing unit generate personalized employer suggestions, thereby matching the students' talents and interests, a feedback module interlinked with the secondary computing unit, for allowing students to provide feedback on their interactions with placement firms, thereby offering valuable insights for continual system improvement and enhancing the overall user experience. Ref Figure 1 and 2

No. of Pages : 15 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/07/2024
(21) Application No.202411054492 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : VIRTUAL REALITY (VR) BASED EXERCISING SYSTEM

(51) International classification	:G06F0003010000, A61B0005000000, A63B0024000000, A61B0005024000, G06F0003140000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present invention relates to a virtual reality (VR) based exercising system comprising a housing accessed by a user to perform exercise, wherein a computing unit accessed by a user to choose different environment where the user desired to perform exercise, a microcontroller linked with the computing unit via a wireless communication unit activates plurality of display screens to display immersive virtual environments for creating an artificial virtual reality, a sensing module integrated within the housing for determining motion of the user, to determine exercise performed by the user and displays a command over the screen in order to assist the user to perform the exercise in a proper manner and an FBG sensor integrated within a band worn by the user for determining heart beat rate of the user. Ref Figure 1

No. of Pages : 14 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :17/07/2024
(21) Application No.202411054536 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SELF ADAPTIVE FREQUENCY SUPPORT CONTROL AND METHOD OF INCREASING EFFICIENCY FOR VARIABLE HEAD PUMPED STORAGE HYDRO-GENERATION UNIT

(51) International classification	:H02J0003380000, F03B0013060000, H02P0009000000, H02J0003240000, G06F0017110000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
ABSTRACT The present invention relates to a control system variable speed pump storage hydropower plants and the method of increasing the efficiency of the plant by speed optimization during both generation and pump mode of operation. This is a mixed integer non-linear programming (MINLP) based speed Optimization for variable head pumped storage hydro power plant. The proposed method MINLP optimization method provides accurate optimized speed strictly considering the operational constraints of turbine, water head and power grid. Also, with large variable speed doubly fed induction machine inertial and droop support is desired to maintain grid stability during transients. The proposed method in this invention also provides a supplementary control in RSC control of DFIG for enhanced frequency support to the grid while also maintaining the DFIG rotor stability using self-adaptive gain parameters. Published with Figures 1 and 4

No. of Pages : 26 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/07/2024

(21) Application No.202411055363 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR SECURE FIRMWARE UPDATES FOR NETWORK DEVICES

(51) International classification	:H04L0009320000, G06F0008650000, G06N0020000000, G06F0021570000, G06F0021640000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :
The present invention discloses system (100) and method (300) for leveraging blockchain technology and cryptographic protocols for secure and authenticated firmware updates. The system (100) optimizes firmware transfer using dynamic push/pull models based on network conditions, enhancing bandwidth utilization and reducing update durations. Firmware installation occurs during low-usage periods or scheduled intervals to minimize disruptions and ensure continuous network reliability. Furthermore, the system (100) enforces atomic firmware updates, preserving the integrity of firmware by preventing partial overwrite. The system employs a secure decentralized approach for firmware distribution eliminating a single-point-of-failure, bolstering resilience against network vulnerabilities. Additionally, transparency and auditability are achieved through blockchain records, facilitating traceability of firmware update activities and enhancing overall security. Finally, tinyAI algorithms distributed throughout the blockchain network work in conjunction with a global AI server (102) through a federated learning model to effectively detect anomalies, if any, throughout the blockchain network.

No. of Pages : 31 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/07/2024

(21) Application No.202411055484 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AN APPROACH TOWARDS SKIN-BASED SIGNAL TRANSMISSION TECHNOLOGY

(51) International classification :H04B0013000000, H04B0005020000, G06F0001160000, H01Q0009040000, G06F0003048700
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
An approach towards skin-based signal transmission Technology is the proposed invention. The signals can be propagated through the skin because the skin conducts electricity, a current loop can be made through the human body and surroundings electrical fields to earth ground. Several prototypes can be constructed for example electronic business cards can be exchanged through a handshake. However, skin-based communication not only makes such transactions more convenient and easier but also gives an important input modality to the invisible computing user interface: sensing toughness. By limiting communication to devices connected by a skin-circuit people can indicate their specific need for controlling the information to disclose. At Microsoft Research Center, scientists are continuously involved in developing skin-based communication systems.

No. of Pages : 17 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/07/2024
(21) Application No.202411055488 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AGRICULTURE LAND ESTIMATION FROM SATELLITE IMAGES USING HYBRID INTELLIGENCE

(51) International classification	:G06K0009620000, G06N0003040000, G06N0003080000, G06N0003020000, G06Q0050260000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Agriculture land Estimation from satellite images using hybrid intelligence is the proposed invention. The proposed invention deals with Image Analysis of Remote Sensing Data Integrating Spectral, and Spatial Features of land in the area of satellite image processing. Multi-spectral remote sensing data to analyze the pattern of surface change of the city and explore the local economics and development this city. The long-term objective of the proposed invention is to optimizing the city's function and operation, and more critically, secure a long-term economically and environmentally sustainable urban development. Some band combinations of remote sensed data are effective in the land cover classification. Here the hybrid method is use to obtain the final better result to estimate the agriculture land. In hybrid method results by taking different samples of NDVI and trend the neurons by it, which provide us the better results than NDVI and Neural Network. Finally, we gained the classified result as Hybrid Intelligence objects like vegetation, free land, urban area, roads and water resource

No. of Pages : 15 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/07/2024
(21) Application No.202411054301 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR FACILITATING ATHLETE COMMUNICATION WITHIN AN OLYMPICS DATA ANALYSIS PLATFORM

(51) International classification :G16H0080000000, G06N0020000000, H04L0069180000, H04L0069220000, G06F0021620000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present invention relates to a system and method for facilitating athlete communication within an Olympics Data Analysis platform comprises of a computing unit installed with a Chat-Bot module configured to interpret user queries and messages using NLP protocol to facilitate fluid and intuitive communication between athletes, a recommendation module interlinked with the Chat-Bot module to deliver personalized recommendations, a privacy and security module ensures secured communications conducted within a secure and encrypted environment and an integration module configured enables the Chat-Bot module to seamlessly interface with analytical tools installed within the platform, wherein the processing unit linked with the integration module allows the athletes to query data, generate reports, and conduct analyses through the Chat-Bot module. Ref Figure 1

No. of Pages : 14 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/07/2024

(21) Application No.202411054302 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : WEARABLE HEARTBEAT MONITORING DEVICE

(51) International classification :A61B5/024, G16H40/60
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present invention relates to a wearable heartbeat monitoring device comprises of a body worn by a user, wherein in a pulse sensor integrated within the body detects pulse rate of the user, a microcontroller linked with the pulse sensor determines heartbeat of the user, wherein in case the heartbeat is determined to be exceeding a threshold value, then the microcontroller activates GPS module integrated within the body for determining exact location of the user, wherein in case the microcontroller determines the heartbeat to be exceeding a threshold value, then the microcontroller linked with the GPS module simultaneously transmits exact location and heartbeat of the user to the user chosen contacts, thereby assisting the contacts to track exact location of the user in order to provide the user a proper treatment without any delay Ref Figure 1

No. of Pages : 13 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/07/2024
(21) Application No.202411054303 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR MANAGING A SMART WORKPLACE ENVIRONMENT

(51) International classification	:G06Q0010060000, G06Q0010100000, G06N0020000000, G16Z0099000000, G06Q0010040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present invention relates to a system and method for managing a smart workplace environment comprises of a User Interface (UI) serves as the central control hub, presenting users with real-time mood and health metrics through a Dashboard, users can manually adjust environmental factors like lighting, sound, and temperature via intuitive Controls, while receiving timely Notifications for breaks, hydration, and posture corrections, enhancing well-being and productivity, the integrated IoT module connects smart devices, including Smart Lighting, Smart Thermostats, and Ambient Sound Systems, to optimize workspace conditions, central to the system is the AI-based module, which analyzes sensor and computer vision data to recognize emotions and personalize adjustments, over time, the AI module learns user preferences, dynamically optimizing settings and suggesting tasks based on energy levels, creating an adaptive, productivity-enhancing workspace environment.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/07/2024

(21) Application No.202411056102 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A MULTI-PURPOSE SCISSOR FOR AGRICULTURE

(51) International classification :B26B13/12, B26B13/08
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present subject matter provides a multi-purpose scissor (102). The multi-purpose scissor (102) includes a first blade (104) having a serrated sharp edge (204a) for cutting an item. The multi-purpose scissor (102) includes a second blade (106) having a notch cut shape with a sharp edge (304a) configured to grip the item being cut. The multi-purpose scissor (102) further includes a pivot pin (108) configured to attach the first blade (104) with the second blade (106) in a hinged connection with another to form the multi-purpose scissor (102).

No. of Pages : 18 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/07/2024
(21) Application No.202411056104 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ADVANCED MINI-SCREW ASSISTED RAPID PALATAL EXPANSION (MARPE) SENSING SYSTEM AND APPLICATIONS THEREOF

(51) International classification :A61C0007100000, A61C0007000000, G16H0010600000, G06F0016951000, G16H0080000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The invention provides a Mini-screw Assisted Rapid Palatal Expander (MARPE) appliance designed to achieve precise maxillary expansion measurement. This innovative device comprises a continuous oral surgery miniplate adapted to the palatal shelves, featuring strategically positioned holes. It incorporates a hyrax screw with guiding arms, securely soldered to form a rigid frame, and orthodontic mini-implants with standoff screws that serve as reference points for expansion. Utilizing image processing techniques, the appliance allows for the initial capture of photographs to establish baseline measurements and subsequent imaging to track expansion progress. The software calculates the exact location of the standoff screw, enabling real-time measurement of expansion, with results shared through a dedicated mobile application that supports patient data management and remote consultations. This invention significantly enhances the efficiency and accuracy of palatal expansion treatments in orthodontics.

No. of Pages : 19 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/07/2024

(21) Application No.202411056210 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : "A SMART IOT-BASED WASTE LEVEL MONITORING DUSTBIN AND TRACKING SYSTEM"

(51) International classification	:B65F0001140000, G06Q0010060000, G06Q0050260000, B65F0001000000, B65F0001160000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract The present invention discloses a smart IoT-based waste level monitoring dustbin and tracking system that is designed to optimize waste collection and monitoring in urban environments. By integrating advanced hardware components such as an Arduino Nano Board 101, an ESP32 NodeMCU 102, ultrasonic sensors 103, a DHT11 sensor 104, a servo motor 105, and Li-poly batteries 107, the system automates the process of waste management. Key features include real-time data transmission via Wi-Fi, long-range communication using LoRa WAN technology, and automated lid control based on waste levels detected by sensors. The system includes a unique alert mechanism that closes the lid when the bin is 80% full and requires a manual reset switch 106 to reopen. This data is processed and visualized through web applications like IKSHANA and ThinkSpeak, providing real-time insights and promoting efficient waste collection, reduced operational costs, improved public health and hygiene, and ultimately supporting smart city development.

No. of Pages : 60 No. of Claims : 13

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/07/2024
(21) Application No.202411056211 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : "NON-TOXIC AND COST-EFFECTIVE BIOACTIVE GLASSES FORMED USING HYBRID RESOURCES"

(51) International classification	:C03C0004000000, A61L0027100000, A61L0027300000, C12Q0001688600, A61L0027320000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Abstract "Non-toxic and cost-effective bioactive glasses formed using hybrid resources" The present invention provides a non-toxic bioactive glass formed by combining the natural biogenic SiO2, and CaO sources with conventional chemicals such as Na2O, P2O5, and K2O and using green and sustainable natural resources. The bioglasses are synthesized using green and sustainable natural and conventional resources making it cost effective and highly bioactive with better mechanical properties than Hench's and other bioglass. The developed glasses are biocompatible up to a large amount of sample on human peripheral blood mononuclear cells (PBMC) with better formation of Hydroxyapatite (HAp) layer and could be used for biomedical applications. The present invention partially replaces Na2O with K2O thus by enhancing the formation of a homogenous bioactive layer over the glass surface, which in turn has proven to be biocompatible with human peripheral blood mononuclear cells (PBMC). It uses two modifiers in a composition thus helping fine tuning of glass composition for specific applications requiring high dissolution or low dissolution rate. The biocompatibility and bioactivity of the hybrid glass paves a new path for the bioactive glasses to be synthesized using the agro-food waste.

No. of Pages : 55 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :18/07/2024
(21) Application No.202411054979 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SYSTEM AND METHOD OF DETECTING FRAUDULENT ACTIVITIES IN FINANCIAL MANAGEMENT USING MACHINE LEARNING

(51) International classification	:G06N0020000000, G06K0009620000, G06Q0020400000, G06Q0040020000, G06N0005000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present disclosure provides a system and method of detecting fraudulent activities in financial management using machine learning. The present invention develops and evaluates advanced machine learning models specifically tailored for identifying and mitigating risks in financial management, with a particular focus on detecting fraudulent activities. By leveraging sophisticated ML algorithms, such as Random Forest, Support Vector Machines (SVM), and K-Nearest Neighbors (KNN), the aim of the present invention is to significantly enhance the accuracy, efficiency, and reliability of fraud detection systems and to proactively prevent financial fraud, thereby reducing financial losses and increasing trust in financial transactions. The said system comprises a plurality of data collection modules configured to gather comprehensive transaction data, customer profiles, and technical details; a plurality of anomaly detection modules equipped with machine learning algorithms (Random Forest, SVM, KNN) to analyse and identify fraudulent patterns in transactional data; one or more alerting mechanisms to notify stakeholders of suspicious transactions promptly; one or more adaptive learning components for continuously improving fraud detection models based on operational insights and user feedback and optimize detection strategies based on evolving transaction data.

No. of Pages : 20 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/07/2024
(21) Application No.202411056638 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : P-TRACH (TRACHEOSTOMY CONNECTOR DEVICE)

(51) International classification :A61M16/04, A61M16/00, A61M16/08, A61M16/12
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A respiratory connector device “P-Trach” (100) is a novel device that provides external PEEP in spontaneously breathing patients. The device comprises of four openings i.e., opening (101) for tracheostomy tube attachment, an opposite opening (103) for suction catheter connection, an opening (104) with a fish-mouth valve (105) for unidirectional oxygen flow, and an opening (102) for an external PEEP valve. Constructed from transparent thermoplastic materials like polyethylene or polypropylene, P-Trach allows visual monitoring of suction catheters and secretions. The precision-engineered openings ensure a secure fit for each component, optimizing respiratory support. The use of an external PEEP valve provides significant benefits, including increased airway pressure, improved oxygenation, alveolar recruitment, and enhanced functional residual capacity, thereby preventing airway and alveolar collapse.

No. of Pages : 27 No. of Claims : 21

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/07/2024
(21) Application No.202411056645 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A BIODEGRADABLE SILICA BASED THERAPEUTIC CARRIER AND PROCESS OF SYNTHESIZING THE SAME

(51) International classification :A61K 9/51, A61K 9/00, A61K 48/00, A61K 39/00, A61K 45/06, B82Y5/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No: NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
A biodegradable silica based therapeutic carrier and process of synthesizing the same is provided. The biodegradable silica based therapeutic carrier involves nanoparticles integrated within in-situ carbonized porous core-shell silica particles (Si-P-NP). The carbonization process enhances the Si-O-Si framework, resulting in particles with improved biodegradability and reduced risk of inducing silicosis. The incorporation of carbon nanoparticles also provides auto-fluorescent properties, facilitating tracking and imaging in biological systems. Upon loading with the model drug curcumin, the biodegradable silica based therapeutic carrier (Si-P-CNP-Cur) demonstrated significant cytotoxicity against A549 human lung cancer cells while sparing healthy Vero cells, indicating selective targeting. The invention offers a safe and effective platform for drug delivery, particularly for treating lung diseases and other conditions requiring precise therapeutic interventions. The biodegradable silica based therapeutic carrier exhibits biodegradation within 168 hours.

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/07/2024
(21) Application No.202411053253 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : POTENT HETEROCYCLIC INHIBITORS OF GRB2-SH2 DOMAIN AND USES THEREOF

(51) International classification :C07D261/20, C07D505/00, C07D317/06, C07D239/10, C07D241/36
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This invention pertains to compounds represented by general formulas I, II, Ill, IV. and V. which are designed to inhibit the interaction between a phosphorylated !)rosine residue and the Grb2- Src homology 2 (SH2) domain. Overexpression or dysregulation of Grb2-SH2 domain interactions disrupts complex signalling transduction pathways, leading to conditions such as various carcinomas, inflammation, autoimmune diseases, cardiac hypertrophy. Alzheimer's disease. and bone degradation. These compounds function as inhibitors of the Grb2-SH2 domain and are intended for use as therapeutics in the treatment of cancer and stress-triggered cadiac hypertrophy.

No. of Pages : 39 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :17/07/2024
(21) Application No.202411054573 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : PARTIALLY OMNIDIRECTIONAL AND CIRCULARLY POLARIZED MIMO ANTENNA

(51) International classification	:H01Q0001380000, H01Q0021280000, H01Q0009040000, H01Q0001520000, H01Q0001500000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present invention discloses a partially omnidirectional and circularly polarized two-port MIMO antenna device comprising two-identical microstrip line-fed patches(01), a rectangular slot(02) embedded at the centre of the patches(01), a rectangular copper-ring(03), inserted within the rectangular slot (02); a rectangular copper-patch(04) inserted at the common centre of the patch (01); a vertical rectangular strip (05); two symmetrical rectangular stubs(06), two identical rectangular conducting strips(07) embedded on reference plane; two symmetric conducting rectangular strips(08), embedded on ground plane; two rectangular strips(09) at the upper corners of radiating elements and an in-built isolator(10). The antenna device covers the whole sub-6-GHz band ranging from 0.97 to 6.19 GHz with an integrated circularly polarized wideband centered at 3.5 GHz. The in-built isolator provides more than 23 dB isolation between the two ports.

No. of Pages : 33 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/07/2024
(21) Application No.202411057196 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : REAL-TIME INTERACTIVE WATER QUALITY PREDICTION SYSTEM UTILIZING ENSEMBLE MACHINE LEARNING AND GUI VISUALIZATION

(51) International classification	:G06N0020000000, G06N0003040000, G06N0020200000, G06N0003080000, G06K0009620000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to an advanced system for predicting water potability through real-time analysis using an ensemble of machine learning models integrated with a user-friendly graphical user interface (GUI). This system enables the rapid assessment of water quality based on various physicochemical and biological parameters including pH, dissolved oxygen, biochemical oxygen demand, total dissolved solids, ammonia nitrogen, nitrate nitrogen, total coliform, fecal coliform, and fluoride. The core of the invention is an ensemble machine learning model that combines Decision Trees, Random Forest, Gradient Boosting Machines, XGBoost, and Neural Networks to process input data and deliver highly accurate predictions of water potability. The GUI facilitates easy input of water quality data, displays the results of the potability analysis in real-time, and allows users to interactively modify parameters and instantly observe the effects on predicted water quality. This invention aims to enhance public health protection and environmental management by providing a tool that supports timely and informed decisions regarding water safety and management. The system is particularly advantageous for its adaptability to incorporate continuous learning from new data, ensuring its relevance and efficacy in diverse and changing environmental conditions.

No. of Pages : 23 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/07/2024
(21) Application No.202411056370 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AN AGRICULTURAL WASTE-BASED BIODEGRADABLE COMPOSITION AS AN ANTICOUNTERFEITING SENSOR OR AS A FOOD FRESHNESS INDICATOR

(51) International classification :G01N0031220000, G01N0021780000, B82Y0030000000, C09D0011500000, G02B0005300000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure relates to an agricultural waste based biodegradable composition as an anticounterfeiting sensor or as a food freshness indicator. Particularly, the present disclosure relates to an agricultural waste based biodegradable sprayable paint or ink composition comprising cellulose nanocrystals and carbon nano dots as an anticounterfeiting sensor or a film composition comprising cellulose nanocrystals, carbon nano dots and sugar alcohol as a food freshness indicator.

No. of Pages : 27 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024
(21) Application No.202411057601 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SMART LIBRARY SHELF

(51) International classification	:G06Q0030020000, H04N0021434000, B62B0005000000, A47B0049000000, G06K0019070000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
SMART LIBRARY SHELF The main design of the present invention discloses the smart library shelf, which comprises a controller and book recommendation unit. The main purpose of the present invention is to search and identify the desired books, along with their related books, using RFID tags. Users' interactions are streamlined from the moment they enter the library by RFID tags. After inputting their book preferences, the book recommendation unit provides personalized suggestions. The user data is transmitted to the controller, which serves as the central hub coordinating communication with RFID readers and tags. Through this coordination, a linear actuator is activated to facilitate easy access to books as users approach specific sections. Moreover, the system's capability to retract books not selected by users ensures shelves remain organized, optimizing space and user experience. The smart library system also represents a significant leap forward in library technology, convenience, and an enriched user journey in accessing library resources.

No. of Pages : 25 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024

(21) Application No.202411057605 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : IOT BASED DIGITAL HANDHELD REAL-TIME CANCER CELL DETECTION DEVICE CHILDHOOD CANCER

(51) International classification	:A61B0005000000, A61B0005145000, G16H0040670000, A61B0005080000, G01N0033574000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention relates to an IOT based digital handheld real-time cancer cell detection device (100). The device (100) comprises a sensor array, a data processing unit, a wireless communication module, a user interface, and a rechargeable power supply. The sensor array configured to non-invasively detect biomarkers associated with cancer cells from bodily fluids or exhalations. The data processing unit equipped with algorithms for analyzing the sensor data to identify the presence of cancer cells and monitor treatment-related symptoms. The wireless communication module for transmitting the processed data to healthcare providers in real-time. The user interface designed for ease of use by pediatric patients and their caregivers, providing real-time health metrics, alerts, and educational content. The rechargeable power supply optimized for continuous monitoring.

No. of Pages : 14 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024

(21) Application No.202411057621 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : HOME POLLUTION CONTROL SYSTEM USING IOT DEVICE

(51) International classification	:G01N0033000000, G01N0015060000, G01N0001400000, G01N0001220000, F24F0110500000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a home pollution control system using Internet of Things (IoT) device. The system comprises; a gas sensor to detect as well as measure the concentration of specific gases in the air; an Arduino microcontroller for efficient data collection, processing, and transmission; a display unit to display the result in real time; a buzzer, and an IoT device for real-time data acquisition and processing. Air quality is one of the most immediate factors which both environmental and human health is suffering directly from. An increased demand for continuous and precise air quality monitoring has emerged owing to the pollution levels of the developing industry and urbanization. Regarding this, the study article provides a comprehensive analysis of the production of an air-quality detection system Internet of Things. This system not just with the capabilities of the IoT devices, but to also deliver real time data on various air contaminants each with a view of quick cautionary measures to cater for the health risks and environmental harm. As air pollution is one of the primary factors to causing both environment and public health deterioration in urban areas, monitoring and controlling the quality of urban air quality is of paramount significance. Along with the Internet of Things (IoT) you which offer novel ways to do real-time data acquisition and processing, the area of environmental monitoring is now undergoing an extremely change.

No. of Pages : 13 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/07/2024
(21) Application No.202411057302 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : TERNARY BLENDS FOR IMPROVED PERFORMANCE AND EMISSIONS CHARACTERISTICS IN SPARK IGNITION (SI) ENGINES

(51) International classification	:C10L0010100000, C10L0001160000, C10L0001180000, C10L0010020000, F02B0001040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present invention relates to a fuel mixture for modern spark ignition (SI) engines and a method for decreasing emissions from the combustion of fuels. The blend contains 18% ethanol (by volume), 80% gasoline (by volume) and 2% DTBP (by volume) for use in modern spark ignition engines. The invention reduces the harmful tailpipe emissions without compromising specific fuel consumption (SFC). The proposed blend is prepared by adding Di-Tert Butyl Peroxide (DTBP) to binary blends of ethanol and gasoline. DTBP acts as an octane improver when added to binary blends of gasoline and ethanol. It also compensates for the leaning effect produced by addition of ethanol to gasoline owing to its higher burning rate and calorific value than ethanol.

No. of Pages : 18 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024

(21) Application No.202411057536 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SIMPLIFIED LOW-COST PORTABLE VENTILATOR DESIGN

(51) International classification	:A61M0016000000, A61M0016100000, A61B0005080000, A61M0016080000, A61M0016060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present invention relates to a simplified, low-cost, and portable ventilator (100) designed to deliver effective respiratory support in various settings, including home care and emergency situations. The ventilator (100) comprises a low-cost air pump for controlled and adjustable airflow, a microcontroller-based control system for regulating ventilation parameters, and a rechargeable battery for extended power supply. The user-friendly interface includes an LCD display and intuitive controls for easy monitoring and adjustments. Housed in a lightweight and durable casing, the ventilator (100) is designed for ease of portability and protection of internal components. It supports multiple ventilation modes, such as CPAP, BiPAP, and ACV, with adjustable settings for tidal volume, respiratory rate, inspiratory/expiratory ratio, and oxygen concentration. Safety features, including alarms for power failure and abnormal pressure levels, ensure patient safety. The device's affordable design, ease of use, and reliability make it ideal for resource-limited environments and emergency use.

No. of Pages : 13 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024
(21) Application No.202411057538 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : MULTICHANNEL TEMPERATURE DATA LOGGER

(51) International classification	:G06F0040180000, G01D0021020000, A61B0005000000, G01D0009000000, G01N0033240000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a system for multichannel temperature data logger. The system comprises an Arduino board; temperature sensor, DHT11 sensor; a real-time clock to ensure precise time stamping of the readings; an LCD screen for real-time monitoring; and an SD card for data storage. The data storage in CSV file format and analysis using spreadsheet software like Microsoft Excel. This configuration not only enhances the ease of data management and analysis but also provides a reliable solution for long-term environmental monitoring. The system's robust design ensures accurate data collection and storage, making it suitable for various applications in research and industry where continuous monitoring of temperature and humidity is essential.

No. of Pages : 11 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024
(21) Application No.202411057551 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : MODIFICATIONS IN THE FASHION DESIGN PROCESS FOR THE EMOTIONAL AND MENTAL WELLNESS OF CUSTOMERS IN GARMENT INDUSTRY

(51) International classification	:A41H0003000000, G06F0030000000, G09B0019000000, G10L0025630000, A47F0007190000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention relates to a process for the modification in fashion design for the emotional and mental wellness of customers in garment industry. The process comprises User experience Design, Emotional Design, User Interviews and Surveys, Empathy Mapping and Cultural and Trend Analysis for the modification in fashion design. In the fashion industry there is a need to modify a design process with some changes in traditional design process so that the garments will be more connected with the customers wellness There are already many designs process available in the design industry like Double Diamond model and in the fashion industry most of the fashion designers use the famous design process by Aspelund. The present invention design process does not directly include the feelings and emotional aspects of the customers and many times customers become frustrated with the garment because design is not fulfilling the emotional aspects of the customers and because of that they buy more garments and, in the result, we can see the wastage of the garments. In this process author is including some more processes in the traditional method so that customer feel more connected with the garment and follow the sustainable practice because if he feels more connected with the garments then he will not buy the garments which are not useful for him.

No. of Pages : 7 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024
(21) Application No.202411057736 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : DESIGN AND DEVELOP THE INNOVATIVE TECHNOLOGY FOR MANAGING THE PATIENT DATA AND SUPPORT DECISION MAKING

(51) International classification :G16H0010600000, G16H0015000000, G16H0040200000, G06Q0040080000, G16H0010650000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT A patient's whole medical history might be kept in one place with the help of the Health Card, a portable smart card. A person can think of it as a pass that allows them to go from one hospital to another. A patient's health card can keep track of their whole medical record, including their diagnosis, vaccinations, family medical history, emergency contacts, insurance information, and more. To prevent data loss caused by card damage, a web application with a graphical user interface is being created to store and manage the patient's complete medical records on the card and in a server. The data is adequately protected by encrypting patient credentials in MongoDB, which also guarantees acceptable privacy. Additionally, we have separated the card's functionality into four sections, which comprise: 1. The users' panel consists of user profile data, his existing medical reports, ongoing medicines (if any), making an appointment, registering emergency cases and payment gateway. 2. The doctor's panel which is a dossier on body mass index, blood pressure statistics, sugar levels, heart scans, other bodily analysis, medical history, fresh records, future investigations, external note for the patient and recommended diet chart. 3. The hospital community panel consists of information on healthcare appointments schedules, list of patient reviews and feedbacks and other hospital communication. 4. The admin's panel consists of columns for approving or rejecting patients' appointment, the ContactUs bar, payment gateway notification and the patient - doctor catalogue. The Health Card will be a "patient-centric" health information system instead of a "hospital-centric" system for easy navigation through the treatment history of the patient. Keywords: RFID, NodeMCU, interfacing, API, program code for easy integration in back-end as well as front-end.

No. of Pages : 11 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024
(21) Application No.202411057737 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : INNOVATIVE IN-SITU SURFACE MODIFICATION TECHNIQUE OF ALUMINIUM ALLOY VIA GAS TUNGSTEN ARC WELDING (GTAW)

(51) International classification	:B23K0020120000, B23K0009167000, B23K0009040000, B22F0003100000, B23P0006000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT This research introduces a novel technique to enhance the erosive wear resistance of aluminum alloy AA7075 T6 by creating a composite layer on its surface. The Gas Tungsten Arc Welding (GTAW) process, employing the bead on plate technique, was utilized to develop this composite layer on aluminum 7075 T6 plates. The arc's heat melted the base metal's surface along with a cover plate placed atop it, embedding alumina particles between them. This method successfully produced a surface composite that exhibited a threefold increase in wear resistance compared to the base metal. The enhancement in wear resistance is attributed to the refined grain structure and the dispersion of alumina across the aluminum alloy's surface. Scanning Electron Microscopy (SEM) images revealed a uniform dispersion of alumina particles, resulting from the melting-disintegration-distribution action described herein. The erosive wear mechanisms identified at a 30° sample inclination were intermetallic displacement and ploughing for the base metal and modified surface, respectively. Alternative surfacing techniques like laser surfacing and friction stir surfacing are deemed commercially unviable for in situ applications. The technology presented in this work offers a ready-to-use solution for commercial in situ manufacturing, leveraging the conventional GTAW process renowned for its high-quality bonding.

No. of Pages : 15 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024
(21) Application No.202411057755 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : UNVEILING HETEROGENEOUS CATALYTIC POTENTIAL OF DISTINCTLY COORDINATED POLYMERS TOWARD HENRY AND MORITA-BAYLIS-HILLMAN REACTIONS

(51) International classification	:C11C0003100000, H04L0067510000, C11C0003000000, H01M0008040070, G06F0021560000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
ABSTRACT The Morita-Baylis-Hillman (MBH) reaction was initially identified in 1968 by Morita, 49 and subsequently by Baylis and Hillman, 50 in 1972. It is essentially a three-component reaction that involves coupling activated alkenes' a-position with carbon electrophiles while being catalyzed by a Lewis base. This reaction offers a straightforward and practical method for synthesizing densely functionalized molecules.51a this intriguing and promising reaction was largely overlooked for a long time after it was discovered, and only in the 1980s did organic chemists begin to investigate its many facets. The MBH reaction is particularly intriguing from a synthetic perspective since it may be utilized to change inexpensive starting materials into highly functionalized molecules appropriate for further transformations. There have also been 48 more recent asymmetric developments of the MBH response.

No. of Pages : 6 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024
(21) Application No.202411057787 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A VIRTUAL REALITY TRAINING PLATFORM FOR MARKETING SKILL DEVELOPMENT

(51) International classification	:G06Q0030020000, G09B0009000000, G06F0003010000, G02B0027010000, G06Q0030060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a virtual reality training platform for marketing skill development. The platform comprises; a Virtual Reality (VR) headset to create immersive simulated environments resembling real-world shops or malls, Mobile device with webcam and microphone to monitor the user's behavior and voice modulation during sales interactions, AI algorithm to analyze the user's behavior and provide real-time feedback on communication effectiveness, and a cloud server to facilitate communication between the VR environment and virtual customers, enabling dynamic interaction and adjustment of virtual customer responses. In today's dynamic marketplace, effective marketing skills are essential for success. Traditional learning methods often lack practical experience, limiting the ability to apply theoretical knowledge in real-world scenarios. To address this challenge, the presnet Virtual Reality (VR) application designed to revolutionize marketing skill development. Our VR application creates an immersive shop environment where users can engage in simulated sales interactions with virtual customers. Through lifelike scenarios and dynamic feedback mechanisms, users can practice and refine their communication skills, product demonstration techniques, and sales strategies.

No. of Pages : 9 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024
(21) Application No.202411057788 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SMART FACE RECOGNITION SYSTEM WITH REAL TIME DATABASE

(51) International classification :G06Q0050200000, G07C0001100000, G06F0021320000, G06F0021600000, F24F0011300000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a smart face recognition system with real time database to enhance the efficiency and accuracy of attendance tracking. The system comprises; a Raspberry Pi camera in conjunction with OpenCV, centralized Firebase Database to stores the data of students; and an AI based image processing algorithms to capture and analyse facial features. The system further equipped with enhanced security features to protect user data and ensure compliance with privacy regulations. The facial recognition system provides a real time attendance and further integrated with the progress report of the users. The current system offers a substantial improvement over previous ones in terms of attendance tracking, as well as a dependable and user-friendly solution for businesses, educational institutions, and other settings. This cutting-edge attendance management system uses state-of-the-art facial recognition technology to deliver precise and effective attendance tracking.

No. of Pages : 10 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024
(21) Application No.202411057789 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : WEB OF THINGS (WOT) BASED UNIVERSAL GAMING COMPETITION FRAMEWORK

(51) International classification	:A61K0036730000, F16H0003720000, A63B0071060000, G06Q0010100000, A63F0013332000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention relates to a system to design a Web of Things (WoT) based Universal Gaming Competition Framework. The system comprises a Raspberry Pi configuration for game input/output, sensors, actuators, camera, and software libraries (wiringPi, OpenCV). The system further installed WoT protocols and platforms on Raspberry Pi for device-to-cloud communication. The Raspberry Pi serves as the core infrastructure, managing communication between WoT-enabled bots and the competition platform. Bots expose their capabilities through WoT descriptions, ensuring standardized interaction. The platform features a web interface for participant registration, bot monitoring, and competition submissions. It may include a simulated environment for testing, robustness, and a scoring system. Documentation and support channels are provided for participants. The design prioritizes user-friendliness and adherence to WoT standards. Testing and iteration are essential for reliability and scalability.

No. of Pages : 16 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024
(21) Application No.202411057790 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : REHABILITATING LOWER LIMB MOTOR SKILLS: A CIMT APPROACH

(51) International classification :A61H1/02, A63B23/04, A63B21/055, A63B21/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention relates to a novel method for rehabilitating lower limb motor skills through Constraint-Induced Movement Therapy (CIMT). The method comprises; a specially designed lower limb brace or constraint device for restricts movement in the unaffected limb while promoting intensive use and retraining of the affected lower limb, weights or resistance bands attached to the affected lower limb to provide additional resistance during rehabilitation exercises, and cognitive training techniques to engage users in interactive tasks and exercises designed to promote motor learning and functional recovery. The method further comprises a progressive and customizable approach for gradually increasing the intensity and complexity of exercises over time and mechanisms for monitoring and analyzing rehabilitation data, such as movement metrics, muscle activation patterns, and functional outcomes. By combining these elements, this approach provides targeted and intensive rehabilitation for individuals with lower limb impairments, aiming to improve motor function, mobility, and quality of life.

No. of Pages : 8 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024
(21) Application No.202411057791 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : UTILIZING GOLD NANOFLUID FOR IMPROVED HEAT TRANSFER IN ENGINEERING AND INDUSTRIAL APPLICATIONS

(51) International classification :B01J0019300000, G06F0030200000, A61M0001360000, B01D0021020000, G16C0020100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a method to investigate the industrial/engineering problem of chemically reactive magnetized gold NF flow in a porous medium inclined channel with radiative heat transfer and thermophoresis/Soret effects. The method designed a prototype, form model/flow associated equations, and solution is discussed by perturbation method and MATLAB software. The substantial results of momentum, heat and mass transfer are explained and presented in the form of figures 1-16. Further method evaluates the heat transfer rate for gold NPs, and investigates for different shapes (like, cylindrical, platelet, blade and brick shapes etc.). It is observed that the heat transfer capacity of conventional fluid is improved when the gold NPs are dispersed within the base fluid. Thus, gold NF (gold NPs +base fluid) is considered the best choice to improve the heat transfer rate of the channel. Also, the magnetic field, volume fraction, inclination angle, thermal radiation, chemical reaction and thermophoresis/Soret effects are also explicated with concentration, temperature and velocity profiles. The elucidated prototype and investigated results are prominently useful in engineering/industrial fields, such as heat exchangers, solar thermal systems, aerospace applications, and various chemical processes.

No. of Pages : 18 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024
(21) Application No.202411057793 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A NOVEL STAIRCASE SLOTS ON MICROSTRIP PATCH ANTENNA

(51) International classification	:H01Q0009040000, H01Q0001380000, H01Q0001500000, H01Q0001480000, H01Q0001320000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention introduces staircase slots on microstrip patch antenna for IoT application. The microstrip patch antenna comprises a ground plate, a dielectric substrate and a monopole patch antenna. The microstrip patch antenna miniaturization is achieved using the technique of staircase shaped slots (SSS) loaded in the patch. First, a normal rectangular microstrip patch antenna is designed which has resonant frequency at 2.435GHz and then stair-shaped slots shift this resonant frequency to a lower side by an amount of 0.605GHz. Thereby miniaturization of the antenna has been justified. Moreover it is shown that with the varying design of the terminal part of the slots towards the middle of the patch, the new lowered resonant frequency is also varied. The configuration of the slots has been justified through using the concept of discontinuities (CoD). The slot-loaded final antenna is simulated and printed on FR-4 epoxy substrate. The numerical analysis is carried out using CST Microwave Studio.

No. of Pages : 9 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024
(21) Application No.202411057794 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR AN AFFORDABLE AND ACCESSIBLE CYBER SECURITY LEARNING PLATFORM

(51) International classification	:G06F0021570000, G09B0019000000, G09B0009000000, G06F0021550000, G09B0005060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention relates to a system and method to design an affordable and accessible cyber-security learning platform. The system comprises a customized, on-demand cybersecurity training environment for individuals and groups, through an augmented with games, realistic, hands-on environment. The user can practice cyber security techniques such as penetration testing, vulnerability assessment, and incident response in a safe and controlled environment on the platform. The platform offers a diverse range of challenges, exercises, and Capture The Flag (CTF) competitions to enhance users' practical skills and problem-solving abilities. These challenges cover various cyber security topics, including cryptography, network security, web application security, and more. The platform designed to cater to users of all skill levels, from beginners to experienced professionals. The platform offers both free and paid subscription options, allowing users to access basic features for free and unlock premium content and features with a subscription. This pricing model ensures that cyber security education is accessible to individuals with diverse financial backgrounds.

No. of Pages : 6 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024
(21) Application No.202411057795 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SYSTEM FOR AUTOMATED EXPENSE TRACKING

(51) International classification	:G06Q0040000000, G06Q0020340000, G06Q0040020000, G06Q0020100000, G06N0020000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a system to track the expenses automatically. The system comprises a display unit for the users to input the expenses; a cloud based storage to store the expenses, a processing unit to sent the input to AI algorithm, and AI based algorithm to for automatic categorization of expenses, an inbuit Power BI tool to display the daily, month and yearly expense in the graphic representation, and a feature with notifications for when expenses exceed the set budget. The system further integrates the bank accounts and credit card/ debit card to track the expenses of an individual. The present invention system related to financial management for that reason system includes the security module for end to end secure transaction. The system is not limited to individual user; any company/organization can also manage or track their expenses. By utilizing a machine learning system to automatically categorize expenses, less manual input is required, which improves accuracy and saves time. The innovation offers a practical and effective way to keep track of and manage spending.

No. of Pages : 11 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024
(21) Application No.202411057796 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ANDROID APPLICATION DEVELOPMENT BASED ON AGGREGATOR TECHNOLOGY USING JAVA

(51) International classification	:G06Q0030020000, G06F0009445000, G06F0021000000, G06F0040143000, G06F0030340000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention relates a system to develop of an android application based on aggregator technology using JAVA for the gym industry. The system comprises android studio for writing the codes and maintain the runtime environment, firebase realtime database, Java software, Xml (Extensible Markup Language) activity for designing and structure of application, and emulator for debugging. The developed application runs on the mobile electronic device. In an implementation, the mobile electronic device includes a memory, and a processor communicatively coupled to the memory. The mobile electronic device also includes an aggregator module stored in memory and executable by the processor. Aggregator technology is an online platform that brings together information or services from multiple sources to provide personalized recommendations or targeted advertisements to users Although aggregator technology offers many benefits, it also poses challenges such as privacy concerns and the potential for monopolistic behavior As the influence of aggregator platforms grows, it is necessary to address these challenges and ensure fair practices.

No. of Pages : 9 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024
(21) Application No.202411057820 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : PHOTOCATALYTIC AND ANTI-MICROBIAL HYBRID NANO-COMPOSITE MATERIAL AND ITS METHOD OF PREPARATION

(51) International classification :01D71/02, B01D69/12, B01D69/14, C02F1/44
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention discloses a photocatalytic and anti-microbial hybrid nano-composite material and its method of preparation, wherein the hybrid material comprises TiO2 nano-particles and silver nano-particles doped with graphene oxide. The method of preparation of the hybrid material allows bonding of the desired size TiO2 nanoparticles and silver nanoparticles with graphene oxide allows better surface area with desired quantity of the material so as to provide highly efficient light-induced decomposition of organic contaminants and ani-microbial activity to perform as an air filter with high efficacy. The method and preparation of TiO2-Silver- Graphene Oxide hybrid nanocomposite adopts a two-step simultaneous synthesis method involving the facile co-precipitation synthesis method for TiO2 nanoparticles and then TiO2-Silver-Graphene Oxide nanocomposite in a water and Alcohol combination, which is followed by the deposition of silver (Ag) nanoparticles onto the synthesized binary nanocomposite using mercury lamp environment.

No. of Pages : 23 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024
(21) Application No.202411057821 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR SORTING ONE OR MORE UNREAD MESSAGES IN AN APPLICATION

(51) International classification	:H04L0051000000, H04L0067540000, G06Q0010100000, H04L0067109700, H04W0056000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Disclosed herein is a method (400) for sorting one or more unread messages in an application. The method (400) includes identifying (402) the one or more unread messages received by the application (202). The method (400) further includes determining (404) an availability status of one or more senders of the identified one or more unread messages, wherein the availability status indicates at least one of an online mode and an offline mode associated with the one or more senders. Furthermore, the method (400) includes prioritizing (406) the one or more unread messages based on the determined availability status, wherein the one or more unread messages associated with the one or more senders in the online mode are prioritized and displayed on top of the one or more unread messages associated with the senders in the offline mode.

No. of Pages : 38 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024
(21) Application No.202411057824 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SYSTEM AND METHOD FOR EXTRACTING NATURAL ANTIOXIDANTS FROM MICROALGAE FOR ENHANCED FOOD PRESERVATION

(51) International classification :C12M1/00, C12M1/36, C12N1/12, C12M1/00, C12M1/36, C12N1/12
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention discloses a system and method for extracting natural antioxidants from microalgae to enhance food preservation. The system includes a microalgae cultivation unit for optimal biomass growth, a harvesting unit for biomass collection, an extraction unit employing physical, chemical, and biological processes to obtain antioxidants, a purification unit ensuring high-purity antioxidant extracts, and a storage/packaging unit for stable product distribution. The method involves cultivating microalgae under controlled conditions, harvesting biomass, pre-treating it to enhance extraction efficiency, extracting antioxidants using suitable methods, purifying the crude extract, and storing/packaging the purified antioxidants. This invention provides a sustainable and natural solution for food preservation, addressing the demand for clean-label products with enhanced nutritional benefits and prolonged shelf life. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 21 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024
(21) Application No.202411057829 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SMART GRID SYSTEMS WITH AUTONOMOUS AI-DRIVEN FAULT DETECTION AND RESOLUTION

(51) International classification :G06F113/04, H02J3/00, G05B23/02, G06Q50/06, G06N20/00, G06N3/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No: NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The rapid expansion of modern smart grids necessitates robust and efficient fault detection and resolution mechanisms to maintain system reliability and efficiency. This utility patent describes an innovative smart grid system equipped with autonomous, AI-driven fault detection and resolution capabilities. The system leverages advanced machine learning algorithms and real-time data analytics to identify, diagnose, and rectify faults within the grid infrastructure swiftly and accurately. Key features of the patented system include a network of intelligent sensors distributed across the grid, continuously monitoring parameters such as voltage, current, and temperature. These sensors feed data into a centralized AI processor that employs deep learning models to detect anomalies indicative of potential faults. Upon identifying an anomaly, the system initiates a multi-step diagnostic process to pinpoint the fault's location and nature. The AI-driven system not only detects faults but also proposes and executes optimal resolution strategies. It can autonomously reconfigure the grid to isolate faulty segments, reroute power, and restore service, minimizing downtime and reducing the risk of cascading failures. Additionally, the system incorporates self-learning capabilities, allowing it to adapt and improve its fault detection and resolution processes over time based on historical data and evolving grid conditions. This patented technology represents a significant advancement in smart grid management, enhancing operational efficiency, reducing maintenance costs, and improving overall grid resilience. By integrating autonomous AI-driven fault detection and resolution, the system ensures a more reliable and sustainable power supply, meeting the demands of modern energy consumption and distribution.

No. of Pages : 6 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024
(21) Application No.202411057837 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : HIGH SENSITIVE FLEXIBLE THIN FILM HEAT FLUX SENSOR FOR WEARABLE THERMAL MONITORING AND ENERGY-EFFICIENT APPLICATIONS

(51) International classification :H05K1/02, G01K7/02, G01K17/00, G01K17/20
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The heat flux sensor comprising a base substrate made up of two sided copper cladded polyimide sheet (1) forming the front overlap (2) and back overlap (3) connected through hole thermopile connector (4). The copper cladded polyimide sheet (1) acts as base for thermoelectric material deposition, temperature sensor attachment pads (6), connector leg pad for temperature (7) and connector leg pad for heat flux sensor (8), a temperature detection element. The cover layer is attached on both the sides to make the flexible sensor robust, is applied using a roll-to-roll manufacturing process. The non-invasive design of the sensor adds to the wearable thermal monitoring system consisting of a flexible printed communication circuit for transmitting heat flux data to an external device for energy-efficient thermal management with a temperature sensor, and a data transferring unit configured to adjust thermal management systems based on heat flux data received from the sensor.

No. of Pages : 25 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/07/2024
(21) Application No.202411055501 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AI-DRIVEN CYBERSECURITY SYSTEM FOR REAL-TIME THREAT DETECTION

(51) International classification :G06N0020000000, G06F0021570000, G06N0007000000, G06F0021550000, G06F0021560000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
Abstract The present invention introduces an AI-driven cybersecurity system designed for real-time threat detection and mitigation in network environments. The system comprises a data collection module that continuously monitors and captures network traffic data, including packet metadata, application logs, and user activity. This data is preprocessed to remove noise and normalized for consistency. A feature extraction module identifies relevant features from the data, which are analyzed by supervised and unsupervised learning models. The supervised model is trained on labeled datasets to recognize known threats, while the unsupervised model detects deviations from normal behavior indicative of potential threats. A threat detection module integrates the outputs of these models to identify threats in real-time. The system includes a threat mitigation module that automatically executes predefined actions, such as isolating affected systems and alerting administrators. A continuous learning module regularly updates the models with new data to adapt to emerging threats, ensuring robust and adaptive cybersecurity.

No. of Pages : 14 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/07/2024

(21) Application No.202411057162 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : BLISTER RESISTANT AND CORROSION RESISTANT ADDITIVE FOR RED OXIDE PRIMER

(51) International classification :C08G63/02, B05D3/06, C09D5/10, C23C18/12, C23C22/66, C23C22/68, C23C22/83, C23F11/06
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a new additive that offers remarkable protection against blister formation and corrosion caused by exposure to seawater. More particularly, the present invention relates to a blister-resistant and corrosion-resistant additive for Red Oxide primer and the process for the preparation thereof. Also, the additive offers a novel approach for increased asset longevity and lower maintenance costs by addressing the long-standing issues with blistering and seawater corrosion. The present invention has potential in many areas of applications such as offshore, coastal, maritime infrastructure sectors and marks a substantial advancement in protective coating technology.

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2024
(21) Application No.202411058035 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SELF-SUSTAINING MICRO-CLIMATE CONTROL SYSTEM FOR URBAN ENVIRONMENTS

(51) International classification :F24F0110500000, F24F0011300000, A41D0013005000, H02S0010120000, F03D0009000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
The present invention relates to a self-sustaining micro-climate control system for urban environments. The system comprises: renewable energy generation means for generating renewable energy through solar and wind turbines and stored in energy storage system; a climate control module equipped with temperature regulation, humidity control, and air purification systems; sensors consist of temperature sensor, humidity, air quality sensor and Occupancy sensor for monitoring environmental conditions; an intelligent controls module includes a microcontrollers or microprocessors, an artificial intelligence algorithms, and a control software. The present invention is a self-sustaining micro-climate control system designed to create comfortable outdoor environments in urban areas. Utilizing renewable energy sources such as solar and wind power, the system integrates advanced climate control technology to regulate temperature, humidity, and air quality within designated outdoor spaces. Climate control modules strategically placed throughout the urban environment continuously monitor environmental conditions and adjust real-time settings to maintain optimal resident comfort. This innovative system enhances the quality of life for urban dwellers and contributes to energy efficiency and sustainability goals.

No. of Pages : 15 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :30/07/2024

(21) Application No.202411057883 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : INTEGRATION OF THE INTERNET OF THINGS AND AI FOR MONITORING CLIMATE, EARTHQUAKES, AND AIR QUALITY

(51) International classification :G01N0015060000, G06N0003080000, G01N0033000000, F24F0110700000, G01N0001220000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The method for the development of the Internet of Things (IoT), Arduino, machine learning, deep learning, and temperature, humidity, wind speed, and wind direction sensors are just a few of the frameworks, technologies, and methods that these systems make use of. These technologies give people access to up-to-date meteorological information, empowering them to make wise decisions. Furthermore, these systems' integration of cloud computing technology enables safe data storage that enables verified users to access from any location. Inhaling these tiny particulates has led to numerous health dangers in addition to a decline in air quality due to PM concentration and an increase in air pollutants. As a result, having a portable and reasonably priced way to keep an eye on air pollutants, the air quality index, and the PM concentration in a given atmosphere is essential. In light of this, a portable device that can monitor and quantify air quality and particulate matter concentration in response to environmental factors such ambient temperature, humidity, atmospheric pressure, and dew point is proposed in this work. FIG.1

No. of Pages : 14 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024

(21) Application No.202411057886 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : INTEGRATED FRAMEWORK FOR SOFTWARE RELIABILITY PREDICTION AND ANALYSIS

(51) International classification	:G06F0003048420, G06Q0050040000, G06N0005040000, G06F0016340000, G06Q0010100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present invention discloses an integrated framework system (100) for prediction of reliability of software. The system (100) includes a plurality of data (102) of different attributes; a user interface (104) to receive the data; a tactile-based module (106) to process the data; a non-transitory computer readable storage medium (108) storing a plurality of attributes of the data; and at least one processor (112) to create process management of the data through a plurality of modules.

No. of Pages : 15 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024

(21) Application No.202411057887 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : CATALYTIC CONVERTER SYSTEM FOR GASOLINE-POWERED VEHICLES

(51) International classification	:F01N0003280000, F01N0003200000, C02F0001000000, F02N0019100000, B01J0035000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention relates to a catalytic converter system for gasoline-powered vehicles comprises of a crossflow heat exchanger installed near a gasoline storage tank, allowing gasoline to flow from the tank to the exchanger, featuring a gyroid-shaped structure, the exchanger maximizes surface area for efficient catalytic conversion and heat exchange, preheating gasoline before it reaches the engine, thus optimizing combustion and fuel efficiency, a digital current monitoring unit within the heat exchanger continuously assesses performance, while an electronically controlled unit (ECU) determines its condition, a health notification device alerts users for maintenance, additionally, a self-cleaning exhaust unit activated by the ECU maintains efficiency by removing residues, and a dual-stream unit preheats fuel by guiding it through intersecting paths.

No. of Pages : 18 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024
(21) Application No.202411057888 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : NOVEL PROCESS AND CATALYST FOR THE SYNTHESIS OF POLYLACTIC ACID

(51) International classification :C08L0067040000, B01J0021060000, B01J0037000000, C07F0003060000, B01J0037020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention provides novel process and catalyst for the synthesis of polylactic acid. In particular, the present invention provides a photocatalytic process for the synthesis of polylactic acid using novel zinc metal complex catalyst. The polylactic acid prepared by such process if free from any heavy metal and is suitable for medical, pharmaceutical and electronic purposes.

No. of Pages : 27 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024
(21) Application No.202411057553 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : IOT ENABLED SMART CHIMNEY

(51) International classification :H04W0004800000, G06T0007130000, A47J0036320000, A47J0037060000, G06T0005000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to an IoT Enabled Smart Chimney (100). The smart chimney(100) comprises a high-accuracy thermal sensor capable of detecting temperature variations with a precision of ±0.5°C (10); a tri infrared distance measuring sensors to detect object (20); a triple wide angle HD Camera (60); a high-precision load cell sensor embedded in the cookware support platform to detect weight changes; a casing(30) includes Wi-Fi Module; Bluetooth Module: IoT Hub Integration; processing unit; a unit of display; vent casing and fan housing (40), exhaust fan grill casing (50), LED lighting Array (70) and Liquid Spillage Detection Algorithm. IoT Enabled Smart Chimney provides a smoke-free and healthy cooking experience, with Auto ON/OFF and Smart Cleaning System along with other smart features to make your life easier and more secure. Now control your chimney with a single click by using a Mobile Application. The device first detects any pan or utensil laid out on the stovetop. Then it runs an edge detection algorithm that uses the Laplacian function to detect edges of a utensil. Once the edges are detected, the device calibrates its 3 infrared ray distance sensors to fit the pan by focusing one on the epicenter of the pan and the other two on its edges. This helps us measure the actual depth of the pan. This device can also use CNNs in order to predict the calories of the food that is being cooked in order to educate the masses about nutrition

No. of Pages : 18 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2024
(21) Application No.202411058217 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ANIMAL CAGE FOR NEUROLOGICAL DISORDERS

(51) International classification :A01K0001030000, A01K0029000000, G06F0040300000, C12M0001000000, G09F0009330000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present disclosure introduces animal cage for neurological disorders 100 which is designed for neurological disorders, aimed at enhancing the accuracy and reliability of experimental studies. The cage features a smart LED screen for group selection 102, allowing for environmental settings. Insulated walls with noise cancellation 104 and insulated waterproof walls 114 ensure a stable and serene environment for accurate behavioral studies. Additionally removable lid 106, a food holder with weight analyzer 108, and a water consumption analyzer 110 for precise monitoring of intake. Stability is ensured with cage holders on both sides 112, while a time lapse recorder 116 continuously records animal activities. A button to unstack the bottom 118 allows for easy maintenance, a quantity analyzer 120 measures the amounts of food and water provided and consumed, and a removable cage tray with sensors 124 ensures real-time environmental monitoring.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2024
(21) Application No.202411058219 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ECO TOUCH NAVIGATOR GLOVE

(51) International classification :A61H0003060000, G09B0021000000, A41D0019000000, G08B0021020000, G01S0015870000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present disclosure introduces an eco touch navigator glove 100 which is an innovative assistive device designed to enhance the mobility and safety of visually impaired individuals. This smart glove comprises of glove 102, ultrasonic sensor 104, microcontroller 106, vibration motor 108, buzzer 110, smartphone integration unit 112, power management system 114, battery 116 and user interface 118. The ultrasonic sensors detect obstacles, while the microcontroller processes the data and activates the vibration motors and buzzer to alert the user. The glove also features smartphone integration for GPS-based navigation assistance, ensuring precise and confident navigation.

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/07/2024
(21) Application No.202411057889 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : BATTERY THERMAL MANAGEMENT SYSTEM (BTMS) AND METHOD FOR COOLING A SET OF BATTERY PACKS

(51) International classification	:H01M0010613000, H01M0010625000, H01M0010480000, H02J0007000000, H01M0010656700
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a battery thermal management system (BTMS) and method for cooling a set of battery packs comprises of a housing accommodates set of battery packs, wherein a thermal sensor integrated within the housing for determining temperature of the battery sets, a control unit linked with the sensor for evaluating the temperature of the set of battery packs in real-time, a vapor absorption refrigeration activated by the control unit, in case the control unit determines the temperature to be exceeding a threshold value for absorbing the heat of the battery packs, a Stirling engine unit installed in parallel to the vapor absorption refrigeration unit activated by the control unit in a simultaneous manner to utilize the waste heat from the set of battery packs, which are further used to drive the pump, while leftover thermal energy regenerates the refrigerant for performing the refrigeration cycle.

No. of Pages : 20 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2024

(21) Application No.202411057907 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A DYNAMIC EDUCATIONAL TOURISM MANAGEMENT SYSTEM AND METHOD THEREOF

(51) International classification	:H04W0004020000, G06Q0050140000, G06Q0050120000, G06Q0030020000, G06Q0010020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to the dynamic educational tourism management system and method thereof. The dynamic educational tourism management system for integrated collaborative resource management for smooth knowledge interchange comprised of at least one university module of first location for collecting updated description periodically, a demography information unit for collecting demographic information in the vicinity of first location, a lodging information module for collecting lodge and restaurant information in the vicinity of first location, a health care information unit for collecting information of hospital, old age care, juvenile care, emergency care in nearby area of first location, a weather information unit for collecting weather, and environment information of first location, a socio-cultural & linguistic information unit for collecting language, prevalent social responsibilities and cultural development of first location.

No. of Pages : 27 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2024

(21) Application No.202411057915 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : MODULAR CARGO BICYCLE

(51) International classification	:A63B0021000000, B60B0027020000, B62M0006900000, B62H0003080000, B62K0025020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
ABSTRACT A modular cargo bicycle (100) is disclosed. The bicycle (100) comprising: a frame (102) adapted to accommodate a cargo bucket (104). The cargo bucket (104) adapted to carry and haul a load, is constructed using a two-part sliding mechanism, such that a first part (104a) of the cargo bucket (104) is adapted to slide over a second part (104b) of the cargo bucket (104); and a handle (112) arranged on the frame (102) of the bicycle (100), and adapted to enable a user to steer the front wheel (110a) of the bicycle (100), wherein the handle (112) and the front wheel (110a) are attached using a rocker arm (114). The bicycle (100) is designed to carry and haul the load in and around a premise.

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2024
(21) Application No.202411057916 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : POLYAMINE POLYMER AND METHOD FOR SYNTHESIS OF SAME FOR TREATMENT OF WASTE WATER

(51) International classification :C12N0015100000, C08F0008320000, C08G0073020000, C02F0101300000, G01S0005020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A polyamine polymer (100) for the treatment of wastewater is disclosed, comprising phenyl-methyl amine in a concentration ranging from 10% to 30% by weight, epichlorohydrin in a concentration ranging from 15% to 35% by weight, and alkyl diamine in a concentration ranging from 5% to 20% by weight, with a molar ratio of phenyl-methyl amine to epichlorohydrin ranging from 1.5:1 to 2:1, resulting in a polymer with a cationicity of at least 80%. Further, a system (200) and a method (300) for synthesizing the polyamine polymer (100) are disclosed. The system (200) allows for the efficient and effective treatment of wastewater, particularly from the sugar industry. The polymerization reaction is completed within 5-10 minutes at a temperature ranging from 25°C to 50°C. The synthesized polymer (100) is characterized using various spectroscopy techniques and exhibits a positive charge due to the presence of amino groups.

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2024

(21) Application No.202411058220 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : NEURORESONANCE RELAXATION SYSTEM

(51) International classification	:A61B0005000000, A61B0005375000, A61M0021000000, A61M0021020000, A61B0005378000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present disclosure introduces a neuroresonance relaxation system 100 which promotes mental wellness by harnessing advanced neurotechnology to induce relaxation and reduce stress. Comprising Electroencephalogram (EEG) sensors 102, signal processing software 104, neurofeedback equipment 106, binaural beats or isochronic tones generators 108, light and visual stimulation devices 110, biofeedback devices 112, headband 114, power source 116 and user interface 118, this device offers a comprehensive system for promoting mental well-being. EEG Sensors detect brainwave activity, while signal processing software analyzes and interprets data in real-time.

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2024
(21) Application No.202411058221 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : TEMP - COMFORT SHOE

(51) International classification :H01M0010625000, H01M0010613000, A61P0029000000, A43B0003000000, H01M0004360000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT The present disclosure introduces a temp-comfort shoes 100 which represents a significant advancement in footwear technology, addressing the challenge of maintaining optimal foot temperature in varying environmental conditions. This innovative invention comprises multiple components connected with conducting wires 114 meticulously designed to regulate foot warmth effectively. The shoe body 102, constructed from durable materials like leather and rubber, provides structural integrity, while the conducting cloth 104 efficiently converts electrical energy into heat when powered by the rechargeable battery 112. Heat retaining pads 106, heat transfer layer 108, and over-heat protection circuit 110 work synergistically to ensure even heat distribution and user safety. Convenient features such as charging sockets 116 and waterproof socket 118 cover enhance usability and durability. The versatility and cost-effectiveness of this invention make it a practical system for individuals seeking reliable temperature regulation in footwear.

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2024
(21) Application No.202411058222 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : NOVEL POLYMER REINFORCED CELLULOSE COMPOSITE

(51) International classification :D21H0021160000, A61P0009000000, C08L0023120000, D21H0017140000, A61P0009120000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present disclosure introduces a novel polymer reinforced cellulose composite 100 which is designed to address the limitations of traditional paper in packaging applications. The composite is fabricated using cellulose pulp 102 obtained from waste paper, a natural binder 104 to enhance mechanical properties, and a polymeric concoction 106 to improve wettability and hydrophobic characteristics. The process involves dissolving and crushing waste paper to form pulp, adding the natural binder and polymeric concoction, and mixing thoroughly to create a homogeneous slurry. The slurry is then spread over a metallic stencil 108 and transferred to a wet cotton cloth 110 for drying. Once dried, the material is pressed using a roller 112 to achieve a smooth, uniform surface.

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2024

(21) Application No.202411058223 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : STOCK SOLUTION RESERVOIR AND DISPENSER

(51) International classification	:B01L0003020000, B01L0003000000, G01N0035100000, G16H0010400000, A61M0005000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present disclosure introduces a stock solution reservoir and dispenser 100 which is a laboratory device designed for the precise storage and dispensing of various solutions, including buffer, isotonic, hypertonic, and drug solutions. It features a durable glass reservoir 102 that stores the solution, a graduated tube 104 for accurate measurement and dispensing, and a glass stopper 106 to prevent contamination and evaporation. The vent 108 facilitates smooth flow by removing vacuum during dispensing, while the knob 110 allows for controlled, precise dispensing of the solution. This integrated system simplifies the process of solution preparation, reducing the need for repetitive pipetting and minimizing measurement errors.

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2024
(21) Application No.202411058036 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : VOICE-CONTROLLED CAR SWITCHBOARD DEVICE

(51) International classification :G10L0015220000, G10L0015260000, B60K0035000000, B60R0016030000, B60R0016020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention relates to a voice controlled device capable of converting any standard automobile control board into a voice-controlled system, offering users enhanced convenience and safety during vehicle operation. The device comprises, a voice recognition module to receive the input through digital mic; a Microcontroller Unit (MCU) receiving input from the voice recognition module and translating it into electrical signals; a connection interface system for integration with the car's electrical switchboard; a control relay circuitry for controlling the switches of various electrical signals within the vehicle; and battery management system requires 5V power supply. The device further includes a wifi module also. The device, designed to be seamlessly integrated into the car's electrical switchboard, enables users to execute various commands through voice input, thereby bypassing the conventional physical controls. This invention provides a cost-effective solution for transforming traditional cars into modern, voice-responsive vehicles, enhancing user experience and promoting safer driving practices.

No. of Pages : 9 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2024
(21) Application No.202411058037 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SPORTS PHYSIOTHERAPY REINVENTED: REAL-TIME REHABILITATION MONITORING AND FEEDBACK WITH RNNS

(51) International classification	:G06N0003040000, G06N0003080000, G16H0020300000, A63B0024000000, G09B0019000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention relates to a novel system and method to enhance sports physiotherapy through real-time monitoring and feedback using recurrent neural networks (RNNs). The system consists of multiple components, including data collection, preprocessing, model training, and real-time analysis. Traditional rehabilitation protocols often lack continuous monitoring, which can lead to suboptimal outcomes and increased risk of re-injury. Our approach aims to address these limitations by leveraging RNNs to analyze movement patterns, muscle activation, range of motion, and other relevant parameters during rehabilitation sessions. By continuously monitoring athletes' progress, RNNs enable physiotherapists to adjust rehabilitation protocols in real-time and provide personalized feedback, facilitating faster recovery and reducing the risk of re-injury. Additionally, the proposed system allows for remote monitoring, enabling athletes to receive expert guidance and support regardless of their location. Through the integration of deep learning techniques into sports physiotherapy practice, this study contributes to the advancement of personalized, data-driven rehabilitation strategies, ultimately enhancing athletes' performance and well-being.

No. of Pages : 8 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2024
(21) Application No.202411058159 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM FOR IDENTIFYING ANOMALIES IN MAP DATA AND METHOD THEREOF

(51) International classification :G01C0021320000, G06F0016290000, H04N0019577000, G01C0021340000, G06T0011600000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A system (100) and a method (600) for identifying anomalies in map data (302) are disclosed. The system (100) includes an anomaly detection and quality indicator module (ADQIM) (102), a map improvement module (MIM) (104), and a control unit (106) in communication with the ADQIM (102) and the MIM (104). The control unit (106) receives map data (302) via the ADQIM (102) as requested by the control unit (106), identifies one or more potential error locations in the map data (302) using the ADQIM (102), and performs correction of the map data (302) using the MIM (104), based on the identified one or more potential error locations.

No. of Pages : 27 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2024
(21) Application No.202411057917 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : PREANESTHETIC MUCOSAL CONDITIONING DEVICE (PMCD) AND METHOD

(51) International classification :A61P0001020000, A61M0019000000, F25B0021020000, A61Q0011000000, G16Z0099000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A Preanesthetic Mucosal Conditioning Device (PMCD) (100) is disclosed. The device (100) comprises a housing (102) comprising a slot for insertion of a mucosal pin (104). A thermoelectric unit (108) is arranged within the housing (102) and adapted to generate a cooling effect for cooling the mucosal pin (104). The device (100) is configured to detect a correct placement and the contact of the mucosal pin (104) on the oral mucosa; and enable cooling of the mucosal pin (104) using the thermoelectric unit (108) for numbing the oral mucosa of the patient upon making the contact with the cold mucosal pin (104), and activate a status indicator (116a-116q) to indicate a readiness of the device (100). The device (100) helps in providing anesthesia without any foreign chemicals and only a required area is neutralized rather than the entire oral cavity of the user. Claims: 10, Figures: 3 Figure 1 is selected.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2024
(21) Application No.202411057919 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD FOR DETECTING AND CLASSIFYING SPINAL CORD TUMORS USING NEURAL NETWORKS

(51) International classification	:G06N0003040000, G06N0003080000, G16H0050200000, G06T0007000000, G06K0009620000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention relates to a method for detecting and classifying spinal cord tumors, comprising capturing one or more magnetic resonance image(s) of spinal cord of a patient; preprocessing the captured images to preserve a set of features of interest, wherein the captured images are passed through a Non Local Means filter for removing noise; wherein the filtered images are refined using one or more morphological operations; segmenting the set of features of interest using masked region augmented convolutional neural network, further comprising: detecting a first set of features through saliency maps using an XRAI based convolutional neural network technique; learning a second set of features using a region based convolutional neural network technique; and segmenting the region formed by fusion of the first and the second set of features; and classifying the segmented images as with-tumor or without-tumor using a supervised machine learning model.

No. of Pages : 29 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2024
(21) Application No.202411057960 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : INTEGRATING ENVIRONMENTAL SUSTAINABILITY INTO INCLUSIVE EDUCATION PRACTICES

(51) International classification	:G09B0007000000, G09B0007020000, G09B0005020000, G09B0019000000, G06Q0050200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Integrating Environmental Sustainability into Inclusive Education Practices It introduces an innovative system designed to embed environmental sustainability principles into inclusive educational settings, creating a comprehensive and adaptable learning environment for students of all abilities. The invention features adaptive learning modules that dynamically adjust educational content to accommodate various learning styles and needs, integrating sustainability topics across multiple subjects. It includes interactive tools such as digital platforms with simulations, virtual field trips, and gamified experiences, all designed to be accessible to students with diverse learning requirements. Additionally, the system incorporates hands-on activities that promote environmental stewardship in an inclusive manner, allowing students with different physical and cognitive abilities to participate. A key component is its robust assessment and monitoring method, which tracks student engagement and learning outcomes through data-driven analysis, enabling educators to refine their approaches and ensure effective teaching. Professional development resources are provided to train educators in implementing these inclusive and sustainability-focused practices. The system also features a customizable digital dashboard for managing educational activities, monitoring progress, and facilitating real-time adjustments based on student feedback. By integrating these elements, the patent addresses the need for a cohesive framework that combines environmental education with inclusive practices, aiming to prepare students for a future where environmental responsibility and inclusivity are central. This comprehensive approach not only enhances the learning experience but also fosters a culture of sustainability and social responsibility among students, setting a new standard for inclusive education in the context of environmental awareness.

No. of Pages : 13 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2024
(21) Application No.202411057963 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : CORROSION RESISTANCE POLYMERIC COATING

(51) International classification	:C09D0005080000, A61P0009000000, B05D0007140000, C09D0007610000, C09D0007400000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present invention relates to the development of an anti-corrosion polymeric coating and its method of synthesis. The synthesis is a single-step reaction and from a one-pot reaction both high and low-molecular-weight polymer was obtained (Fig 1a). The polymer showing the characteristics of excellent corrosion resistance properties in pristine conditions for chloride and acid environments without adding any filler or additive. The developed polymer is hydrophobic in nature, showing self-cleaning properties, abrasion resistance, and good pencil hardness. The polymer can be easily applied to metal surfaces by solution processing methods as a coating material. Published with Figure 1a

No. of Pages : 23 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2024
(21) Application No.202411057965 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A PREDICTIVE CRIME ANALYTICS AI MODELS FOR CRIME PATTERN RECOGNITION

(51) International classification :G06N0020000000, G06Q0010060000, G06F0016248000, G06N0005040000, G06Q0050260000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present invention relates to predictive crime analytics AI models for crime pattern recognition. The predictive crime analytics AI models for crime pattern recognition includes a data collection module that integrates diverse sources including crime reports, GIS data, social media, and demographic information. It includes a preprocessing module for cleaning and normalizing data, and a predictive modeling module that uses statistical, machine learning, and deep learning techniques to analyze historical crime data and forecast future incidents. The method involves collecting, integrating, and preprocessing data, training predictive models, and evaluating their performance. Deployed in real-time, the system offers continuous monitoring, integration with law enforcement databases, and actionable insights through intuitive visualization tools. This advanced approach enhances the ability of law enforcement agencies to proactively prevent crime and optimize resource allocation, addressing limitations of conventional methods and improving overall public safety and efficiency.

No. of Pages : 12 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2024
(21) Application No.202411058033 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ENHANCING SOCCER PLAYER HEALTH AND PERFORMANCE THROUGH DEEP LEARNING-BASED INJURY RISK ASSESSMENT

(51) International classification	:G06N0003040000, G06N0003080000, G16H0050300000, A61B0005000000, G16H0050700000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention relates to a system and method for enhancing soccer player health and performance using deep learning-based injury risk assessment. The system comprises, a diverse database includes biomechanical measurements, injury history records, genetic profiles, and contextual information collected from professional soccer players; a deep learning architectures, including convolutional neural networks (CNNs) and recurrent neural networks (RNNs), to extract complex patterns and relationships from multi-modal data sources; and Transfer learning techniques to adapt pre-trained models to the domain of soccer injury risk assessment, leveraging knowledge from related domains to enhance model performance and generalizability. Soccer, one of the most popular and physically demanding sports worldwide, often exposes players to various injury risks that can impact their performance and long-term health. Through rigorous validation and clinical trials conducted in collaboration with professional soccer teams, invention demonstrates the effectiveness and practical utility of approach in improving player health, performance, and longevity. Present system and method showcases the transformative potential of deep learning technology in sports medicine, offering actionable insights and personalized interventions to mitigate injury risks and optimize player well-being in soccer.

No. of Pages : 7 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2024
(21) Application No.202411058034 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : GPS AND ACTIVITY TRACKING SHOES FOR SCHOOL CHILDREN

(51) International classification :A61B0005000000, A61B0005110000, G01C0022000000, G08B0021040000, A61B0005020500
(86) International Application No :NA
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(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
The present invention relates to a smart shoes equipped with GPS technology to provide real-time monitoring and activity analysis of a child's movements. The smart shoes comprises, a Microcontroller Unit (MCU) serving as the central processing unit to manage various functions and data processing tasks; GPS and GSM module enable accurate location tracking and communication with the mobile application, a MEMS sensor for activity recognition, allowing the shoes to monitor the child's daily movements, such as walking, running, jumping, and cycling; a display unit for real time update, a processor connected with display unit convert the signal into digital, a rechargeable 1800mAh battery incorporated in shoe provide up to 24 hours of continuous operation in working mode and 3-4 days of standby time in sleep mode; and a magnetic charging port in top of shoes and a wireless charging coil inside the outsole for convenient and hassle-free charging. This design not only enhances safety but also allows for customization and scalability, making it adaptable to various needs and suitable for mass production. In addition to real-time location tracking, the smart shoe features an advanced activity analysis system accessible through both web and mobile platforms. Guardians can effortlessly monitor their child's daily activity levels, including steps taken, distance traveled, and overall physical activity. This data empowers parents to gain insights into their child's routine and detect any signs of inactivity or sedentary behavior. By providing this level of insight, parents can take proactive measures to encourage healthy habits and provide extra care if necessary, especially if a child is found to be particularly inactive during school hours. All data collected is securely stored in the cloud, ensuring accessibility and peace of mind for caregivers at all times. With its innovative design, advanced features, and emphasis on safety and activity monitoring, the smart shoe is poised to meet the high demand in the market. Its potential to revolutionize child safety and promote healthy habits through technology makes it a compelling solution for caregivers and guardians alike.

No. of Pages : 10 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/07/2024

(21) Application No.202417052688 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : POSITIVE ELECTRODE MATERIAL COMPOSITION AND PREPARATION METHOD THEREFOR, POSITIVE ELECTRODE PLATE COMPRISING SAME, SECONDARY BATTERY, AND ELECTRIC DEVICE

(51) International classification :H01M0004620000, H01M0010052500, H01M0004360000, H01M0004505000, H01M0004525000
(86) International Application No :PCT/CN2022/101327
Filing Date :24/06/2022
(87) International Publication No :WO 2023/245679
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A positive electrode material composition and a preparation method therefor, a positive electrode plate comprising same, a secondary battery, and an electric device. The positive electrode material composition comprises a positive electrode active material having a core-shell structure and an organopolysiloxane compound, wherein the positive electrode active material comprises an inner core and a shell, which coats the inner core, the chemical formula of the inner core is Li1+xMn1-yAyP1-zRzO4, and the shell comprises a first coating layer, which coats the inner core, a second coating layer, which coats the first coating layer, and a third coating layer, which coats the second coating layer. The positive electrode material composition enables a secondary battery to have a high energy density, and to have improved cycle performance, safety performance and/or rate performance.

No. of Pages : 80 No. of Claims : 27

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2024
(21) Application No.202411058224 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : PORTABLE TURBAN PIN STRAIGHTENER BOX

(51) International classification	:G05D0001020000, B21F0001020000, H01M0010420000, A61B0017000000, B21F0023000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT The present disclosure introduces a portable turban pin straightener box 100 which is designed to efficiently straighten bent turban pins, extending their usability and reducing waste. The device features a cell opening 102 for pin insertion, central hole 104 and pin holding sections 106 to secure the pin, and a rubber roller 108 driven by a DC motor 110 to apply consistent pressure along the pin's length. A controller 112 manages the operation, while a combined start/stop button 114 initiates and halts the process. An LED indicator 118 provides real-time status updates, glowing red during straightening and green upon completion. The eject button 116 releases the straightened pin for easy retrieval. Powered by a rechargeable battery 120, the device is portable and user-friendly. This invention is a cost-effective device for maintaining turban pins, eliminating the need for cumbersome manual tools and minimizing metal waste.

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2024
(21) Application No.202411058233 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD FOR TRACKING MAXIMUM POWER POINT OF A SOLAR FARM INTERFACED GRID-TIED INVERTER

(51) International classification :G05F1/67, H02J3/38
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT Disclosed herein is a method for tracking the maximum power point of a solar farm interfaced grid-tied inverter. The method for tracking the maximum power point of a solar farm interfaced grid-tied inverter shown in FIG. 1 comprises the steps of monitoring continuously the charge of a DC capacitor at the input terminals of the inverter, tracking the maximum power point based on the charge of the DC capacitor by capacitor force balance mechanism, analyzing the power variations of the solar farm and the grid in relation to the charge of the capacitor and deriving a natural modulation for the inverter in constant voltage and constant current solar regions by counter-power balance mechanism.

No. of Pages : 18 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/07/2024
(21) Application No.202411058238 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : UNIVERSAL ELECTRICAL COMPONENT TEST KIT

(51) International classification :G01R27/00, G01R27/26, G01R31/00, G01R31/28, G01R31/66, G01R31/64, G01R31/50
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT In an aspect, the present disclosure discloses a universal component testing kit (100). The universal component testing kit (100) includes a single Printed circuit board (PCB) (102) and a single microcontroller (106) connected to multiple GPIO pins for each of the components. The serial pins activate upon receiving instruction from the user to generate electrical signal to the electrical component to test thereto. The kit (100) tests multiple electrical components at one time one by one or simultaneously, and at one platform using single microcontroller (106), single power supply, and a single battery.

No. of Pages : 26 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/04/2024
(21) Application No.202417031881 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AQUEOUS COMPOSITIONS OF DIAFENTHIURON

(51) International classification :A01N 47/30, A01P 7/00
(31) Priority Document No :63/440701
(32) Priority Date :24/01/2023
(33) Name of priority country :----------
(86) International Application No :PCT/IL2024/050096
Filing Date :24/01/2024
(87) International Publication No :WO 2024/157254
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
An agrochemical suspension concentrate composition for crop protection from insects which, comprises diafenthiuron and a wetting system comprising polyacrylate compounds and organosiloxanes.

No. of Pages : 41 No. of Claims : 21

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/04/2023

(21) Application No.202321026168 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : "BOSWELLIC ACID PHYTOSOMES TO IMPROVE SOLUBILITY AND ABSORPTION USING STATISTICAL DESIGN"

(51) International classification :A61K31/19, A61K9/127, A61K31/685, A61K36/324, A61K36/48, A61K36/8965
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to the process for preparation of Boswellic acid's Phytosomes to improve solubility by Soya lecithin- Asparagus synergy complex. Boswellia serrata gum resin extracts are used widely for the treatment of inflammatory diseases. The Present study investigated the effect of phospholipids alone and in combination with common surfactants (Tween 80, Asparagus Saponin, Cremophor) on the solubility of boswellic acid. Soya Lecithin as a phospholipid and Saponin of Asparagus as a surfactant is optimized for Boswellic acid Phytosomes formulation. Micromeritics property of optimized batch shows tremendous improvement in flow and compressibility than standard boswellic acid.

No. of Pages : 12 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/04/2023
(21) Application No.202321026169 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : "METHOD PREPARATION OF FAST DISSOLVING TABLET CONTAINING SYNERGISTIC PHYTOCONSTITUENTS BLEND FOR GLUCOSE HOMEOSTASIS."

(51) International classification	:A61P0003100000, A61K0009200000, A61K0009280000, G16H0010200000, A61K0009480000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a botanical composition for diabetes and a method of treatment for diabetes and glucose homeostasis using the tablet prepared by synergy phytoconstituents. In Botanical, Phytochemistry chemical-based preservatives, excipients, additives and dosage-modifying agents and hence it is not safe for prolonged time. Here this invention is designed with multiple synergy effects, and statistical design to improve dosage evaluation parameters, Therapeutical efficacy, and potency with no or minimal side effects. It is an excipient less aqueous transparent coated tablet developed by OEM technology. As per clinical evidence, it shows reduces the dosage of OHA & insulin with improvement in HBA1C, C-Peptide and average blood glucose. It reduces HBA1C score by 3.0 and 50% Reduction in Fasting and PPBS found in 60 days as an adjuvant with glucose homeostasis. C-Peptide and Homa-B Score also improved in 60 days of the human clinical trial. As per the chronic toxicity study and histopathology study, without any mortality, there is no abnormalities found in any organ and in hematological parameters.

No. of Pages : 17 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/04/2023

(21) Application No.202321026176 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : “PROCESS TO FORMULATE PULSATILE DELIVERY IN DIABETES AND PROCESS FOR SAME”.

(51) International classification	:A61K0009200000, A61K0009280000, A61K0009500000, A61K0009000000, A61P0003100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to the Phytoconstituents-based antidiabetic pulsatile Bilayer tablet formulation design. In particular, the disclosure relates to the Phytoconstituents-based antidiabetic pulsatile Bilayer tablet formulation design as per biological rhythm, because in diabetes post-meal glucose increase during sleep at night and stress level is also high during sleep. Hence pulsatile design is selected for the best therapeutical effect in diabetes. The present disclosure further relates to the Antidiabetic pulsatile tablet design with synergy form of Phytoconstituents and Phytochemicals according to circadian rhythm and biological rhythm is developed in pulsatile bilayer form containing one blend. The invention shows Phytoconstituents-based antidiabetic pulsatile tablet formulation immediately releases in 60 minutes and next after 3 hours of pause, sustains release up to next 3 hours. Another invention relates to predictable cyclic rhythms and the timing of dosage regimens can improve the outcome of diabetes. Phytoconstituent blend isolated from emerging phytochemistry science and HPMCAS: Guar gum pulsatile delivery based on chrono pharmaceutical approach for the treatment of diabetes. The prepared pulsatile tablets are evaluated for thickness, hardness, weight variation, friability, disintegration and in-vitro release profile. On the basis of these evaluation parameters, the formulation results of F-2 are selected as an optimized formulation. Cumulative release of optimized batch concluded within 1 hour, 40% of active released in 0.1 N HCL (1.2-PH) and then Pause for 3 hours with no significant release or dose dumping. Again, after gastric emptying total 60% release found in next 3 hours (approximately 20% after each 1 hour of interval).

No. of Pages : 15 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :07/04/2023

(21) Application No.202321026183 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : "EFFECT OF NATURAL SUPERDISINTEGRANT TO ENHANCE DISINTEGRATION PROPERTY IN PHYTOPHARMACEUTICAL TABLET DOSAGE FORM AND METHOD OF MAKING THE SAME."

(51) International classification :A61K9/20, A61K36/88, A61K36/48, A61K36/61

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to natural super disintegrant to enhance disintegration property in Phytopharmaceutical tablet dosage form and method of making the same. Oral route is the most preferred route for administration of different medicines because it is regarded as safest, most convenient, and economical route. Fast disintegrating tablets are very popular nowadays as they get dissolved or start to disintegrated in gastric juice within few seconds. Natural blend invented by synergy blend contains dehydrated banana powder, Trigonella saponin and Dehydrated Guava powder gives disintegrating property of tablet and itself utilized as binder, diluent, and filler to overcome synthetic chemicals. It helps to decreased is integration time and uniformity in release. This blend compatible with phytoconstituents and its synergy form. As compare with SSG it gives better disintegration (in 80-120 sec) and dissolution (35-60 min) in different phytochemicals and its synergy form. Physical characterization confirms no interaction found in nature and functional group.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/07/2023
(21) Application No.202321046025 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : MECHANICALLY STRENGTHENED MULTILAYER, MULTIBARRIER, DESICCANT INTERLACED COLD FORMABLE BLISTER LAMINATES, OPTIONALLY PVC-FREE

(51) International classification	:B32B0027300000, B32B0027080000, B32B0007120000, B32B0027340000, B32B0027320000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT MECHANICALLY STRENGTHENED MULTILAYER, MULTIBARRIER, DESICCANT INTERLACED COLD FORMABLE BLISTER LAMINATES, OPTIONALLY PVC-FREE The present disclosure relates to multilayer, multibarrier, cold formable blister laminate. The present disclosure further relates to a compact blister pack made by cold forming of the multilayer, multibarrier, cold formable blister laminate. The laminate of the present disclosure incorporates or interlace mechanical cum impact strength enhancing materials, desiccant materials or both mechanical cum impact strength enhancing and desiccant materials. The laminate of the present disclosure has enhanced deep draw formability as well as is capable of yielding cold formed blisters of compact size along with improved mechanical and impact strength for cavities with large dimensions without any rupture after forming and at the same time providing requisite ultra high barrier with use of desiccant interlacing when required, against adverse environmental impact. The laminate of the present disclosure can be used for packaging of various products having large dimensions and which are fragile as well as sensitive or highly sensitive to moisture, temperature, and light.

No. of Pages : 117 No. of Claims : 30

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/07/2023
(21) Application No.202321049598 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ARTIFICIAL INTELLIGENCE BASED SYSTEM FOR DETECTING AND CORRECTING MUSCULOSKELETAL DISORDERS

(51) International classification	:G06N0005040000, G06N0020000000, G06N0007000000, A61P0021000000, A61P0019080000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT OF THE INVENTION ARTIFICIAL INTELLIGENCE BASED SYSTEM FOR DETECTING AND CORRECTING MUSCULOSKELETAL DISORDERS 10 Configurations of a system (200) implementing the method (1000) for detecting and providing recommendations to overcome musculoskeletal (MSK) disorders are provided. In one aspect, the system (200) receives (1002) data sets from data sources. Subsequently, the system (200) scans and marks (1004) key points corresponding to joints, muscles, and skeletal landmarks. Preliminary data is processed (1006), and physical activities are initiated 15 for the subject. Movements of the subject's body are continuously monitored (1008) during the performance of physical activities. Angles between joints, muscles, and skeletal landmarks are measured (1010) in real-time. An absolute score is computed (1012) based on real-time measurements and predefined threshold values, dynamically updated using historical data. Real-time measurements are analyzed (1014) to determine muscles and joints 20 causing MSK disorders. Customized progressive physical exercises are generated (1016) based on the analysis. Real-time feedback is provided (1018) to correct postures and movements, including reference video and audio cues.

No. of Pages : 45 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/07/2023
(21) Application No.202321049845 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : NIR RESPONSIVE HYALURONIC ACID-SILVER NANO-COLLOID AND IN-SITU GEL FOR PHOTOTHERMAL WOUND HEALING, PREPARATION PROCESS THEREOF

(51) International classification :A61K0041000000, A61P0035000000, A61K0049000000, A61K0047360000, A61P0017020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention discloses NIR responsive hyaluronic acid-silver nano-colloid for the photothermal wound healing. The present invention also discloses a process for green synthesis of said NIR responsive hyaluronic acid-silver nano-colloid using hyaluronic acid as reducing agent. A near infra-red (NIR) responsive hyaluronic acid-silver in-situ gel comprising said NIR responsive hyaluronic acid-silver nano-colloid, a process for the preparation of NIR responsive hyaluronic acid-silver in-situ gel is also disclosed. The invention further provides a medical device for non-invasive photothermal guided wound therapy comprising a substrate and an NIR responsive hyaluronic acid-silver nano-colloid applied on the said substrate.

No. of Pages : 64 No. of Claims : 16

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/07/2023
(21) Application No.202321049846 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : NEAR INFRA-RED RESPONSIVE QUERCETIN-SILVER NANO-COLLOID AND THERMOGEL FOR PHOTOTHERMAL THERAPY AND PROCESS FOR PREPARATION THEREOF

(51) International classification :B22F1/10, B22F1/054
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a near infra-red (NIR) responsive quercetin-silver nano-colloid comprising quercetin-silver nanoparticles and a process for the preparation of NIR responsive quercetin-silver nano-colloid using quercetin as green reducing agent. The NIR responsive quercetin-silver nano-colloid under NIR wavelength shows a temperature increment of 37.0 ºC to 66.2 ºC. The present invention also relates to a near infra-red (NIR) laser responsive quercetin-silver thermogel and a process for the preparation of NIR responsive quercetin-silver thermogel for the photothermal therapy guided wound healing through tropical application.

No. of Pages : 68 No. of Claims : 16

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/10/2023
(21) Application No.202321071567 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR SPEECH-TO-TEXT TRANSLATION BASED ON CONTINUAL LEARNING TECHNIQUE

(51) International classification :G10L0015260000, G06T0007000000, G06K0009620000, G06F0017160000, G09G0003200000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Disclosed is a speech-to-text translation system (100). The speech-to-text translation system (100) includes an input unit (102), a storage unit (104), processing circuitry (106), and an output unit (108). The input unit (102) is configured to receive a current language pair. The storage unit (104) coupled to the input unit (102) is configured to store previous language pairs and the current language pair. The processing circuitry (106) coupled to the storage unit (104) and is configured to (i) retain the previous language pairs in equal proportions to the current language pair by augmented proportional language sampling (APLS) technique, (ii) balance the previous language pairs and the current language pairs by random sampling (RS) technique, (iii) maintain and select a representative set by gradient representative sampling (GRS) technique, and an output unit (108) coupled to the processing circuitry (106) configured to display the text corresponding to the current language pair. FIG. 1A is the reference figure.

No. of Pages : 24 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/10/2023
(21) Application No.202321073421 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SYSTEM AND METHOD OF 3D OBJECT DETECTION

(51) International classification :G06K0009620000, G01S0013860000, G06N0020100000, G06T0007730000, G01S0013931000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
TITLE OF THE INVENTION: A SYSTEM AND METHOD OF 3D OBJECT DETECTION A method and a system (100) for classifying an object in a 3D image is disclosed. In an embodiment, a depth map of a query image having a target object is obtained, by an active region generator (ARG) (106), wherein the query image is a 3D image captured by a 3D imaging device (102). A depth map of a background image is obtained by the ARG (106). A point cloud corresponding to an active region is generated by the ARG (106) based upon the depth maps of the query image and the background image, the active region indicating a region comprising the target object. An object embedding corresponding to the target object is generated by a 3D object embedding generator (114) based upon the point cloud corresponding to the active region. The target object is classified by a classifier (116) into an object class of at least one object class based upon the generated object embedding. Fig. 1

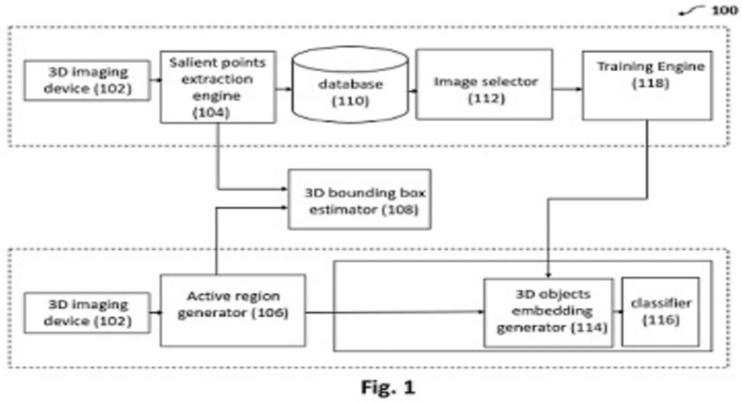


Fig. 1

No. of Pages : 64 No. of Claims : 32

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/10/2023

(21) Application No.202321073422 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR ASSESSING PERFORMANCE OF A DEPTH CAMERA

(51) International classification	:A61B0005000000, G01S0017890000, A61B0005220000, G03B0013360000, A61B0005103000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
TITLE OF INVENTION: SYSTEM AND METHOD FOR ASSESSING PERFORMANCE OF A DEPTH CAMERA A system (100) for assessing performance of a depth camera includes an imaging unit (20) including a computing unit (20a), and an assessment unit (10) including a processor (10a). The processor (10a) is configured to obtain an identifier of the depth camera and a target application; determine an imaging set-up associated with the target application; communicate a set of instructions to be executed corresponding to the imaging set-up to the computing unit (20a); receive, from the computing unit (20a), point clouds or depth maps corresponding to the one or more images captured by the depth camera based upon the set of instructions; calculate a performance parameter based upon the point clouds or the depth maps corresponding to the one or more images; compare the performance parameter with a threshold; and provide a recommendation to the user indicating usability of the depth camera for the target application based upon the comparison. Fig. 1A

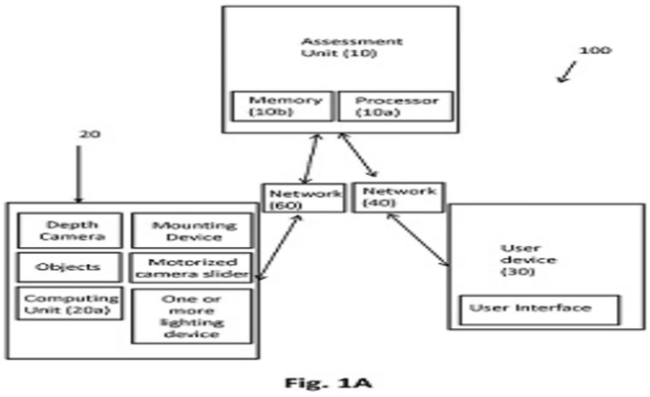


Fig. 1A

No. of Pages : 67 No. of Claims : 17

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/11/2023
(21) Application No.202321075161 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : NOVEL HIERARCHY POROUS MOF: ZIF-7@ZIF-8 EMBEDDED IN POLYSULFONE (PSF) MEMBRANE BENEFICIAL FOR REMOVING NATURAL ORGANIC MATTER AND OIL- WATER EMULSION FROM WASTEWATER

(51) International classification :C02F1/28, B01J20/18
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Extensive research is still underway to thoroughly investigate the potential health hazards associated with oil-water emulsion and natural organic matter (NOM) in water. However, it is thought that these contaminants' longevity in the environment due to regular discharge, even at minimal amounts, poses serious environmental problems. Advanced treatment techniques like the ultrafiltration membrane separation process can eliminate a variety of these pollutants found in water. In the past decade, there has been a tremendous expansion in the research and use of membrane technologies for water and wastewater treatment. It does not involve high chemical prices or consuming much energy during processing. In this process, Zeolitic imidazolate frameworks (ZIF-7) and (ZIF-8), which were synthesised in this technique using a one-pot approach, were added to the PSF matrix in amounts ranging from 0.5 to 2 wt% to produce PSF- modified mixed matrix membranes (MMMs).The fillers' functional groups, membrane's hydrophilicity, morphology, and crystalline structure and its crystalline structure were verified by FTIR, Contact Angle, SEM, and XRD analysis of the mixed matrix membranes, respectively. We investigated the impact of incorporating ZIF-7@ZIF-8 filler in PSF-mixed matrix membranes to remove NOM and O/w emulsion experiments. The 2 wt% ZIF-7@ZIF-8 PSF modified mixed matrix membrane suffered aggregation of filler particles and the possibility of blockage of pores by polymer chains, which reduced the pure water flux and rejection of the mixed matrix membrane. The synthesised membrane was characterised based on its physical and chemical properties and was used to study the effective removal of HA, BSA, and O/w emulsion from wastewater. After the HA.BSA and O/w emulsion removal with different membrane compositions, it was found that 1.5 wt% ZIF-7@ZIF-8 mixed matrix membrane gave a maximum HA, BSA, and Oil rejection of 98.57%, 97.69% and 90.24%, respectively, in comparison with other membranes. Overall, a 1.5 wt% concentration of PSF/ZIF-7@ZIF-8(M1.5) membrane showed better characteristics and a maximum percentage of HA, BSA and O/w emulsion rejection was obtained.

No. of Pages : 9 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/08/2023

(21) Application No.202321057326 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : “SYNTHESIS OF SUBSTITUTED CHALCONES OF 2-PHENYL-10-H-PHENOTHIAZINE”

(51) International classification :C07C49/115, C07D515/08
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a process for the preparation of substituted chalcones of 2-phenyl-10-h-phenothiazine (1).

No. of Pages : 26 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/11/2023
(21) Application No.202321074994 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : PLAY AND LEARN GEOSTATIC MODELLING - CLASSROOM CARD GAME BASED TEACHING LEARNING ACTIVITY

(51) International classification	:A63F0001000000, G06Q0050200000, A63F0001040000, G09B0005080000, G09B0005120000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT Title: PLAY AND LEARN GEOSTATIC MODELLING - CLASSROOM CARD GAME-BASED TEACHING LEARNING ACTIVITY The titled invention "Play And Learn Geostatic Modelling - Classroom Card Game-Based Teaching Learning Activity " discloses a card-based play and learns activity that is planned to analogous to the step-by-step procedure implemented in the geological modeling of subsurface petroleum reservoirs. Through the proposed activity, the petroleum engineering or allied disciplines students learn complex theoretical and mathematical concepts by playing the game. Geostatic modeling is a computational procedure implemented in the upstream oil and gas industry to characterize the subsurface geological formation with fundamental properties. The step-by-step approach is a well-established concept; however, the proposed invention is about an effective teaching method to teach such complex engineering and computational techniques to petroleum engineering and similar disciplines students.

No. of Pages : 8 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/11/2023
(21) Application No.202321074998 A
(43) Publication Date : 16/08/2024

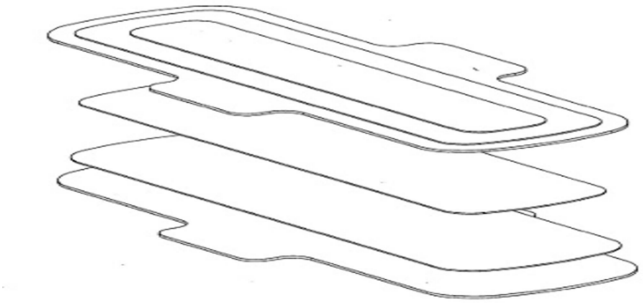
(54) Title of the invention : BIODEGRADABLE SANITARY NAPKIN FROM WASTE BIOMATERIAL

(51) International classification	:A61F0013472000, A61L0027580000, A61L0027180000, A47G0021160000, A61F0013475000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The titled invention "Biodegradable Sanitary Napkin from Waste Biomaterial" discloses Embodiments of the present invention relate to an optimized biodegradable sanitary napkin scaffold with enhanced absorption behavior comprising of combination of materials staggered in layers to prolong the time of utilization. The average time a women should use a sanitary napkin is 3 to 4 hours and after that the sanitary napkin needs to be changed. Wearing a sanitary napkin for more than 4 hours or 5 hours can lead to rash, redness, itching and swelling and sometimes the heat and moisture in vaginal area can contribute to bacterial build up and can cause infection and reproductive problems. Our invention developed an eco-friendly, biodegradable, antibacterial, antifungal, absorbent sanitary napkin. It is an initiative to make a proper organic sanitary napkin in complete sense by designing, developing a sanitary napkin from banana fibre, neem, cotton and biodegradable polyester polyol polymer foam.

Figure - 1



No. of Pages : 6 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/11/2023
(21) Application No.202321075001 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : NOVEL SOLVO THERMAL SYNTHESIS OF GGAG: CEMICROPARTICLES FOR ENHANCED SCINTILLATION.

(51) International classification :B82Y30/00, B82Y40/00, B01J23/10, B01J23/08
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The titled invention "Novel Solvo Thermal Synthesis Of GGAG: Cemicroparticles For Enhanced Scintillation" disclose a GGAG:Ce is a promising scintillator material for radiation detection due to its high light yield and fast decay time. However, the synthesis of GGAG crystals with high quality and reproducibility is still challenging. In this paper, a solvothermal method was used to synthesize GGAG:Cemicroparticles with high optical quality and scintillation performance. The aforementioned micro-particles were characterized by XRD, SEM, PL, and RL spectroscopy. The results showed that the microparticles have a single-phase cubic garnet structure, are small (20-40 micron) and uniform in size, and have a strong emission peak at around 550 nm. The radioluminescence data showed that the intensity of the emission peak increases with increasing Ce3+ concentration. The results of this study demonstrate that the solvothermal method is a promising technique for the synthesis of GGAG:Cemicroparticles with high optical quality and scintillation performance. The synthesized microparticles have potential applications in radiation detection, medical imaging, and security screening.

No. of Pages : 9 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/11/2023

(21) Application No.202321075168 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : CROSS-SWITCHED MULTILEVEL INVERTER WITH ZERO COMMON-MODE VOLTAGE FOR SOLAR SYSTEM.

(51) International classification :H02M7/483, H02M1/00, H02M7/527, H02M 7/521
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The huge rate of the global energy demand has led to the high consumption of fossil fuels; thus, the environment has been negatively affected owing to the high emission of greenhouse gases into the atmosphere. Therefore, renewable energy resources have gained attention and development by generating efficient electric power with almost zero pollution. Nowadays, multilevel inverters are being deployed in power systems because of their ability to meet the demand in power quality and power rating, as well as their reduced level of harmonic distortion and electromagnetic interference. The present invention provides novel cross-switched multilevel inverter (100), which is a low-cost solution to completely remove the common-mode voltage; operates with reduced number of components and has high efficiency, wherein the cross-switched multilevel inverter comprising, two cross-switched circuits; the first cross-switched circuit comprising one dc source (VDC), five switches (S1, S2, S3, S4 and S5) and one capacitor (C1); the second cross-switched circuit comprising four switches (S6, S7, S8, and S9) and one capacitor (C2), wherein the capacitor (C1:C2) voltage is maintained in the ratio 1:0.5 throughout the operation without additional controller, which assist the generation of seven-level boost output across the load; while not exceeding the maximum voltage stress across the switches more than the input voltage magnitude (VDC). The multilevel inverter (100) can operate under no-load to full load variation, with sudden change in modulation index from 0.65 to 0.98 at different voltage levels and with variation in the input DC voltage.

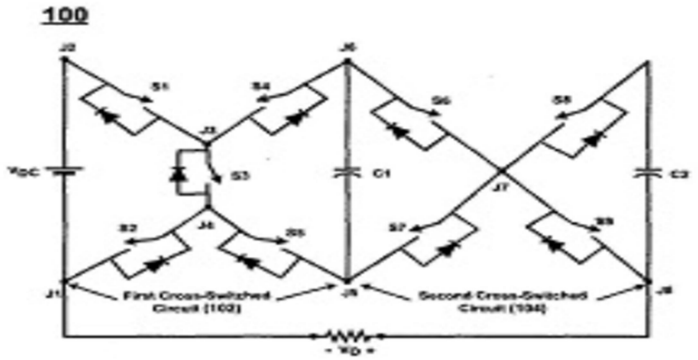


Figure 1: Cross-switched multilevel inverter schematics

No. of Pages : 18 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/11/2023

(21) Application No.202321075187 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : DEVELOPMENT OF MXENE USING PYROLYSIS MICROWAVE METHOD.

(51) International classification	:B01J0008040000, B01J0004000000, B01J0019240000, H05B0006640000, F23G0005027000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The titled invention is Development of MXene using Pyrolysis Microwave Method is to synthesis of MXene using a Pyrolysis Microwave Reactor with Sodium Fluoride (NaF) and the Hydrochloric Acid (HCl). The new family of 2-D materials is coming into the limelight after showing its excellent properties surpassing Graphene and its family compounds. The MXenes are new materials that have elevated their properties than Graphene. These multi-layered 2-D materials have shown excellent potential in applications like supercapacitors, electrochemistry, environmental remediations, etc. This Invention describes an innovative and quick method for fabricating delaminated, single-layered MXene sheets from the MAX phase precursors. The pyrolysis microwave method uses high-power electromagnetic waves at a frequency of 2.5GHz. The typical pyrolysis reactor used during the experiment has a power range of up to 750W. The temperature is measured and controlled via a K-type thermocouple. The ceramic wool is used inside the microwave to avoid any heat losses. The conversion of MAX phase to MXenes is more effective than the conventionally used. The HF production is a safe process as the molten salts and acid are used to etch out the A layers from MXenes, making it a safe effective method with higher yield and time-reducing method. The etching of A layer takes place between 12-24h depending on the etchant used. This method used InSitu HF as an etchant and microwave rays as an etching medium. The material confirmed the formation of MXenes using X-Rtay Diffraction and Scanning Electron Microscopy (SEM).

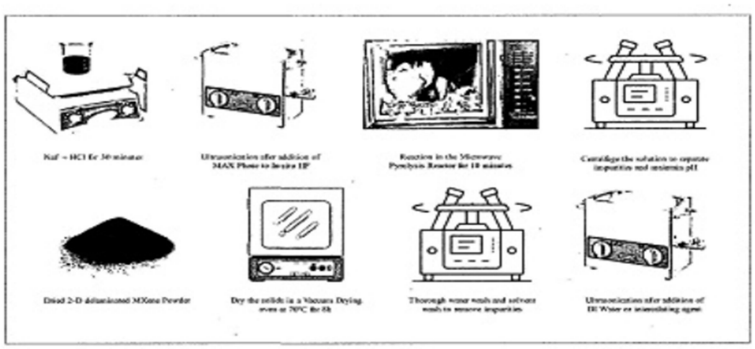


Figure 1: Development of MXene using Pyrolysis Microwave Reactor Method

No. of Pages : 9 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/11/2023
(21) Application No.202321075003 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : COMPACT SWITCHED-CAPACITOR BOOST COMMON-GROUND MULTILEVEL INVERTER FOR PHOTOVOLTAIC SYSTEM.

(51) International classification	:H02M7/483, H02M1/00, H02M1/08
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT Title: COMPACT SWITCHED-CAPACITOR BOOST COMMON-GROUND MULTILEVELINVERTER FOR PHOTOVOLTAIC SYSTEM The present invention provides compact switched-capacitor common-ground multilevel inverter for photovoltaic system, the inverter comprising, a single dc input source, a quasi resonant soft-charging cell, at least six unidirectional and complementary operating switches, at least two diodes and at least three self-balanced switched-capacitors, wherein six complementary operating switches are provided as a plurality of switches operate with only three isolated control signals, quasi resonant soft-charging cell allows smooth charging of the switched- capacitors, the switched-capacitors are naturally balanced without any sensors, the common-ground connection between the input voltage and the load nullify the leakage current completely and said inverter can produce boost output smoothly under any abrupt change in load and source. Further, a plurality of switched- capacitor cells is replicated horizontally to exhibit more voltage steps and near- sinusoidal output using single dc source.

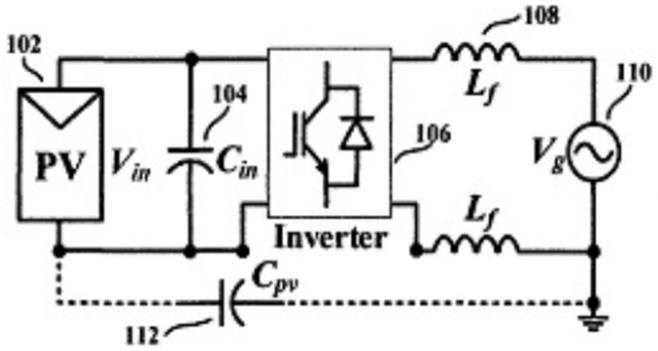


Figure 1: Common-ground photovoltaic inverter configuration

No. of Pages : 19 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :03/11/2023

(21) Application No.202321075014 A

(43) Publication Date : 16/08/2024

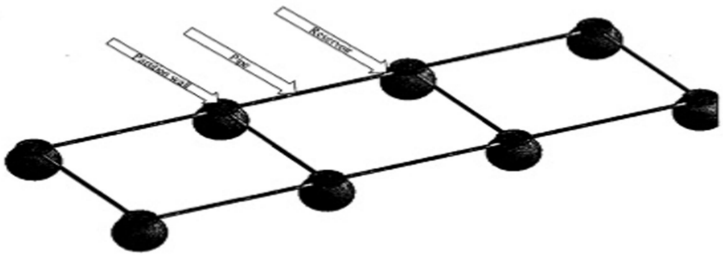
(54) Title of the invention : FLEXIBLE AND CONTROLLED DRIP IRRIGATION SYSTEM.

(51) International classification :A01G25/02, A01G25/16
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The titled invention " Flexible and controlled drip irrigation system" describes an irrigation technique system that efficiently provides water and nutrients to various types of crops, even in challenging conditions such as adverse water properties, mixed crop cultivation, and inadequate water facilities. The system comprises a porous clay pot reservoir, a partition wall to subdivide the reservoir, and a PVC pipe network for water distribution. The porous clay pot reservoir is a water storage unit with a pipe network that fills it, allowing water to infiltrate the soil through porous holes in the pot's surface. The partition wall ensures equal water distribution among different sections of the reservoir, catering to the specific water requirements of various crops. This system minimizes water wastage and offers a self-regulated, auto-adjusting approach to irrigation. This irrigation system can be customized to suit different crop types and their water needs. It eliminates the need for extensive water filtration, as common in traditional drip irrigation systems, and can also deliver additional inputs like nutrients, insecticides, and fertilizers to the plants. The installation and maintenance costs of this system are comparatively low, making it a cost-effective choice for farmers.

Figure - 1



No. of Pages : 8 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/11/2023

(21) Application No.202321075086 A
(43) Publication Date : 16/08/2024

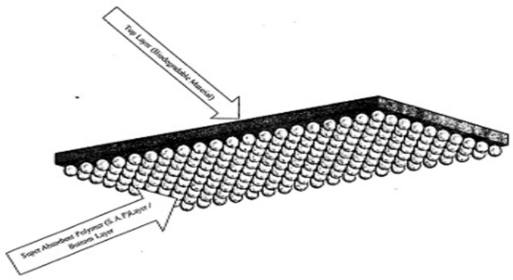
(54) Title of the invention : BIODEGRADABLE MULCHING SYSTEM WITH SUPER ABSORBENT POLYMER FOR WATER-EFFICIENT AGRICULTURE.

(51) International classification :C09K17/52, C08L97/02, C08J5/18, C08J5/04, C08L101/16, C08J3/00, A01G13/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The titled invention "Biodegradable mulching system with super absorbent polymer for water-efficient agriculture" discloses the water conservation and efficient irrigation in agriculture. It consists of water-retention paper, which comprises two essential layers, a top layer made from biodegradable materials derived from sugarcane and coconut by-products and a bottom layer containing a super absorbent polymer (S.A.P). This paper, with dimensions of 1.5 meters in width and 15 to 50 microns in thickness, is for regulating soil moisture, minimizing water evaporation, and preventing water infiltration into the soil. This is designed to optimize water use in agriculture. When water is supplied for irrigation, the super absorbent polymer in the bottom layer absorbs excess water that the crop does not immediately require, effectively preventing evaporation and infiltration losses. When the crop's water needs arise, the super absorbent polymer releases the stored water back into the soil through gravitational force, thereby maintaining the soil's moisture content at an optimal level. This water-retention paper is particularly well-suited for irrigation techniques like drip irrigation and benefits crops such as vegetables and fruits.

Figure - 1



No. of Pages : 7 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/11/2023

(21) Application No.202321075099 A
(43) Publication Date : 16/08/2024

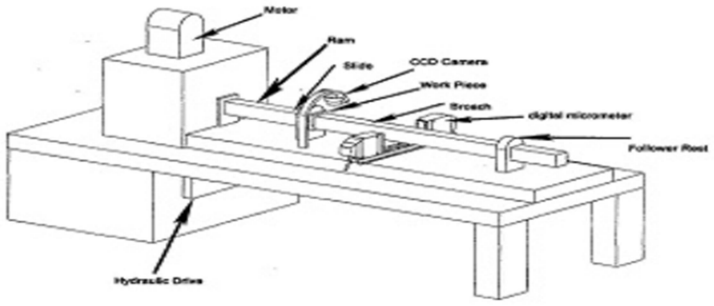
(54) Title of the invention : A DEVICE FOR AUTOMATED INSPECTION OF BROACHED COMPONENTS.

(51) International classification :B23D43/00, G06T7/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The titled invention is A Device for Automated Inspection of Broached Components disclosed a Broaching is a manufacturing process using a tool called Broach. During the broaching process, the material will be removed continuously in a progressive manner. A broach is a type of tool having teeth of varying sizes, which will help in the progressive removal of material from the work piece, producing accurate components. Broaching can be either internal or happen on the work piece's surface. A horizontal broaching machine can produce keyways, splines, slots, etc. Horizontal broaching machines are used with heavy work pieces. They also occupy much space. On the other hand, a Vertical broaching machine can be of push-down, pull-up, and pull-down types. A Surface broaching machine uses a broach that is pushed across the surface during broaching. The ram may move either horizontally or vertically during surface broaching. An attempt has been made to design and develop a device for inspecting Broached components. In this context, the proposed invention assumes special significance.

Figure - 1



No. of Pages : 9 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/11/2023

(21) Application No.202321075104 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : GRINDING OF SOLID MATERIALS BEYOND CRITICAL SPEED USING ADVANCED BALL MILLING.

(51) International classification :B22F9/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The preliminary objective of the research work is to introduce a sophisticated Ball mill that can be operated beyond the critical speed. This enhanced speed of the ball mill will help the solid raw material and catalyst particles grind to the desired size and time. In this process, the problem of material centrifuging is avoided and hence the grinding capacity can be enhanced and through which we also can save the energy required for the grinding. The proposed design of the ball mill is expected to have innumerous applications such as (1) The critical speed of the particles and raw materials can be significantly increased in the proposed ball mill by eliminating the centrifugal force persisted in the conventional ball mill. (2) Enhancing the grinding capacity of solid materials. (3) The energy efficiency of the ball milling can be enhanced.

No. of Pages : 8 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/11/2023

(21) Application No.202321075114 A
(43) Publication Date : 16/08/2024

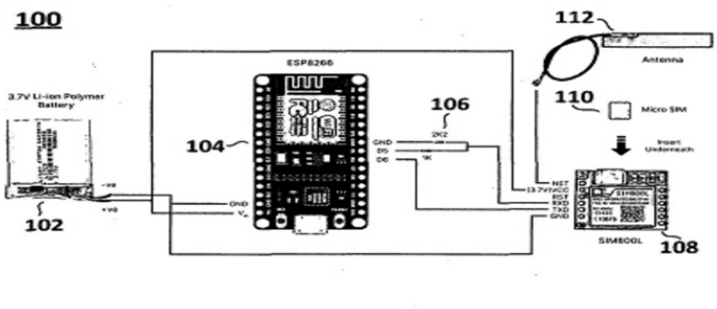
(54) Title of the invention : LOW COST SYSTEM AND METHOD FOR DETECTION OF WIFI DE AUTHENTICATION ATTACKS.

(51) International classification	:H04W0084120000, G11C0007100000, H04W0012060000, H04L0005000000, C30B0025080000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention provides a low-cost system (100) and method to detect Wi-Fi de-authentication attacks, the system (100) comprising a battery to provide power source (102), ESP8266 microcontroller (104), resistors (106), a SIM800L module (108) with a sim (110), and an antenna (112); wherein the ESP8266 microcontroller (104) is responsible for monitoring the Wi-Fi network for de-authentication packets, it continuously scans the WiFi network and when anomalous behavior is detected, the detector raises an alert and takes appropriate action to mitigate the attack. By continuously monitoring the network, the detector helps ensure that the network is protected from de-authentication attacks and the network administrator can take appropriate action to mitigate the attack. The present invention is a cost-effective and scalable solution, which makes it accessible to a wide range of users. By alerting users in real time about potential threats, this invention enables quick response and timely action, fortifying the resilience of Wi-Fi networks against de-authentication attacks.

Figure 1: WiFi de-authentication detection system



No. of Pages : 16 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/11/2023
(21) Application No.202321075120 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : EXPLAINABLE AI-BASED INFECTIOUS DISEASE SYMPTOM CHECKER, DETECTOR AND RECOMMENDER.

(51) International classification	:G06N0003040000, G06N0005040000, G16H0050200000, G06N0003080000, G06N0020000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The titled invention Explainable Al-Based Infectious Disease Symptom Checker, Detector, and Recommender In order to improve the early diagnosis and treatment of infectious diseases, the patent aims to provide an Al-based infection disease symptom checker, detector, and recommender system. The system accurately recognizes and evaluates user-reported symptoms using powerful natural language processing (NLP) and hybrid deep learning algorithms, enabling quick and accurate symptom recognition. The suggested system includes personalized health recommender algorithms that produce tailored suggestions for seeking the proper medical care, self-treatment choices, or lifestyle changes based on users' medical histories, demographics, and risk factors. By giving tailored recommendations, the system enables users to make wise decisions about their health and wellbeing. Additionally, the Al model is continually updated with the most recent knowledge and improves over time in terms of accuracy and performance by learning from fresh medical research as well as actual patient data. Early diagnosis of infectious diseases is aided by effectively triaging users and seeing potential early warning indicators of severe infections, which allows for prompt interventions and better health outcomes. People of different ages and technical backgrounds may use the system because to its user-friendly design, making it a useful tool for individuals looking for quick and precise health information. Additionally, user data is anonymized and maintained in compliance with industry standards and regulations, placing a high priority on data privacy and security.

No. of Pages : 12 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/11/2023

(21) Application No.202321075124 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : THREE-PASSENGER E-VEHICLE FOR DIFFERENTLY ABLED INDIVIDUALS FOR EMPOWERING MOBILITY.

(51) International classification	:G06Q0010100000, A61F0004000000, C12Q0001682700, G09B0021000000, H04W0004120000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The titled invention Three-Passenger E-Vehicle for Differently Abled Individuals for Empowering Mobility relates to Commuting with pride and societal respect for disabled people is a big issue in country. Using handle with hands to move the vehicle is a traditional way for transport for persons with leg disabilities. Using this E-vehicle such members would be empowered to simply use it like a scooter and using the throttle, these members can control the speed of this E-vehicle. In addition, currently not many public transport systems designed for convenience of persons with disabilities. Our E-Vehicle can carry three members of people like inspection teams, pilgrims, disabled etc. with ease in public places or industries and campuses. This E-vehicle which is having three cycle type wheels, is lighter in weight and easy to carry at all places, it could, conveniently be used for going to job place, or to move in the city for domestic needs, and that too with their family members. It empowers them to have a respectful life in society and these members would feel privileged by owning such an E-vehicle. This vehicle designed to have carrying capacity up to 250 KG payload; it has 48 V battery with 30 Ampere current. A single charged battery can travel up to 70 KM. Comfort and stability provided for the disabled people is unique with better visibility and legroom space. Entry and exit in the E-vehicle can be from both the sides of the vehicle. Road Clearance enhanced in the vehicle such that this e-vehicle can run in waterlogged area up to 2 ft. height. This not only enhances the confidence and comfort of the individual but feels rest assured to reach home even in the worst situations. The charging socket is kept simple, so that the E-vehicle can be charged, at any place without any hurdles.

No. of Pages : 9 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/11/2023

(21) Application No.202321075129 A
(43) Publication Date : 16/08/2024

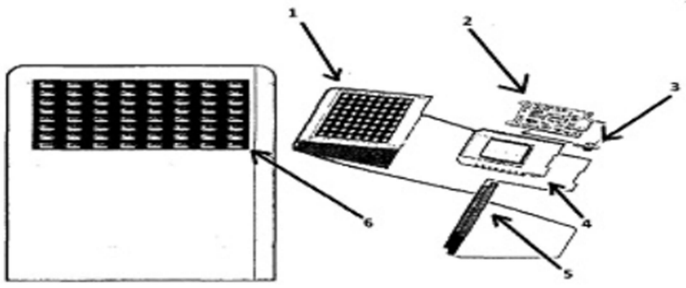
(54) Title of the invention : NOTIME-NOTIFICATION GADGET.

(51) International classification	:G06F0009448000, G06F0001180000, H02J0007000000, B65D0081200000, B01D0061100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

(71)**Name of Applicant :**
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(57) Abstract :
The titled invention Notime - Notification Gadget is disclosed a simple, compact gadget to aid patients as well as caregivers with a need based customizable option for diverse applications some of them being toddler care while parents are away, elderly home alone care, patient care at home and at nursing home. Can be set up for caregiver as well as for the one who needs care.

Figure - 1



No. of Pages : 8 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/11/2023
(21) Application No.202321075131 A
(43) Publication Date : 16/08/2024

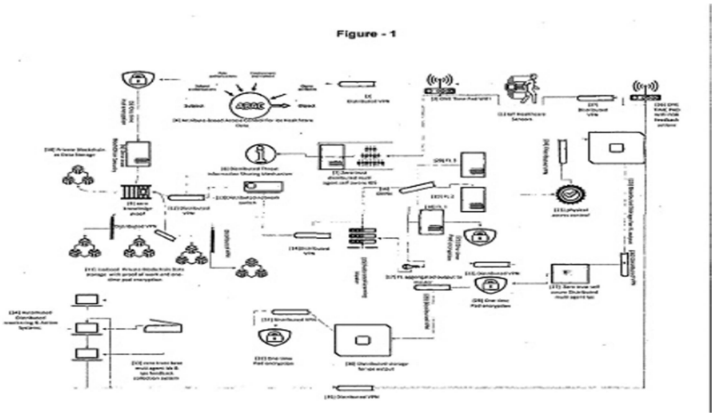
(54) Title of the invention : IOT HEALTHCARE DECENTRALIZED DISTRIBUTED SELF-AWARE MULTI AGENT INTRUSION DETECTION AND INTRUSION PREVENTION SYSTEM ARCHITECTURE

(51) International classification	:H04L0067120000, G06N0003080000, G06F0021550000, H04W0012080000, H04W0012121000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The titled invention " loT Healthcare Decentralized Distributed Self-Aware Multi Agent Intrusion Detection and Intrusion Prevention System Architecture" discloses the solution for safeguarding loT healthcare data from a variety of sensors, prioritizing patient data security in the dynamic landscape of loT-based healthcare. It is to ensure the protection of patient information throughout the data lifecycle. It commences with loT healthcare sensors collecting and delivering real-time health insights, employing One-Time Pad encryption to secure Wi-Fi transmissions, thereby preserving data confidentiality. Attribute-Based Access Control carefully evaluates data attributes before passing them through Zero Trust Block chain Security and Zero-Knowledge Proof protocols to ensure trust and data privacy. The system lies in the Zero Trust Distributed Multi-Agent Intrusion Detection System (IDS), wherein agents form an impenetrable barrier against threats, operating under a continuous verification Zero Trust paradigm. A distributed threat sharing mechanism enhances the IDS with collective intelligence, while Federated Learning improves intrusion prediction. Additional layers of VPN channels and physical access control further fortify data security. The Intrusion Prevention System (IPS) adds an extra layer of defense, utilizing proactive measures and continuous analysis. The system adapts dynamically with an automated monitoring system and feedback loop, transmitting actions through VPN and encrypted Wi-Fi for agility. In the context of Distributed Decentralized loT-Based Healthcare, access control.

Figure - 1



No. of Pages : 16 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/12/2023
(21) Application No.202321087900 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SKIN-CARE COMPOSITION FOR REDUCTION OF ACNE AND REMOVAL OF ACNE SCARS AND A METHOD OF MAKING IT

(51) International classification :A61K31/7048, A61K31/192, A61K31/203, A61P31/04, A61P29/00, A61P17/10, A61Q19/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
TITLE: A skin-care composition for reduction of acne and removal of acne scars and a method of making it. The present invention is a skin-care composition for reduction of acne and removal of acne scars, comprising a first component of properties antibiotic by weight percentage of 1% to 3%; a second component of properties retinoid by weight percentage of 0.05% to 0.2%; a third component of properties antibacterial and anti-inflammatory by weight percentage of 4% to 5%; additives; and purified water. In the said composition, the first component of properties antibiotic is Clarithromycin, the second component of properties retinoid is Adapalene, and the third component of properties antibacterial and anti-inflammatory is Barbados Aloe.

No. of Pages : 16 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/09/2023
(21) Application No.202321062350 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : MACHINE LEARNING BASED APPROACH FOR CLASSIFICATION OF BLOOD FLOW USING NON-INVASIVE DEVICE

(51) International classification	:A61B5/02, A61B5/026, A61B5/0295, G06N3/0464, G16H50/20
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract: This invention introduces a novel non-invasive system for blood flow pattern recognition utilizing dual photoplethysmography (PPG) sensors and deep learning. The system integrates two PPG sensors, a MAX86150 on the fingertip and a MAX32664 on the wrist, capturing local microvascular and larger vessel blood flow dynamics. An ESP32 microcontroller acquires and processes these synchronized PPG signals. At the heart of the system lies PPGNet-4, a custom-designed convolutional neural network (CNN) optimized for analysing dual PPG signals. PPGNet-4 categorizes blood flow into five distinct patterns: normal, oscillatory, pulsatile, stagnant, and turbulent, using 200-sample windows from both sensors. Key advantages include non-invasive and continuous monitoring capabilities, high accuracy in pattern distinction, real-time processing, and potential for early detection of cardiovascular abnormalities. The system finds applications in clinical settings, home health monitoring, and fitness tracking, offering a convenient, accurate, and non-invasive approach to blood flow pattern recognition. This innovation represents a significant leap forward in cardiovascular health monitoring and diagnostics. .

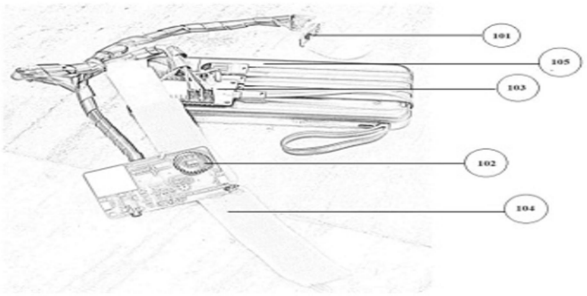


Fig 1. System Overview Diagram.

No. of Pages : 17 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/12/2023
(21) Application No.202321084053 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : HYDRAULIC SUCKER ROD PUMPING (HSRP) UNIT

(51) International classification :E21B0043120000, F04B0047020000, E21B0047009000, E21B0010020000, F16K0011070000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT “HYDRAULIC SUCKER ROD PUMPING (HSRP) UNIT” The present invention provides a hydraulic sucker rod pumping unit (HSRP) which is used for lifting and extracting fluid from great depth using a hydraulic system. In addition to that, the present invention facilitates fluid or oil communication in upside and downside manner through triggering instructions sent through manifold block (29) connected with electric control panel (9) and limit sensors (13) into double-acting hydraulic cylinders (10), thereby achieving a larger stroke length for oil extraction. Moreover, said present invention monitors the production area at remote access and evaluates the operation in real time using an IoT (Internet of Things) monitoring facility, thereby enabling an effective oil production per stroke length with easy worldwide accessibility to the user in the digital devices. (Figs. 1-3)

No. of Pages : 39 No. of Claims : 10

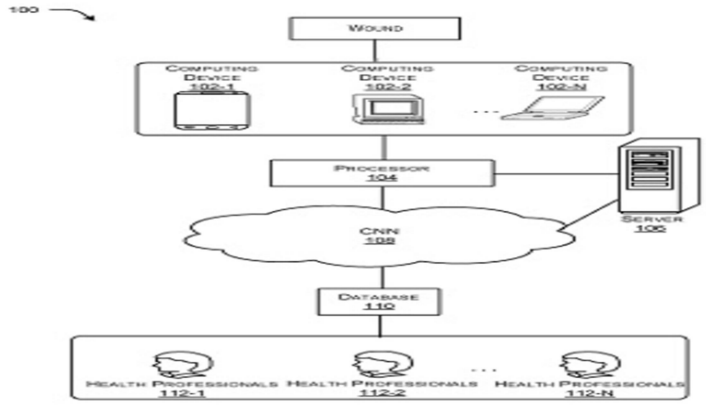
(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/03/2024
(21) Application No.202421017776 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR WOUND ANALYSIS

(51) International classification	:G06N0003080000, G06N0003040000, A61B0005000000, G06T0007100000, G16H0050200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present disclosure provides a system (100) and method (300) for wound analysis. The system (100) includes one or more computing devices (102) to capture one or more images of a wound and a processor (104) in communication with the one or more computing devices (102). The processor (104) is configured to receive the one or more images captured by the one or more computing devices (102), transmit the one or more images of the wound to a server (106) and process the one or more images using a Convolution Neural Network (CNN) (108) to perform semantic segmentation on the one or more images, wherein the semantic segmentation generates one or more segmented images from the one or more processed images. Further, the processor (104) analyzes the one or more segmented images to extract one or more clinical wound parameters from said one or more segmented images, store the analyzed one or more wound parameters in a database (110) and generate and send an output to one or more health professionals (112) based on the analyzed one or more wound parameters for diagnostic and treatment purpose.



No. of Pages : 31 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/11/2023
(21) Application No.202321075191 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AA-CO-PEOMA COPOLYMER ADSORBENT FOR THE REMEDIATION OF CATIONIC DYE FROM AQUEOUS SOLUTION.

(51) International classification :C02F1/28, C08F220/06, C08F220/18
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
In this process, a novel copolymer (AA-co-PEOMA) adsorbent for the mitigation of potential dye from wastewater adsorbents are synthesized using varying proportions of both Acrylic acid (AA) and Phenoxyethyl Methacrylate/ Poly(ethylene oxide) monomethacrylate / (PEOMA). The synthesized adsorbent characterized for structural and functional identity using FTIR and XRD respectively. The optimal situations of adsorption of Crystal violet (CV) dye are scrutinized by varying the operating parameters such as contact time, adsorbent dosage, temperature and pH. The experimental results are further analyzed to fit various established Kinetic and Equilibrium Isotherm models. The kinetics study inferred that the investigational data shows a decent trend in line with the pseudo- second-order model. The adsorption of CV dye on the synthesized copolymer mostly follows the Langmuir model with the supreme adsorption capability (qmax) estimated to be 24.75 mg/g. The reusability study as well as the comparison of proposed adsorbent with other potential adsorbents confirms the applicability of adsorbent for large-scale applications.

No. of Pages : 11 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/04/2024

(21) Application No.202421032058 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AN INSPECTION AND MEASUREMENT SYSTEM FOR STRAIGHT HOLLOW CYLINDRICAL OBJECTS

(51) International classification	:F41A0021220000, B64F0005600000, B23K0026080000, E21B0047100000, A24C0005340000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
AN INSPECTION AND MEASUREMENT SYSTEM FOR STRAIGHT HOLLOW CYLINDRICAL OBJECTS Abstract Disclosed is an inspection and measurement system for straight hollow cylindrical objects (100) such as internal gun barrel surface of large caliber gun barrels (150). The system (100) comprises an inspection device (200,500) operatively connected to the controller (400). The controller (400) is configured to receive realtime 2D image and 3D laser scan data captured by the inspection device (200,500) to generate 2D and 3D maps of the internal surface of the straight hollow cylindrical object and provide a means of visualization and interpretation of inspection and measurement data. Ref. Figure 1

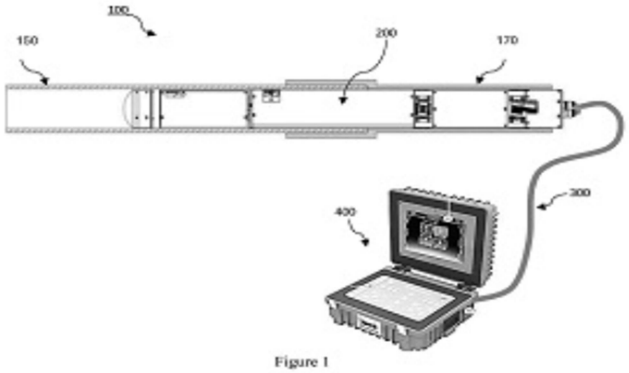


Figure 1

No. of Pages : 42 No. of Claims : 25

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/05/2024
(21) Application No.202421035153 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR SUMMARIZATION OF SPEECH TO TEXT/SPEECH TRANSLATION

(51) International classification	:G06F0040580000, G10L0015260000, H04N0021854900, G06F0040300000, G06F0040450000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed is a system (100) that facilitates summarization of speech to text/speech translation. The system (100) includes an input unit (102) configured to receive an input speech in a first language. The system further (100) further includes a data processing apparatus (104) coupled to the input unit. The data processing apparatus (104) includes processing circuitry (110) that is configured to transcribe the input speech in the first language into corresponding textual data in the first language. The processing circuitry (110) is further configured to summarize the textual data in the first language and then translate the textual data summarized in the first language into the textual data summarized in a second language. Furthermore, the processing circuitry (110) is configured to convert the textual data summarized in the second language into an output speech summarized in the second language. FIG. 2 is the reference figure.

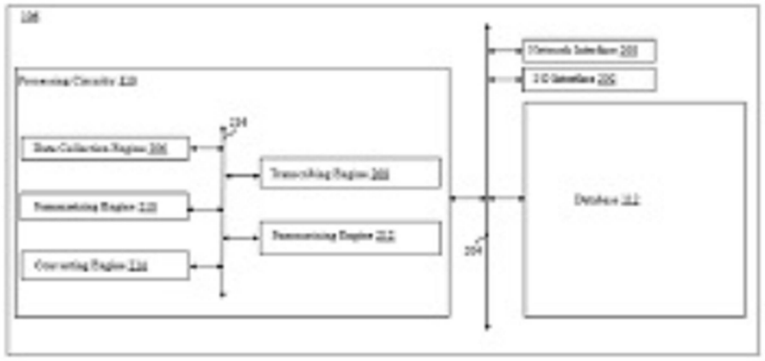


FIG. 2

No. of Pages : 19 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/05/2024
(21) Application No.202421035244 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A CHEMICAL METHOD FOR SILVER DOPED NICKEL PHOSPHATE HYDRATE ELECTRODES FOR ELECTROCATALYTIC APPLICATION

(51) International classification :C25B11/051, C25B11/04, H01M4/04, C01G53/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Abstract: The present invention claims a hydrothermal method for doping silver (Ag) into nickel phosphate hydrate (NPH) deposited on nickel foam. The UV-Visible absorption at 420 nm confirmed the formation of Ag NPs. The XRD pattern revealed that Ag -doped NPH possess monoclinic crystal structure. The SEM images revealed that Ag NPs - doped NPH possess interlocked stacked micro-sheet structure. Ag - doped NPH electrocatalyst electrode tested using electrochemical LSV technique revealed an overpotential of 196 mV at the current density of 10 mA/cm2 showed excellent electrochemical water splitting using 1.73 V potential towards OER.

No. of Pages : 17 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/12/2023

(21) Application No.202321083323 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : MULTI-JOINT REHABILITATION SYSTEM

(51) International classification	:A61H0001020000, A63B0021000000, A61G0005140000, A63B0023035000, A63B0024000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(72)**Name of Inventor :**
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(57) Abstract :
A multi-joint rehabilitation system (106) including a portable device (108) and an attachment (110) is disclosed. The portable device (108) has a casing (108a, 510) and includes an output shaft (325a, 325b), a driving assembly, and a resistance controlling assembly. The driving assembly drives the output shaft (325a, 325b). The resistance controlling assembly magnetically controls resistance. The attachment (110) receives and moves an upper limb and a lower limb through at least a degree of freedom. The portable device (108) selectively rehabilitate multi-joints of the upper limbs and the lower limbs in a single device to assist and train the users with responsive feedback in a sitting and a standing position of the user (102). The attachment (110) includes a finger attachment (655), and receives a hand of the user (102) and moves digits of the hand in a spline path motion through at least a degree of freedom to selectively rehabilitate multi-joints of the hand.

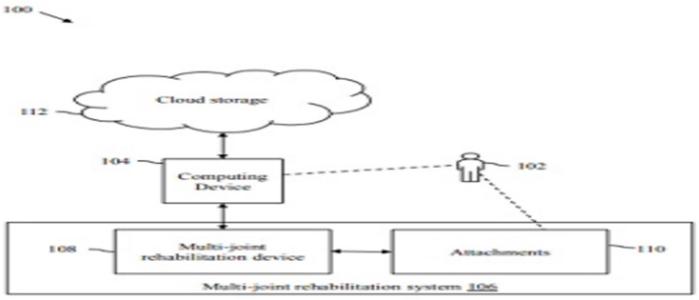


FIGURE 1

No. of Pages : 40 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/06/2024
(21) Application No.202421042892 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : IMPROVED PROCESS FOR PREPARATION OF 2,2'- CYCLOCYTIDINE HYDROCHLORIDE

(51) International classification	:C07H0019060000, B01J0035100000, A61K0031565000, B01J0038120000, C07C0271600000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract The present invention discloses an improved and industrially feasible process for preparation of 2,2'-cyclocytidine hydrochloride of formula (I), an intermediate of Cytarabine, in high yield without using hazardous chemicals and column chromatographic techniques. 14

No. of Pages : 14 No. of Claims : 14

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/06/2024
(21) Application No.202421048304 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : FABRICATION OF ZINC OXIDE NANOPARTICLES WITH AZADIRACHTA INDICA TO DETECT THE SPOILAGE MICROORGANISMS IN BANANAS, INFESTATION OF PARASITIC ORGANISMS AND REDUCE THE RATE OF ROTTING IN BANANAS WITH INCREASING THE SHELF LIFE OF BANANA

(51) International classification :A61K33/30, A61K9/14, C01G9/02, B22F1/0545, A61K36/58, A23P20/10, B82Y40/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This study delves into the detection of fungi associated with banana spoilage and its impact on the fruit's nutritional value. Employing Potato Dextrose Agar (PDA) and Sabouraud Dextrose Agar (SDA) culture media, fungi and molds associated with bananas were isolated. The presence of various microorganisms in spoiled bananas was examined, highlighting the detrimental effects of microbial action on the fruit's market value and nutritional significance. The research endeavors to evaluate the efficacy of zinc oxide nanoparticles synthesized via biological methods (green synthesis) using Azadirachta indica (neem) leaves. Bananas treated with these nanoparticles were stored at room temperature for 15 days, and their effectiveness was assessed through physiochemical characteristics such as pH, moisture content, and microbiological testing. Morphological changes within the samples were analyzed through Scanning Electron Microscopy (SEM), and structural alterations were investigated using X-ray Diffraction (XRD) techniques. This comprehensive study aims to contribute to the development of edible coatings and films for food packaging applications, addressing challenges like consumer acceptance, regulatory compliance, and non-toxic scaling for commercial viability. The incorporation of keywords such as Azadirachta indica, SEM, X-ray diffraction, edible coatings, zinc oxide nanoparticles, fungi, and molds underscores the multidimensional nature of the research and its potential implications for food preservation and safety.

No. of Pages : 14 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/12/2023
(21) Application No.202321087901 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : COMPOSITION OF PROTON PUMP INHIBITOR, PROKINETIC AGENT AND ALGINIC ACID AND A METHOD OF MAKING IT

(51) International classification	:A61K0031443900, A61P0001040000, A61P0001000000, A61P0001140000, A61K0009160000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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1)Laxmikant Sadashiv Patil
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(57) Abstract :
ABSTRACT TITLE: Composition of proton pump inhibitor, prokinetic agent and alginic acid and a method of making it In the present invention is a stable composition for treatment of GERD, Zollinger-Ellison syndrome, and stomach ulcers, comprising a first component being proton pump inhibitor; a second component being antiemetic and prokinetic agent; a third component being alginic acid; additives, coating (seal and enteric) and lubricants; and purified water in q.s. The proton pump inhibitor is Esomeprazole which ranges preferably between 150 mg to 350 mg in weight. he second component antiemetic and prokinetic agent is Domperidone Maleate ranges preferably between 6.365 mg to 19.10 mg in weight. The third component alginic acid is Sodium Alginate ranges preferably between 150mg to 350 mg in weight. A method for making the said composition.

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/06/2024
(21) Application No.202421044313 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : "A METHOD OF PREPARATION OF POLYVINYLPYRROLIDONE COATED MANGANESE IRON OXIDE NANOPARTICLES AND APPLICATION THEREOF'

(51) International classification :B82Y30/00, B82Y40/00, B82Y25/00, B01J23/76, C01G49/06
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Abstract: In the present invention polyvinylpyrrolidone (PVP) coated manganese iron oxide (PVP-MnFe204) nanoparticles have been synthesized by hydrothermal method. Zeta potential of prepared sample was measured to be -11.3 mV which confirms the presence of-ve charge on surface which makes them suitable for bio-nano interactions. The use of PVP polymer during the reaction for preparing in situ PVP coated MnFe204 nanoparticles has shown better physiochemical properties as well as hyperthermic efficacy. Using the in-situ polymerization technique; crystallite size, surface potential, and colloidal dispersion stability of PVP-MnFe204 nanoparticles has been improved. The results have shown better colloidal dispersion stability and high heat generation ability of PVP-MnFe204 magnetic nanoparticles under an alternating magnetic field (AMF) at different field amplitudes at fixed frequency of 278 kHz. It has been shown that these optimized sample will play better role for magnetic hyperthermia therapy as heat mediators owing to their magnetic induction heating properties and good colloidal

No. of Pages : 16 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/06/2024
(21) Application No.202421044348 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SILVER NANOPARTICLES DECORATED NICKEL PHOSPHATE HYDRATE ELECTRODES FOR APPLICATION IN ELECTROCATALYS

(51) International classification :C25B11/051, C25B11/04, H01M4/04, C01G53/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Abstract: Efficient catalysts for electrocatalytic applications are of supreme importance for electrochemical energy applications. Herein, a method for synthesizing silver nanoparticles decorated nickel phosphate hydrate (Ag NPs-decorated-NPH) electrode for oxygen evolution reaction (OER) is claimed. The Ag NPs-decorated-NPH is prepared by hydrothermal method and dip coating. The XRD pattern of Ag NPs-decorated-NPH revealed monoclinic structure. The SEM images revealed nanoparticle decorated micro-sheet structure of the as synthesized electrocatalyst. The Ag NPs-decorated-NPH electrode reflected an overpotential of 124 mV at the current density of 10 mA/cm2 towards OER.

No. of Pages : 22 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/06/2024
(21) Application No.202421049777 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND DEVICE FOR MONITORING FACIAL SKIN AND A METHOD THEREOF

(51) International classification	:A61M0005200000, A61K0008020000, A61Q0019000000, A61B0005000000, A61M0005142000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(72)**Name of Inventor :**
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(57) Abstract :
A system, device (100) and a method for monitoring facial skin is disclosed. The device (100) includes a facial mask unit (110) comprising one or more Advanced Sensor Arrays (106) configured for acquiring data on a facial skin of the wearer 112. The device (100) includes one or more processor units (102), collectively programmed and configured for receiving and processing the acquired data from each sensor of the Advanced Sensor Array (106) for providing data on the wearer's skin. The device (100) also includes a control and display unit (108) configured for graphically presenting the processed data, related to the condition of the facial skin.
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No. of Pages : 61 No. of Claims : 23

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :13/05/2024
(21) Application No.202421037644 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD FOR FABRICATING STONE CLAMP APPARATUS USING METAL INJECTION MOULDING

(51) International classification :B23Q3/00, B28D1/00, B22F3/16, B22F3/10, B22F7/00, B28B1/24
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention belongs to the technical field of a method for fabricating stone clamp apparatus. Particularly, the present disclosures consist of DOP and Diamond Fitting Pin 003 which provides an improved stone holding apparatus by using the techniques of metal injection moulding and PVD Coating that has capacity to retain the high temperature and pressure while diamond scanning.

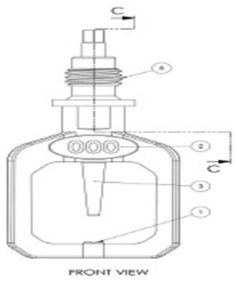


FIG.: 1 (FRONT VIEW)

No. of Pages : 18 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024
(21) Application No.202421050184 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : PULLEY MECHANISAM BICYCLE WITH LONG CRANK.

(51) International classification	:E04H0006000000, B62M0025040000, A63B0022000000, E05D0015060000, B65H0007020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract: The present invention relates to a pulley mechanism bicycle with long crank. Which can improve light weight, speed capacity and comfortable driving of the bicycle. The present invention comprises; two pulley systems and each system comprising one flat rope pulley (3) attached with one-way (clutch) bearing (4) and a spur gear (5) with an axle (6) and inter connected with another spur gear (7); two long cranks (10) pivotally mounted on seat stay frame (11) and connected both pulley system through axle tube (8) and idler pulley (9) by the rope (12).

No. of Pages : 12 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/07/2024
(21) Application No.202421050311 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : "SINGLE STEP METHOD OF OBTAINING ONE-DIMENSIONAL SILICON CARBIDE NANOSTRUCTURES FROM SELECTED AGRICULTURAL WASTE"

(51) International classification :B09B3/00, B09B101/25, B82Y30/00, C01B32/956
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Abstract Herein an easy, rapid, economically viable and single-step route for the synthesis of one-dimensional structures of silicon carbide from the agricultural waste precursors is disclosed. Particularly agricultural wastes such as, rice husks, bamboo leaves and sugarcane leaves have been used. These agricultural wastes have been treated with high-temperature plume to obtain one-dimensional structures of silicon carbide in single-step with high yield of production.

No. of Pages : 31 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202421051568 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : "A METHOD OF PREPARATION OF POLYMER FUNCTIONALIZED IRON OXIDE NANOPARTICLES AND APPLICATION THEREOF"

(51) International classification :B82Y30/00, C01G49/06, C01G49/08
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
Abstract: The unique magnetic properties of iron oxide nanoparticles make suitable candidate for nanoparticle based therapeutic applications. In the present research work, we have synthesized PEG coated iron oxide nanoparticles in one step hydrothermal synthesis method. Through this optimized chemical synthesis method, we achieved uniform particle formation with polymer functionalization. We analyzed the heating properties of prepared sample at various concentrations in an aqueous medium under an alternating magnetic field (AMF), specifically at 13.3, 20 and 26.6 kA/m, with fixed frequency of 278 kHz. The induction heating results demonstrated excellent heat generation efficiency and specific absorption rate (SAR) of the synthesized nanoparticles. The therapeutically required hyperthermic temperature was achieved within 2 minutes for a 5 mg/mL concentration and the maximum SAR value is 111 W/g for Img/mL concentration under 26.6 kA/m field amplitude. This study comprehensively evaluates the hemocompatibility, biocompatibility, and cytocompatibility of nanoparticles, with a particular emphasis on their interactions with normal cells, to provide insights crucial for their clinical applicability. These findings strongly indicate that PEG coated iron oxide holds great promise as effective hyperthermia agent. Keywords: Magnetic nanoparticles, Polyethylene glycol, Biocompatibility, Biomedical applications.

No. of Pages : 15 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202421051659 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : "EVALUATION OF SOME BAMBOO VARIETIES FOR POTENTIAL COMPONENTS OF NUTRITIONAL AND FEMALE HEALTH BENEFITS

(51) International classification :A61K0036899000, A23L0033105000, C12Q0001689500, A23L0002520000, A61L0015200000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The possible health advantages of extracts from bamboo plants are examined in this study, with a focus on women's health. Three solvents were used to extract the extracts: distilled water, ethanol, and water: ethanol. Maceration and decoction procedures were also used. Dentrocalaums Strictus (Roxb.) Nees. exhibiting a greater ash content. According to the results of the phytochemical screening tests, phenol, phytosterols, flavonoids, protein, terpenoids, alkaloids, and vitamin C were present in Dentrocalamus Brandisii (Munro) Kurz. Progesterone agonistic action was demonstrated by all phytosterols and flavonoids, while progesterone antagonistic and agonistic activity was demonstrated by flavonoids, syringic acid, and p-coumarin acid, according to in silico screening of phytoconstituents employing progesterone and oestrogen receptors. The hydroethanolic extract had a greater total phenolic content, but the water solvent extract had a higher total flavonoid content. Dentrocalamus Brandisii (Munro) Kurz and Dentrocalaums Strictus (Roxb.) Nees, achieved good IC50 values, with 59.04 µgml and 86.39µg/ml, respectively, according to the antioxidant assay. The bamboo sample extract that was chosen was combined with water, jaggery, honey, and woodfordia fruticosa flower to create Arishta. The developed arishta formulation may be beneficial for enhancing female health; with Dentrocalamus Brandisii (Munro) Kurz and Dentrocalaums Strictus (Roxb.) Nees. being potential candidates for treatment of female bleeding disorders and ovarian cancer.

No. of Pages : 15 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024

(21) Application No.202421051661 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : "BIODEGRADABLE BANDAGE BY USING PVA WITH BANANA STEM BASED BACKING MEMBRANE FOR WOUND DRESSING"

(51) International classification	:A61F0013000000, A61L0026000000, A61F0013020000, A61L0015440000, A61L0015460000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The escalating environmental concerns associated with traditional wound care materials have driven the exploration of sustainable alternatives. This report details the development of a novel biodegradable bandage derived from banana stem fibers, enhanced with the antimicrobial properties of neem and curcumin. Banana stems, a widely available agricultural byproduct, were processed to extract fibers suitable for bandage fabrication. The incorporation of neem, known for its antibacterial and antifungal properties, and curcumin, renowned for its anti— bandage. The fabrication process involved the extraction of banana fibers, blending with neem extract, and curcumin incorporation, followed by the formation of the bandage using eco-friendly binders. This research contributes to the ongoing efforts in developing eco-friendly and biodegradable medical materials, aligning with the global push towards sustainable healthcare practices. The utilization of abundant agricultural byproducts such as banana stems, combined with the natural healing properties of neem and curcumin, opens avenues for the development of cost-effective and environmentally friendly wound care solutions.

No. of Pages : 10 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024
(21) Application No.202421051705 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD TO CONTROL PERMANENT MAGNET SYNCHRONOUS MOTOR PERFORMANCE USING MINIMAL ANGLE CALCULATIONS

(51) International classification :H02P21/00, H02P21/12, H02P21/14, H02P25/022, H02P27/06, H02P27/08, H02P6/10
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention discloses a system (100) and method (200) of controlling a permanent magnet synchronous motor (PMSM) drive (500) using predictive current control (PCC) mechanism using minimal angle calculations. The system comprises a two-level inverter (101) generating voltage vectors for the PMSM drive (500) and a controller (102) employing PCC. The controller (102) calculates a desired voltage vector (vref) and selects two close voltage vectors (V1, V2) based on the previous control cycle using PCC mechanism. The angles (??1, ??2) between the reference and chosen vectors are minimized. The controller (102) then forms at least three voltage vector groups using the available options and these angles (??1, ??2). The system (100) optimizes PCC for the PMSM drive (500) while maintaining efficiency.

No. of Pages : 31 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202421051154 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : WAVELET BASED JOINT WATERMARKING AND ENCRYPTION STRUCTURE FOR MULTIMODAL TELEBIOMETRIC SYSTEM.

(51) International classification	:G06T0001000000, A61B0005000000, H04B0007060000, H04N0019630000, H04N0019573000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A Wavelet Based Joint Watermarking and Encryption (WBJWE) structure embeds a fingerprint image into a compressed face image. The significance of the structure is that wavelet base technique is used for both compression and feature extraction. The WBJWE structure may be used for multimodal biometric applications. The wavelet used is a Dyadic Maximum Vanishing Moments Wavelet which Has less hardware complexity. Furthermore, a weighted score fusion algorithm is proposed that enables better recognition accuracy when used in a telebiometric system.

No. of Pages : 11 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202421051261 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : "ZERO (0) AND INFINITY (∞) ARE NOT JUST DIFFERENT CONCETUAL SYMBOLS, THEY ARE THE SAME CONCEPTUAL SYMBOL USED IN DIFFERENT PLACES WITH DIFFERENT PERSPECTIVES AND REFERENCES

(51) International classification	:G01N0033574000, G06F0016901000, G06F0005010000, G06Q0020200000, H04N0005247000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
zrealms of mathematics and physics. Through a combination of empirical observations, theoretical analysis, and a constructed 3D model, I demonstrate how the path of Zero can seamlessly transition into the shape of Infinity when viewed from different angles. This paradigm shift offers a fresh perspective on fundamental mathematical and physical phenomena, with potential implications across various disciplines. By presenting compelling evidence and arguments, we aim to stimulate further inquiry and dialogue, ultimately advancing our understanding of the intricate interconnectedness of mathematical concepts.

No. of Pages : 7 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/07/2024
(21) Application No.202421052945 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : "A MODULAR AND INTERLEAVED SOLID-STATE INDUCTION HEATING GENERATOR FOR INDUCTION CASTING MACHINE WITH IMPROVED INPUT POWER FACTOR

(51) International classification :H02M1/42, H05B6/02, H02M7/48, H02M1/00, H02M1/08, H01F38/14
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A MODULAR AND INTERLEAVED SOLID-STATE INDUCTION HEATING GENERATOR FOR INDUCTION CASTING MACHINE WITH IMPROVED INPUT POWER FACTOR The invention addresses the challenges traditionally faced in constructing solid-state induction heating generators of varying power levels, specifically for jewelry casting machines, while ensuring compliance with harmonic standards for the input AC supply. The proposed design utilizes modular single-phase solid-state inverters, each integrated with a single-phase Power Factor Correction (PFC) unit. A specially designed high-frequency impedance matching transformer is employed to distribute power to a common series resonant LC tank circuit on the secondary side. The system comprises three single-phase inverter stacks utilizing advanced 600-700V SiC power MOSFETs and a custom gate-driver card, enhancing efficiency and reliability. This invention outlines methods for constructing induction heaters with industry-standard power levels in multiples of 6kW. Although primarily designed for induction casting, the system is adaptable for other induction heating applications. The digital controller can be any modern FPGA/DSP-based microcontroller. While the design may initially appear to increase component count, standardizing 2/4 kW power inverter modules with integrated PFC allows for easy adjustment of overall system power through hot-swapping, maintaining cost-effectiveness and improved performance.

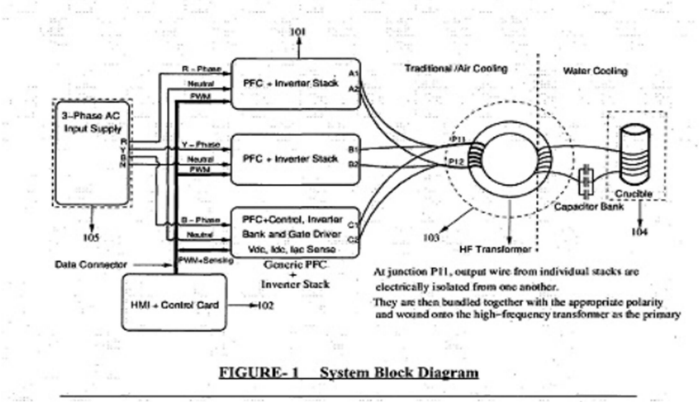


FIGURE- 1 System Block Diagram

No. of Pages : 18 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/07/2024
(21) Application No.202421053831 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : HYGROPHILLA AURICULATA FLOWER EXTRACT LOADED MICROEMULSION GEL

(51) International classification :A61K0009107000, A61P0017000000, A61K0009000000, A01N0025040000, A61K0009190000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
HYGROPHILLA AURICULATA FLOWER EXTRACT LOADED MICROEMULSION GEL The present invention relates to a pharmaceutical composition for treatment of skin cancer. More preferably, the present invention provides a formulation of Hygrophilla Auriculata Flower Extract Loaded Microemulsion gel that has the smallest droplet size, the maximum drug concentration, and good physical stability suitable for treatment of skin cancer. The Hygrophilla Auriculata Flower Extract Loaded Microemulsion gel consisting of 0.5 to 1.0 % w/v of Hygrophilla Auriculata Flower Extract, 1.5 to 3.0 % w/v of Castor oil, 15 to 25 % w/v of Surfactant and Water. The present invention also discloses the process for preparation of Hygrophilla Auriculata Flower Extract Loaded Microemulsion gel formulation and the process involves extraction of Hygrophilla Auriculata Flower and loading the said extract in microemulsion globules using high-speed homogenization.

No. of Pages : 16 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/07/2024

(21) Application No.202421053867 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SUPER CAPACITOR BASED BUS, NEW GENERATION TRANSPORT SYSTEM.

(51) International classification :B60L50/40, B60L5/24, B60L7/20
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT: The Super Capacitor Based Bus system introduces an innovative solution to the pressing issues of energy consumption, traffic congestion, and environmental pollution in rapidly urbanizing regions. This system employs super capacitor technology to power electric buses, thereby reducing reliance on fossil fuels and overhead power lines. Key components include the Arduino Nano microcontroller, IR sensors, motor drivers, and a super capacitor bank, all of which work together to ensure efficient energy management and robust performance during bus operations. By utilizing super capacitors, the system enables rapid charging and discharging, which is particularly beneficial for applications requiring quick energy bursts, such as regenerative braking. This results in significant improvements in energy efficiency, reduced greenhouse gas emissions, and lower overall environmental impact. The integration of advanced sensors and microcontrollers enhances safety and reliability, providing real-time data for collision avoidance and optimal energy flow management. This approach not only addresses environmental concerns but also offers economic advantages by reducing the establishment and maintenance costs associated with traditional fossil fuel-based bus systems. The Super Capacitor Based Bus system is designed to be scalable and adaptable, making it suitable for various urban settings and capable of accommodating future technological advancements. This system represents a significant step forward in sustainable urban transportation. By leveraging the benefits of super capacitor technology, it offers a cleaner, more efficient and cost-effective alternative to conventional bus systems, paving the way for greener and more liable cities.

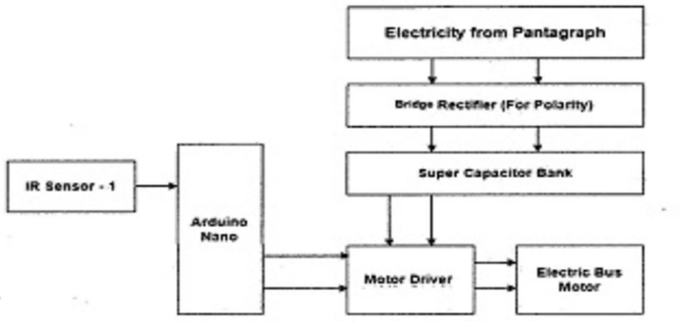


Fig: 1 Block Diagram

No. of Pages : 16 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/07/2024
(21) Application No.202421053919 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ADVANCED SKULL IDENTIFICATION SYSTEM FOR COMPREHENSIVE FORENSIC AND SECURITY APPLICATIONS

(51) International classification :H04N0007180000, G06Q0050260000, G08B0013196000, A61B0008000000, G06N0003040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT: This invention describes Advanced Skull Identification System that works as a biometric device designed for forensic and security applications. It features a multi-angle scanning chamber with high-resolution imaging devices, including cameras, multispectral sensors, and laser scanners, mounted on a rotating mechanism to capture comprehensive 3D skull images. The chamber's environmental sensors regulate temperature, humidity, and air quality, ensuring optimal conditions for accurate imaging. Ultrasonic sensors provide internal structural analysis, while AI algorithms, including convolutional neural networks and clustering algorithms, analyze the data to differentiate between types of damage, such as blunt force trauma, sharp force trauma, and environmental erosion. A high-performance processor compares the captured data against a secure database of pre-recorded skull structures for identification. The system's user-friendly software interface allows real-time monitoring and adjustments, making it a powerful tool for forensic investigations and enhancing security operations



FIGURE – 1

No. of Pages : 27 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/07/2024

(21) Application No.202421050733 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SMART POWDER DOSING SYSTEM

(51) International classification	:B29C0064153000, B33Y0010000000, B05B0007140000, B33Y0030000000, B23K0026060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A SMART POWDER DISPENSING SYSTEM A smart powder dispensing system (100) includes a powder hopper (102) including an inlet opening through which powder material enters. The dispensing system (100) further includes plate (106) positioned in a middle portion (206) of the powder hopper (102). The dispensing system (100) further includes a blade (208) connected with a motor (122), and a microcontroller (118) to rotate the blade (208) at variable speed according to the powder material characteristics, align an orifice (112) of the blade (208) with an orifice (114) present in a bottom portion (110) of the powder hopper (102) after a fixed time period, and dispense the powder material through the orifice (114) based on the alignment. <>

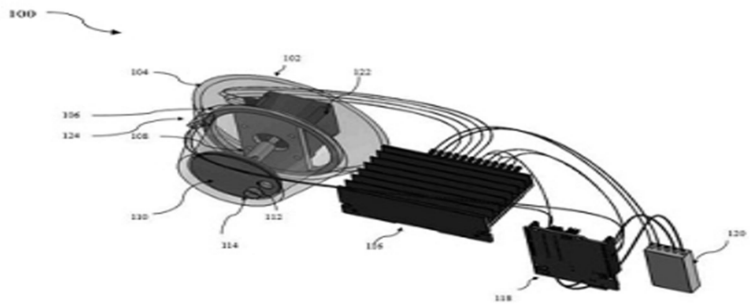


Figure 1

No. of Pages : 27 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202421050817 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : CONTINIOUS LUBRICATING BALL FORMING TOOL

(51) International classification :B21D0031000000, B23B0051000000, F04C0029020000, F01D0025180000, E21B0023010000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
CONTINUOUS LUBRICATING BALL FORMING TOOL A continuous lubricating tool (100) for continuous lubrication during an incremental forming, the continuous lubricating tool (100) comprising a stepped cylindrical body (106) comprises of two parts, an upper part (124) and a lower part (126). The continuous lubricating tool (100) further includes a shank (102) having an upper portion (120) and a lower portion (122), the lower portion (122) connected with the upper part (124) of the stepped cylindrical body (106). The continuous lubricating tool (100) further includes a lubricant inlet (103) present at a collar (114) for providing continuous lubricant flow, and a holding sleeve (110) having an upper end (128) and a and a lower end with a conical tip (112), wherein a spherical ball (117) is placed at the tip of a conical lower end of the holding sleeve (110) . <>

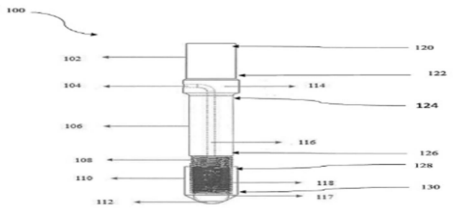


FIGURE 1

No. of Pages : 14 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/07/2024
(21) Application No.202421055531 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : RED-OX FREE LOW-TEMPERATURE DISCHARGE PRINTING METHOD FOR MARIGOLD FLOWER EXTRACTED NATURAL COLOURANT

(51) International classification	:D06P0005150000, D06P0001340000, D06P0001480000, C09B0061000000, C07C0403240000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
This invention relates to a novel cold discharge printing process comprising an aqueous composition of alkali and thickening agents. This printing paste effectively provides discharge printing of a natural dye extracted from the Marigold flower. The invention describes how this innovative effect is achieved under low/ambient temperature conditions. This invention offers a simple, easy-to-use, green/eco-friendly and non-hazardous alternative to traditional high-temperature and Red-Ox chemical-based discharge printing without affecting the inherent characteristic properties of the cellulose as well as protein-based textiles.

No. of Pages : 17 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/07/2024

(21) Application No.202421055534 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : LYOPHILIZE NOMEGESTROL FORMULATION

(51) International classification :A61K0031570000, A61P0043000000, A61P0035000000, A61P0005300000, A61K0009190000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The invention pertains to pharmaceutical formulations, particularly sustained-release nanoparticle injections of nomegestrol acetate. These formulations are designed as lyophilized powder, enhancing the solubility, bioavailability, and therapeutic efficacy of nomegestrol acetate for medical applications. These pharmaceutical formulations are intended for diseases responsive to nomegestrol treatment, such as hormone replacement therapy. The lyophilized powder formulation is easily reconstituted and administered, improving overall patient experience and treatment outcomes

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :19/07/2024

(21) Application No.202421055123 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : A SYSTEM AND METHOD FOR HIGH VOLTAGE SUB-STATION DESIGN

(51) International classification	:G06F0030130000, G06F0111120000, G06F0030000000, H02B0005000000, H02J0013000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT TITLE: A SYSTEM AND METHOD FOR HIGH VOLTAGE SUB-STATION DESIGN This invention discloses a system (100) and method (200) for designing high voltage substations. The method (200) comprises steps of collection and storage of substation-specific data (201), the establishment of a coordinate system (203), and the generation of detailed schematic representations (204, 205, 206) for all critical substation components including main structures, equipment, and interconnections. Utilizing a design module (104), the method involves precise calculations for the placement and dimensions of design elements, alongside a clearance optimization process (105) to ensure regulatory compliance. The schematic representations include layouts for civil foundations, substation plans, sections, erection key drawings, and structural plans, aiming for time efficiency, accuracy, optimization of conductor clearance, and fostering collaboration among engineering teams. This comprehensive approach not only streamlines the substation design process but also integrates standardization and safety considerations, making it a pivotal solution for modern electrical infrastructure development.



Figure 2

No. of Pages : 27 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :15/07/2024
(21) Application No.202421053920 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : INTELLIGENT AUTONOMOUS SOLAR-POWERED ROBOTIC SYSTEM FOR OPTIMAL STEVIA CULTIVATION AND INTEGRATED PEST MANAGEMENT

(51) International classification	:G06Q0050020000, G01D0021020000, B25J0009160000, A01G0025160000, G08C0017020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT: Intelligent Autonomous Solar-Powered Robotic System for Optimal Stevia Cultivation and Integrated Pest Management This invention describes Autonomous Solar-Powered Robotic System for Optimal Stevia Cultivation and Integrated Pest Management revolutionizes Stevia farming with cutting-edge technology. It features a comprehensive environmental monitoring module with soil health sensors measuring moisture, pH, and nutrients, alongside micro-climate sensors tracking temperature, humidity, and light. Real-time data is analyzed by the central processing unit (CPU), optimizing conditions for plant health and yield. The system uses AI algorithms for precise leaf plucking and integrated pest management, deploying biopesticides, ultrasonic deterrents, and predatory insects. This autonomous system enhances productivity, sustainability, and efficiency, ensuring high-quality Stevia cultivation with minimal environmental impact



FIGURE – 1

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/07/2024
(21) Application No.202421054384 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : DEVICE FOR PROVIDING PERSONALIZED BEAUTY PROFILING AND GUIDANCE TO A USER AND A METHOD THEREOF

(51) International classification :G06F17/40, G06F21/62, G16H10/60, G16H30/00, G16H50/20, G16Y10/60, G16Y20/40
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
A system, device (100) and a method (50) for providing personalized beauty profiling and guidance to a user is disclosed. The device (100) includes a data acquisition subsystem (11) comprising one or more multimodal modules (11A) configured for acquiring data associated with the user; and a processing subsystem (12A). The processing subsystem (12A) is configured for processing the acquired data for generating a personalized module (16) for providing personalized beauty profiling and guidance to the user, wherein the personalized module (16) comprises a device generated data file (16A) encapsulating the user's personalized beauty condition, and facilitating active beauty care through the personalized module (16) by interfacing the personalized module (16) with one or more of dedicated devices for providing differential information to different stakeholders. <

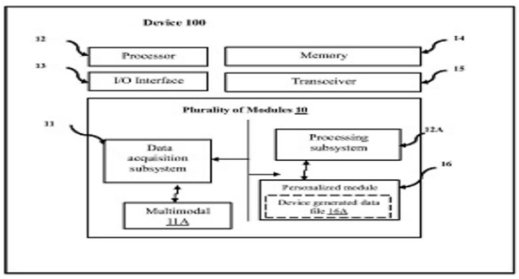


FIG 1

No. of Pages : 64 No. of Claims : 20

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :23/07/2024

(21) Application No.202421056024 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : THE IMPACT OF MENTAL HEALTH ON SELF-EFFICACY, ACADEMIC PERFORMANCE AND CAREER DECISIONS

(51) International classification :G09B0019000000, G16H0010200000, G09B0007000000, G09B0007020000, A61B0005160000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
THE IMPACT OF MENTAL HEALTH ON SELF-EFFICACY, ACADEMIC PERFORMANCE AND CAREER DECISIONS ABSTRACT The mental well-being of students significantly influences their belief in their own abilities, their academic performance, and their choices for their future careers. This invention examines the correlation between mental health and students' self-efficacy, academic performance, and career choices. Information was collected from a diverse group of students through surveys and academic records, and subsequently evaluated to identify patterns and correlations. The results indicate a correlation between impaired mental well-being and diminished belief in one's own abilities, decreased academic performance, and the presence of less clear or less ambitious professional aspirations. Positive mental health, conversely, enhances self-efficacy, boosts academic success, and facilitates more decisive and assured career choices. This invention highlights the necessity of providing mental health assistance in educational environments to enhance student performance and well-being.

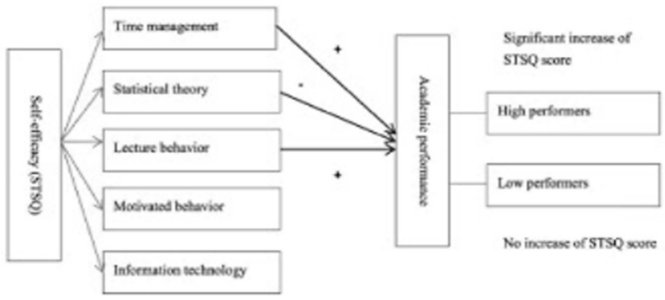


Fig.1: depicts the impacts of self-efficacy on academic performance.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/07/2024
(21) Application No.202421055552 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SOME HETEROCYCLIC HYBRIDS AS POTENTIAL ANTI-TUBERCULAR AGENTS AND THE PROCESS OF PREPARATION THEREOF

(51) International classification	:A61P0031060000, A61K0045060000, A61K0009240000, C07D0401120000, A61P0019100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Some heterocyclic hybrids as potential anti-tubercular agents and the process of preparation thereof. A series of piperazinyl-N-aryl acetamides and 1,3,4-thiadiazole hybrids (21 - 30) have been disclosed as potential anti-tubercular agents and the process of their preparation thereof. Potential anti-tubercular agents (21-30) as shown below and their method of preparation are claimed. The claimed compounds have shown potent anti-tubercular activity.

No. of Pages : 21 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/07/2024

(21) Application No.202421055564 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : TIME SERIES ANALYSIS AND MACHINE LEARNING FOR STOCK MARKET PREDICTION

(51) International classification :G06Q0040040000, G06N0003040000, G06Q0040060000, G06N0020000000, G06Q0030020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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Address of Applicant :Assistant Professor, Department of Information Technology, Vishwakarma Institute of Technology, Pune, Maharashtra, India. Pune ---------- ----------

(57) Abstract :
TIME SERIES ANALYSIS AND MACHINE LEARNING FOR STOCK MARKET PREDICTION ABSTRACT This invention investigates the utilization of machine learning and time series analysis to predict the stock market's behaviour. We create models that capture the fundamental patterns and temporal relationships of stock values by utilizing historical price data and a variety of economic indicators. In order to improve the accuracy of predictions, advanced machine learning techniques such as RNNs and LSTMs are implemented. The invention assesses the performance of these models by conducting extensive validation and back-testing against actual stock market data. Our findings indicate that the integration of machine learning and time series invention can provide traders and investors with more practical and dependable data.

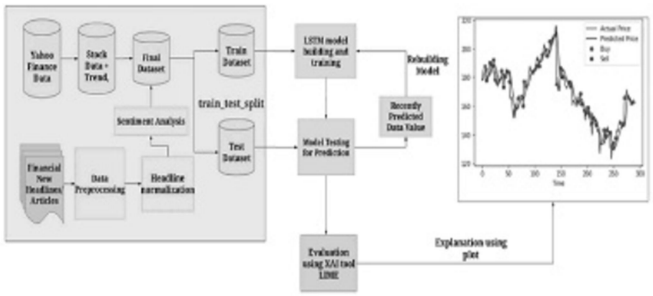


Fig.1: depicts System Architecture of Stock Market Prediction using LSTM and XAI.

No. of Pages : 16 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/07/2024
(21) Application No.202421055586 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : PROCESS FOR PREPARATION OF DICYANO-ISOPHORONE BASED CONJUGATED AZO DYE CONTAINING RESORCINOL UNIT.

(51) International classification :C08C0019440000, A61K0008340000, G03C0008100000, C08C0019250000, B41M0005388000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A Dicyano-isophorone based conjugated novel azo Dye containing resorcinol can be produced using the method that is detailed in this invention. The method described involves synthesizing a compound with the chemical formula (I) by reacting a compound with the chemical formula (II) with resorcinol as an arylating agent with the chemical formula (III).

No. of Pages : 10 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/07/2024
(21) Application No.202421055587 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : METHOD FOR PREPARING NEW BETA-NAPHTHOL BASED AZO DYE CONTAINING DICYANO-ISOPHORONE FRAMEWORK.

(51) International classification :C25D0003320000, G03C0008100000, B41M0005388000, C09B0067100000, C07C0051150000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A new beta-naphthol based azo dye containing dicyano-isophorone framework can be prepared using the method that is detailed in this invention. The method described involves synthesizing a compound with the chemical formula (I) by reacting a compound with the chemical formula (II) with beta-naphthol as an arylating agent with the chemical formula (III).

No. of Pages : 10 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/07/2024
(21) Application No.202421055602 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : EFFICIENT TECHNOLOGY TO DETECT HUMAN FACE FROM VIDEOS

(51) International classification	:H04N0019630000, G06F0017140000, H04N0005235000, G01N0033569000, H04N0021439000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The technique involves three major steps. Firstly, human face is detected and tracked every frame from running video (real time). After the preprocessing on detected face sample frames, different features are extracted from face sample frames using six level Discrete Wavelet Transformation (DWT) using Haar in second step. The algorithm is based on discrete wavelet for feature extraction. The final step is to recognize or match the features of query face sample frames or video with the trained database using the algorithm.

No. of Pages : 5 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/07/2024
(21) Application No.202421055635 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : MULTICHROMATIC SUPERHYDROPHOBIC FLUORESCENT CARBON QUANTUM DOTS FOR AI-ENABLED ANTI-COUNTERFEITING AND COATING APPLICATIONS

(51) International classification :C09K0011650000, B82Y0040000000, B82Y0020000000, G01N0021640000, H04N0005357000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT MULTICHROMATIC SUPERHYDROPHOBIC FLUORESCENT CARBON QUANTUM DOTS FOR AI-ENABLED ANTI-COUNTERFEITING AND COATING APPLICATIONS The Invention provides a series of superhydrophobic, fluorescent CDs materials. These dots not only exhibited a wide range of fluorescent colours (green YG-CDs, red APC-CDs, orange YR-CDs and yellow CR-CDs), but also achieved superhydrophobicity with appreciably high contact angle 172o for CR-CDs. These CDs were then processed with a powder dusting technique to develop luminescent fingerprint powders (LFPs). A Python program analysed the fluorescence images of these LFPs, with the prime sample showing a 90% match score, indicating significant similarity to the standard control. This performance surpasses that of traditional methods, confirming the suitability of all four CDs powders and the digital processing program for practical applications. Lastly, owing to their superhydrophobic nature, these multicoloured CDs have promising applications in coatings, capable of imparting superhydrophobic properties to various substrates, including mild steel, cotton fibers, and lab coat cloth.

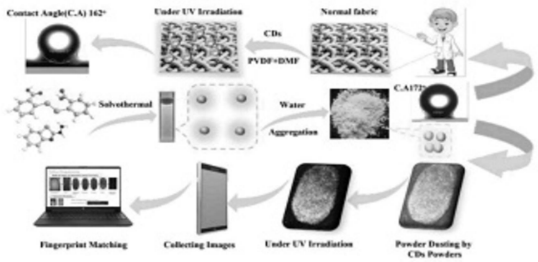


Fig. 1

No. of Pages : 30 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/07/2024

(21) Application No.202421055636 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SELF-POWERED UV- NIR PHOTODETECTOR PROBE

(51) International classification :H01L0027146000, G01F0023263000, H04N0005355000, H02J0050900000, G06T0007900000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a ready-to-use probe-like photoelectron chemical photodetector device (100) for generating electrical parameters based on incident intensity of illumination and the concentration of the electrolyte media used. It includes an illuminant (102) configured to generate optical power for illumination, a first electrode (104) configured to act as a reference electrode, a second electrode (106) configured to generate electron hole pairs for based on intensity of illumination received from optically coupled illuminant (102), a media (108) configured to be an electrolyte solution having ions, a holder (110) configured to hold illuminant (102), first electrode (104), second electrode (106) and media (108), and a processing unit (112) configured to control on-off time durations and intensity variation of illuminant (102) and measure value of received electrical parameters from first electrode (104) and second electrode (106). The first electrode (104) and second electrode (106) configured to be at least partially immersed into media (108) forming a dual-heterojunction-based photodiodes having high optoelectronic performances.

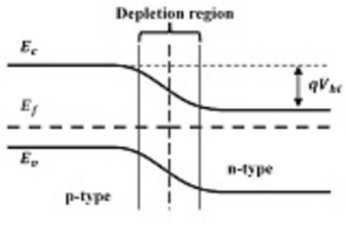


Fig. 1A

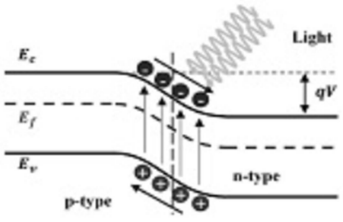


Fig. 1B

No. of Pages : 27 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/07/2024
(21) Application No.202421055658 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : OPTIMIZING CONNECTIVITY IN MULTI-CHANNEL HYBRID WIRELESS MESH NETWORKS: A DYNAMIC CHANNEL ASSIGNMENT AND GATEWAY SELECTION ALGORITHM

(51) International classification :H04W0072080000, H04W0028020000, H04W0028080000, G06F0009500000, H04W0084180000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This study presents a new method to improve the performance of multi-channel hybrid wireless mesh networks (WMNs) by using a dynamic channel assignment and gateway selection algorithm. The proposed solution tackles issues such as channel interference, network congestion, and gateway load balancing in order to enhance network throughput, minimize packet loss, and optimize resource utilization.

No. of Pages : 23 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/07/2024

(21) Application No.202421056179 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : DOPPELSCAN: DUAL AUTHENTICATION CONTACTLESS ATTENDANCE SYSTEM

(51) International classification	:G06Q0050200000, G07C0001100000, H04W0004800000, H04L0009320000, G06Q0010100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present disclosure provides a dual authentication contactless attendance system designed for educational institutions to ensure accurate and secure attendance tracking. The system includes a facial recognition module at entry points to verify identity. Inside each classroom, attendance is marked via a locally hosted central application connected to the BLE beacon, ensuring students are present within the classroom. The application generates dynamic QR codes that students can scan within a time frame using their mobile devices. The system then cross-references the QR code data and connectivity to the Bluetooth beacon to confirm the students' presence. The application features various roles and shows real-time attendance analytics for the students. This innovative system provides a reliable, foolproof method to prevent fraudulent attendance marking and improve attendance management in educational institutes

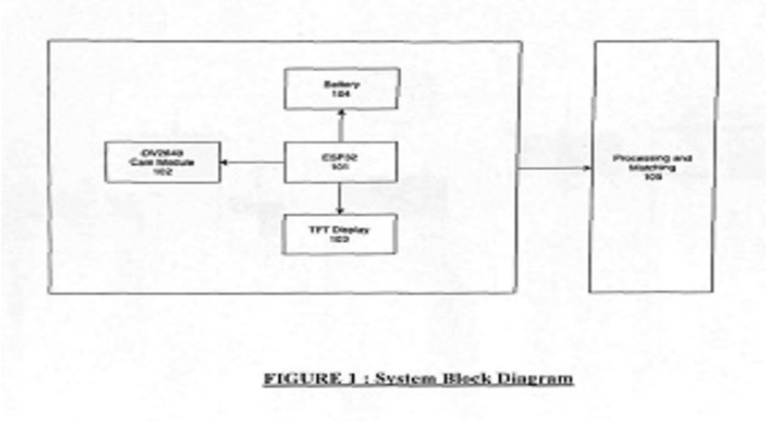


FIGURE 1 : System Block Diagram

No. of Pages : 27 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/07/2024

(21) Application No.202421056184 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SYSTEM FOR THE DEVELOPMENT OF A LIGHTWEIGHT GNU/LINUX DISTRIBUTION FOR SECURITY TESTING

(51) International classification	:G06F0021570000, G06F0009480000, G06F0008710000, H04L0009320000, G06F0009451000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention discloses a system for the development of a lightweight GNU/Linux distribution tailored for security testing. This system features a specially optimised Linux kernel designed to run efficiently on hardware with limited resources. It includes essential system components such as libraries and utilities, along with up-to-date security patches. The distribution offers a minimal desktop environment to ensure low resource consumption, with advanced anonymity features like proxy chains and TOR support to safeguard user privacy. It supports various software formats through a versatile package manager and comes equipped with a comprehensive set of testing tools for system and network analysis. Users benefit from extensive customisation options, including the ability to add or modify software and access to integrated monitoring, logging, and community support resources. This makes the system a powerful, adaptable, and efficient solution for security testing in diverse scenarios.

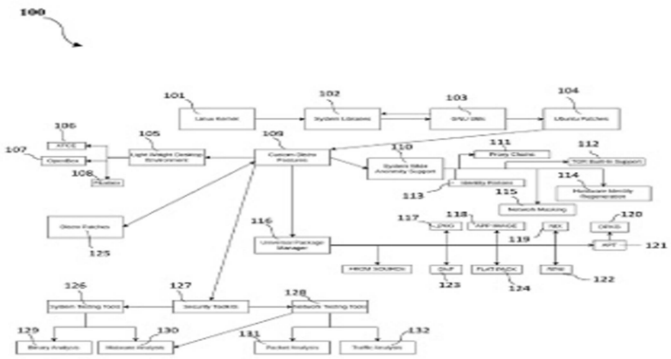


Figure – 1

No. of Pages : 17 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/07/2024
(21) Application No.202421056186 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AI DRIVEN AND IOT ENABLED VIRTUAL MOUSE

(51) International classification :G06F0003010000, G06F0003048830, G06F0003035400, G06F0001160000, G06F0003034600
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention discloses an AI driven and Internet of Things (IoT) enabled Virtual Mouse that performs navigation of a cursor and performing at least one task on a computer screen by gesture recognition. The Virtual Mouse comprises a camera 104, a single a single board computer 106, and a computer monitor 108. The user 102 shows a hand gesture to perform a specified task. The camera 104 captures at least one hand gesture made by the user 102. The single board computer 106 is configured to run a gesture recognition algorithm to process the captured gesture and perform a designated task based on the captured gesture. The computer monitor 108 displays the results of the executed tasks and a relevant feedback to the user 102. Figure 1.

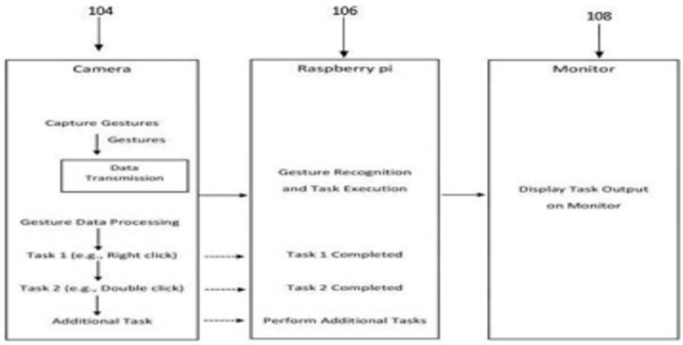


Figure – 1

No. of Pages : 15 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/07/2024
(21) Application No.202421056187 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SMART BATTERY CHARGING SYSTEM WITH SAFETY MONITORING, ALARM, AND AUTOMATED EJECTION MECHANISM

(51) International classification	:H02J7/00, G01R31/36, G01R31/367, G05B23/02
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The invention relates to a smart battery charging system featuring advanced safety mechanisms and automated functionalities. The system includes a charging dock with a multi-layered door comprising a fireproof net and a secure door panel. A server-controlled mechanical lock mechanism ensures secure battery engagement, while a processor continuously monitors critical parameters such as voltage, current, temperature, state of charge (SoC), and internal resistance. The system compares real-time data against predefined trends to detect anomalies, triggering an alarm and notifications. An auto ejector system then disengages and safely ejects the battery, containing it within the fireproof net for enhanced safety.

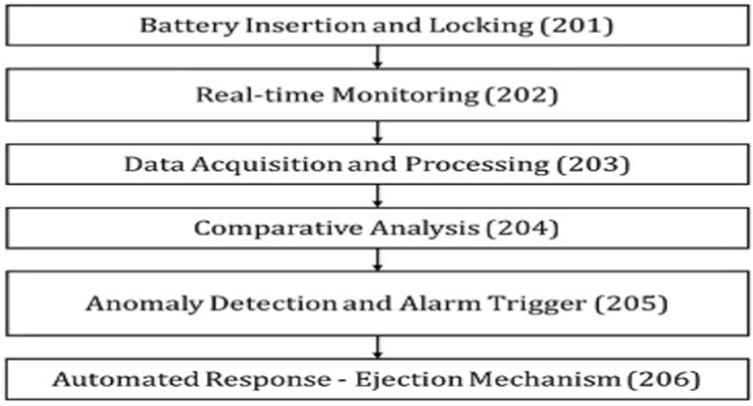


Fig. 2

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/07/2024

(21) Application No.202421056512 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : METHOD AND SYSTEM FOR EVALUATING BONE STRENGTH BY CORRELATING BONE MINERAL DENSITY AND RADIOGRAPHIC INTENSITY

(51) International classification :A61B0005000000, A61B0006000000, A61P0019080000, G16H0050300000, A61B0090110000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The invention pertains to a novel method and system for evaluating bone strength by integrating bone mineral density (BMD) measurements with radiographic intensity data. Current diagnostic tools often assess bone strength using either BMD or radiographic imaging separately, leading to potential gaps in evaluation accuracy. This method overcomes such limitations by correlating these two metrics to provide a more comprehensive assessment of bone integrity. The system involves acquiring a radiographic image of the bone and measuring its radiographic intensity. Concurrently, a BMD measurement is obtained using established techniques. Advanced algorithms then process these data points to establish a correlation between radiographic intensity and BMD, resulting in an enhanced evaluation of bone strength. This combined approach leverages the complementary information provided by both BMD and radiographic intensity to improve diagnostic accuracy. The system also includes a user interface for clinicians to visualize and analyze the correlation data, offering a more detailed and nuanced understanding of bone health. By integrating these two data sources, the invention facilitates better diagnostic decisions, potentially leading to more effective treatments and interventions for bone-related conditions. This method and system present a significant advancement in bone health diagnostics, combining existing technologies in a novel way to provide a richer, more accurate evaluation of bone strength.

No. of Pages : 17 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/07/2024

(21) Application No.202421056545 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : 1,2,3-TRIAZOLYL-PYRAZOLONE COMPOUNDS AS THERAPEUTICALLY ACTIVE AGENTS

(51) International classification	:C07D401/14, A01N43/647, A01P7/04
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT 1,2,3-TRIAZOLYL-PYRAZOLONE COMPOUNDS AS THERAPEUTICALLY ACTIVE AGENTS The invention relates to substituted 1,2,3-Triazolyl-Pyrazolone compounds of Formula (I) pharmaceutically acceptable salts thereof, wherein substitutes are described herein, for their use therapeutic agents. The invention also relates to the pharmaceutical composition of compounds for management of various diseases.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/07/2024
(21) Application No.202421056564 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : INNOVATIVE VERMICOMPOST BED FOR SUSTAINABLE FARMING

(51) International classification :C05F0017050000, A01K0067033000, C05F0017907000, C05F0003000000, C05F0005000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT INNOVATIVE VERMICOMPOST BED FOR SUSTAINABLE FARMING The innovative vermicompost bed is a sustainable farming method that utilizes the natural process of vermicomposting to create nutrient-rich soil for plant growth. This method involves the use of red worms, which feed on organic waste materials, breaking them down into a highly potent fertilizer. The vermicompost bed is created using layers of organic waste, such as food scraps, leaves, and manure, which are then covered with a thick layer of soil. The red worms are then added to the top layer, where they begin to feed on the organic matter and their castings mix with the soil below, creating nutrient-dense compost. This compost can then be used in farming to enhance soil fertility and plant growth, reducing the need for chemical fertilizers. The innovative vermicompost bed offers a sustainable and eco-friendly solution for farmers, promoting soil health and reducing waste in the environment. The vermicompost bed is designed with a raised platform and mesh base, allowing for ample air circulation and drainage. This promotes aerobic decomposition, resulting in faster decomposition and more nutrient-rich compost. One of the key innovative features of this bed is its use of a perforated PVC pipe system, which evenly distributes water and air throughout the bed. This ensures that the compost remains moist and well-aerated, creating the ideal environment for the earthworms to thrive and break down organic material. Additionally, the use of a removable top layer allows for easy harvesting of the vermicompost without disturbing the worms. This eliminates the need for manual sorting and lifting of worms, reducing labour and potential harm to the worms.

No. of Pages : 10 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/07/2024
(21) Application No.202421051326 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : RAM A GREEN ENERGY TRANSPORT SYSTEM.

(51) International classification	:G02F0001133570, G02F0001133500, A01N0059000000, H02S0010100000, B61L0027040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
As we all know that air pollution is one of the biggest problems in today's world. The major cause of this is emission of pollutants from vehicles. Today global warming is at alarming state and emission from vehicles is a major contribution in it and if it is not handled in a proper way then that might create a question on the existence of earth. Today in this project we will try to resolve this problem and this project we have created a transport system which is completely environmental friendly and which drives only on solar energy. This system will significantly reduce problem of pollution and along with it can also lead us to a new way of transportation which is even pocket friendly. In current transport system, vehicles majorly require fuel to overcome the air resistance. The biggest cause of loss of energy is due to resistance by air, for this above reason in any vehicle like Car from 30-40 to 100 hp engine is required. As we take up a vehicle from 40 km/h to 50 km/h or above the requirement of energy goes on increasing and as we reach hundred kilometres per hour or more the requirement of energy per kilometre is very-very high. Come let us understand this in a very simple language why we need energy. We know that in atmosphere there are multiple layers. In these layers, there are air particles like dust and various gases and they all are in a state of rest in the frame of ground and when we drive our vehicle in a fast speed then we remove these suspended particles from the state of rest aside by doing this we accelerate these particles and if there is acceleration there must be force according to Newton's first law of motion. And by the second law of newton's (that is F=ma) more is the magnitude of acceleration more energy will be required, in the above expression value of M depends on the amount of air removed which is proportional to the volume covered by a vehicle during its motion.(here M refers to mass of removed air). Let us considered an example Let's say volume of a car is 10 m cube and it is moving with the speed of 30 m/s. Then with the moment it will remove 300 m cube air and the removed mass of air will be approximately 300 Kg and this air removal is the major cause of loss of energy. To remove air resistance, we have developed a loop based transport system in which high speed air movement is created inside a closed atmosphere called a loop. Airflow inside a loop is achieved by injecting air with the help of big air compressor. Direction of motion of vehicle and air flow is in same direction And the velocity of air flow is more relative to the velocity of vehicle and by this movement of air, air resistance is negligible and this airflow is also providing energy to overcome friction from ground. For internal functioning of vehicle or for initial acceleration or for motion of a vehicle on an elevated surface, energy is provided by a small battery and motor and when this vehicle is on plane surface this battery is being charged by wind energy and the battery is only providing energy when it is required, and for this purpose, only 200 Ampere Watt battery is sufficient. For movement of air inside loop, the requirement of energy is completely handled by solar energy. This means that this whole system is dependent on solar energy. This is solar energy driven transport system. Flow chart of energy Solar Energy Electric energy Wind energy Energy requireme nt of vehicle In this way by this project we can say that this a transport system which is completely dependent on solar energy Air injected from this side by compressors for continuous air flow

No. of Pages : 5 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2024

(21) Application No.202421051497 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : “GREEN SYNTHESIS OF DIHYDROPYRIMIDINONE DERIVATIVES”

(51) International classification	:C07D0239220000, H01M0010052000, C07D0498040000, B82Y0030000000, F24F0110100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates synthesis of dihydropyrimidinone (DHPMs) derivatives of compound of formula (1) by Biginelli reaction. A green, cost-effective, eco-friendly, simple and efficient method has been developed for performing this Biginelli reaction at room temperature using some common fruit juices as reaction medium.

No. of Pages : 11 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/07/2024
(21) Application No.202421053202 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : INSOLATED POLYMER PANEL

(51) International classification	:A61B0090000000, F24S0010400000, G01C0021340000, B32B0043000000, B62D0021150000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT Title: Insolated Polymer Panel To prepare a preferred polymer plastic panel being polypropylene / polystyrene, take up two sheets of preferred plastic one of the any two be at the most two centimetre larger at its four sides. Then the two sheets be enclosed with all their respective edges by connecting and sealing thus providing a compact panel without vacuum (1+2). Thereafter the air atoms (3) in between the two sheets hallow space being at the most two centimetre, be evacuated from the top point (4) of the two sheets. Thus this method presents a complete polymer insolated panel. Characteristics of the Panel : 1. To insolate temperature maintaining status quo. 2. Insolate intense gravity (Energy, Force, Pressure shocks), sound and current. 3. No sweat and scar.

No. of Pages : 12 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/07/2024
(21) Application No.202421055165 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD FOR PROTEIN PURIFICATION

(51) International classification	:C07K1/14, C07K1/16, C07K1/22, C07K16/28, B01D15/38
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present disclosure provides a method of reducing protein aggregates during purification of a protein from a cell culture harvest, comprising an affinity chromatography step that involves contacting the affinity chromatography column with an elution buffer having a pH of about 2.5 to about 4.0 and comprising imidazolium-based ionic liquid as a protein stabilizer.

No. of Pages : 41 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/07/2024
(21) Application No.202421055436 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ENERGY FLOWER - ENERGY GENERATION

(51) International classification :F03D0009250000, F03D0001060000, F03D0009000000, F03D0015000000, F03D0080500000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The energy flower relates to energy generation using sunlight, wind and air in single mechanism. It automatically detects the weather and decides the energy source for energy generation. If the weather is sunny, then the petal opens and solar panel charges. Similarly, during rainy weather, the petal close for water collection and it flows to the center hole. The falling water rotates the hydro turbines for energy generation. If the weather is windy, then the wind turbines rotate for energy generation. The wind flow automatically rotates the wind blades and wind turbine base.

No. of Pages : 21 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/07/2024

(21) Application No.202423055856 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A VARIED VALLEY REFINER DISC MANUFACTURING METHOD AND REFINER DISC MADE OF SAID METHOD THEREOF

(51) International classification	:G11B0007260000, D21D0001300000, B23K0001008000, C12N0007000000, B60B0003040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filed on	: :01/01/1900
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT A VARIED VALLEY REFINER DISC MANUFACTURING METHOD AND REFINER DISC MADE OF SAID METHOD THEREOF The present invention envisages a varied valley refiner disc (100, 100', 200, 300, 300', 400, 400') comprising, a plurality of rib (102, 202, 302, 402, 502 configured with a varied valley tile (103, 203, 303, 403) and said varied valley tile (103, 203, 303, 403) configured with a base plate (104, 104', 204,304, 304', 404, 404'). Wherein said plurality of rib (102, 202, 302, 402) configured with said varied valley tile (103, 203, 303, 403) and said varied valley tile (103, 203, 303, 403) configured with said base plate (104, 104', 204,304, 304', 404, 404') by means of vacuum brazing and positive locking means in order to articulate said disc (100, 100', 200, 300, 300', 400, 400').

No. of Pages : 62 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/07/2024

(21) Application No.202421055666 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : "ROLE OF SILYMARIN IN MANAGEMENT OF ALCOHOL WITHDRAWAL-INDUCED MEMORY DYSFUNCTION"

(51) International classification	:A61K0031357000, A61P0039060000, A61K0031197000, A61P0025280000, A61K0008490000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates a role of silymarin in management of Alcohol Widrawal induced memory dysfunction. Silymarin influences the activity of NMDA, GABA, oxidative stress, and the glutaminergic reward pathway, it is beneficial in treating memory dysfunction. Silymarin has potential to be a rich source for discovering safer and more relieve, potent variety of medicines in alcohol withdrawal induced memory dysfunction.

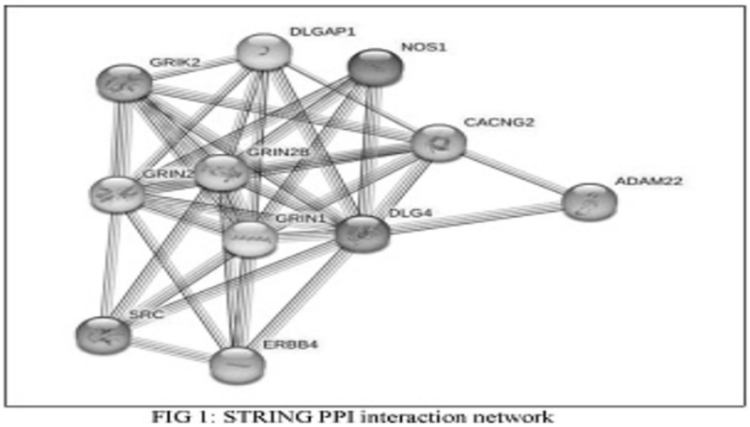


FIG 1: STRING PPI interaction network

No. of Pages : 30 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :22/07/2024

(21) Application No.202421055775 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : AI-BASED AUTOMATIC HEALTHCARE MANAGEMENT SYSTEM FOR EARLY DETECTION AND MONITORING OF CARDIOVASCULAR DISEASES USING WEARABLE IOT DEVICES AND DEEP LEARNING MODELS

(51) International classification	:G06K0009620000, G06N0020000000, G06N0003040000, G16H0050200000, G06N0003080000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :

AI-Based Automatic Healthcare Management System for Early Detection and Monitoring of Cardiovascular Diseases Using Wearable IoT Devices and Deep Learning Models ABSTRACT: Cardiovascular disease is the leading cause of mortality worldwide, claiming the lives of more than 17.9 million individuals annually, as per the Pan American Health Organisation. This study provides a thorough examination of the application of machine learning, the Internet of Machine Things, and the Internet of Things to the identification, prediction, or monitoring of cardiovascular illness. A comprehensive list of the most frequently discussed cardiovascular disorders, machine learning methodologies, datasets, and Internet of Things and Internet of Machine Things technologies is presented in this study. Neural networks have been extensively employed to attain an accuracy of over 90%, with random forest, XGBoost, k-NN, and support vector machines (SVM) following in that order. The conclusions that can be drawn from the findings are that the Internet of Things and Internet of Medical Things technologies have the potential to predict cardiovascular disorders in real time, that ensemble techniques exhibited one of the highest levels of accuracy, and that hypertension and arrhythmia were the most investigated diseases. In summary, we discovered that the absence of data collected from the general public is one of the most significant challenges for machine learning techniques in the prediction of cardiovascular disease.

No. of Pages : 10 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/07/2024

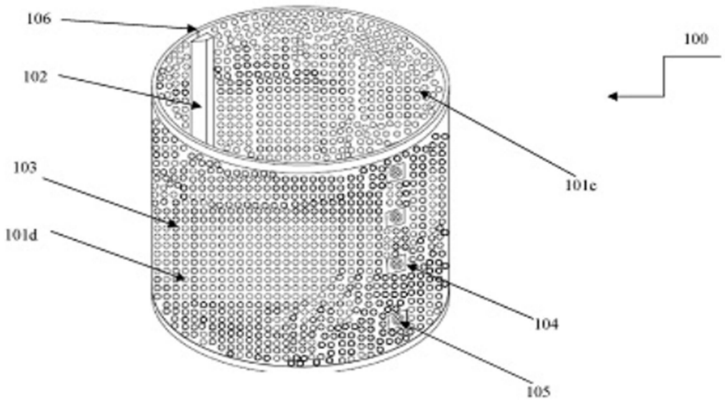
(21) Application No.202421055855 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SCREEN BASKET

(51) International classification	:H04B0007155000, D21D0005020000, F21V0015010000, D21D0005160000, B29C0045000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT A SCREEN BASKET A screen basket (100, 200, 300, 400, 500, 600) comprising an internal surface (101c, 201c, 301c, 401c, 501c, 501c, 601c) configure within said screen basket (100, 200, 300, 400, 500, 600) and a rib (102, 202, 302, 402, 502, 502, 602) removable configure with said internal surface (101c, 201c, 301c, 401c, 501c, 501c, 601c). Wherein a fastening means (105, 205, 305, 405, 505, 505, 605) removable configured with said rib (102, 202, 302, 402, 502, 502, 602) and projected outside of an external surface (101d, 201c, 301c, 401c, 501c, 501c, 601c). However, a configuring block (104, 204, 304, 404, 504, 604) removable configure with said fastening means (105, 205, 305, 405, 505, 505, 605) and said an external surface (101d, 201c, 301c, 401c, 501c, 501c, 601c).



No. of Pages : 37 No. of Claims : 14

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/07/2024
(21) Application No.202421056188 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR OPTIMIZING CONTENT DELIVERY THROUGH ADVANCED IMAGE ANALYSIS AND COLOR PROFILE MATCHING

(51) International classification :G06T7/90, G06V10/40, G06F16/78
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This invention relates to a system for optimizing content delivery through advanced image analysis. The system features a processor that identifies image-related parameters from previously watched videos to create a detailed user color profile. It then extracts and compares color profiles of related videos with the user's color profile. Based on this comparison, the system generates and displays a list of recommended videos. The color profiles of both the videos and the user are generated by capturing frames at predetermined intervals and analyzing the image-related parameters of these frames. This method enhances the accuracy and relevance of video recommendations by leveraging detailed image analysis.

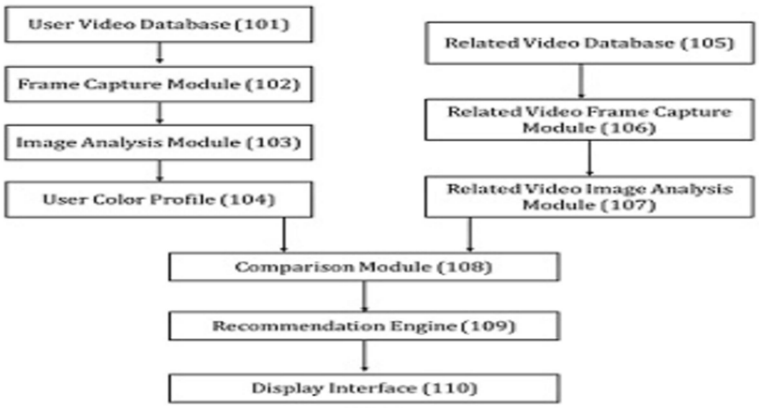


Fig. 1

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/07/2024

(21) Application No.202421056191 A
(43) Publication Date : 16/08/2024

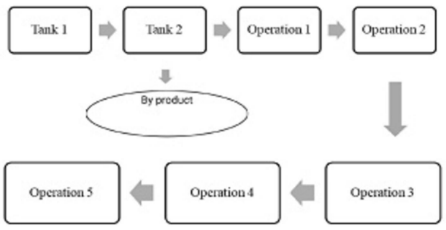
(54) Title of the invention : BUILDING GREEN: THE SELF-DRIVEN PLASTIC BLOCK MACHINE

(51) International classification	:B29B0017020000, B03B0009060000, B29B0017040000, B65F0001000000, G06Q0050260000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
By taking advantage of the water buoyancy principle, recycling and environmentally friendly trash management can be achieved as it separates plastic from other debris. This method of separation involves taking advantage of differences in density between plastics and other materials; plastics float while heavier materials sink when put into water due to their less density. The latter is a simple but effective separation technique that can be applied at different levels such as in industrial waste management or domestic sorting. Plastic debris is separated and dried so that moisture can be excluded and optimal conditions for processing are established. In order to make handling and recycling easier, dry plastic is shredded into smaller, manageable pieces. It is worth noting that these shredded plastics once again illustrate how useful recycled items can be when filled in empty plastic bottles which offer them a convenient storage way. This approach enhances the efficiency of garbage segregation and adds value to wasted plastics by incorporating water buoyancy separation, drying, shredding, and repurposing into filled plastic bottles. It supports sustainable waste management practices, reduces environmental pollution and promotes the circular economy. This all-embracing strategy not only facilitates the effective administration of discarded plastic refuse but also encourages using eco-friendly vocabulary like renewable resources in discussing what we do with ecologically beneficial waste handling and recycling techniques.

Drawing 1 of 2: Block Diagram of Building Green: The Self-Driven Plastic Block Machine



No. of Pages : 14 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/07/2024

(21) Application No.202421056192 A
(43) Publication Date : 16/08/2024

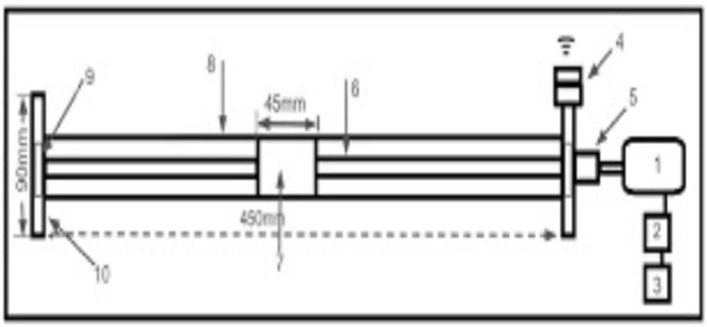
(54) Title of the invention : ULTRASONIC SENSOR-BASED POSITION CONTROLLER FOR STUDYING PID CONTROL ALGORITHM

(51) International classification	:G05B11/42, H02P7/02, H02P7/00, G05D111/20
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA

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(57) Abstract :
This invention introduces an innovative approach to enhancing precision and control in linear actuator systems through the integration of an ultrasonic sensor as a feedback mechanism. Traditionally, linear actuators rely on mechanical sensors for position feedback, which may be limited by accuracy and responsiveness. By contrast, the proposed system utilizes ultrasonic technology to provide real-time distance measurements, enabling precise and adaptive positioning of the actuator. Ultrasonic sensors offer high-resolution, real-time feedback, significantly improving the actuator's accuracy and operational efficiency. This technology is particularly beneficial in applications where precision is critical, such as industrial automation, robotics, and medical devices. The non-contact nature of ultrasonic sensors reduces mechanical wear and tear, extending the lifespan of the actuator system and reducing maintenance requirements. Furthermore, the versatility of ultrasonic sensors allows for seamless integration into various applications, enhancing performance in assembly lines, material handling, precision machining, and other processes requiring accurate linear motion control. In robotics, for instance, precise linear motion control can improve pick-and-place operations, welding, and inspection tasks. This abstract underscores the potential of ultrasonic feedback in advancing the capabilities and applications of linear actuators. By addressing the limitations of traditional mechanical sensors, this invention promises significant benefits across diverse industries, enhancing reliability, productivity, and overall system performance.

Diagram 1 of 2: Components of the system



No. of Pages : 15 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :22/07/2024

(21) Application No.202421055890 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : AI-DRIVEN EXPLORATION OF BISMUTH-BASED DOUBLE PEROVSKITES FOR ENHANCED SOLAR CELL PERFORMANCE

(51) International classification :H01L0051420000, G06Q0010060000, G06N0005040000, G06N0020000000, H01L0051000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
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Filing Date :NA

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(57) Abstract :
The present invention provides a novel method for optimizing bismuth-based double perovskite materials for use in solar cells through the integration of artificial intelligence (AI). This method involves collecting a comprehensive dataset of existing bismuth-based double perovskites and training an AI model to predict the properties of various untested compositions. The AI model generates a list of candidate materials with predicted superior optoelectronic properties. These candidates are then synthesized and experimentally characterized to assess their structural, optical, and electronic attributes. The experimental results are fed back into the AI model, allowing for continuous refinement of predictions and iterative optimization of material properties. This AI-driven approach accelerates material discovery, reduces development costs, and enhances the performance of solar cells by identifying and developing high-performance bismuth-based double perovskite materials more efficiently.



Fig. 1 Method for optimizing bismuth-based double perovskite materials for use in solar cells

No. of Pages : 19 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :22/07/2024

(21) Application No.202421055891 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : ENHANCING WRITING PROFICIENCY THROUGH A CONTEXTUALLY-DRIVEN LANGUAGE ENRICHMENT PLATFORM

(51) International classification	:G06F0040253000, G10L0015260000, G06F0040205000, G09B0019060000, G09B0019040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

The invention provides a language enrichment platform designed to enhance writing proficiency through contextually-driven feedback and personalized learning experiences. The platform incorporates a Contextual Analysis Module that analyzes user-generated text based on genre, purpose, and target audience, enabling precise and relevant feedback. The Language Enrichment Engine then offers tailored suggestions on grammar, style, and vocabulary, while the Adaptive Learning Module delivers customized educational resources and exercises based on user performance. Additionally, the platform supports collaborative writing environments and integrates voice-to-text capabilities, allowing for real-time, context-aware improvements and flexible input methods. This comprehensive approach aims to improve writing skills effectively across various contexts and user needs.



Fig. 1 An Advanced Language Enrichment Platform

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/07/2024
(21) Application No.202421055893 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : DRYING CHARACTERISTICS OF PINEAPPLE POMACE AND ITS UTILIZATION IN DEVELOPMENT OF VALUE-ADDED PASTA

(51) International classification :A23L7/109, A23L33/105, A23L19/00, A21D2/36, A21D13/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to the field of food processing, specifically to the drying characteristics of pineapple pomace and its subsequent utilization in the development of value-added pasta products. This invention aims to provide a method for enhancing the nutritional value and sensory properties of pasta by incorporating dried pineapple. The process involves optimizing drying conditions to preserve the nutritional quality of pineapple and blending the dried pomace to produce pasta with enhanced nutritional benefits and acceptable sensory qualities. Treatments of Semolina and Pineapple powder (Hot air oven and Tray Dried) for dough preparation are described. Fig. 1



Fig. 1

No. of Pages : 7 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/07/2024
(21) Application No.202421055918 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AN AI-BASED SYSTEM FOR AUTOMATED DIABETIC RETINOPATHY DETECTION USING FEDERATED LEARNING AND MASK R-CNN

(51) International classification :G16H0010600000, G06N0003040000, G06N0003080000, A61B0003120000, G06F0021620000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure describes an AI-based system for automated diabetic retinopathy (DR) detection in retinal images. A data acquisition module captures and anonymizes retinal fundus images, ensuring patient privacy. The system leverages a pre-trained Mask R-CNN model, fine1tuned on a centralized dataset of labeled retinal images. Through a federated learning approach, the model is locally trained at participating institutions, adapting to local data variations without sharing patient data. Centralized aggregation of model updates enhances the model's generalizability. Key features include privacy preservation, interpretability of results, and robustness in handling diverse healthcare settings. The system also supports multi-modal data inputs, ensures compliance with healthcare data protection regulations, and includes modules for performance evaluation, anomaly detection, and continuous model monitoring.



Figure 1

No. of Pages : 25 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/07/2024

(21) Application No.202421056197 A
(43) Publication Date : 16/08/2024

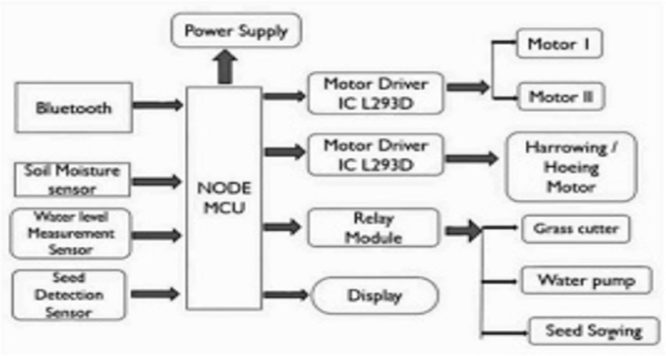
(54) Title of the invention : SMART PHONE OPERATED MULTIPURPOSE AGRICULTURE ROBOTIC VEHICLE

(51) International classification	:A01M0007000000, B25J0009160000, A01D0101000000, A01M0021040000, A01B0049060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
In India almost about 70 percent of humans are depending on agriculture. Several Operations are performed inside the agricultural discipline like seed sowing, grass cutting, ploughing and so on. The present strategies of seed sowing, pesticide spraying and grass reducing are hard. The device's used for above moves are expensive and inconvenient to deal with. So the Agricultural gadget in India has to be recommended by using developing a gadget if you want to lessen the man strength and time. This work objectives to layout, increase and layout of the robot which can sow the seeds, cut the grass and spray the insecticides, this entire system is powered through sun energy. The designed robotic receives strength from solar panel and is operated the usage of Bluetooth /Android App which sends the indicators to the robot for required mechanisms and movement of the robot. This will increase the performance of seed sowing, pesticide spraying and grass cutting and additionally reduces the problem encountered in guide planting.

Drawing 1 of 3: Block Diagram of Prototype



No. of Pages : 15 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/07/2024

(21) Application No.202421056202 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SYSTEM FOR VISUALLY VIEWING, SELECTING, AND ORDERING JEWELLRY DESIGNS

(51) International classification	:G06Q0030060000, H04W0036000000, G06Q0010020000, H04M0003420000, G06Q0010100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention provides A System For Visually Viewing, Selecting, And Ordering Jewellery Designs. The system comprises multiple interconnected modules: a module 1 for selecting jewellery designs directly from a retailer without customization, and a module 2 for selecting and customizing designs. Modules 1 and 2 are connected, allowing customization after initial selection. Retailers place orders via module 3 online, and share design details with goldsmiths by module 4, manufacturers by module 5, or wholesalers by module 6 if further processing is required. If these makers do not fulfil the order, they communicate with the retailer, who may request the customer to reselect or further customize the design. The system also includes modules for booking appointments: module 7 for shop visits, module 8 for home visits without customization, and module 9 for home visits with customization. Module 10 allows customers to place orders entirely online. Modules 7, 8, and 9 connect to module 10, offering various methods for customers to finalize and order their designs, either through direct online orders or by booking appointments.



FIG. 1

No. of Pages : 32 No. of Claims : 12

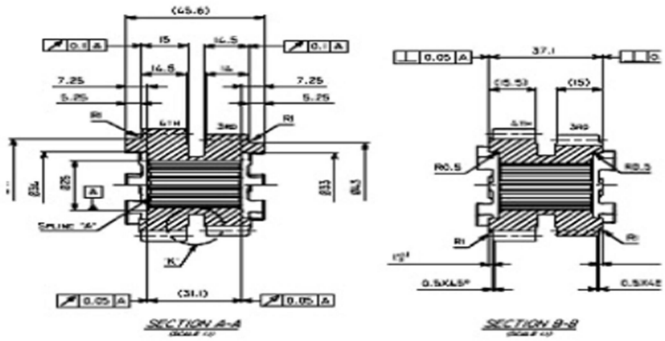
(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/07/2024
(21) Application No.202421056216 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : METHOD AND SYSTEM FOR RAPID PROTOTYPING OF SPUR GEARS USING THREE-DIMENSIONAL PRINTING TECHNOLOGY

(51) International classification	:B33Y0070000000, B33Y0010000000, B33Y0080000000, B33Y0030000000, G06F0030000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention discloses a method and system for rapid prototyping of spur gears utilizing three-dimensional (3D) printing technology. The proposed approach addresses the limitations of conventional gear manufacturing by integrating advanced 3D printing techniques to streamline the prototyping process. The system employs a computer-aided design (CAD) model of the spur gear, which is processed through specialized software to generate precise 3D printable files. These files are then used to create high-resolution prototypes with optimal material properties and dimensional accuracy. Key aspects of the invention include the use of advanced printing materials, customizable design parameters, and automated post-processing techniques to enhance the gear's performance and durability. Additionally, the method incorporates real-time feedback mechanisms to adjust and refine the design based on prototype testing results. This innovative system significantly reduces prototyping time and cost, accelerates the development cycle, and enables rapid iterations for design optimization. The invention is particularly beneficial for applications in automotive, aerospace, and mechanical engineering industries where precision and efficiency are critical. The integration of 3D printing technology with gear design and testing represents a significant advancement in rapid prototyping methodologies.



No. of Pages : 18 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/07/2024
(21) Application No.202421056584 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : INDEPENDENT SENSOR COMMUNICATOR OVER INDEPENDENT WIRELESS NETWORK AND METHOD THEREOF

(51) International classification :B64C0039020000, B25J0009160000, G07C0005000000, G05D0001000000, A61B0005000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
An independent sensor communicator (100) over independent wireless network is disclosed. The communicator (100) includes external sensor interface (106), data processor (108), Wireless Communication Module (WCM) (110), ground station control (112), Ground Station Receiver (GSR) (114), and data management module (116). The external sensor interface (106) is configured within physical layer of the frame/chassis of UAV to connect to one more sensors to a drone's frequency communication system. The data processor (108) is configured to processes raw data from the sensors. The Wireless Communication Module (WCM) (110) is configured to transmit the processed data from the drone frequency communication system to a ground station over the independent wireless network over an encrypted system. The data management module 116 is configured to perform at least one of storing of processed data, analysing the processed data over independent frequency, and generating actions for drone related operations based on analysed data. FIG. 1

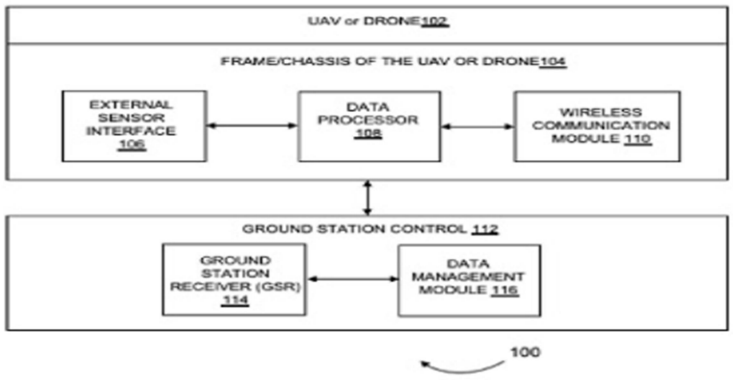


FIG. 1

No. of Pages : 15 No. of Claims : 10

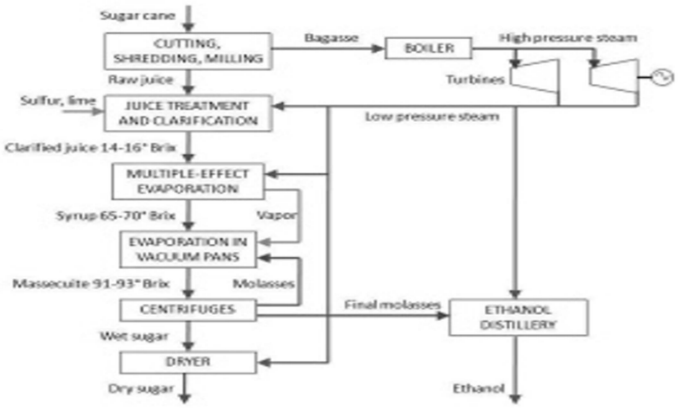
(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/07/2024
(21) Application No.202421056795 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : INNOVATIVE ENERGY GENERATION FROM BAGASSE AND BANANA TREE WASTE IN INDIAN SUGAR FACTORIES

(51) International classification	:F02C0006180000, F03D0009250000, F22B0001180000, H02J0003380000, G06Q0050060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The sugar industry is one of the earliest and most successful users of biomass for commercial energy production. There are various type of renewable energy sources such as solar, wind, hydropower, biomass energy etc. out of these renewable energy sources, biomass is more economically viable for almost all the continents in the world. Biomass is a carbonaceous material and provides both the thermal energy and reduction for oxides, where as other renewable energy sources can meet our thermal need only. Amongst all the solid fuel like coal etc. biomass is the purest fuel consisting of very lesser amount of ash materials. The power generation potential data for renewable energy sources in India clearly indicates that the biomass has potential to generate more than 17000 MW of electricity per year in India. However, the country is locking in exploitation of biomass in power generation. Till date, India has been capable to generate only 2000 MW (approx.) of electricity per year in spite of declaration of several incentives by the govt. of India. Hence, there is an argent need to increase the utilization of biomass in power generation. The main objective of my study is to compare two advanced cogeneration systems for the sugar and ethanol industry; a high pressure direct combustion steam Rankine cycle system and a biomass integrated gasifier combined cycle system by using fuel bagasse and banana tree waste, and examine their energy values and power generation potential. These systems provide significant opportunities to improve energy conversion efficiencies, electricity generation potential as well as the minimum bagasse required for each cogeneration option to satisfy the process steam demand, and to increase electricity generation in sugar factories during the off-season.



No. of Pages : 17 No. of Claims : 4

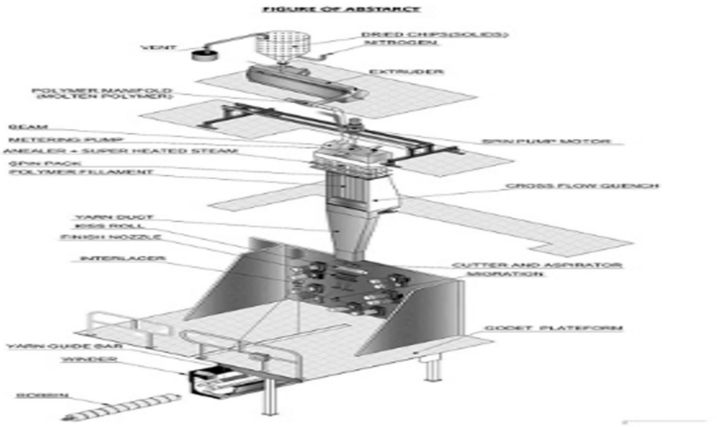
(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/07/2024
(21) Application No.202421056796 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : NYLON (PA6) YARN HAVING TENACITY > 10 GPD AND PROCESS FOR PRODUCTION THEREOF

(51) International classification	:D01D0005080000, D01F0006600000, D01D0004020000, D01F0001100000, C08L0077020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
"NYLON (PA6) YARN HAVING TENACITY > 10 GPD AND PROCESS FOR PRODUCTION THEREOF" ABSTRACT The present invention discloses about a method for producing Nylon 6 (PA6) yarn with a tenacity exceeding 10 GPD through a series of controlled steps. Beginning with low relative viscosity (RV) PA6 chips, the process involves vacuum drying with steam and additives (such as KI, KBr, Cu (NO3)2) to achieve high RV chips with less than 0.05% moisture content. Stored under nitrogen, these chips are extruded under precise temperature and pressure conditions, followed by feeding the extruded melt into a spinning beam. The melt, managed by a metering pump, passes through filters and sand in a spinning pack before being spun through spinnerets to form filaments. Enhanced cooling strategies involve employing multiple spinnerets and extending the quenching screen length to ensure uniform cooling and optimize filament properties. Post-quenching, the yarn undergoes finishing with oil application, multi-stage drawing, and heat setting using dual godets, culminating in winding onto bobbins. This innovative process yields high-performance PA6 yarn suitable for various industrial applications requiring exceptional strength and durability. Refer Fig. 4



No. of Pages : 27 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/07/2024
(21) Application No.202421056801 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SINGLE-STEP DISPOSABLE DEVICE AND METHOD FOR PREPARING CELL BLOCK PELLETS FROM FINE NEEDLE ASPIRATES

(51) International classification	:B01L0003000000, A61B0010020000, G01N0001360000, G01N0001280000, G01N0001300000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
SINGLE-STEP DISPOSABLE DEVICE AND METHOD FOR PREPARING CELL BLOCK PELLETS FROM FINE NEEDLE ASPIRATES ABSTRACT The present invention describes a disposable device and method for the efficient preparation of cell blocks directly from fine needle aspirates in a single step. The device comprises a needle hub, a modified suction device, and a filtration system that eliminates the need for multiple centrifugation steps, reducing cell loss and processing time. The method allows for the collection of cells directly onto a filter, which can be subsequently processed for frozen sections, histopathology, or molecular analysis. Additionally, the present device ensures safe outpatient procedures and enhances diagnostic accuracy for cancer and other cytological evaluations. TO BE PUBLISHED WITH FIGURE 1.

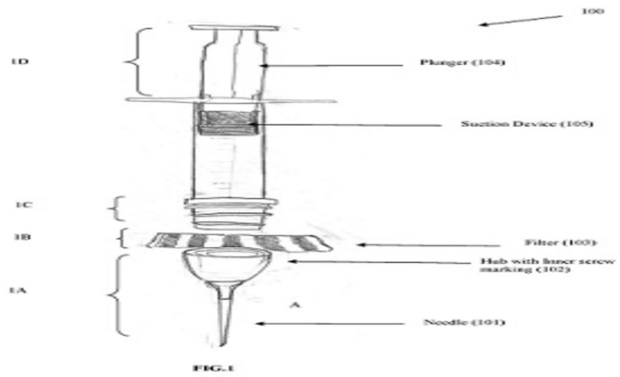


FIG.1

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/07/2024

(21) Application No.202421056806 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SOCIAL COMMERCE: THE CONVERGENCE OF SOCIAL MEDIA AND E-COMMERCE STRATEGIES

(51) International classification :G06Q0030020000, G06Q0050000000, G06Q0030060000, G06Q0020380000, G06Q0020120000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
SOCIAL COMMERCE: THE CONVERGENCE OF SOCIAL MEDIA AND E-COMMERCE STRATEGIES ABSTRACT This invention examines the integration of e-commerce and social media, which is frequently referred to as "social commerce." It examines the ways in which businesses utilise social media platforms to enhance the quality of online purchasing experiences, with a particular emphasis on user engagement, personalised marketing, and social interactions. The invention concentrates on the benefits of social commerce, including increased conversion rates, improved brand loyalty, and enhanced consumer trust. Additionally, it addresses concerns regarding platform dependence and data privacy. In general, the integration of e-commerce and social media is a transformative approach to influencing consumer behaviour and fostering invention in the digital economy.



Fig.1: depicts social media strategy for e-commerce.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :26/07/2024

(21) Application No.202421056809 A
(43) Publication Date : 16/08/2024

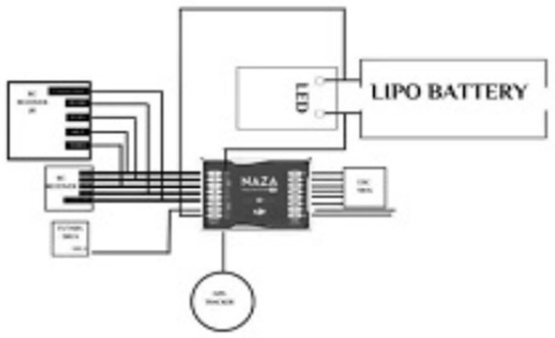
(54) Title of the invention : DESIGN AND IMPLEMENTATION OF FIRE FIGHTING DRONE

(51) International classification	:B64C0039020000, A62C0003020000, G06Q0050260000, G08B0017120000, A62C0099000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The Design and Implementation of Fire Fighting Drone is a revolutionary drone designed to tackle the growing challenges of urban fires. The drone's design focuses on adaptive morphology, allowing it to navigate through complex urban landscapes and deliver efficient fire suppression. Its sensor and telemetry systems are integral to its capabilities, enabling it to detect fires and coordinate suppression mechanisms. The drone's morphological features were meticulously engineered to optimize its response to various urban fire scenarios. Extensive testing of the Drone demonstrated its efficacy in fire detection, navigation, and extinguishment, with an impressive success rate in simulated urban fire scenarios. The results highlight the potential of the Drone to revolutionize modern fire-fighting practices by reducing response times and enhancing the safety of both the public and first responders during urban fire emergencies. The Drone represents a significant leap forward in fire-fighting technology, contributing to the evolving field of voluntary drones and providing a novel solution to the unique challenges posed by urban fires. The successful implementation of the Drone underscores its potential to save lives, protect property, and mitigate the devastating impact of urban fires, marking a significant leap forward in the field.

Drawing 1 of 3: Drone Driving System



No. of Pages : 16 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :24/07/2024

(21) Application No.202421056246 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : A SYSTEM FOR HEALTHCARE ASSESSMENT FOR PREDICTIVE ANALYSIS

(51) International classification :G06N0003040000, G16H0050300000, A61B0005000000, G16H0050200000, G06F0040300000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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4)Dr. Deepali Sunil Shinde
5)Mrs. Bhagyashri Prakash Pol
6)Samarjit Singh
7)Sachin Panditrao Nalawade
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(57) Abstract :
The present invention relates to a healthcare assessment tool that integrates text and image data inputs for predictive analysis. The system utilizes advanced machine learning techniques, including natural language processing (NLP) for text processing and a fine-tuned neural network (ResNet50) model for image analysis, to provide accurate and timely diagnostic results. The system is divided into several key layers, including an input layer for receiving text and image inputs from users; a processing layer for conducting NLP on text inputs to extract symptoms, for pre-processing image inputs to ensure quality and consistency, and utilizing a fine-tuned ResNet50 model for image analysis; an analysis layer for performing comprehensive text analysis and conducting detailed image analysis; and finally an output layer for synthesizing the analysis results and delivering a detailed diagnostic report to the user. The system streamlines the health assessment process, improving patient care and reducing the workload on healthcare professionals.

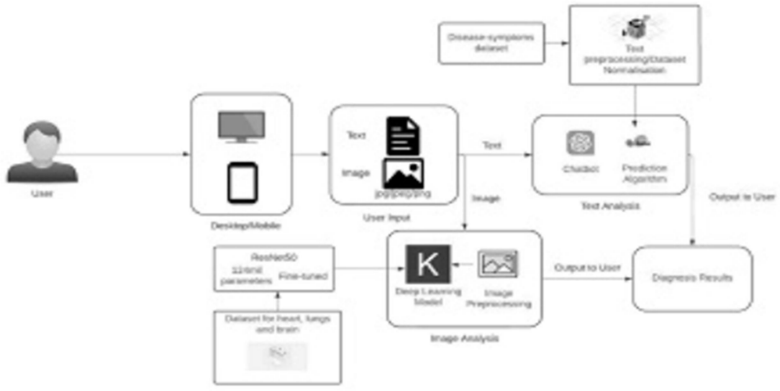


Figure 1: Schematic diagram of the system architecture.

No. of Pages : 18 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/07/2024

(21) Application No.202421056255 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : TOPICAL PHARMACEUTICAL FORMULATION OF CEDRUS DEODARA EXTRACT

(51) International classification :A61K0009000000, A61P0029000000, A61P0017000000, A61P0037080000, A61K0047100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Topical pharmaceutical formulation of Cedrus deodara extract The present invention relates to a topical pharmaceutical formulation of Cedrus deodara extract and process for its preparation. The present invention also relates to use of topical pharmaceutical formulation of Cedrus deodara extract for the treatment of inflammation.

No. of Pages : 16 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/07/2024
(21) Application No.202421056296 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : METHOD FOR ASSESSING THE IMPACT OF INTERNAL COMMUNICATION PRACTICES ON ORGANIZATIONAL DEVELOPMENT

(51) International classification	:G06Q0010060000, G06Q0010100000, G09B0019000000, G06Q0099000000, G06F0021620000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A method for assessing the impact of internal communication practices on organizational development is described herein. The model examines the organizational structure, communication methods, and the effectiveness of conveying work-related information. Utilizing a causal research design, the study analyzes independent variables such as Openness of Communication, Adequacy of Information, and Effectiveness of Communication methods, and their influence on dependent variables including Decision Making, Management Effectiveness, Goal Setting, Organizational Restructuring, Teamwork, Self-Directed Teams, and Employee Empowerment. Data collection involved a structured questionnaire analyzed using statistical tools to validate reliability and interpret trends, thereby facilitating informed improvements in organizational communication practices.

No. of Pages : 18 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/07/2024

(21) Application No.202421056300 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ANNULOPLASTY IMPLANT

(51) International classification :A61F2/24
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
TITLE OF INVENTION: ANNULOPLASTY IMPLANT An implant (100) includes an actuating shaft (130) and a plurality of legs (120). The actuating shaft (130) is configured to move in a translational motion along an axis of the actuating shaft (130) in response to a corresponding translational input. The plurality of legs (120) is coupled to the actuating shaft (130). Each leg of the plurality of legs (120) is configured to pivot radially inwards and outwards about a corresponding pivoting point in response to the translational motion of the actuating shaft (130). Fig. 1A

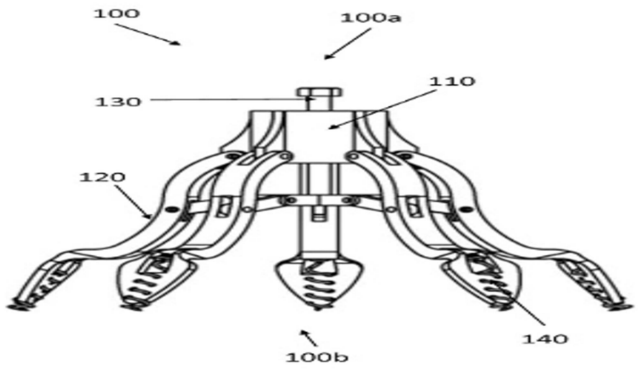


Fig. 1A

No. of Pages : 29 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/07/2024
(21) Application No.202423055942 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : STRING MANAGEMENT OF AN INSTRUMENT TO PREPARE AND SAFELY PLACE AN INTRA-UTERINE DEVICE

(51) International classification	:A61F0006140000, A61F0006180000, B60N0002060000, B23B0029034000, F03D0003060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filed on	: :01/01/1900
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Title: String Management of an Instrument to Prepare and Safely place an Intra-uterine Device An instrument (10) to prepare and safely place an intra-uterine device (30) in uterus (50) of a woman, comprising a dynamic stopper (20), a string management arrangement (110) whereby a string (31) of an IUD (30) is in one of a locked condition or an unlocked condition, wherein the dynamic stopper (20) slidably resides in the base (70) and can slide by the sliding length (23), the string (31) of the IUD (30) provided with an obstruction means (31A), a graduated tube (16) engulfs arms (34) of the IUD (30) till an inner edge (11A) of the graduated tube (16) obstructs and stops dome shaped ends (36) of the arms (34) at a position when the inner chamfer (11B) constrains the faces (36A) to butt mutually against each other. Abstract Figure 2. Place: Mumbai Date: 19 July 2024 Agent of Applicant IN/PA -413

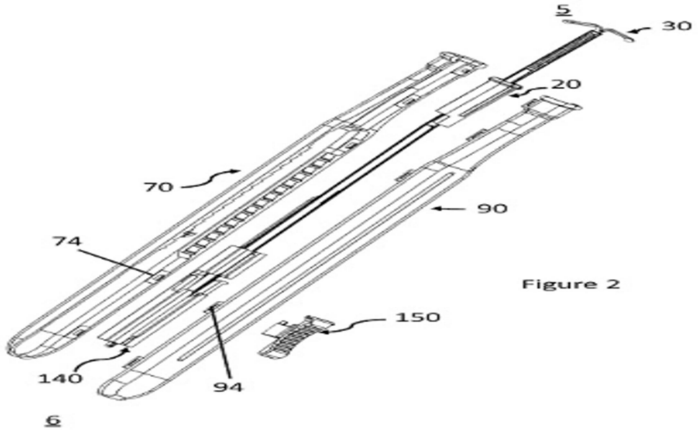


Figure 2

No. of Pages : 70 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/07/2024

(21) Application No.202421056006 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : DRIVING THE FUTURE ROLE OF MACHINE LEARNING IN AUTONOMOUS VEHICLES

(51) International classification	:G06N0020000000, A61F0013150000, G06N0005020000, G06N0003000000, G06N0020100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention relates to provide a driving the future role of machine learning in autonomous vehicles. The methodology involves a unique blend of neuroscience, psychology, and advanced machine learning, synthesizing human brain-inspired models with cutting-edge algorithms. Preliminary results demonstrate a significant enhancement in decision-making, interpreting ambiguity, predicting human behavior, and adapting to diverse driving styles. This innovative approach, integrating ethical considerations, marks a pivotal moment in the evolution of autonomous vehicles, fostering adaptability, ethical soundness, and harmonious integration with human drivers. The present invention heralds a transformative vision, ensuring the driving force behind autonomous vehicles transcends traditional perspectives through a synergy between machines and human intuition.

No. of Pages : 11 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/07/2024
(21) Application No.202421056416 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A NAOPARTICLE BASED WATER PRE-TREATMENT SYSTEM

(51) International classification	:C02F0103080000, C02F0001440000, C02F0001280000, B01J0035000000, C02F0001480000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present subject matter provides a nanoparticle-based water pre-treatment system. The subject matter provides iron nanoparticles doped with a group of charged species, wherein the charged species has an ionizable group of the negatively charged species. The negatively charged species are selected from the ethylene diamine tetra acetic acid (EDTA) are configured to bind with the positively charged effluent so as to pre-filter an effluent water stream. The present invention is configured to provides a cost-effective solution for the industrial and sea water desalination and purification and helps in reducing the TDS and hardness of the waste water. It also provides magnetic nature for easy separation.

No. of Pages : 21 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/07/2024

(21) Application No.202421056467 A
(43) Publication Date : 16/08/2024

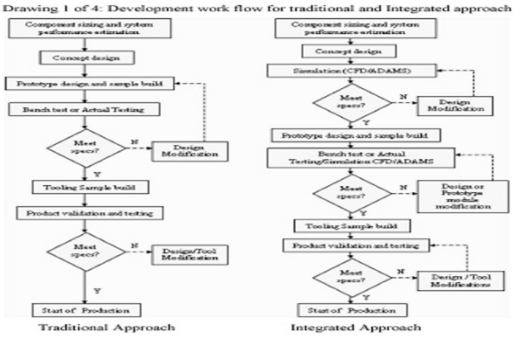
(54) Title of the invention : INNOVATIVE NATURAL VENTILATION SYSTEM FOR ENHANCED AIRFLOW IN AUTOMOBILES

(51) International classification	:B60H0001000000, H05K0007200000, F24F0007000000, B60H0001240000, B60H0003000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention discloses an innovative natural ventilation system designed to significantly enhance airflow within automobiles, optimizing interior air quality and passenger comfort. The system employs a multi-faceted approach to harness and amplify natural wind currents, utilizing strategically positioned vents, aerodynamic channels, and adjustable flaps to create a dynamic and efficient airflow pattern. Key components of the system include a series of intake and exhaust vents placed at optimized locations on the vehicle's exterior and interior surfaces. These vents are designed to direct and control the flow of external air into the cabin, while the aerodynamic channels guide the air through the vehicle's interior in a manner that maximizes circulation and minimizes stagnation. Additionally, the system incorporates electronically controlled adjustable flaps that respond to changes in vehicle speed, external wind conditions, and cabin temperature. This adaptability ensures that airflow is continuously optimized for various driving conditions, enhancing both comfort and ventilation efficiency. The natural ventilation system also features integrated sensors and control mechanisms that allow for real-time adjustment of airflow patterns, contributing to an improved driving experience and reduced reliance on mechanical air conditioning systems. By leveraging natural airflow dynamics, the system offers a sustainable and energy-efficient solution for improving automotive ventilation, with potential benefits including reduced fuel consumption and lower environmental impact. Overall, this innovative natural ventilation system represents a significant advancement in automotive climate control technology, addressing both functional and environmental considerations.

Drawing 1 of 4: Development work flow for traditional and Integrated approach



No. of Pages : 16 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/08/2023
(21) Application No.202341052548 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A DIGITAL DRIVER'S DISPLAY SYSTEM FOR SPECIAL PURPOSE VEHICLE

(51) International classification	:G09G0003200000, G09G0003360000, B60L0050160000, F02N0011040000, H04N0005235000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT A DIGITAL DRIVER'S DISPLAY SYSTEM FOR SPECIAL PURPOSE VEHICLE The present invention relates to a programmable digital driver's display system that can start special purpose vehicle's engine by electrically (or) pneumatically (or) combined way with help of a controller and starter-generator motor. It provides ride comfort and easy maneuverability of the driver. It provides user friendly smart interface as it is indigenous programmable digital version controlled by controller. It eliminates four control boxes(Reverse start protection unit, High gear engage protection unit, Tacho-generator, Recovery aggregates control unit) with a compact system integrated in the driver's panel in compact space. Published with Figure 1 & Figure 3a

No. of Pages : 28 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2023
(21) Application No.202341053027 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD OF CHECKING FUEL GAS CYLINDERS FOR WEAR AND TEAR DAMAGE

(51) International classification	:E02F0009200000, A61P0037060000, G01S0015870000, B29K0101120000, G01S0015931000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT SYSTEM AND METHOD OF CHECKING FUEL GAS CYLINDERS FOR WEAR AND TEAR DAMAGE A system 100, 200 and method of checking fuel gas cylinders for wear and tear damage is disclosed. A set of cylinders are positioned for checking whether they have any wear and tear damage. A carousel arrangement (150) or a linear conveyor arrangement is used to position the fuel gas cylinders. A 3D camera station 120A-D, 260A-E and/or a thermal camera imaging system 240 are used to capture images of the set of fuel gas cylinders. Ultrasonic probes 130A-H, 250 are used to transmit ultrasonic waveforms and receive a response waveform. An analysis of the captured images and the ultrasonic waveforms are performed. One or more dents, cracks, holes and rust on the fuel gas cylinders are identified and a safety score is calculated for the set of the fuel gas cylinders. A safety score is calculated and compared with a safety threshold. If the safety score is lesser than that of the safety threshold, the set of cylinders having the lesser score are identified and removed from use. Figure to be published: Figure 3

No. of Pages : 27 No. of Claims : 19

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2023
(21) Application No.202341053232 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A BINDER COMPOSITION, AN ELECTRODE COMPOSITE, AND METHODS THEREOF

(51) International classification	:H01M0004620000, H01M0004360000, H01M0004130000, H01M0010052500, C03C0008180000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT A BINDER COMPOSITION, AN ELECTRODE COMPOSITE, AND METHODS THEREOF The present disclosure provides an electrode composite comprising: a) an active material; b) a conducting additive; and c) a binder composition, wherein the binder 5 composition comprises a copolymer with hydroxyl group and a fluoropolymer. The present disclosure further provides a process for preparing the electrode composite, an anode and an electrochemical cell. The present disclosure provides an anode comprising the electrode composite having higher peel strength, better charge-discharge capacity, initial coulombic efficiency and enhanced life cycle stability

No. of Pages : 34 No. of Claims : 22

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/08/2023
(21) Application No.202341054171 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SIGNALING ENHANCEMENTS ON RADIO RESOURCE CONTROL FOR AI/ML BASED CSI COMPRESSION

(51) International classification	:H04W0072040000, H04B0007060000, H04L0005000000, H04W0076270000, H04B0007045600
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT METHOD AND APPARATUS FOR ACHIEVING MODEL COMPATIBILITY IN TWO-SIDED MODEL AND ITS PARAMETER SIGNALING The present invention provides a method and apparatus for achieving model compatibility in AI/ML based channel state information compression models in multi-antenna systems. An initial capability report is transmitted to a base station. An initial network configuration is received from the base station. An AI-specific AI/ML CSI capability report is transmitted to the base station. A CSI report configuration consisting of AI/ML model specific configuration parameters and CSI reporting parameters, and CSI-Reference signals are received from the base station. Parameters such as AI-CSI is computed based on the CSI report configuration to transmit CSI report. The CSI report configuration is transmitted according to an information element (IE) consisting of a pairing ID. The AI- CSI parameter is computed based on AI/ML model indicated by the pairing ID and other CSI reporting parameters included in the CSI report configuration. Ref Fig. 2

No. of Pages : 25 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/08/2023
(21) Application No.202341054172 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : PHYSICAL LAYER SIGNALING PROCEDURES FOR AI/ML BASED CHANNEL FEEDBACK

(51) International classification :H04B0007060000, H04W0004700000, H04L0005000000, H04L0047100000, H04L0012640000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention describes a method of evaluating performance of a two-sided model used for performing CSI compression. The method includes receiving a first reference signal in a first time slot (t). A first channel Ht and a first Channel Quality Indicator ($CQIt$) are estimated at a first time instance. The first channel (Ht) is compressed using an encoder of a two-sided model. A compressed channel (Ht) along with the $CQIt$ is transmitted to a Base Station (BS) (102). A second reference signal precoded with a reconstructed channel (Ht) is received in a second time slot (t + 1). A second channel Ht+1 and a second $CQIt$+1 are estimated at a second time instance. The second CQI ($CQIt$+1) and the first CQI ($CQIt$) are compared for determining performance of the encoder of the two-sided model.

No. of Pages : 14 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/08/2023
(21) Application No.202341054178 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SYSTEM FOR DETECTION AND PREVENTION OF GAS LEAKAGE

(51) International classification :F17D5/02, F17D5/00, G08B21/16, F17D3/01
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A SYSTEM FOR DETECTION AND PREVENTION OF GAS LEAKAGE The present disclosure relates to a system for detection and prevention of gas leakage from a pipeline. The system includes a plurality of detector units, in wireless communication with each other and installed along the pipeline to detect and relay signal corresponding to 5 the detected gas leakage via a gas sensor and a detector controller. Further, a valve is coupled to an intake of the pipeline. A responder unit is coupled to the valve and in wireless communication with at least one of the plurality of detector units to selectively operative the valve to regulate the gas flowing into the pipeline by a low-powered motor and a responder controller to receive and process the relayed signal of the at least one of the 10 plurality of detector units to actuate the low-powered motor based on the relayed signal. Fig. 1

No. of Pages : 23 No. of Claims : 13

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/08/2023
(21) Application No.202341056357 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : NANO EMULSION BASED BOTANICAL HERBICIDE AND PREPARATION METHOD THEREOF

(51) International classification :A61K36/61, A61K31/736, A61K9/107, A01N65/28, A01N65/20, A01P13/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
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Filing Date :NA

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(57) Abstract :
NANO EMULSION BASED BOTANICAL HERBICIDE AND PREPARATION METHOD THEREOF A nano emulsion based botanical herbicide of the present invention has a unique aqueous phase containing leaf extract derived allelochemicals and an oil phase containing the volatile allelochemicals of Eucalyptus citriodora. The nano emulsion is developed using combined high energy techniques such as ultrasonication and high pressure homogenization with a mean particle size of the emulsion below 100nm. The encapsulation efficiency of the nano emulsion is 83-87 %.The eco-friendly botanical herbicides of the present invention serves as an alternative to the synthetic herbicides available in the market.

No. of Pages : 19 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/08/2023
(21) Application No.202341058607 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AN APPARATUS FOR ADDITIVE MANUFACTURING OF FUNCTIONALLY GRADED MATERIALS AND METHOD THEREOF

(51) International classification	:B33Y0030000000, B33Y0010000000, B22F0010200000, B33Y0050020000, B29C0064153000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention discloses an apparatus (100) for additive manufacturing of functionally graded materials and method thereof. The apparatus (100) comprises a dispenser (102) for housing distinct materials, a build platform (104) for receiving the distinct materials, and at least one piston (114a and 114b) facilitating controlled vertical movement. A recoater (106) spreads the distinct materials onto the build platform (104), and an additive manufacturing apparatus (112) fabricates a functionally graded object. The apparatus (100) ensures precise material distribution, leading to enhanced precision, efficiency, and cost-effectiveness in manufacturing.

No. of Pages : 25 No. of Claims : 13

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(21) Application No.202341059191 A

(22) Date of filing of Application :04/09/2023

(43) Publication Date : 16/08/2024

(54) Title of the invention : A SCREW BASED ELEVATOR DEVICE FOR MAXILLOFACIAL FRACTURE

(51) International classification	:A61B0017800000, B66B0011020000, B66B0001320000, B66B0007020000, B66B0005000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

A screw based elevator device for maxillofacial fracture includes an elevator body, a handle, a shank and a working tip. Said working tip is a maxillofacial screw or a screw. The elevator body having a handle at one end and a working tip at another end. The handle is having a hollow slot provided for gripping action. The shank is provided with a gradually tapering form between the handle and the working tip. The working tip end of the shank is attached to the maxillofacial screw through a welding process by solder alloy to unite the two ends of the metal. An identical space being provided throughout the welded area to obtain uniform solder thickness. The solder joint material is prepared from silver solder, barium oxide flux, oxygen-propane torch or aluminium oxide jet. The length of the device is 6 inch. [To be published with Figure 1]

No. of Pages : 17 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/12/2023
(21) Application No.202341088482 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : CLOUD-BASED ANALYTICS TO ENHANCE THE ABILITY OF SOLID WASTE MANAGEMENT

(51) International classification	:G06Q0050260000, B09B0003000000, H04W0004380000, G09B0019000000, C04B0111000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT CLOUD-BASED ANALYTICS TO ENHANCE THE ABILITY OF SOLID WASTE MANAGEMENT The present invention relates to a novel system to waste management in urban environments through the integration of cloud-based analytics and sensor technologies. The system employs a plurality of intelligent waste bins [1] equipped with sensors to monitor waste levels, type of waste, and other relevant parameters. Data collected from these bins is transmitted to a centralized cloud-based analytics platform [6], where it is processed and analyzed in real-time. Advanced algorithms within the platform generate optimized waste management strategies, including route optimization and resource allocation. A Smart Healthcare Monitoring and Control Unit (SHMCU) [3] serves as the interface for monitoring and controlling waste management operations based on instructions received from the analytics platform. Waste collection vehicles are deployed based on the optimized strategies generated by the platform, ensuring efficient waste collection and disposal. The proposed system and method offers a scalable, efficient, and environmentally sustainable solution to the challenges of urban waste management, ultimately contributing to cleaner, healthier cities. (Figure 1 is the reference figure.)

No. of Pages : 12 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/12/2023
(21) Application No.202341088486 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AN APPARATUS FOR PEELING AN AGRICULTURAL PRODUCT

(51) International classification	:A61B0017000000, A23N0007000000, A23N0005000000, H01L0021670000, A23N0007020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT AN APPARATUS FOR PEELING AN AGRICULTURAL PRODUCT The present disclosure envisages an agricultural product peeling apparatus (100) comprises a frame assembly (1) with interconnected truss members defining the frame. Positioned on the operative top of the frame are feeding rollers (71, 72), oriented vertically to receive and guide agricultural product downward. Downstream, a driven self-adjustable circular blade attached pulley (19) on the frame is configured to receive and guide the agricultural product vertically. This circular blade attached pulley features peeling means (26) with three self adjustable L-type blades positioned at 120 degrees apart with a spring load mechanism, facilitating the removal of peel from agricultural product. Subsequent to peeling, discharge rollers (73, 74) mounted downstream to pull the peeled agricultural product. The apparatus operates through driving means (11a, 11b) in communication with feeding rollers, the self-adjustable circular blades attached pulley, and discharge rollers, ensuring an effective and automated peeling process. Overall, this configuration streamlines agricultural product processing, enhancing efficiency in peeling and discharge within the specified operative configuration.

No. of Pages : 35 No. of Claims : 16

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/12/2023

(21) Application No.202341090125 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SYSTEM FOR BIOMETRIC AUTHENTICATION AND SELF HEALING

(51) International classification :G06F21/32
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
TITLE: A SYSTEM FOR BIOMETRIC AUTHENTICATION AND SELF HEALING APPLICANT: MEENAKSHI ACADEMY OF HIGHER EDUCATION AND RESEARCH APPLICATION NUMBER: 202341090125 DATED: 30/12/2023 ABSTRACT The present invention discloses a system for biometric authentication with self-healing mechanism for accessing into buildings, rooms or computing devices with enhanced user security and reliability comprises of a. camera for capturing facial image of the user and a finger print scanner for capturing fingerprint of the user; b. a computing device having a microprocessor to receive data from the camera and finger print scanner and compare the captured facial image and fingerprint with a reference facial image and fingerprint stored in the memory of the microprocessor; c. the microprocessor unlock the system for accessing when the captured facial image or fingerprint matches the reference facial image or fingerprint; characterized in that d. a self healing mechanism embedded in the microprocessor comprises machine learning algorithm to identify errors and activating diagnostic software to examine and diagnose the errors and repair the errors by redeploying or restarting, scaling and descaling.

No. of Pages : 11 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :31/12/2023
(21) Application No.202341090281 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A PROCESS OF PREPARATION OF HEALTHY GREEN PUNCH GUMMIES AND PRODUCT THEREOF

(51) International classification :A23L21/10, A23G3/34, A23G3/36, A23L33/105, A23L33/10, A23L29/30, A23P30/10
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
TITLE: A PROCESS OF PREPARATION OF HEALTHY GREEN PUNCH GUMMIES AND PRODUCT THEREOF APPLICANT: MEENAKSHI ACADEMY OF HIGHER EDUCATION AND RESEARCH APPLICATION NUMBER: 202341090281 DATED: 31/12/2023 ABSTRACT The present invention discloses a process of preparation of healthy green punch gummies comprises of following steps; a. drying Spirulina, drumstick leaves and curry leaves followed by grinding and sieving to form powdered mixture; b. mixing sugar and citric acid with water and heating until formation of soft ball consistency sugar syrup; c. mixing gelatin in water to form a gel; d. adding the powdered mixture and the gel to the soft ball consistency sugar syrup followed by adding mint extract, biotin, Vitamin C and clove oil under continuous stirring to form a mixture; e. melting the mixture under heat until complete dissolution to form a homogeneous suspension; f. pouring the suspension into silicone molds and allowing the suspension to set at room temperature overnight to form healthy green punch gummies. The present invention also discloses a healthy green punch gummies prepared by the process as described above.

No. of Pages : 17 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/03/2024
(21) Application No.202441017626 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A PASSIVITY BASED CONTROL SYSTEM FOR ELECTRIC VEHICLE

(51) International classification	:G05D0029000000, B60L0055000000, B60L0053630000, B60L0053300000, B60L0053680000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Title: A passivity based control system for electric vehicle The present invention is a passivity based control system for electric vehicle wherein, passivity based control (PBC) is an energy-based control, in which total energy is a stored and dissipated energy. The controller is a linear controller which adapts precise variation by means of sensing output current as well as position of motor for varying speed reference. The system is made sensorless by eliminating both position and speed sensors to reduce cost of implementation using back (Electromotive) force EMF method. The back EMF of each winding is sensed and using zero crossing detectors, the initial position is found for starting the motor. The speed is observed from back EMF and also the gate signals are sent to inverter. The inverter is powered from single phase AC supply through DC filter and boost converter. The present invention is used to drive a BLDC motor coupled with DC motor, mainly for electric vehicle application.

No. of Pages : 26 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/04/2024
(21) Application No.202441032634 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A PROCESS FOR FORMULATION OF HERBAL NANOGEL FOR ENHANCED DRUG DELIVERY

(51) International classification :A61K0031050000, A61K0009510000, A61K0009107000, A61Q0019100000, A61K0047100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention relates to a process for formulation of herbal nanogel for enhanced drug delivery. The composition comprises piperine, resveratrol, ethanol, propylene glycol, carbopol-940, and triethanolamine in specific weight percentages. The process involves preparing a drug phase by dissolving piperine and resveratrol in ethanol and propylene glycol, and an aqueous phase by dissolving carbopol-940 in water. An oil-in-water emulsion is formed by adding the drug phase to the aqueous phase under homogenization, followed by further homogenization with triethanolamine to form the herbal nanogel. The process enables encapsulation of herbal actives in a nanogel formulation for improved solubility, bioavailability, sustained release, and targeted delivery, overcoming limitations of conventional herbal formulations.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2024
(21) Application No.202441051063 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : “HYPERAUTOMATE SOC AND CCOE OPERATIONS WITH LLM POWERED AUTOBOTAI”

(51) International classification :G06Q0010060000, G06F0009500000, H04L0067100000, H04L0067020000, H04L0051000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Abstract “An Hyperautomate SoC and CCoE operations with LLM powered autobotAI” The present invention provides an Hyperautomate with autobotAI Cloud detection and response automation platform designed to streamline cloud operations and security across multiple cloud platform such as AWS, Azure and GCP. It utilizes no code, low code and full custom code workflows to automate a vast array of IT and cloud security tasks, making cloud management effortless at scale. Such security automation will create AI capabilities. It supports integration with major cloud platforms, communication tools (MS Teams, Google chat), and security solutions. It employs generative AI to offer intuitive workflow automation, including event-driven architecture for threat detection and response, identify and access management and compliance tracking; said platform consists of a centralized, user-friendly interface that allows security and IT team users to configure integration, design workflow and monitor automation performance, a drag and drop workflow editor, compliance violation insight, and real time notifications.

No. of Pages : 92 No. of Claims : 18

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/07/2024
(21) Application No.202441053359 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR REAL-TIME PHYSIOLOGICAL DATA-DRIVEN ADAPTIVE THERAPEUTIC DEVICE

(51) International classification	:A61B0005000000, A61B0005020500, A61B0005024000, A61B0005145000, G16H0040630000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Exemplary embodiments of the present disclosure are directed towards a system and method for real-time physiological data-driven adaptive therapeutic device. A real-time physiological data-driven adaptive therapeutic system comprising of a bio-sensing module acquires the patient real-time physiological details along with a health-monitoring sensor. Furthermore, the health monitoring sensors captures and maintains user vital signs and other health-state parameters at all times and sends the data to physiological data processor. Furthermore, the physiological data processor analyzes the collected data and sends the analyzed data to adaptive therapy controller. Furthermore, the adaptive therapy controller utilizes the processed data to adjust therapeutic interventions in real time. Finally, the continuous feedback loop provides a feedback loop among key components. FIG. 1

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :18/07/2024
(21) Application No.202441054830 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SYSTEM AND METHOD FOR DETECTING AND RESPONDING TO UNAUTHORISED ACCESS TO VEHICLE BATTERY PACK

(51) International classification :H01M0010480000, H01M0050200000, B60R0025240000, B60R0025230000, B60R0025100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A SYSTEM AND METHOD FOR DETECTING AND RESPONDING TO UNAUTHORISED ACCESS TO VEHICLE BATTERY PACK The present invention discloses a system and method for detecting and responding to unauthorized access to vehicle battery pack. Said method mainly comprises an optical sensor (202), a Battery Management System (BMS) (104), a microcontroller (204), a Vehicle Control Unit (VCU) (206), a casing opening detection mechanism (210) and an action enforcement mechanism (212). The optical sensor (202) gets activated by an ambient light when the unauthorized person opens a battery pack casing (106). The activation signal is detected and in response to that, one or more functions of the battery pack (102) are disabled. Further, the casing opening event is communicated to VCU (206) and a cloud-based server (208). Furthermore, tampering of the battery is inspected by an authorized person and appropriate action of enabling or permanently disabling the battery pack (102) is taken based on an outcome of the inspection. [To be published with figure 2]

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/07/2024
(21) Application No.202441055292 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : PRIVACY-PRESERVING FEDERATED LEARNING SYSTEM AND METHOD FOR COLLABORATIVE ANALYSIS OF DISTRIBUTED MEDICAL IMAGING DATA

(51) International classification	:G06F0021620000, G06N0020000000, G06F0021600000, G06N0003040000, G06N0003080000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Exemplary embodiments of the present disclosure are directed towards a method for privacy-preserving federated learning for collaborative analysis of distributed medical imaging data includes receiving overall medical imaging dataset from medical institutions by computing device. Partitioning a medical imaging dataset into subsets using a privacy preserving federated learning module enabled in a computing device. Training local machine learning models at each institution using locally pre-processed data by privacy preserving federated learning module. Encrypting locally trained models using an encryption techniques before transmission to a cloud server. Establishing secure communication channels between institutions and the cloud server. Aggregating encrypted models received from multiple institutions at a federated learning module enabled in cloud server. Verifying integrity and trustworthiness of aggregated models. Synthesizing a global model from aggregated encrypted models on server while maintaining data privacy and monitoring compliance with data privacy regulations and maintaining audit logs using the federated learning module. FIG. 1.

No. of Pages : 31 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/07/2024
(21) Application No.202441055303 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SMART INSULIN DELIVERY SYSTEM WITH IOT CONNECTIVITY FOR REAL-TIME GLUCOSE MONITORING AND METHOD EMPLOYED THEREOF

(51) International classification	:A61B0005000000, A61B0005145000, G16H0040670000, G16H0040630000, H04L0067120000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Exemplary embodiments of the present disclosure are directed towards a smart insulin delivery system with IoT connectivity for real-time glucose monitoring and method employed thereof. The system comprising an Internet of Things (IoT) module known as DoseWise™ enables efficient insulin delivery. The DoseWiseTM is configured to support real-time glucose monitoring through a sensor. The Glucosense™ is configured to provide real-time glucose data to DoseWise™ for adjusting insulin doses. The GlucosenseTM is configured to ensuring continuous glucose monitoring. The GlucoLink™, an IoT connectivity module is configured to permit remote monitoring and analysis by transmitting glucose data seamlessly to a smartphone application or centralized monitoring system. The GlucoLink™ allows further data access and remote monitoring of parameters. The integrated components ensure effective insulin delivery, with steps including collecting low and high glucose levels via Glucosense™ and calculating and comparing insulin doses using the DoseWise™ algorithm. This technology proposing various communication protocols for tabulating glucose levels, insulin doses, and other parameters, ensuring real-time data transmission to medical experts. Fig. 1 and Fig. 2

No. of Pages : 16 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/07/2024
(21) Application No.202441055392 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A NANO-FLUID ENHANCED COOLING SYSTEM WITH MACHINE LEARNING OPTIMIZATION FOR HIGH-PERFORMANCE ELECTRONICS

(51) International classification	:H05K0007200000, C09K0005100000, H01L0023473000, B24B0055020000, H01S0005024000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Exemplary embodiments of the present disclosure are directed towards an nano-fluid enhanced cooling system with machine learning optimization for high-performance electronics. The system includes a nano-fluid reservoir containing a nanofluid coolant with high thermal conductivity, circulated by a pumping system. A microchannel heat exchanger enables dynamic heat exchange between electronic components and the coolant. A temperature sensor array monitors thermal signatures, providing data to a machine learning controller unit, which adjusts cooling parameters in real-time. A nano-fluid injector ensures consistent coolant levels, while a nano-fluid filter removes impurities to prevent clogging. A heat sink array increases the system's surface area for better heat dissipation. A nano-fluid flow regulator controls the coolant flow rate, and an electronic component enclosure provides housing and efficient heat dissipation, ensuring prolonged component lifespan. FIG. 1

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/07/2024
(21) Application No.202441055973 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : INTELLIGENT CARDIAC HEALTH MONITORING SYSTEM AND METHOD FOR REAL-TIME ANOMALY DETECTION AND EMERGENCY ALERT

(51) International classification	:A61B0005000000, A61B0005318000, G16H0040670000, A61B0005250000, A61B0005352000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Exemplary embodiments of the present disclosure are directed towards an intelligent cardiac health monitoring system and method for real-time anomaly detection and emergency alert, comprising a wearable healthcare device comprising an electrocardiogram (ECG) sensor configured to collect ECG signals and transmit the collected ECG signals to a processing device, processing device is configured to process the collected ECG signals. The processing device communicatively connected to a cardiac signal monitoring module, the processing device is communicated with cardiac signal monitoring module, is configured to send processed ECG signals to the cloud server. The cloud server comprising a cardiac signal analyzing module configured to processed ECG signals and analyze cardiac signals, cloud server is configured to transmit analyzed cardiac signals to cardiac signal monitoring module, to generate alerts and send alerts along with location coordinates of the wearable healthcare device to computing device based on the detected emergency condition in cardiac signals. FIG. 1.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :23/07/2024
(21) Application No.202441055979 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM FOR REAL-TIME REMOTE MONITORING OF CARDIAC HEALTH USING IOT AND PREDICTIVE ANALYTICS AND METHOD EMPLOYED THEREOF

(51) International classification	:G16H0010600000, A61B0005000000, G16H0040670000, G16H0050200000, G16H0050300000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Exemplary embodiments of the present disclosure are directed towards a system for real-time remote monitoring of Cardiac health using IoT and predictive analytics and method employed thereof. The system comprising one or more Cardiac wearable sensors are configured to collect and transmit cardiac input data through an IoT gateway to a cloud-based machine learning platform, which analyses the real-time cardiac data to identify potential health issues. A cloud storage infrastructure that provides centralized, scalable, and secure storage for various health data types, facilitating the creation of algorithms and data analysis. A user interface application for interaction and feedback, designed to provide insights into predicted health issues along with visual cues and alerts for immediate health responses. The IoT Gateway connects all the sensors and devices in the personal health monitoring system to the Internet or cloud. It sends the collected data for analysis and tracking, enabling users to communicate with all their devices and healthcare providers. The combination of IoT and predictive analytics provides real-time monitoring and actionable health insights, representing a significant improvement over current reactive monitoring methods for cardiac health. A notification system is configured to alerts users and healthcare providers about potential problems, offering targeted recommendations based on health analysis, serving as the system's hub for emergencies and ongoing management. Fig. 1 and Fig. 2

No. of Pages : 20 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/07/2024

(21) Application No.202441056214 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : METHOD FOR PRODUCING HIGH-STRENGTH CONCRETE USING ENGINEERED FIBERS, GGBS, AND PVC WASTE POWDER

(51) International classification	:C04B0028040000, C04B0028080000, C04B0103320000, C04B0103300000, C04B0007153000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Exemplary embodiments of the present disclosure are directed towards a method for producing high-strength concrete incorporating engineered fibers, ground granulated blast furnace slag (GGBS), and poly-vinyl chloride (PVC) waste powder. The method includes mixing ordinary Portland cement (OPC) with GGBS and varying percentages of PVC waste powder, adding 0.5% engineered fibers by weight of cement, and incorporating 0.6% sulpho-naphthalene formaldehyde (SNF) superplasticizer. A water-cement ratio of 0.34 is maintained. The mixture is thoroughly blended using a concrete mixer, followed by conducting slump and compaction factor tests to evaluate workability. Concrete specimens are cast and cured in a water bath for 7, 14, 28, and 90 days. Compressive, flexural, and split tensile strength tests are performed on the cured specimens as per Indian standards IS:516-1959. The method optimizes mix design by comparing the results of mixes with and without fibers, ensuring enhanced strength, workability, and sustainability in concrete production for construction applications. Fig. 1

No. of Pages : 42 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :24/07/2024
(21) Application No.202441056229 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR CONTINUOUS EMOTIONAL AND MENTAL HEALTH ASSISTANCE USING A PORTABLE ROBOTIC COMPANION

(51) International classification	:G16H0050200000, G10L0025630000, G16H0010200000, G16H0050300000, B25J0009160000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Exemplary embodiments of the present disclosure are directed towards a a system for continuous emotional and mental health assistance using a portable robotic companion. The system comprises a first computing device with a mental health supporting module, enabling a user to activate a portable robotic device. The portable robotic device includes a camera and a microphone configured to collect the user's facial expressions, body language, and speech patterns. A mental health data analyzing module within the robotic device receives this data and processes it using artificial intelligence models to determine the user's emotional state. Based on the analyzed data, the robotic device provides personalized support and interventions tailored to the user's needs. This system offers a novel approach to mental health support, leveraging advanced robotics and AI to deliver real-time, personalized emotional assistance, enhancing overall well-being and mental health outcomes for users. Fig. 1

No. of Pages : 34 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/08/2024
(21) Application No.202441058463 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : GEOGRID REINFORCED RUBBLE MOUND BREAKWATER TO MITIGATE TSUNAMI INDUCED DAMAGES AND METHOD THEREOF

(51) International classification	:E02B0003060000, E02D0029020000, E02B0003120000, E04H0009020000, E01C0003040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present disclosure relates to a system (100) and process (200) for developing tsunami resilient geogrid reinforced rubble mound breakwaters against tsunamis. The process involves wrapping biaxial geogrids around the slopes of the rubble mound breakwater, ensuring that the aperture size of the geogrids is smaller than the mean size of the core rubbles to allow effective interlocking and lateral confinement. This method eliminates the need for primary armour layers, relying solely on the geogrids for slope stability and protection. Additionally, the process incorporates precast units of a crown wall with a shear key placed on top of the rubble mound breakwater, and steel sheet piles inserted into the seabed on either end to be embedded into the dense sand. The wrapped geogrid layer offers superior lateral confinement and enhanced slope stability, preventing the dislocation of rubbles during tsunami overflow while maintaining the breakwater's permeability for effective energy dissipation. Figure 1 and 2 will be the reference.

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/08/2024
(21) Application No.202441058464 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : GABION REINFORCED RUBBLE MOUND BREAKWATER FOR TSUNAMI MITIGATION AND METHOD THEREOF

(51) International classification	:E02B0003060000, E02B0003120000, E02D0029020000, E02B0003040000, E02B0003140000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A gabion reinforced rubble mound breakwater (100) for tsunami mitigation on coastal infrastructure and method thereof is disclosed. The breakwater (100) includes one or more gabions (102), and a crown wall with a shear key (110). The one or more gabions (102) are configured to be placed as a replacement of armour layers on a seaside (104) and a harbour side (106) slopes of a rubble mound breakwater (108). The gabions (102) are laid on either side of slopes of the rubble mound breakwater (108). The crown wall with a shear key (110) at bottom is placed above the core layer of the rubble mound breakwater (108). The one or more gabions (102) and the crown wall with shear key (110) collectively reinforce the gabion rubble mound breakwater (108) for reducing a risk of damage and to withstand an impact of tsunamis on the coastal infrastructure. <>

No. of Pages : 21 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :01/08/2024
(21) Application No.202441058465 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : L-SHAPED FLOATING OSCILLATING WATER COLUMN WAVE ENERGY CONVERTER SYSTEM AND METHOD THEREOF

(51) International classification	:F03B0013140000, F03B0013240000, B01D0046000000, F04D0025060000, A61M0016000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Disclosed is an L-shaped Oscillating Water Column (L-OWC) system (100) includes a vertical column (102) that houses an air flow generator (112) on top, one or more cylindrical air chambers (108A-N), each cylindrical air chamber of the one or more 10 cylindrical air chambers (108A-N) is positioned on either side of the vertical column (102) and adapted to facilitate the L-OWC system (100) to float on water level and attenuate wave energy, a horizontal column (104) that is positioned on lower side of the vertical column (102), and one or more anchors (110A-N) that are positioned on lower side of the horizontal column (104) and facilitates the L-OWC system (100) to secure to bed of a body 15 of water to prevent from drifting due to wind or current. The present disclosure also relates to a method (200) of operating the L-OWC system (100). Figure 1A will be the reference

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/08/2024
(21) Application No.202441059247 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : METHOD OF PREDICTING CROP YIELD BY PROCESSING SATELLITE IMAGERY THROUGH MACHINE LEARNING

(51) International classification :G06V0020100000, G06Q0010063900, G06Q0050020000, G06V0020130000, G06T0011600000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Abstract Method of predicting crop yield by processing satellite imagery through machine learning The method of predicting crop yield by processing satellite imagery through machine learning. The present invention use NDVI and satellite data for predicting wheat crop production using regression modeling. Through the application of sophisticated analytical techniques and remote sensing technology, The present invention provides important insights into the intricate dynamics of crop development and yield. The regression model created for this study shows how well statistical methods and remote sensing data can be combined to predict crop productivity. Figure 5, Figure 6

No. of Pages : 19 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :06/08/2024

(21) Application No.202441059257 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : EMPLOYING OF SOC TRACKER FOR RESCUING AND SUPERVISING A CHILD IN CASE OF EMERGENCIES

(51) International classification :A61B0005024000, A61B0005000000, G08B0021020000, A61B0005024500, A61B0005020500

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
According the study, thousands of children go kidnapped every year, but it is tragic that only one-third are located and the rest are considered lost. This research proposes a SOC (Safety of Child) wearable tracking device for tackling the particular problem. These provides details of -the child to their parents in the case if they are discovered to be kidnapped. The parents' . smartphone will acquire information in two methods. This is really a basic application that is accessible to all kinds of devices and it is not restricted to any smart phones.The child's whereabouts, temperature, including pulse rate data are sent to parent's smartphone, then finally an SOS (save our soul) signal and alarm sound is triggered, that is heard by nearby people, as well as the child can be saved. These details are provided in response to specific terms - including such Geolocation, BUZZ, HBT, TEMP, and so on. The heart rate variability • is the • second method of obtaining information. The heart sensors threshold value has been set. During an emergency, the kid's heart rate rises, which is recognized by the sensor, so when- it reaches the threshold value, the position and heartbeat rate arc promptly sent to the parents, indicating if their child need assistance. Keywords: SOC (Safety of Child), Threshold Value, Wearable Tracking Device, Heart Rate Variability.

No. of Pages : 7 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/08/2024

(21) Application No.202441059258 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : POLICY-INTEGRATED SMART FARMING APPLICATION FOR ENHANCED EFFICIENCY AND SUSTAINABILITY

(51) International classification	:G06Q0050020000, G06N0020000000, A61B0005020500, G16H0040670000, G06V0010820000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ANNEXURE 3 Our invention offers a comprehensive agricultural application that aims to transform farming methods by integrating cutting-edge technologies. The main component of the app is an Al-powered chatbot • that offers professional agricultural advice • and real-time assistance. Precise weather forecasting adapted to agricultural decision-making, sophisticated machine learning algorithms for early plant disease detection through image analysis and • sensor data, and smooth integration with government programs to ease access to loans, subsidies, and other vital programs are some of the major innovations. Additionally, the application makes use of advanced data analytics to optimize farming techniques, increasing sustainability and productivity. Our invention seeks to alleviate existing agricultural challenges, lower environmental impact, and increase global food security by utilizing state-of-the-art technologies. This comprehensive solution not only satisfies tackles urgent social needs by providing farmers with the means to improve their livelihoods in a. sustainable manner and make educated decisions

No. of Pages : 5 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/08/2024
(21) Application No.202441059496 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ARTIFICIALLY ENGINEERED AUTOMATED BOTTOM-MOUNTED DOOR LOCK MECHANISM

(51) International classification	:H04L0009400000, G07C0009000000, E05C0019000000, H04W0088060000, E05C0019180000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ARTIFICIALLY ENGINEERED AUTOMATED BOTTOM-MOUNTED DOOR LOCK MECHANISM The system is conceptualized to enhance the overall security infrastructure of doors by utilizing innovative technology. The invention pertains to the field of door security systems, specifically focusing on an artificial lock system integrated at the bottom of doors. The Artificial Door Lock System is a technologically advanced mechanism designed to overcome the problem against the unauthorized access. The main advantage of this door lock system is that it is integrated at the base of doors and operating is easy as compare to other system. Also it looks like Integration with smart home systems and mobile applications with Emergency override mechanisms to ensure accessibility in critical situations. The Artificial Door Lock System presents an innovative approach to door security, offering a discreet yet powerful solution for ease of access to the user. FIG.1A-C

No. of Pages : 11 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :06/08/2024

(21) Application No.202441059497 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : APPLYING MACHINE LEARNING AND AI TO OPTIMIZE SUPPLY CHAIN MANAGEMENT AND LOGISTICS

(51) International classification :G06N0020000000, G06Q0010063700, G06N0003020000, G06Q0010063100, G06Q0030020200

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
APPLYING MACHINE LEARNING AND AI TO OPTIMIZE SUPPLY CHAIN MANAGEMENT AND LOGISTICS The method for the development of a healthy supply chain to be successful. Possessing an accurate inventory prediction gives you a significant competitive advantage. The performance of the supply chain is influenced by a wide range of external and internal elements, including weather, extreme seasonality, shifts in customer perception, and media coverage. Examples of internal factors that impact the supply chain include product introductions and distribution network expansion. Artificial intelligence (AI) has demonstrated in recent years to be a brain extension, enhancing our cognitive capacities to heights we never would have imagined. Contrary to popular belief, artificial intelligence (AI) will not replace people; rather, it will enable us to reach our full creative and strategic potential. The amount of data produced by the supply chain as a whole has altered the nature of SCM analysis. Due to these methods' shortcomings in terms of studying and understanding vast amounts of data, researchers have developed a few methods with superior big data analysis and interpretation capabilities. FIG.1

No. of Pages : 17 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :07/08/2024

(21) Application No.202441059532 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : FORMULATION AND EVALUATION OF GASTRORETENTIVE OMEPRAZOLE FLOATING MICROBEADS USING NATURAL GUMS FOR PEPTIC ULCER

(51) International classification :A61K0009000000, A61P0001040000, A61K0009200000, A61K0009160000, A61K0009280000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
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(57) Abstract :
The present invention relates to a formulation and evaluation of gastroretentive omeprazole floating microbeads using natural gums for peptic ulcer. This invention presents the formulation of a pharmaceutical composition for the controlled release of Omeprazole, designed for enhanced gastroretentive performance. The composition consists of floating microbeads, each containing a core of Omeprazole and a coating made from natural polymers, specifically Babool gum, Xanthum gum, and Guar gum. These microbeads are prepared using the Ionotropic gelation technique, which enables them to float in gastric fluids for an extended duration, ensuring a prolonged and controlled release of Omeprazole. This approach aims to improve the therapeutic efficacy of Omeprazole, particularly in the treatment of peptic ulcers.

No. of Pages : 14 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/08/2024
(21) Application No.202441059541 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AI-POWERED SYSTEM: EQUIPS LITERACY EDUCATION FOR LIFELONG LEARNING

(51) International classification	:G09B0005060000, G09B0019060000, G09B0017000000, G06Q0050200000, G09B0007020000
(86) International Application No Filing Date	:NA :NA
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(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
AI-POWERED SYSTEM: EQUIPS LITERACY EDUCATION FOR LIFELONG LEARNING Abstract: Artificial Intelligence (Al) is revolutionizing literacy development by enabling personalized learning experiences tailored to individual needs and learning styles. This abstract explores how Al enhances literacy through adaptive learning platforms, customized content delivery, and individualized feedback mechanisms. Al-powered systems analyse student performance data to personalize learning paths, adjusting the pace and difficulty of lessons in real-time. Natural Language Processing (NLP) algorithms provide personalized feedback on writing assignments, enhancing grammar, coherence, and overall literacy skills. Al supports diverse learning modalities, accommodating visual, auditory, and kinaesthetic preferences, while continuous progress monitoring ensures timely intervention and improvement tracking. Engagement is fostered through interactive elements and gamification, motivating students to actively participate in their literacy journey. Moreover, Al improves accessibility with tools like text-to-speech and translation capabilities, ensuring inclusive access to educational content. Educators benefit from Al-driven insights, leveraging data analytics to inform instructional strategies and optimize literacy instruction. This abstract underscore the transformative potential of Al in advancing literacy development, offering tailored educational experiences that enhance student engagement, proficiency, and lifelong learning skills. In essence, Al enhances literacy development by offering personalized learning experiences, automating assessment and feedback processes, supporting language learning, improving accessibility, providing data-driven insights, and contributing to the ongoing evolution of educational technologies. As these technologies continue to advance, Al holds promise for further revolutionizing how literacy skills are taught, learned, and mastered across diverse educational contexts. In essence, Al enhances literacy development by offering personalized learning experiences, automating assessment and feedback processes, supporting language learning, improving accessibility, providing data-driven insights, and contributing to the ongoing evolution of educational technologies. As these technologies continue to advance, Al holds promise for further revolutionizing how literacy skills are taught, learned, and mastered across diverse educational contexts. In summary, Al enhances literacy development by offering personalized learning experiences that cater to individual needs, preferences, and abilities. By leveraging advanced technologies like adaptive learning systems, NLP, and data analytics, Al empowers educators to create more effective, engaging, and inclusive literacy education environments that foster student success and proficiency in reading, writing, and communication skills.

No. of Pages : 11 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/08/2024
(21) Application No.202441059542 A
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(54) Title of the invention : CULTURAL RESPONSIVE PEDAGOGIES: FOSTER LITERACY, INCLUSIVE EDUCATION AND PROFESSIONAL DEVELOPMENT

(51) International classification	:G06Q0050200000, G09B0007020000, G09B0019000000, G09B0007000000, G09B0005060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Inclusive education demands a pedagogical approach that honours and integrates the cultural backgrounds and experiences of all students. Culturally responsive pedagogies in literacy development offer a framework to achieve this goal by recognizing and leveraging cultural diversity within educational settings. This abstract explores how culturally responsive practices enhance literacy instruction, foster inclusive learning environments, and promote academic success among diverse student populations. Key elements of culturally responsive pedagogies include the recognition of students' cultural identities, the incorporation of culturally relevant materials and perspectives into literacy instruction, and the integration of students' home languages and dialects. These practices not only make learning meaningful and relatable but also affirm students' cultural identities, creating a supportive and inclusive atmosphere where all learners feel valued and respected. Moreover, culturally responsive pedagogies promote critical thinking skills by encouraging students to analyze texts and media from diverse cultural perspectives. This approach helps students develop a deeper understanding of social justice issues, challenge biases, and promote equity within educational contexts. Collaboration with families, communities, and cultural organizations further enriches the learning experience, providing students with opportunities to connect their learning to real-world contexts and build bridges between school and community. Ultimately, this abstract highlights the transformative potential of culturally responsive pedagogies in literacy development, emphasizing their role in fostering inclusive education environments that support the academic achievement and holistic development of all students, regardless of their cultural backgrounds or linguistic diversity. In conclusion, culturally responsive pedagogies in literacy development promote inclusive education by valuing and integrating students' cultural backgrounds into the learning process. By embracing cultural diversity, fostering language proficiency, creating affirming environments, and promoting critical thinking and equity, educators can enhance literacy outcomes and support all students in achieving academic success and personal growth.

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(19) INDIA
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(54) Title of the invention : INTEGRATING CORPUS-BASED APPROACHES BRIDGE THE GAP BETWEEN THEORETICAL LANGUAGE LEARNING AND

(51) International classification	:G09B0019060000, G09B0005060000, G09B0007000000, G06Q0050200000, G06F0040284000
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(57) Abstract :
INTEGRATING CORPUS-BASED APPROACHES: BRIDGE THE GAP BETWEEN THEORETICAL LANGUAGE LEARNING AND ENGINEERING COMMUNICATION Abstract: Integrating corpus-based approaches in language education represents a pivotal strategy to bridge the gap between theoretical language learning and practical engineering communication. This abstract explores the transformative impact of utilizing corpus linguistics to enhance language instruction within — engineering curricula. Corpus-based approaches harness large-scale collections o f authentic engineering texts (corpora) to identify and prioritize technical vocabulary, collocations, and discourse patterns essential for effective communication in engineering fields. By analyzing these corpora, educators gain empirical insights into the language demands of engineering professions, ensuring that language instruction is both relevant and aligned with real-world applications. This abstract highlights the benefits of corpus-based approaches in fostering authenticity, relevance, and data-driven pedagogy in engineering language education. Students benefit from exposure to authentic language samples, enabling them to develop proficiency in technical vocabulary usage, collocational competence, and genre-specific writing skills crucial for professional success. Furthermore, integrating corpus-based approaches encourages interdisciplinary collaboration between language educators and engineering faculty, promoting a holistic educational approach that integrates language proficiency with technical expertise. This collaboration not only enhances students' communicative competence but also prepares them to effectively navigate and contribute to multidisciplinary engineering projects and global professional environments. In conclusion, integrating corpus-based approaches in engineering language curricula represents a paradigm shift towards enhancing theoretical language learning through empirical analysis o f real-world language use. This approach equips students with the linguistic and communicative skills necessary to excel in their engineering careers and contribute meaningfully to the global engineering community. AT EMT O F F IC E CR'EMKAT" 0 8 / 08* <2 0 2 4 I I : 25-In summary, integrating corpus-based approaches enables educators to bridge the gap between theoretical language learning and real-world engineering communication by providing authentic, data-driven insights into language use within technical contexts. This approach enhances students' language proficiency, prepares them for professional communication, and fosters interdisciplinary collaboration essential for success in their engineering careers.

No. of Pages : 11 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

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(21) Application No.202441059556 A

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(54) Title of the invention : ARTIFICIAL NEURAL NETWORKS BASED VAR COMPENSATION OF INVERTERS CONNECTED TO DISTRIBUTED ENERGY RESOU

(51) International classification	:H02J0003380000, H02J0003180000, H02J0003000000, G06N0003080000, H02J0013000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

ABSTRACT ARTIFICIAL NEURAL NETWORK BASED VAR COMPENSATION OF INVERTERS CONNECTED TO DISTRIBUTED ENERGY RESOURCE SYSTEM OF WIND TURBINE AND PV ARRAY USING SVPWM TECHNIQUE A method for Voltage-Ampere Reactive (VAR) compensation in inverter-interfaced distributed energy resource (DER) systems, which include wind turbines and photovoltaic (PV) arrays, using an Artificial Neural Network (ANN). The variability of wind and solar power generation can cause significant power quality issues, making effective VAR compensation essential. The proposed ANN-based approach predicts the necessary VAR compensation by considering system parameters and operating conditions. These predictions are used to generate appropriate modulation signals through the Space Vector Pulse Width Modulation (SVPWM) technique for controlling the inverters. The results from simulations and experiments show that this method effectively enhances power quality, improves system stability, and optimizes the performance of the DER system.

No. of Pages : 22 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/08/2024
(21) Application No.202441059564 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : PROGRAMMING BASED MULTIMODE ELECTRICAL SMART SWITCH BOARD OPERATING SYSTEM

(51) International classification	:H02J0003140000, F04D0025080000, F03B0017000000, G05B0019418000, F03B0013060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Electrical switch is a commonly used device to control or manage the electricity current in homes, factories, offices and anywhere else where electricity power is used. Without power switch it is impossible to turn on electricity or use electricity as per need. Nowadays, the electrical switch that we use in practice in all the above-mentioned places have only two functions either connecting or disconnecting the electricity power with electrical load. Both of these functions are 100?^o flawlessly executed by the power switch. What we need to note here is that once we turn on the power switch, it continues to conduct electricity. For example, if a home water pump motor is operated with an electric switch, electricity will continue to flow through the motor. Perhaps if we forget about it the motor will continue to run thus wasting electricity and water. Compare this example with other electrical appliances that we use in our homes and factories. In modem scientific development, many old electrical appliances are being modernized as per the present day. Through this, I have designed this modem electric switching operation plan in such a way that everyone can use it easily and save more electricity by combining some of the modem operation plan and shape of the electric switches that we are using nowadays. The device is designed so that the user can set the time duration (half an hour, one hour, two hours or as per requirement) of how long to use the electricity and after which time the electricity will be cut off. This switch board system can be used either as an automatic (based on time delay control) or as is commonly practiced nowadays.

No. of Pages : 10 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/08/2024

(21) Application No.202441059586 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : TREATMENT OF DYE WASTE WATER AND ADSORPTION KINETICS

(51) International classification	:C02F0101300000, C02F0001280000, C02F0001300000, C02F0103300000, B01J0020200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
In 21st century, water pollution due to textile dye industry has turned into a severe problem ~ around the world including India. The dye industry in India is made up of about 85 large organized units co and 4,000 small scale units, they produce around I ,60,000 tonnes of dyestuff per month. These direct ~ discharges of dye wastewater effluent into waterbodies like lakes, rivers and other water pollution will .o... . affect plants and animals. The aim of our research is to prepare activated carbon from coconut shell with ~ surface modification by chemically activating method . Adsorption was done by both pellet and powder N form for Allura Red dye with different contact time . The study undergoes the effects of contact time, ~ powdered activated carbon and chitosan dosage, and effect of rpm in adsorption between chemically C, activated carbon,chitosan and dye waste water. The maximum removal efficiency of 96.73% was :::::1 achieved at optimum contact time of 90 minutes with the ratio of 2: I: I . Adsorption Kinetics were studied ~ and it followed the second order kinetics bodies were studied

No. of Pages : 19 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/08/2024

(21) Application No.202441059604 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AI-POWERED LINGUISTIC ANALYSIS SYSTEM FOR EARLY COGNITIVE DECLINE DETECTION

(51) International classification	:A61B0005000000, G06F0040300000, G06N0020000000, G16H0050300000, G16H0040670000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Al-Powered Linguistic Analysis System for Early Cognitive Decline Detection 07-Aug-2024/101787/202441059604/Form 2(Title Page) ABSTRACT: Al-powered linguistic analysis system designed for the early detection of cognitive decline. .This innovative system comprehensively analyzes both speech patterns and written text to identify subtle linguistic and cognitive changes indicative of early cognitive issues. By leveraging advanced natural language processing (NLP) techniques and sophisticated machine learning algorithms, the system offers a non-invasive, efficient,.and accurate method for the early diagnosis of cognitive impairments. Such impairments include but are not limited to, mild cognitive impairment (MCI) and early-stage Alzheimer's disease. The core functionality of the system revolves around its ability to extract and analyze a wide range of linguistic features from the user's input data. These features include vocabulary richness, syntactic complexity, semantic coherence, and speech fluency, among others. The system employs state-of-the-art deep learning models to recognize patterns that may indicate cognitive decline., thus providing valuable insights that can assist healthcare professionals in early diagnosis and intervention. This system is designed to be highly accessible and user-friendly, with potential applications in various settings, including clinical environments, at-home monitoring, and telehealth services. By facilitating continuous and remote monitoring of cognitive health, it aims to enhance the early detection and management of . cognitive decline, ultimately improving .patient outcomes and quality of life.

No. of Pages : 8 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/08/2024
(21) Application No.202441059688 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SMART FOOD STORAGE DEVICE

(51) International classification :A47J39/02, A47J36/24, H05B1/00, A47J47/02, A47J47/14, F24C7/08
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
The present disclosure relates generally to the field of household devices. More specifically the present disclosure relates to a smart food storage device. The device (100) includes a include a housing (102), a plurality of insulated compartments (104), an enclosure (106) and a heating unit. The plurality of insulated compartments (104) is attached within the housing (102), each compartment (104) configured to store different food. The enclosure (106) is movably attached to a top end of the housing (102) to cover upper opening of the housing (102) to seal the food within the plurality of insulated compartments (104). The heating unit includes a plurality of heating elements and a control unit. The control unit is configured to monitor heating of insulated compartments (104). Advantageously, the present invention relates to a smart food storage device that heats food to a desired temperature achieving nutrient benefits of food.

No. of Pages : 16 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/08/2024
(21) Application No.202441059689 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A VIRTUAL REALITY THERAPY SYSTEM FOR MENTAL HEALTH MONITORING AND A METHOD THEREOF

(51) International classification :A61B0005000000, G06F0003010000, A61B0005110000, A61B0005024000, A61B0005020500
(86) International Application No :NA
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(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A Virtual Reality (VR) therapy system (100) comprises a virtual reality headset (118) configured to provide a therapy session, and a plurality of wearable sensors (102) attached to one or more parts of the user. The plurality of wearable sensors (102) are configured to sense a plurality of sensor data associated with emotional and physiological states of the user The system (100) comprises a data collection unit (104) configured to collect a plurality of sensor data associated with the plurality of wearable sensors (102) in a real-time. Further, a data extraction unit (106) is configured to extract one or more features associated with the collected sensor data. The extracted features are processed to adapt a VR therapy scenario. Moreover, a monitoring unit (110) configured to monitor one or more health indicators, to provide insights into emotional and physiological states of the user.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/08/2024
(21) Application No.202441059691 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A HEMOSTATIC AGENT AND USE THEREOF

(51) International classification :A61P0007040000, A61Q0011000000, A61C0009000000, A61K0038360000, C12N0005078400
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to the field of pharmaceuticals. Specifically, the present invention relates to a hemostatic agent for the control of intraoral bleeding. More specifically, the present invention provides a customized hemostatic agent for the control of intraoral bleeding in patients with hemophilia. The present invention provides a safe and cost-effective measure for the management of oral cavity bleeding.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :07/08/2024

(21) Application No.202441059751 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : PROTEIN CHIP ARRAYS WITH COMPREHENSIVE CHEMICAL AND ENZYMATIC TREATMENT OF PROTEINS THAT ARE PHOSPHORYLATED AND GLYCOSYLATED USING ARTIFICIAL INTELLIGENCE

(51) International classification :G01N0033680000, B01J0019000000, B01L0003000000, C12Q0001480000, C12Q0001000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT: Title: Protein Chip Arrays with Comprehensive Chemical and Enzymatic Treatment of Proteins that are Phosphorylated and Glycosylated using Artificial Intelligence The present disclosure proposes a method for the chemical and enzymatic treatment of proteins on these chips, particularly targeting the treatment of post-translationally modified proteins on protein chip arrays. Initially, a protein chip surface is prepared. Next, a sample containing the protein or peptide is applied to the protein chip surface. Next, the protein is denatured on the chip surface. Next, the protein is reduced on the chip surface. Later, the protein deglycosylates, dephosphorylates, and digests on the chip surface for peptide mass fingerprinting. Finally, the sample is analyzed using mass spectrometry. The proposed method has an ability to handle small sample volumes and perform reactions in a compact on-chip environment enhances cost-effectiveness and reduces resource consumption.

No. of Pages : 14 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/08/2024

(21) Application No.202441059770 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : AUTONOMOUS MOBILE VACUUM CLEANING ROBOT

(51) International classification :G05D0001000000, A47L0011400000, G01S0017890000, A47L0009280000, G06Q0010063700

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The Autonomous Mobile Vacuum Cleaning Robot represents a pioneering project that employs cutting-edge technology to redefine the realm of automated cleaning. By leveraging the capabilities of Robot Operating System 2 (ROS2) and LiDAR technology, this advanced robot seamlessly integrates a sophisticated robot chassis with LiDAR sensors. These sensors empower the robot to autonomously generate precise maps of its surroundings, strategically plan cleaning routes, and navigate through spaces with the agility to avoid obstacles. The inclusion of a user-friendly interface enhances its adaptability, positioning it as a versatile solution suitable for both residential and commercial environments. The project's primary objectives revolve around maximizing the potential of ROS2 for robust communication, utilizing LiDAR technology for accurate mapping and obstacle avoidance, and designing an intuitive interface that facilitates seamless control and monitoring. The methodology adopted for this project involves the integration of ROS2 middleware, LiDAR sensors, and a meticulously crafted robot chassis, forming a comprehensive autonomous cleaning system. This integration not only contributes to the practical applications of autonomous cleaning but also serves as an invaluable educational tool. Thus, the Autonomous Mobile Vacuum Cleaning Robot stands as a groundbreaking endeavour poised to revolutionize indoor cleaning processes. By harmonizing state-of-the-art technologies, this project not only addresses the immediate demand for autonomous cleaning solutions but also opens up new possibilities in the fields of robotics and automation. Its potential impact extends beyond functionality, offering a gateway for exploration and innovation in the dynamic landscape of robotics and intelligent systems.

No. of Pages : 8 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :07/08/2024

(21) Application No.202441059775 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : BIOMETRIC AUTHENTICATION SYSTEM FOR FOYER ACCESSING

(51) International classification	:G06F0021320000, G06V0040160000, G07C0009250000, G07C0009370000, G07C0009000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

BIOMETRIC AUTHENTICATION SYSTEM FOR FOYER ACCESSING ABSTRACT The invention pertains to a biometric authentication system tailored for secure and efficient access to building foyers. This system employs multiple biometric modalities, including fingerprint scanning, facial recognition, and iris scanning, to ensure high accuracy and security. Advanced algorithms facilitate rapid identification and verification, thereby reducing wait times and enhancing user experience. The user-friendly interface guides users through the authentication process with clear instructions and real-time feedback, improving usability and adoption rates. Moreover, the system integrates seamlessly with existing building management systems, allowing centralized control and monitoring. Robust security features, such as data encryption and real-time alerts, safeguard the integrity and confidentiality of biometric data. This comprehensive approach addresses current challenges in access control, providing a modern and reliable solution for both residential and commercial buildings.

No. of Pages : 10 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/08/2024
(21) Application No.202441059789 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A PROCESS AND COMPOSITION FOR ENHANCING THE ORAL BIOAVAILABILITY OF IPRIFLAVONE

(51) International classification	:A61K0009000000, A61K0031352000, A61K0047600000, A61K0009510000, A61K0031337000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A solution to overcome the poor oral bioavailability of Ipriflavone (IP) due to low solubility coupled with extensive first-pass metabolism made with the mixture of ingredients such as, Ipriflavone (102), Glyceryl Monostarate (GMS) (104), D-alpha-tocopherol polyethylene glycol succinate 1000 (TPGS) (110), Span 80 (106) and distilled water (108) in certain composition so that the oral bioavailability of Ipriflavone can be increased and eventually increase the ability of the drug to be absorbed and used by the body. The proposed PEGylated SLN is a unique invention which is stable and overcomes the challenges of absorption and hepatic first-pass effect thereby increasing the drug's bioavailability.

No. of Pages : 29 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/08/2024
(21) Application No.202441059792 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A PROCESS OF PREPARATION OF A VITAL DRINK FOR SLEEP INDUCTION AND MUSCLE STRENGTH AND PRODUCT THEREOF

(51) International classification :A23L2/38, A23L33/105, A23L5/10, A61K36/88, A61K36/35, A61K36/28
(86) International Application No :NA
Filing Date :NA
(87) International Publication No: NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
TITLE: A PROCESS OF PREPARATION OF A VITAL DRINK FOR SLEEP INDUCTION AND MUSCLE STRENGTH AND PRODUCT THEREOF APPLICANT: SREE BALAJI MEDICAL COLLEGE AND HOSPITAL ABSTRACT The present invention discloses a process of preparation of a vital drink for sleep induction and muscle strength comprises of following step; a. preparation of banana leaf extract comprises of washing banana leaf with water followed by cutting and grinding cut banana leaf with water followed by filtration to obtain filtrate of banana leaf extract; b. preparation of Valerian root extract comprises of washing Valerian root with water followed by cutting and grinding cut Valerian root with water followed by boiling and filtering to obtain filtrate of Valerian root extract; c. preparation of Chamomile flower extract comprises of washing Chamomile flower with water followed by boiling and filtering to obtain filtrate of Chamomile flower extract; d. mixing the banana leaf extract, Valerian root extract and Chamomile flower extract followed by adding Saffron threads and honey followed by refrigeration to form vital drink for sleep induction and muscle strength.

No. of Pages : 16 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/08/2024
(21) Application No.202441059793 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD OF DETECTING MORPHOLOGY OF URINARY SEDIMENTS USING BEETROOT JUICE

(51) International classification	:G01N0033493000, G01N0001300000, A61K0036210000, G01N0033520000, A23L0002600000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
TITLE: A METHOD OF DETECTING MORPHOLOGY OF URINARY SEDIMENTS USING BEETROOT JUICE APPLICANT: SREE BALAJI MEDICAL COLLEGE AND HOSPITAL ABSTRACT The present invention discloses a method for detecting morphology of urinary sediments using beetroot juice. The method of the present invention comprises of following steps; a. centrifuging urine sample to form supernatant and residue of urinary sediments, in which supernatant is discarded; b. blending 250gm of beetroot using a blender followed by filtering to form stain solution; c. adding the stain solution to the residue followed by mixing for 5 minutes followed by observing under microscope in 45x to determine urinary sediments morphology.

No. of Pages : 15 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/08/2024
(21) Application No.202441059794 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : PULMONARY FUNCTION TESTING (PFT) SYSTEM

(51) International classification :A61B0005087000, A61B0005000000, A61B0005097000, A61B0005091000, A61B0005080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
TITLE: PULMONARY FUNCTION TESTING (PFT) SYSTEM APPLICANT: SREE BALAJI MEDICAL COLLEGE AND HOSPITAL ABSTRACT The present invention discloses a pulmonary function testing (PFT) system[1]. The system[1] of the present invention comprises of a. a spirometer[2] adapted to receive respiratory airflow from a subject through an airflow tube[3] and configured to process the received air and to display results of pulmonary function of the subject in a display screen[4] and to print receipt of interpretation; b. the mouthpiece[5] comprises of an elliptical shaped member having • an attachment extension[6] to fit to the airflow tube[3]; • a user engagement portion[7] for user to place in mouth to blow air; • a filtering portion[8] between the attachment extension[6] and user engagement portion[7] for placing a membrane/filter configured to trap microorganisms in the air blown by the user; characterized in the membrane/filter comprises of PFT filter[9] coated with silver nanoparticles thereby minimizing risk of cross-contamination and optimizing test accuracy.

No. of Pages : 24 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/08/2024
(21) Application No.202441059795 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A PROCESS OF PREPARATION OF SELF-HEALING BIO-CEMENT AND PRODUCT THEREOF

(51) International classification :C09K0008880000, B01J0035310000, C04B0014060000, B01J0035690000, B22C0009100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
TITLE: A PROCESS OF PREPARATION OF SELF-HEALING BIO-CEMENT AND PRODUCT THEREOF APPLICANT: SREE BALAJI MEDICAL COLLEGE AND HOSPITAL ABSTRACT The present invention discloses a process of preparation of Self-healing bio-cement comprises of following steps; a. mixing 250 g of autoclaved sand, 50gms of Mussel's Adhesive proteins and 50gms of nano graphene oxide to form a sand mixture; b. adding 250 mL of the bacterial culture to the sand mixture to form microbial sand mixture; c. adding 100 mL of the fixation solution containing 8% of nutrient broth supplemented with 0.3M Urea and 0.2M Ca2+ to the microbial sand mixture to form self-healing bio-cement. The present invention also discloses a self-healing bio-cement prepared by the process as described above.

No. of Pages : 22 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/08/2024

(21) Application No.202441059800 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AN HERBAL LIQUID SOAP FORMULATION AS ADJUVANT SPRAY - WASH AND STICKER CUM SPREADER

(51) International classification :A01N0043900000, A01N0033120000, A01N0057160000, A01N0025020000, A01N0025300000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The present invention involves a herbal liquid soap adjuvant formulation designed to enhance the application and efficacy of ecologically safer insecticides, such as azadirachtin. The formulation utilizes phytochemicals to minimize resistance in pest management. The adjuvant demonstrates a synergistic effect, increasing azadirachtin efficacy by approximately 30%, potentially reducing the frequency of sprays needed. The liquid formulation, easy to apply and disperse, targets pests such as aphids, thrips, whitefly and mealybugs, etc, which are significant vectors for viruses and other pathogens. The invention aims to provide an effective, environmentally friendly solution for pest management, promoting sustainable agriculture. The ingredients of the present invention provide effective pest control as an adjuvant, stability, and a desirable olfactory profile. The formulation's synergistic combination of active ingredients enhances pest control and offers a stable, effective, and environmentally friendly solution for pest management.

No. of Pages : 29 No. of Claims : 18

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :07/08/2024

(21) Application No.202441059804 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : ENERGY-EFFICIENT IOT SENSOR NETWORK FOR ENVIRONMENTAL MONITORING

(51) International classification	:H04W0052020000, H04W0084180000, H02J0007000000, G06F0001320300, H04L0067560000
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
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(57) Abstract :

Abstract The invention pertains to an energy-efficient IoT sensor network designed for environmental monitoring. This network comprises multiple sensor nodes, each equipped with a low-power microcontroller, environmental sensors, and an energy-harvesting module to capture ambient energy, such as solar or vibrational energy, to extend battery life. The nodes incorporate a power management unit and adaptive sampling protocols that optimize data collection and transmission based on real-time conditions and energy availability. Additionally, data is aggregated and compressed to minimize transmission requirements. Sensor nodes feature a sleep mode to conserve energy during inactivity and perform local edge computing for preliminary data analysis and anomaly detection. This integrated approach ensures the network operates efficiently in remote or resource-constrained environments, providing accurate, real-time environmental data while addressing the challenges of energy consumption and network sustainability.

No. of Pages : 14 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/08/2024
(21) Application No.202441059805 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A COOLANT FILTER DEVICE

(51) International classification :B60J0007220000, H01R0013627000, F16L0037140000, E21B0017046000, B01D0035020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A wind deflector device for a vehicle [0031] The present invention discloses a coolant filter device for non-inline piping circuits. The device (100) features an L-shaped casing (101) that reduces packaging constraints and simplifies construction. The first end (101a) of the casing (101) integrates a quick connector (102) with a circular opening (104), washer (105), O-ring (106), and lock pin (107) for secure attachment to a coolant pump (103). The second end (101b) has a threaded portion (114) for securing a coolant hose connector (109) with a lock nut (108). The casing (101) includes a cylindrical body (111) housing a filter element (112) and connectors for coolant filtration, with recesses (113) for O-rings (106). The quick connector (102) allows easy disconnection, and the casing includes a groove (116) for the lock pin (107). (Figure 1)

No. of Pages : 22 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/08/2024
(21) Application No.202441059810 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AN INGENIOUS AI TOOL “BRAIGHTMIND” FOR IMPLEMENTING ACTIVE LEARNING STRATEGIES

(51) International classification :G06Q0050200000, G06F0040300000, G09B0019000000, G09B0007000000, G06N0020000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The AI tool "brAIghtmind" is revolutionizing educational practices through its adaptive learning capabilities, facilitated by advanced technologies such as Natural Language Processing (NLP), Machine Learning (ML), and Deep Learning (DL). This customization enhances engagement and effectiveness by delivering personalized learning experiences. These tools engage students in real-time interactions, helping them grasp concepts more effectively and reinforcing learning outcomes. They predict individual progress and recommend personalized materials, ensuring a more comprehensive and efficient learning process. These platforms cultivate hands-on skills and critical thinking abilities, bridging the gap between theoretical knowledge and practical application. "brightmind" and similar AI tools are reshaping education by enhancing personalization, interactivity, and efficiency in learning processes while also addressing ethical concerns to foster a responsible and equitable learning environment.

No. of Pages : 16 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/08/2024
(21) Application No.202441059811 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD OF DESIGNING THE DOWNSIZED AND TRANSMUTED W WEIR FOR EFFECTIVE SCOUR REDUCTION AT THE VICINITY OF THE CYLINDER-SHAPED PIER.

(51) International classification	:E01D0019020000, E02B0003260000, E01D0021000000, E02B0017000000, G06T0017050000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to the scour countermeasures on a circular bridge pier. A downsized and transmuted W weir is the improvement over the stream-spanning W weir to minimize the scour at each bridge pier. The embodiment of the invention comprises the optimum height, size, and positioning a W weir from a pier. An optimal structural arrangement of the downsized W weir is 2.0D (D= pier diameter) size with an elevation of 1.0D positioned at an interval of 2.0D from the upstream face of the pier, which could effectively control the scour up to 50% at the neighborhood of the pier. For the transmuted W weir, a weir 1.5D-sized, having an elevation of 2.0D situated at an interval of 2.0D from the windward side of a pier, is considered the optimal structural configuration, providing nearly 60% scour reduction.

No. of Pages : 15 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202441059828 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : TRAFFIC MANAGEMENT USING MACHINE LEARNING

(51) International classification	:A43B0005120000, G08G0001010000, G08G0001080000, G06N0020000000, G06Q0050260000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Abstract The ever-growing tide of vehicles on our roads has painted a grim picture: a world choked by gridlock, with majorjunctionstransforming into time-devouring black holes. While traditional traffic management systems hold sway in low-density landscapes, they unravel under the dynamic ebb and flow of modern traffic. This project proposes a bold departure from the static status quo: a transformative leap to dynamic traffic signal switching, powered by the cutting edge of machine learning and artificial intelligence. Our ambition isto dismantle the rigid confines of current infrastructure and pave the way for a new era of urban mobility. We envision a traffic ecosystem that breathes with the city itself, a pulsating network of intersections that adapt in real-time to the ever-shifting dance of vehicles. Predictive analytics will become our crystal ball, forecasting traffic patterns and tailoring signal sequences with exquisite precision to melt away congestion and usher in an era of optimized flow. Imagine arteries of your city pulsing with a newfound rhythm, signal durations dictated not by rigid schedules, but by the dynamic symphony of traffic itself. This is the future we strive for: a cityscape unshackled from the gridlock's chokehold, where intelligent traffic management fosters a seamless, productive urban experience. ii No longer will precious hours be sacrificed at the altar of outdated signal cycles. Instead, our dynamic system empowers cities to breathe, to adapt, and to transform the very essence of urban mobility from a source of frustration into a harmonious ballet of efficient movement. This is the transformative essence of our project: a reimagining of traffic management where intelligence reigns supreme, weaving a tapestry of optimized flow and rediscovering the true rhythm of a city in motion.

No. of Pages : 10 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/08/2024

(21) Application No.202441059832 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : WATER WAVE OPTIMIZATION ALGORITHM BASED DEEP LEARNING MODEL FOR DETECTION AND CLASSIFICATION OF SKIN CANCER

(51) International classification :G06T0007000000, G06N0003080000, G06N0003045000, A61B0005000000, G16H0030400000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Water Wave Optimization Algorithm (WWOA) based Deep Learning Model for the detection and classification of skin cancer presents a novel approach integrating advanced computational techniques to enhance diagnostic accuracy. The model leverages the WWOA, a nature-inspired optimization algorithm mimicking the propagation and refraction of water waves, to optimize the hyperparameters of a deep learning architecture specifically designed for medical image analysis. This hybrid system effectively improves the performance of convolutional neural networks (CNNs) in identifying and categorizing various types of skin cancer from dermoscopic images. The integration of WWOA with deep learning not only accelerates the training process but also enhances the model's precision and reliability, making it a significant advancement in the field of medical diagnostics and skin cancer detection.

No. of Pages : 16 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202441059834 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SYSTEM FOR DETECTING LOW FREQUENCY OSCILLATION IN POWER SYSTEM

(51) International classification	:H05K0007140000, A61B0005145500, A61B0005000000, H02J0003240000, G06Q0010063100
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed herein is a system for detecting low frequency oscillation unit of a power grid system, the system (100) comprises an input unit (102) configured to receive a plurality of phases from a power grid system; a microcontroller (104) configured to process input received from the input unit (102) wherein, the microcontroller (104) further comprises of : a pre-processing module (106) connected with a server assembly (108) configured to process the input and perform various pre-defined steps as to maintain a smooth flow of electricity in a power grid system; an oscillation analysis module (110) configured to analyse the detected low frequency oscillation of the processed data received from the pre-processing module (106) and further extract relevant parameters; an early warning alerts module (112) configured to set a threshold limit and if the threshold limit exceed it starting making alert and a reporting module (114).

No. of Pages : 26 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024

(21) Application No.202441059835 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SOLAR-POWERED HYDROPONIC SYSTEM USING DUAL-AXIS SOLAR TRACKER

(51) International classification	:H02S0020320000, F24S0030000000, G06F0003060000, F24S0050200000, G01C0019560000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Disclosed herein is a solar-powered hydroponics system with a dual-axis solar tracker (100) comprising a light-dependent resistor (LDR) (102) mounted on a plurality of solar panels (104) configured to detect the direction having the maximum intensity of sunlight and further generate a light detection signal, a microcontroller (106) connected with the light-dependent resistor (LDR) (102) configured to process the light detection signals, a plurality of sensors (108) connected with the microcontroller (106) configured to detect the amount of water in a tank and check the nutritional value of the water in the tank for adequate growth of the plants.

No. of Pages : 30 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/08/2024

(21) Application No.202441059836 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : SECURE AND USER-FRIENDLY FACE RECOGNITION SYSTEM FOR OFFICE AND HOME AUTOMATION

(51) International classification	:G06V0040160000, G06V0040400000, G07C0009000000, G06N0003045000, G06F0018214000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

This invention presents a Secure and User-Friendly Face Recognition System designed for office and home automation. Utilizing advanced facial recognition technology, the system verifies an individual's identity by matching their facial image with stored database records, thereby providing seamless access control without physical interaction, unlike traditional key-based systems. The system requires only a camera for recognition, ensuring ease of installation and user operation. This paper examines different methodologies in Face Recognition, beginning with face detection and cropping, where we compare the classical Viola-Jones face detection method with Multi-Task Convolutional Neural Networks (MTCNN) for their detection quality and processing efficiency. The resulting classifier accurately matches live camera feeds with database images. To enhance security, the system incorporates a spoof detection mechanism to counteract unauthorized access attempts, such as using a photo of an authorized person displayed on a phone screen. This added layer of security ensures that the system remains robust against common bypass techniques, providing reliable and secure access control for both office environments and home automation systems.

No. of Pages : 7 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/08/2024

(21) Application No.202441059837 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : INFLUENCE OF SB DOPING ON SNS THIN FILMS

(51) International classification	:H01L0031180000, H01L0031032000, H01L0031200000, H01L0031029600, G06Q0050000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

ABSTRACT In the recent times, SnS thin films drew much attention for obvious reasons like abundancy, and lesser toxic nature. Researchers across the world proved the suitability of SnS thin films for Photovoltaic(PV) applications,as absorber layer in a solar cell.We made an attempt here to establish the suitability of Antimony (Sb) – doped SnS thin films for Photovoltaic applications. Chemical Bath Deposition (CBD) method was used to deposit the pristine and Antimony doped SnS thin films. The properties like structural, optical, and electrical were studied besides studying the composition of the grown films.The crystallinity of the deposited films showed an improving trend with the Sb-doping concentration till 5 atomic percentage. The optical band gap showed variation between1.147eV to1.25eV.The electrical resistivity and the charge carrier concentration marked opposite trends with the former decreasing significantly while the latter increasing with the Sb-doping concentration. Electrical resistivity as low as 2.72 x 10-2 ohm-cm and carrier concentration as high as 3.65 x 1019 cm -3 were exhibited by 5 atomic % Sb doped SnS films.

No. of Pages : 5 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024

(21) Application No.202441059856 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : DESIGN OF POWER MANAGEMENT CONTROL OF EHV USING INTERNET OF THINGS

(51) International classification :B60W0010060000, B60W0010080000, B60W0010260000, G06F0001320300, H02J0007000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Design of Power Management control of EHV using Internet of Things, proposes the hybrid vehicle power management system in order to efficiently use the peripherals available in the electric vehicle and to increase the mileage of vehicle with minimum power source. The invention categorizes the peripherals available in the electric vehicle into three types which are mandatory, less priority/moderate peripherals and luxury peripheral devices. The main aim of this work is to travel a certain distance for reaching the destination/next charging station with available power sources by the power management program and power demand limitation.

No. of Pages : 9 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202441059857 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : HIGH GAIN SEPIC DC-DC CONVERTER FOR PV APPLICATIONS

(51) International classification :H02M0003158000, H02M0001000000, H02M0003155000, H02M0003000000, H02M0001140000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A novel high-efficiency transformerless High Gain Sepic DC–DC converter is proposed in this work. The presented converter voltage gain is higher than that of the conventional boost, buck–boost, CUK, SEPIC and ZETA converters, and high voltage gain can be obtained with a suitable duty cycle. The voltage stress across the power switch is low. Hence, the low on-state resistance of the power switch can be selected to decrease conduction loss of the switch and improve efficiency. The input current ripple in the presented converter is low. The principle of operation and the mathematical analyses of the proposed converter are explained. The validity of the presented converter is verified by the simulation results in MATLAB software and experimental results based on the prototype circuit with 250 W.

No. of Pages : 9 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202441059861 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : QUAMIN AGRICARE 1.0: A PRECISION AGRICULTURE PLATFORM FOR OPTIMIZED CROP MANAGEMENT AND FOOD SAFETY

(51) International classification :H04L0009000000, G06Q0050020000, H04L0009320000, G06Q0030018000, H04L0009060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT Quamin AgriCare 1.0 is a comprehensive platform leveraging IoT, AI, and blockchain technologies to revolutionize agriculture and food safety. The platform integrates precision farming, predictive analytics, and supply chain management to enhance crop yields, reduce waste, and ensure transparency. Farmers, Local Agriculture Researchers (Scientists), suppliers, and consumers are connected through a decentralized network, enabling data-driven decision-making, traceability, and smart contracts. Quamin AgriCare 1.0 transforms the agriculture industry, promoting sustainability, efficiency, and trust.

No. of Pages : 7 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024

(21) Application No.202441059877 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : CROP PREDICTION USING MACHINE LEARNING TECHNIQUES

(51) International classification	:G01B0003100300, C12N0001200000, G06Q0050020000, H01L0029739000, G06Q0030060100
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
This project proposes the development of an ML and DL website aimed at enhancing farming quality by offering advanced suggestions to farmers. The website contains models that suggest suitable crops based on localities and soil types. A standout feature of this endeavor is its ability to provide suggestions on fertilizers and techniques to achieve high yields for specific crop types, which will be beneficial for farmers.

No. of Pages : 9 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024

(21) Application No.202441059889 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AI-POWERED SYSTEM FOR GENERATING PERSONALIZED LEARNING MATERIALS IN EDUCATIONAL TECHNOLOGY

(51) International classification	:G06Q0010060000, G06Q0050020000, C10G0003000000, G06Q0010063700, C10L0001020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT: Harvester for Energy Crops with Integrated Biomass Pre-Processing To address the challenges associated with traditional harvesting and transportation, the harvester incorporates an integrated biomass pre-processing system. This innovative approach aims to optimize energy crop yield, reduce operational costs, and enhance the quality of biomass feedstock for subsequent biofuel conversion. The harvester's design incorporates [briefly describe key components and their functions, e.g., cutting mechanism, 608-Aug-2024/102232/202441059889/Form 2(Title Page) conveying system, pre-processing modules]. Field experiments were conducted to evaluate the harvester's performance under various crop conditions and to assess its impact on energy crop yield, harvesting efficiency, and biomass quality. Results indicate that the integrated harvester significantly outperforms conventional methods in terms of [specific performance 5 metrics, e.g., harvesting time, field losses, energy consumption]. Furthermore, the pre- processed biomass exhibited improved characteristics, including [desired biomass properties, e.g., reduced moisture content, increased particle size uniformity], leading to enhanced biofuel conversion efficiency. Economic analysis revealed that the harvester offers a competitive return on investment due to increased productivity, reduced labor requirements, 10 and potential revenue generation from higher-quality biomass. Life cycle assessment was conducted to evaluate the harvester's environmental impact, demonstrating a net reduction in greenhouse gas emissions compared to conventional practices. Overall, the developed harvester represents a significant advancement in energy crop harvesting technology, providing a promising solution for the sustainable production of biofuels and other bio-based 15 products.

No. of Pages : 9 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202441059917 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A PHENYL DERIVATIVE AND PREPARATION THEREOF

(51) International classification :A61P0029000000, A61P0035000000, A61P0003060000, A61P0027100000, A61P0011080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure relates generally to the field of fertility-enhancing compound. More specifically, the present disclosure relates to the process for the preparation of a phenyl derivative, its solvate, its stereoisomer, or a pharmaceutically acceptable salt thereof. Further phenyl derivatives provide excellent fertility-enhancing effects of alcohol-induced reproductive toxicity in mouse Leydig TM3 cells.

No. of Pages : 25 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/08/2024

(21) Application No.202441059928 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : FOOT STEP POWER GENERATION

(51) International classification :H02N0002180000, H10N0030300000, G06F0030200000, H02J0007350000, G06Q0010063700

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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7)Dr. P. V. V Rama Rao

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(57) Abstract :

Footstep power generation is an innovative and sustainable approach to harnessing energy from human movement. This project explores the design and implementation of a system that converts the mechanical energy generated by footsteps into electrical energy. The system utilizes piezoelectric materials, which generate an electric charge when subjected to mechanical stress. As individuals walk over the embedded piezoelectric sensors,the pressure exerted is converted into electrical energy, which is then stored in batteries for future use. The objective of this project is to develop a cost-effective and efficient energy-harvesting solution that can be integrated into high-footfall areas such as sidewalks, shopping malls, and public transportation hubs. The design process includes selecting appropriate piezoelectric materials, optimizing the sensor layout, and integrating a power management system to maximize energy storage and utilization. Experimental results demonstrate the feasibility of generating significant electrical power from footsteps,contributing to the reduction of reliance on traditional energy sources and promoting green energy solutions.This technology has the potential to power low-energy devices and contribute to smart city initiatives byproviding a renewable energy source that leverages everyday human activity. The successful implementation of footstep power generation systems can pave the way for sustainable energy solutions in urban environments,enhancing both energy efficiency and environmental conservation.

No. of Pages : 7 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202441059938 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SPONGE GOURD LOOFAH AS ORGANIC SUBSTRATE FOR SEEDLING RAISING

(51) International classification :A61K0036420000, A01G0009029000, A01G0022050000, A01G0024000000, A01G0022000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT The innovation resides in using the de-skinned dried fruits of luffa cylindrica filled with red spoil /coco peat/farm yard manure for raising nursery seedlings in organic way. In this method, initially de-skinned dried fruits of luffa cylindrical are filled with red spoil /coco peat/farm yard manure. Then, seeds are sown to 1-2cm depth in luffa structure and watered. All these kind of luffas are kept side by side for better mechanical strength. Based on the crop, seedling will be ready to transplant in the main field in 21 days in case of tomato, within 25 days in case of cabbage and cauliflower, 35 days in case of brinjal and 45 days in case of chilli. The seedlings raised in the innovated way are organic seedlings, free from plastic particle contamination, faster growth of the seedlings due to better aeration provided by the natural fibers (porous nature of luffa), seedlings can be transplanted along with luffa base without disturbing root structure for faster seedling establishment in field or pots, thereby early flowering and fruiting can be realized. The luffa structure can also be used three to four times for seedling growth.

No. of Pages : 7 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202441059939 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : BASED REFRIGERATION AND AIR CONDITIONING OBSERVATION SYSTEM

(51) International classification :F24F0011300000, G01W0001100000, F24F0011460000, C09K0005040000, F24F0011580000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT Transport Refrigeration Systems,Sustainable, meaning not powered by diesel engine(powered by other methods, battery, solar, regenerative energy, etc.) and also can cover low gwp natural refrigerants like (Propane R290 , or CO2), can cover AI, iot, telematics, predictive in transport refrigeration , or general refrigeration).Information pertaining to the development of artificial intelligence (AI) technology for improving the performance of heating, ventilation, and HVAC (heating, ventilation, and air conditioning) systems. Just three features—weather forecasting, optimization, and predictive controls—of the eighteen AI tools created for HVAC management during the previous 20 years have gained traction. The evidence that has been given indicates that HVAC systems with AI capabilities save less energy than those with standard energy management system (EMS) regulating methods. This is a result of the current sensors' inability to provide the necessary level of AI capabilities. The majority of current sensors have errors of less than 5%. With the exception of weather forecasts, the majority of AI technologies' prediction errors exceed 7%. The highest saving ratios and energy saving percentages of various HVAC control types may be assessed using the normalized Harris index (NHI). The highest energy savings ratio and the predicted average energy savings percentage of AI-assisted HVAC control are 44.084% and 14.48%, respectively, based on the NHI. of this research series contains data pertaining to the idea that AI forecasting or prediction technologies have lower accuracy.

No. of Pages : 10 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202441059940 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : POWER OF THE PAWNS: GASTRO-ENTERITIS TREATMENT BOARD GAME

(51) International classification	:A63F0003000000, G16H0070200000, G09B0019000000, G16H0050200000, G16H0050700000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT POWER OF THE PAWNS: GASTRO-ENTERITIS TREATMENT BOARD GAME The present invention, titled "Power of the Pawns: Gastro-enteritis Treatment Board Game," is a revolutionary educational tool designed to teach healthcare professionals and students the principles of rational antimicrobial use in treating gastroenteritis. This innovative board game combines entertainment with medical education, addressing the critical issue of antimicrobial resistance (AMR) by promoting appropriate drug selection, dosage, and treatment duration. The game comprises a meticulously designed board, pawns representing various clinical conditions, a dice, a score sheet and a rulebook. The board features a unique circular layout with 16 houses divided into sections for clinical conditions and treatment options, color-coded for easy identification. The pawns are three-dimensional, durable, and vividly printed with condition names. Gameplay involves players rolling the dice, moving pawns to match clinical conditions with correct treatments, and scoring points based on accuracy, fostering active learning and knowledge retention. The game is expandable, allowing for updates with new medical knowledge and additional modules. Enhanced with features such as a dual-layer board, dynamic feedback, and potential VR integration, "Power of the Pawns" offers a comprehensive, engaging, and impactful learning experience, making it an invaluable tool in medical education and the fight against AMR. Fig. 1

No. of Pages : 20 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202441059963 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR DETECTING AND REPORTING CHUCKHOLE-CENSUS DATA IN REAL-TIME

(51) International classification	:G01C0021360000, G08G0001160000, G06V0020560000, G06T0007000000, B60Q0001500000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present disclosure relates to a system for detecting and reporting chuckhole-census data in real-time. The system include accelerometers (114) operatively coupled processors (112), and measures vibrations on road surface to detect potential chuckhole on road surface, where accelerometers (114) transfer activation signals to processors (112) and trigger image-capturing units (116) to capture images of the road surface. The system (102) analyses images to determine potential chuckhole on road surface. The system (102) enables global positioning system (GPS) module (118) to detect location data of road surface upon determining potential chuckhole on road surface. The system (102) compiles location data of road surface with images to create chuckhole-census data of road surface. The system (102) transfer chuckhole-census data to computing device (108) associated with user (106) and enable to monitor severity of damage to road surface.

No. of Pages : 27 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202441059964 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD FOR THE BIOGENIC SYNTHESIS OF CATHODE MATERIAL AND USE THEREOF

(51) International classification	:H01M0010360000, H01M0004020000, C01G0053000000, H01M0004525000, H01M0010052000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to the field of electrode material. Specifically, the present invention relates to a method for the biogenic synthesis of cathode material. More specifically, the cathode material is a cobalt vanadate. Also, the synthesized cobalt vanadate is used as cathode material for aqueous zinc-ion batteries. The method for the synthesis is fast, reliable and simple, due to the affordability and high level of safety.

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202441059965 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SELF CLOSING TAP DEVICE

(51) International classification	:F16K0005060000, E03C0001040000, C12M0001120000, F16K0027060000, B05B0001180000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present disclosure relates generally to the field of plumbing devices. More specifically the present disclosure relates to a self closing tap device. The device (100) includes a ball valve (102), a water inlet (104), a water reservoir indicator (106), a water outlet (108), a gravity and water pressure mechanism (110) and a push lever mechanism (112). The water inlet (104) is placed above the ball valve (102) connected to a transparent water chamber. The transparent water chamber includes a water reservoir indicator (106) configured to indicate users about the availability of the water before the operation of opening the tap device (100). The water outlet (108) is aligned below the ball valve (102) in a tapering conical end. The gravity and water pressure mechanism (110) are applied to the tap device (100) configured to release water from the ball valve.

No. of Pages : 15 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202441059966 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : MOXIBUSTION THERAPY BOX FOR PREVENTING BURN RISKS AND METHOD THEREOF

(51) International classification :A61H0039060000, A61K0009000000, A61K0036282000, F28D0015040000, A61F0002000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure relates to a moxibustion therapy box (102). The moxibustion therapy box (102) includes an enclosure (104); a steel mesh (106) placed within the enclosure (104); and a mesh layer (108) coated with graphene, where the mesh layer (108) configured to enable therapeutic heat transfer from a moxa stick to a body surface through the steel mesh (106).

No. of Pages : 13 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024

(21) Application No.202441059971 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SMART NATURAL FIBER COMPOSITE WITH SELF-HEALING CAPABILITIES AND METHOD THEREOF

(51) International classification	:B29K0311100000, C08J0005040000, C08G0018760000, B29C0070220000, C04B0028020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a smart natural fiber composite material equipped with self-healing capabilities. This composite integrates natural fibers, such as jute, flax, hemp, and sisal, with a matrix material that includes embedded self-healing agents. The self-healing agents, contained in microcapsules or distributed through a microvascular network within the matrix, are designed to autonomously repair damage to the composite material. When the composite experiences mechanical damage, the microcapsules rupture or the microvascular network activates, releasing the healing agents to bond and repair the damaged areas, thereby restoring the material's structural integrity. The invention also includes a method for manufacturing such a composite, involving the preparation of natural fibers, matrix material, and self-healing agents, and the incorporation of these components into a cohesive, durable material. This smart natural fiber composite offers enhanced durability, sustainability, and reduced maintenance requirements, making it suitable for a wide range of applications, including automotive, aerospace, construction, and consumer goods. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/08/2024

(21) Application No.202441059972 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : ARTIFICIAL INTELLIGENCE-POWERED IMAGE PROCESSING PLATFORM FOR AUTONOMOUS VEHICLE NAVIGATION

(51) International classification :G06N0003080000, B60W0060000000, G06V0020580000, G16H0050200000, G06N0003045000

(86) International Application No :NA
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Filing Date :NA

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(57) Abstract :

[029] The invention relates to an artificial intelligence (AI)-powered image processing platform designed to enhance autonomous vehicle navigation. The platform integrates high-resolution image acquisition with advanced image processing and deep learning algorithms to improve the accuracy and reliability of object detection, classification, and tracking. By processing real-time visual data from onboard cameras, the system performs tasks such as object detection, semantic segmentation, and pattern recognition. The AI-driven analysis enables the generation of precise navigation commands, which are communicated to the vehicle's control systems for safe and efficient navigation. This innovative approach enhances the vehicle's ability to operate effectively in diverse and dynamic environments, significantly advancing autonomous driving technology. Accompanied Drawing [FIGS. 1-2]

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202441059974 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : HYBRID SMART CONTRACT VULNERABILITY AUDIT USING SLIDING LEXICAL AND GRAPHEME ANALYSIS INTEGRATED WITH CNN-BIGRU TECHNIQUES

(51) International classification	:H04L0009400000, H04L0009000000, H04L0009320000, G06F0021570000, H04L0009080000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Blockchain has become increasingly important in various industries, including supply chain, healthcare, voting, banking, energy trading, assert management, smart city projects, and government sectors. However, the increasing number of users and transactions through decentralized applications (dApps) attracts hackers and attackers. Smart contracts, which are digitalized agreements between parties, can be subject to manipulation and unintentional vulnerabilities. To detect vulnerabilities, a system is proposed to perform vulnerability audits on smart contracts. The system pre-processes smart contracts, removes user commands, and performs line and word tokenization. Binary encoding and grapheme encoding are used to identify hidden vulnerabilities. The lexical tokens are passed through deep learning layers, while grapheme tokens are passed through different layers. The extracted features are concatenated and two dense layers with PReLu are appended. The sigmoid classifies the results, and a report with the analyzed results is sent to the blockchain network user. This novel deep learning model can help blockchain practitioners, smart contract developers, and stakeholders recognize vulnerable activities and prevent users from falling victim to illegal activities and scammers.

No. of Pages : 7 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024

(21) Application No.202441060010 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : IOT BASED VEGETABLE CONVEYOR

(51) International classification :G06F0009480000, G06F0009500000, G06F0001200000, H04L0067125000, G06F0011300000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention relates to an IoT-based vegetable conveyor system. The system (100) comprises a conveyor belt, a plurality of IoT-enabled sensors, a control system, an edge computing device, a cloud computing platform and a user interface The conveyor belt configured to transport vegetables through a processing facility, equipped with a plurality of IoT-enabled sensors strategically positioned to monitor environmental conditions and vegetable characteristics in real-time. The system includes a control mechanism designed to automatically adjust the operational parameters of the conveyor belt based on sensor data. An edge computing device processes this data locally, enabling low-latency responses for real-time adjustments, while a cloud computing platform aggregates, stores, and analyzes the data over time. Additionally, a user interface is provided to offer real-time monitoring, data visualization, and control of the system.

No. of Pages : 12 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202441060015 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : WIRELESS INTERACTIVE KIOSK FOR AGILE MANAGEMENT USING CLOUD

(51) International classification :G06Q0010100000, G06Q0010063100, G06F0021620000, H04L0009400000, G06Q0050080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention relates to wireless interactive kiosk for agile management using cloud. The kiosk (100) comprises a high-resolution touchscreen interface, a wireless communication module, and a cloud integration system. The kiosk (100) includes integrated project management tools such as Kanban boards and Gantt charts, along with a team messaging system to facilitate real-time collaboration and task management. Enhanced with data analytics and reporting functionalities, the platform provides insights into project progress, team performance, and resource allocation. User authentication and security mechanisms protect sensitive project data, while a backend server application hosted on cloud infrastructure ensures scalability and reliability. The user-friendly interface, built using web technologies, allows for easy navigation and interaction with the tools.

No. of Pages : 12 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202441060016 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM FOR REDUCING SEA SURFACE TEMPERATURE (SST) AND SEA SURFACE AREA

(51) International classification :A01G0015000000, E02B0003040000, C02F0103080000, G06Q0010040000, B01D0053140000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Embodiments herein provided a system designed to mitigate the impacts of rising sea levels and global warming by reducing the quantum of ocean water and tidal forces. The system includes the use of metallic interphases, such as Inter-Osculation-System-Floats (IOSF) 102, and the enhancement of natural sea mounts with heat-transfer-maximizing materials to release sea surface temperature (SST) into the atmosphere. Additionally, the system performs the installation of black ceramic tiles on beaches, the construction of river-mouth dams 302 to limit freshwater inflow into oceans, and the maximization of surface rainwater collectors. These embodiments aim to prevent coastal erosion, polar melt, cyclones, and global warming, while reclaiming vast coastal land areas submerged in the sea. The implementation of these system will lead to a significant reduction in the solar radiation absorption capacity of oceans, promoting a cooler global climate and benefiting agricultural, industrial, and residential areas. FIG. 1

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(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/08/2024

(21) Application No.202441060020 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : INTEGRATING POSITIVE PSYCHOLOGY AND MACHINE LEARNING IN ENGLISH AS A FOREIGN LANGUAGE (EFL) TEACHER EDUCATION

(51) International classification	:G06Q0050200000, G09B0005060000, G09B0007020000, G09B0019000000, G16H0020700000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :

The present invention provides a system and method for enhancing English as a Foreign Language (EFL) teacher education by integrating principles of Positive Psychology with Machine Learning techniques. The system includes a database of Positive Psychology resources, a Machine Learning module that analyzes data from teacher interactions, and an adaptive learning module that dynamically adjusts training content to support both the psychological well-being and teaching effectiveness of educators. In one embodiment, the system incorporates real-time classroom data and student feedback to further personalize the training experience, offering context-aware recommendations and interventions. The invention aims to create a holistic and responsive teacher training program that fosters both professional growth and psychological resilience, leading to improved educational outcomes for teachers and their students.

No. of Pages : 20 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202441060026 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM TO PREVENT UNLOCKING OF A DOOR BY AN UNAUTHORIZED PERSON AND METHOD THEREOF

(51) International classification	:E05D0011000000, E05C0019000000, A61N0005060000, E05B0047000000, F16H0025220000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention discloses a system (100) for preventing unauthorized entry into an enclosed area (500). The system is integrated within a door (101) having a door knob (101-2) equipped with a mechanical switch (103) and a locking mechanism (102). The mechanical switch (103) transmits signals to a control unit (104) upon force application. The control unit (104) then activates a linear actuator (107) mounted on the door frame (101-1). The locking mechanism (102) employs at least three hinges (105-1, 105-2, 105-3), at least three rods (108-1, 108-2, 108-3), and the plurality of gears (109). When activated by the control unit (104), the linear actuator (107) moves the third rod (108-3) via the plurality of gears (109). The movement engages the first rod (108-1) and the second rod (108-2), effectively securing the door (101) and preventing unauthorized entry.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202441060027 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SMART DEVICE FOR MONITORING MEDICATION SCHEDULES AND DISPENSING PHARMACEUTICAL PELLETS, AND THE METHOD THEREOF

(51) International classification	:A61B0005000000, G06F0001140000, A61M0015000000, H04W0072230000, H04N0007180000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present disclosure relates to a smart device for monitoring medication schedules and dispensing pharmaceutical pellets. The smart device (102) includes memory (204) coupled to processors (112), said memory (204) stores instructions which when executed by processors (112) cause smart device (102) to monitor real-time clock time with medication schedules scheduled by user (106). The smart device (102) synchronizes real-time clock time with medication schedules and determines predetermined time values from medication schedules. The smart device (102) transfers activation signals to stepper motor (116) upon determining predetermined time value and triggers stepper motor (116). The smart device (102) actuates linear actuation unit (118) using stepper motor (116) based on activation signals and dispenses designated pharmaceutical pellet on pull rack (126) from designated slots (114-1), (114-2), or (114-N) among slots (114), pull rack (126) enables user (106) to collect designated pharmaceutical pellet.

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202441060028 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR EXTINGUISHING FIRES

(51) International classification :A62C0027000000, A62C0099000000, A62C0003020000, A62C0031280000, A62C0003000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
Embodiments of the present disclosure relate to a system (100) and method (200) for extinguishing fires in narrow lanes and alleys and other congested public spaces. The system (100) includes a platform (102) configured to be detachably engaged with a fire engine (120). The platform (102) is configured to enable manoeuvring of the fire engine (120) for extinguishing fires in narrow spaces and is provided with a height-adjustable ladder (108) configured to allow a user to reach elevated areas for extinguishing fire. The platform (102) of the system (100) can be easily moved around obstacles, parked cars, and through congested areas, thereby providing quick access to the fire scene. Further, the system (100) enables firefighters to position the platform (102) close to the fire while keeping the fire engine (120) in a safe location in narrow lanes and alleys, cramped housing complexes, and congested areas, that are otherwise inaccessible by conventional fire engines.

No. of Pages : 19 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/08/2024

(21) Application No.202441060042 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : ALTITUDE OPTIMIZATION USING PYTHOGOROUS THEOREM

(51) International classification	:G05D0001000000, B64B0001620000, G06F0008410000, G06F0017000000, B67D0001000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

ABSTRACT The present invention relates to a system and method for altitude optimization using the Pythagoras theorem. The system includes a horizontal distance sensor and a direct distance sensor for measuring distances d and a, respectively. A processing unit calculates the altitude h using the formula, and an adjustment mechanism modifies the object's altitude based on this calculation. The method involves measuring d and a, computing h, and adjusting altitude accordingly. This approach offers improved accuracy and real-time responsiveness for altitude control across various applications.

No. of Pages : 12 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202441060069 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SMART AUTO JOB APPLICATION

(51) International classification :G06Q0010105300, G06Q0030020100, G06Q0010063100, G06Q0040060000, G06Q0010040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The current job application process is a challenging and often tedious endeavour. It is largely manual, requiring job seekers to navigate through numerous steps that collectively demand a substantial investment of time and effort. On average, job seekers spend around 30 days meticulously completing applications, tailoring resumes, and writing cover letters for each position they are interested in. This process is not only time-consuming but also mentally exhausting, as job seekers must keep track of various deadlines, requirements, and follow-ups. There are two primary avenues through which job seekers typically approach the application process. The first is to apply for jobs independently, managing all aspects of the application themselves. This involves researching potential employers, identifying suitable job openings, and customising their application materials for each position. While this approach allows for a high degree of personalisation, it also requires significant time and effort. Job seekers must ensure that each application aligns closely with the specific requirements of the job, a task that can become increasingly difficult when applying for multiple positions simultaneously. The second option available to job seekers is to engage placement firms or career advisors. These professionals offer services to apply for jobs on behalf of the job seekers, often at a considerable cost. However, despite the financial investment, there are no guaranteed results. Placement firms and career advisors can assist in refining resumes, identifying potential job matches, and even submitting applications, but the outcome remains uncertain. Job seekers may still find themselves without job offers despite the additional expenditure. Both of these approaches have inherent drawbacks. The manual nature of the process leads to significant errors. For instance, job seekers might mistakenly send the wrong version of their resume or cover letter, overlook specific application requirements, or miss deadlines. These errors can be costly, leading to missed opportunities and prolonged job searches. Moreover, the substantial amount of effort and money involved—both direct and indirect—adds to the stress and financial burden faced by job seekers. Recognising these challenges, our team has developed a revolutionary solution: the Smart Auto Job Application algorithm. This innovative technology is designed to streamline the job application process, making it more efficient and less burdensome for job seekers. The algorithm leverages advanced artificial intelligence and machine learning techniques to match job seekers with positions that precisely align with their skills, competencies, preferred work area, job type, and location. One of the key advantages of the Smart Auto Job Application algorithm is its inclusivity. It is designed to assist job seekers regardless of their experience, industry, or background. Whether someone is a recent graduate entering the job market for the first time, a mid-career professional seeking a change, or an experienced worker looking to advance their career, the algorithm can cater to their needs. This universal applicability ensures that all job seekers can benefit from the technology. The algorithm operates with remarkable precision. By analysing a job seeker's profile, which includes their skills, competencies, and preferences, it identifies job opportunities that are the closest match. This eliminates the need for job seekers to sift through countless job listings, saving them significant time and effort. Instead of manually customising each application, job seekers can rely on the algorithm to do the heavy lifting. With just a click of a button, they can apply to multiple positions that are well-suited to their qualifications and preferences. In addition to reducing the effort required, the Smart Auto Job Application algorithm also cuts down on costs. Job seekers no longer need to spend money on placement firms or career advisors. The algorithm provides a cost-effective alternative that delivers results efficiently. By minimising manual errors and ensuring that applications are tailored to match job requirements, the algorithm enhances the chances of landing the right job. The benefits of the Smart Auto Job Application algorithm extend beyond mere convenience. By helping job seekers apply to the closest matching jobs, the algorithm significantly improves their chances of securing employment quickly. When job seekers apply for positions that align closely with their skills and preferences, they are more likely to stand out to employers. This leads to higher response rates, more interviews, and ultimately, more job offers. Furthermore, the algorithm's efficiency has broader implications for the job market. By reducing the time and effort required to find suitable job matches, it enables job seekers to focus on other aspects of their job search, such as preparing for interviews and enhancing their skills. This holistic approach to job seeking can lead to better-prepared candidates and more successful job placements. The Smart Auto Job Application algorithm also has the potential to transform the hiring process for employers. Employers often receive a high volume of applications, many of which are not relevant to the job opening. This can make it challenging to identify the most suitable candidates. By ensuring that applications are closely matched to job requirements, the algorithm helps employers receive more relevant applications. This streamlines the hiring process, saving time and resources for employers and leading to more effective recruitment. In conclusion, the current job application process is fraught with challenges that can be overwhelming for job seekers. The manual, multi-step process requires substantial time and effort, often with no guaranteed results. By contrast, our Smart Auto Job Application algorithm offers a transformative solution. It streamlines the application process, reduces manual errors, cuts down on costs, and significantly improves the chances of job seekers landing suitable positions. By matching job seekers with the closest matching jobs quickly and efficiently, the algorithm not only enhances the job search experience but also contributes to a more effective and efficient job market. This innovative technology is poised to revolutionise the way job seekers find employment, making the process faster, easier, and more successful.

No. of Pages : 16 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/08/2024

(21) Application No.202441060070 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : AN AWARENESS AND PERCEPTION TOWARDS EMPLOYEES TRAINING AND DEVELOPMENT IN ORGANISATION

(51) International classification	:G06Q0010063900, G06Q0010105000, G06Q0010063000, G16H0050700000, G06Q0010101000
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(87) International Publication No	: NA
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(57) Abstract :

[05] Training and development have become critical and strategic investments in human resource capital. These programs play a significant role in enhancing employee performance and organizational profitability. Employees' perceptions of training and development activities foster a sense of value through social exchange, which in turn strengthens the relationship and loyalty between employees and the organization. This study aims to explore employees' perceptions of the existing training and development programs provided by their organization and to investigate their satisfaction with these training initiatives. Using a quantitative research method, 350 questionnaires were distributed to employees who had participated in training activities within the Indian banking sector, achieving a notable response rate. Data analysis was conducted using IBM SPSS software, including reliability tests and factor analysis. The results indicate a strong relationship between employees' job satisfaction and their overall satisfaction with the training received. Employees value training activities when they believe these will enhance their ability to perform their tasks, which also boosts their satisfaction and motivation.

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(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/08/2024

(21) Application No.202441060071 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : EMPOWERING EDUCATION THROUGH DYNAMIC ALGORITHMIC FRAMEWORKS: A SYSTEM FOR REAL-TIME DATA ANALYSIS

(51) International classification	:G06Q0050200000, G09B0019000000, G09B0007020000, G09B0007000000, G09B0005060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

The present invention relates to a system for enhancing education through real-time data analysis and adaptive learning. The system features a data collection module that gathers real-time data from various educational activities, a dynamic algorithmic processing unit that analyzes this data to identify learning patterns and adapt content, and an adaptive learning interface that customizes educational resources based on the analysis. Additionally, the system includes a real-time feedback mechanism for both students and educators. In a second embodiment, the system integrates a collaborative learning module, an advanced analytics engine, and an integration framework for external educational tools, further enhancing its capability to support personalized and effective learning experiences. This invention provides a dynamic, data-driven approach to education, improving student engagement and educational outcomes through timely insights and adaptable instructional strategies.

No. of Pages : 19 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/08/2024

(21) Application No.202441060072 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : EXPLORING FACTORS INFLUENCING THE ADOPTION OF ONLINE SHOPPING; A QUALITATIVE APPROACH

(51) International classification :G06N0020000000, G06Q0030060100, G06Q0030020100, G06N0003045000, G06Q0030020400

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The invention relates to a system and method that provides an advanced system and method for analyzing factors influencing online shopping adoption using qualitative research techniques, enhanced by machine learning algorithms. The system comprises a Data Collection Module equipped with AI-powered tools for automatic transcription, categorization, and adaptive surveying. The Data Analysis Engine employs machine learning techniques such as topic modeling and sentiment analysis to process and interpret qualitative data, identifying key trends and patterns with high accuracy. The Insight Generation Interface features predictive analytics to visualize findings and simulate the impact of various strategies on online shopping adoption. This approach offers a comprehensive understanding of consumer behavior, enabling e-commerce platforms to optimize their strategies and improve user experience based on actionable, data-driven insights.

No. of Pages : 17 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202441060081 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : MEDICAL ROBOTICS AND AUTOMATION FOR SURGERY AND PATIENT CARE USING AI

(51) International classification	:G16H0010600000, G16H0040200000, A61B0017000000, A61B0034300000, A61B0005020500
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
MEDICAL ROBOTICS AND AUTOMATION FOR SURGERY AND PATIENT CARE USING AI ABSTRACT By enhancing accuracy, productivity, and results, medical robots and AI-driven automation in surgical procedures and patient care will revolutionise healthcare. Surgical robots powered by artificial intelligence can perform complex procedures with pinpoint precision, cutting down on incisions and recovery periods. In patient care, automated technologies take over routine tasks like medication administration and vital sign monitoring, allowing medical professionals more time for important contacts with patients and decision-making. Healthcare facilities may enhance their resource utilisation and operational procedures through the integration of AI and robots, which in turn increases the quality of treatments.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202441060083 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SYSTEM AND A METHOD FOR SIMULTANEOUS READ AND WRITE OPERATIONS IN A MEMORY CELL

(51) International classification	:G11C7/10, G11C11/408, G11C7/22
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA

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(57) Abstract :
A system (100) for simultaneous read and write operations in a memory cell is disclosed. A plurality of select signals including write command and a read command. A write circuitry (110) includes a One-Transistor Dynamic Random Access Memory (1T DRAM), which receives data when the write command is activated, and stores the data. An isolator pulse circuitry (120) works in conjunction with the write circuitry to generate an isolator pulse with a predetermined width, isolating write and read operations to prevent interference. The read circuitry (130), connected to the isolator pulse circuitry, accesses and amplifies data from the 1T DRAM upon receiving the isolator pulse. It then converts the amplified signals into digital data. The read circuitry amplifies weak signals retrieved and converts amplified signals into digital data as a final output in an inverted form. The system operates at a supply voltage of 1.1V. FIG. 1

No. of Pages : 27 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/08/2024

(21) Application No.202441060116 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : BRAIN STROKE PREDICTION USING MACHINE LEARNING

(51) International classification	:G06N0020000000, G16H0050200000, A61B0005000000, G16H0050300000, G16H0050700000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :

BRAIN STROKE PREDICTION USING MACHINE LEARNING Abstract Stroke is a neurological deficit, primarily because of acute central nervous system focal injury caused by a vascular issue. It is a major cause of disability and death worldwide. It estimated that the overall prevalence of stroke in the United States is 2.5%, and about 7 million Americans over the age of 20 years have experienced a stroke. The condition has a significant negative impact on patients' health and quality of life. It also has a negative impact on hospital services and the availability of beds and was estimated to cost the US economy about US $351.2 billion between 2014 and 2015. There are two types of stroke: ischemic and hemorrhagic. Hemorrhagic stroke occurs because of a burst vessel that leads to bleeding in the brain, whereas ischemic stroke occurs because of a blockage of the arteries of the brain. Ischemic strokes are the most common, comprising 85% to 90% of all strokes. This condition can be prevented by promoting health and increasing awareness of risk factors. There are many risk factors related to lifestyle, including obesity, diet, alcohol intake, and lack of physical activity. Underlying conditions, such as diabetes, hypertension, and cardiovascular diseases, may also lead to stroke. Therefore, proper self-management of these diseases and the pursuit of a healthy lifestyle may prevent the occurrence of stroke. The prime objective of this project is to construct a prediction model for predicting stroke using machine learning algorithms. The dataset was obtained from "Healthcare dataset stroke data". With the advancement of technology in the medical field, predicting the occurrence of a stroke can be made using Machine Learning. The algorithms present in Machine Learning are constructive in making an accurate prediction and give correct analysis. The works previously performed on stroke mostly include the ones on Heart stroke prediction. Very less work has been performed on Brain stroke. This paper is based on predicting the occurrence of a brain stroke using Machine Learning. The key components of the approaches used and results obtained are that among the five different classification algorithms used Naïve Bayes has best performed obtaining a higher accuracy metric. The limitation with this model is that it is being trained on textual data and not on real time brain images. This methodology shows the implementation of Machine Learning algorithms. This paper can be further extended to implementing all the current machine learning algorithms. A dataset is chosen from Kaggle with various physiological traits as its attributes to proceed with this task. These traits are later analysed and used for the final prediction. The dataset is initially cleaned and made ready for the machine learning model to understand. This step is called Data Preprocessing. For this, the dataset is checked for null values and fill them. Then Label encoding is performed to convert string values into integers followed by one-hot encoding, if necessary. After Data Preprocessing, the dataset is split into train and test data. A model is then built using this new data using various Classification Algorithms. Accuracy is calculated for all these algorithms and compared to get the best-trained model for prediction. After training the model and calculating the accuracy, an HTML page and a Flask application are developed. The web application is for the user to enter the values for prediction. The flask application is a framework that connects the trained model and the web application. After proper analysis, the paper concludes which algorithm is most appropriate for the prediction of stroke. Here in this application I am going to use three modules namely, admin, users, and patients. Admin is the module in this application and has the facility to view the list of users. Users are the main module of this application they can register to the application. Mainly users can predict whether a stroke can occur or not, by filing some parameters. Patients can login and book the appointment.

No. of Pages : 13 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202441060117 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : DEVELOPMENT OF A SUSTAINABLE ENVIRONMENT BY PRODUCING AND PERFORMING TESTS OF OPTIMIZING UNFIRED CLAY BRICKS EFFECTIVELY WITH THE INCORPORATION OF NATURAL ADDITIVES.

(51) International classification	:G01N0033000000, C04B0028260000, G08B0021140000, C04B0028020000, D06M0101120000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Development of A Sustainable Environment By Producing And Performing Tests of Optimizing Unfired Clay Bricks Effectively With The Incorporation of Natural Additives. Abstract: In the current era, the annual production of over 9 billion traditional bricks strives to meet the escalating global demand for construction materials. However, the conventional practice of heating these bricks to enhance strength contributes significantly to deforestation, coal consumption, and reliance on natural gas, resulting in substantial greenhouse gas emissions. Brick kilns release harmful fumes, containing elevated levels of carbon monoxide and sulfur oxides, posing threats to both human health and the environment. To address this concern, the study aims to innovate by developing unfired clay bricks, colloquially known as wool bricks. This involves incorporating fillers such as wool fibers, alginate, and seaweed. The wool bricks are crafted by infusing wool fibers into standard brick-making clay, subsequently blending them with alginate powder a natural polymer derived from seaweed cell walls. The resulting brick sample measures 19 cm by 9 cm by 9 cm, and laboratory tests employ varied mix proportions: clay (79.5%, 80%), wool fiber (1.5%, 0.5%), and alginate (19%, 19.5%). Evaluation encompasses flexural and compressive strength testing, with a focus on minimizing crack development and deformation through contraction for enhanced compressive strength. Additionally, the innovative approach aims to expedite the drying process and fortify the bricks' resistance to bending. Keywords: Strength properties, Alginate, Wool fiber, Clay and Compressive strength.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202441060118 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AI-ENHANCED INTELLIGENT TRANSPORTATION SYSTEM FOR REAL-TIME TRAFFIC FLOW OPTIMIZATION USING IOT SENSORS AND DEEP LEARNING MODELS

(51) International classification	:G08G0001010000, G06N0003080000, G06N0003045000, G06Q0010040000, G08G0001080000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
AI-Enhanced Intelligent Transportation System for Real-Time Traffic Flow Optimization Using IoT Sensors and Deep Learning Models ABSTRACT: Traffic management encompasses the activities involved in arranging, guiding, and regulating a traffic system that comprises stationary and moving vehicles, pedestrians and bicycles, traffic lights, and physical infrastructure. Intelligent technology, including video analytics based on artificial intelligence, has led to a rapid evolution in Traffic Management, giving rise to Active Traffic Management (ATM). ATM enables the regulation of traffic in a dynamic manner, meaning it may be adjusted based on current or predicted traffic conditions. Traffic forecasting is a crucial duty in the transportation industry. Furthermore, apart from its importance in route planning and the formulation of traffic laws, it can exert a substantial influence on the design of road construction schemes and projects. Moreover, densely populated urban regions and cities that have already reached their maximum capacity face a substantial obstacle in the shape of traffic congestion. Therefore, it is imperative to carry out a suitable assessment and prediction. Hence, it is vital to possess a method that is both reliable and effective in order to predict traffic. The key objectives of this work are doing a comprehensive assessment of the prevailing machine learning and deep learning techniques employed in traffic prediction. The second phase is identifying the inherent obstacles that arise when applying machine learning and deep learning in the field of traffic prediction.

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(19) INDIA

(22) Date of filing of Application :08/08/2024

(21) Application No.202441060119 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : CYBERSECURITY SYSTEM FOR 6G WIRELESS SMART CONTRACTS IN BLOCKCHAIN-BASED FINANCIAL PLATFORMS

(51) International classification	:H04L0009400000, H04L0009000000, H04L0009320000, G06N0020000000, H04L0009060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT Cybersecurity System for 6G Wireless Smart Contracts in Blockchain-Based Financial Platforms The present invention relates to a comprehensive cybersecurity system designed to protect 6G wireless smart contracts within blockchain-based financial platforms. As the transition to 6G networks introduces unprecedented speed, latency reduction, and massive connectivity, it also brings new cybersecurity challenges. The integration of 6G technology with blockchain-based financial platforms, particularly those utilizing smart contracts, necessitates robust security measures to safeguard transactions and data integrity. This invention addresses these challenges by employing a multi-faceted security framework that enhances the reliability and trustworthiness of financial operations over next-generation networks. The proposed cybersecurity system comprises several key components, including an authentication module, a cryptographic module, a smart contract validation module, a real-time monitoring and anomaly detection module, and a machine learning-based threat detection module. The authentication module utilizes multi-factor authentication (MFA) and biometric verification to ensure that only authorized users and devices can access the blockchain network and execute smart contracts. The cryptographic module employs advanced algorithms such as AES-256 and RSA-2048 to encrypt and decrypt financial data, ensuring confidentiality and integrity during transmission and storage. The smart contract validation module performs thorough security assessments, including code analysis and vulnerability scanning, to ensure that smart contracts are secure and compliant with predefined policies. Real-time monitoring and anomaly detection are achieved through continuous analysis of network traffic and system activities, using machine learning algorithms to identify suspicious behavior and trigger immediate countermeasures. The machine learning-based threat detection module further enhances security by predicting and identifying potential threats, including advanced persistent threats (APTs) and zero-day exploits, through the analysis of historical data and real-time inputs. This multi-layered approach ensures comprehensive protection, making the system scalable and effective in securing the evolving landscape of 6G-enabled blockchain financial platforms. The invention thus provides a robust cybersecurity solution, ensuring the secure execution of smart contracts and safeguarding the integrity of financial transactions over 6G networks.

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(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060137 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : METHODS AND APPARATUS FOR ANALYSIS OF EMPLOYEE ENGAGEMENT AND CONTRIBUTION IN AN ORGANIZATION

(51) International classification	:G06Q0010063900, G06Q0010067000, G06Q0010000000, G06Q0010063700, G06Q0010105000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Employee engagement, a key outcome of a positive work culture, represents an employee's connection, sense of belonging, and perceived value within an organization. It denotes their dedication and alignment with organizational goals. Engagement thrives on trust, honesty, mutual commitment, and effective communication between the organization and its members. As a strategy, it enhances corporate success by boosting performance, productivity, and employee well-being. Employee engagement is quantifiable and can vary significantly, ranging from poor to excellent. It can be actively nurtured and significantly improved, yet is also vulnerable to being lost. This study reviews existing literature on the concept and determinants of employee engagement, utilizing secondary data sourced from articles, books, and websites to provide a comprehensive understanding of the factors influencing engagement and its impact on organizational success.

No. of Pages : 13 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060138 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ANALYSIS THE PROCESSES OF HUMAN RESOURCE MANAGEMENT FOR EMPLOYEE RETENTION

(51) International classification	:G06Q0010105000, G06Q0010063100, C12N0015820000, G06Q0010063000, G06Q0030020400
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(87) International Publication No	: NA
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(57) Abstract :
This endeavor seeks to contribute to a comprehensive understanding of the practices and strategies implemented by organizations globally to effectively retain a dedicated and skilled workforce. In the contemporary competitive landscape, engaging and retaining employees in the 21st century poses a formidable challenge for HR professionals. While technology propels modern organizations, human resources remain indispensable for executing tasks through these technological advancements. Thus, human resources serve as the lifeblood crucial for an organization's survival, growth, and development. Retaining employees amid dynamic environmental shifts stands as a pivotal challenge for HR managers. This secondary research delves into a review of numerous research articles in journals and books, aiming to explore insights into employee retention across diverse sectors and industries.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060139 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AI BASED ROLE OF DIGITAL MARKETING ON CONSUMER PURCHASE INTENTION

(51) International classification	:G06Q0050000000, G06Q0030025100, G06Q0030020100, G06Q0030020200, G06Q0030024200
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
This work examines the impact of social media marketing on consumer behavior, particularly focusing on purchase intentions. Social media platforms such as Facebook, Instagram, Twitter, and YouTube have transitioned from primarily entertainment-focused feeds to robust advertising and sales tools, leveraging user data for targeted marketing. These platforms provide an optimal space for direct communication between businesses and customers. The study gathered data from 122 social media users selected randomly, using a self-structured online questionnaire with 22 closed-ended questions addressing aspects like trust, review selection, purchase ideas, attitudes, and purchase intention. The data was analyzed using frequency, mean, correlation, and regression analysis techniques via SPSS software. The findings highlight the significant role of social media marketing in influencing consumer purchase behavior, emphasizing the platforms' effectiveness as powerful marketing tools in the digital age.

No. of Pages : 20 No. of Claims : 10

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(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060140 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AN ADVANCED NOVEL TECHNIQUE FOR DIGITAL MARKETING USING AI, BLOCKCHAIN, AND IOT

(51) International classification	:H04L0009000000, H04L0009320000, H04L0009060000, H04L0009400000, H04L0067560000
(86) International Application No Filing Date	:NA :NA
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(57) Abstract :
Artificial intelligence and blockchain technologies are widely used in the Internet of Things (IoT). IoT to collect and present data, blockchain to provide the infrastructure to define operational rules, and AI optimization processes and rules are all possible connections between these technologies. These technologies converge, enabling new autonomous business models and the innovative impacts of this triad on increasing the competitiveness of companies. This article delves into the basic understanding of each of the triads and how they complement each other's drawbacks in possibly revolutionizing the entire financial domain.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060153 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : DESIGN APPROACH TO FLEXIBLE PAVEMENT FOR CONVENTIONAL AND STABILIZED SUBGRADE SOIL

(51) International classification	:G01N0033240000, E02D0001020000, C04B0111000000, E01C0003000000, G06Q0010040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
An increase in population demands for well-designed, well maintained, and geometrically designed roadways. Given the drastic depletion of supply of construction materials, highway engineers are finding it extremely difficult to realise this vision. Construction prices are rising as a result of the current decline in standard construction resources. New materials are therefore in demand, as are better methods for making use of the ones that are already on hand. This made way for the new pattern in soil stabilisation that modifies the properties of the soil to suit the requirements of the design. This study aimed at the physical characteristics, compaction characteristics, unconfined compressive strength, and California bearing ratio of soil samples collected from different locations in Karnataka. Varied at three different dosage levels obtained for varied dry densities and water content of compaction tests at different days of curing 0, 7, 15, and 30 periods. There is a noticeable strength improvement for the soils treated with different dosages and curing durations. In this study, the subgrade and sub base soils are made of enzyme-stabilized soil, which provides the required strength for the pavement from below. The impact of using Bio enzymes in stabilization of soil geotechnical parameters will aid in determining the most successful and cost-effective way to use in subgrade preparation. The aim of this study is to use a low-cost Bio enzyme and hypo sludge to stabilize soils. For this, extensive laboratory work has been completed, and its impact on various soil properties was examined and evaluated. For which cost estimation of flexible pavement has been calculated as per SHDP proposed rates and savings in cost has been projected.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060154 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD FOR RAINFALL PREDICTION

(51) International classification :G06Q0010040000, G06N0005010000, G01W0001100000, G06F0018243000, G06Q0050060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
This invention focuses on employing machine techniques for rainfall prediction. Utilizing historical weather data, the model aims to forecast future rainfall patterns. With the increasing impact of climate change on weather patterns, accurate rainfall prediction has become crucial for various sectors, including agriculture, water resource and disaster preparedness. It attempts to solve rainfall prediction problem using machine learning techniques. This involves evaluation of machine learning algorithms -Random Forest model, Decision Tree applied on the rainfall data.

No. of Pages : 19 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060155 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SYSTEM FOR ADVANCED ACCIDENT DETECTION AND PREVENTION

(51) International classification :G08B0021060000, H04N0007180000, G06V0020590000, G01N0029040000, G02B0023240000
(86) International Application No :NA
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(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A system for detecting a drowsy condition of a driver of a vehicle includes a video imaging camera located in the vehicle and oriented to generate images of a driver of the vehicle. The system also includes a processor for processing the images acquired by the video imaging camera. The processor monitors an eye and determines whether the eye is in an open position or a closed state. An impact detection and remediation system includes a sensing device for detecting damage events related to a structure of interest. A method for determining a tilt angle of a vehicle includes measuring accelerations of a vehicle in directions along a longitudinal axis, a transverse axis, and a vertical axis of the vehicle.

No. of Pages : 19 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060156 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : FEASIBLE STUDY ON UTILIZATION OF GRANITE POWDER AND FLY ASH AS PARTIAL REPLACEMENT OF CEMENT IN CONCRETE MIXES TO DETERMINE THE STRENGTH CHARACTERISTICS

(51) International classification	:C04B0028040000, C04B0111000000, C04B0028020000, C04B0033135000, C22C0038120000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Continuous growth and progress in the building sector has contributed to an enormous rise in the consumption of cement, and it has additionally resulted in a significant rise in the quantity of solid waste produced from building deconstruction. Due to these conditions, deconstructed building waste, like granite powder and fly ash, was recycled, minimizing the overall amount of solid garbage released and the limited supply of cement needed for making concrete. In this research, the amounts of fly ash and granite powder utilized as partial replacements in concrete varied from 10% to 30% and 5% to 15% by mass to cement, respectively. The material's compressive, tensile, and flexural strengths were examined for 7, 14, and 28 days. The M40 type of concrete will be the grade of concrete used for the purpose of the study. The outcomes demonstrated that introducing 10% of granite powder by mass to concrete raised the compressive strength of the material to 52.37 MPa, which was greater than the standard 48.57 MPa of normal concrete. The addition of 20% fly ash by weight to concrete raised its compressive strength to 57.32 MPa, which was greater than the 48.57 MPa of standard concrete. Similar patterns have been noted for tensile strength. Tensile strength improved by 10% with granite powder replacement, to 3.43 MPa, from 3.09 MPa of standard concrete, as well as by 20% with fly ash replacement, to 3.5 MPa, from 3.09 MPa of standard concrete. According to the test outcomes, it is recommended to substitute 15% of cement with granite powder and 20% of cement with fly ash

No. of Pages : 14 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060157 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : INVESTIGATING THE IMPACT ON THE ELASTIC MODULUS OF RCC BEAMS

(51) International classification :C09K0019120000, C09K0019300000, G01N0029070000, C09K0019200000, B32B0007022000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Concrete, as a non-elastic material with a non-linear stress-strain curve, challenges the application of traditional elastic constants like Poisson's ratio and modulus of elasticity. Despite this discrepancy, these constants are commonly utilized in the design process to simplify the analysis of concrete structures. The modulus of elasticity of concrete plays a crucial role in predicting building deformation and determining the modular ratio, even though the material's actual behaviour deviates from ideal elastic assumptions. This abstract underscores the significance of the modulus of elasticity in estimating structural deformation and highlights the practical use of elastic constants in concrete engineering, acknowledging the complexities of material behaviour versus theoretical assumptions

No. of Pages : 15 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441060158 A

(19) INDIA

(22) Date of filing of Application :09/08/2024

(43) Publication Date : 16/08/2024

(54) Title of the invention : REMOVAL OF IRON BY ADSORBENT METHOD USING EUCALYPTUS AND JACK FRUIT PEEL WASTE

(51) International classification	:C02F0001280000, C02F0101200000, C02F0101300000, B01J0020300000, A61K0036610000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
[008] Heavy metals are one of the toxic pollutants present in water. There are many methods to remove heavy metals from wastewater like boiling, coagulation, dialysis, membrane separation and adsorption. All of these methods of treating waste water are not economical. Bio-adsorption is a low-cost method of treatment, which is a process to remove solids from wastewater. The ability of certain solids to attract to adsorbents is adsorption. Adsorbents like Eucalyptus bark and Jack fruit peel waste were used for the removal of heavy metal of Iron from water are studied. The wastewater was prepared by the synthetic process. Eucalyptus Bark and jack fruit peel waste were obtained from the market. The raw material of Eucalyptus bark and Jack fruit peal was collected. It was cut into small pieces and dried. It was then carbonized in a muffle furnace to 2000 C to remove all the moisture content present in the Eucalyptus bark. It was then taken in a clean beaker and made into slurry by using 4N Nitric acid. It was heated for about 30 minutes in a hot water bath at 100°0 C and kept aside for overnight. It was then washed several times with distilled water to remove acid and any impurities present in it. It was dried in an air-oven at 12000 C for about six hours. The dried materials were grinded and sieved into 90micron particles and were used as an adsorbent for overall studies Hence there is a need to find low-cost adsorbents for the economical treatment of wastewater. This method is more beneficial than any other conventional method as it low cost, minimization of chemical and lower biological sludge.

No. of Pages : 9 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060159 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : DEVELOPMENT OF STIFFENED GLASS FIBER REINFORCED POLYMER COMPOSITE BEAM AS A REPLACEMENT OF TRADITIONAL STEEL BEAMS

(51) International classification :G06F0030230000, G01M0005000000, G06F0030150000, B29C0070340000, E04C0003040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
In the present scenario where the constructions are increasing, the need to find a supplementary composite beam for traditional steel beams for the improvement of strength, structural performance, light weight and cost effectiveness is of great significance. In the present work the possibility of utilizing glass fiber reinforced polymer (GFRP) composite I section stiffened beam in place of traditional steel beams of high density which can result in higher load carrying capacity with reduced deflections and stresses along with lighter sections which helps in easy installation. The feasibility of use of GFRP composite beams are analyzed through numerical approach using finite element analysis. Steel I section beams and GFRP composite I beams with and without stiffeners are modelled using HYPERMESH software and then were analyzed for strength, deflection and structural performance using ANSYS 19.1 package which works on finite element method. Two patterns of longitudinal and transverse stiffener arrangements with cantilever beam condition and concentric and eccentric loading conditions were studied. The transverse stresses and deflections, axial stresses and deflections along with the weight comparison between the steel and composite beams were carried out.

No. of Pages : 25 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060160 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD FOR LIMNOLOGICAL ANALYSIS OF LAKES IN BENGALURU CITY USING A WATER QUALITY INDEX

(51) International classification :G01N0033180000, B01D0061120000, C02F0003320000, G06Q0050060000, C02F0009000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The Water Quality Index (WQI) is a valuable and unique rating to depict the overall water quality status in a single term that is helpful for the selection of appropriate treatment technique to meet the concerned issues. The Water Quality Index (WQI) is a numerical value that represents the overall quality of water based on multiple parameters. It provides a single value to communicate the water quality in an easily understandable format. However, WQI depicts the composite influence of different water quality parameters and communicates water quality information to the public and legislative decision makers. WQI by Weighted Arithmetic Mean method is calculated for an urban lake by considering 29 physical and chemical parameters. The purpose is to understand and compare the overall water quality of the lakes. The result can provide insights into the relative health and pollution levels of each lake and identify any significant differences or similarities between them.

No. of Pages : 20 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060161 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR ADVANCED EMAIL SECURITY USING MACHINE LEARNING TECHNIQUES

(51) International classification :H04L0009400000, G06F0021560000, G06N0020000000, H04L0051212000, G06F0018210000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A method and system for identifying suspicious emails using a combination of various machine learning algorithms, along with an up-to-date dataset of known malicious links, and antivirus software. The models are trained on different machine learning models using datasets consisting of email and sms communications that are labeled as safe or unsafe. The data undergoes preprocessing, where unnecessary and personal information is removed, and vectorization before being used for training. The models are tested to ensure high accuracy before being incorporated into the system. The system can be integrated with email services through the use of web extensions. This invention ensures the safety of individuals as well as corporations that use email for communication from cyber criminals, improving their digital security by warning them of potential threats

No. of Pages : 22 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060162 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : CONTEXTUAL SUGGESTION ENGINE FOR MULTILINGUAL CHATBOT

(51) International classification	:H04L0051020000, G06F0040300000, G06N0005040000, G06F0040400000, G06N0020000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The presented system revolutionizes conversational AI by offering a comprehensive solution for enhancing interactions in multilingual environments. The system seamlessly integrates advanced techniques in contextual understanding, language adaptation, and personalized suggestion generation to deliver a conversational experience. By employing sophisticated algorithms, including natural language processing (NLP), stochastic gradient descent (SGD), and rule-based approaches, the engine analyzes conversation history, user preferences, and contextual cues to generate contextually relevant suggestions tailored to individual user needs and interests. Through scalable architecture and optimized performance, the system ensures reliable support for users across multiple languages, enabling effective communication and engagement. This innovation represents a significant advancement in conversational AI, setting a new standard for multilingual chatbot interactions and user satisfaction.

No. of Pages : 15 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060163 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : METHOD FOR DETECTION OF FRAUDULENT JOB POST

(51) International classification	:G06N0020000000, G06Q0010105300, G06F0018241300, G06N0020100000, G06N0007010000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The method of Fake Job Post Detection using Machine Learning proposes a self-regulating solution utilizing machine learning classification algorithms to combat the proliferation of fraudulent job postings on the internet. In the past decade, there has been a growing interest among researchers in identifying deceptive content within job advertisements. To distinguish between fake and legitimate job postings on social media, various algorithms, such as Logistic Regression and the K-Nearest Neighbor algorithm, have been applied. The subtle and elusive distinctions between fraudulent and genuine content, as determined by elements and word embeddings, significantly impact the accuracy of the system. Wordnet is employed for preprocessing tasks on job post data, such as filtering out irrelevant information to create a clean dataset from the raw data. To address data imbalances, the oversampling technique is used. The introduction of new columns through encoding reflects the presence of all conceivable attribute values within the unstructured data collected. Furthermore, the removal of irrelevant features from the dataset has been successfully executed. The assessment of the model's performance will be based on metrics like the F1-score, accuracy, precision, and recall.

No. of Pages : 19 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060164 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : FARM TO FOLK USING MACHINE LEARNING

(51) International classification	:G06Q0050020000, G06T0007000000, G16H0050200000, G16H0010600000, G06N0020000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
This invention presents an agricultural technology, utilizing machine learning techniques to predict optimal crop selections for cultivation based on an input given by the user. By utilizing a comprehensive dataset containing crucial agricultural indicators such as nitrogen levels, phosphorus content, and temperature, among others, the system generates accurate predictions for crop cultivation under specific environmental conditions. The methodology employed includes systematic steps from data collection to model deployment, culminating in the development of a reliable decision-support tool for agricultural decision-making. This invention helps farmers to make decisions, contributing to enhanced agricultural efficiency, resource optimization, and sustainable farming practices.

No. of Pages : 17 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060165 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD FOR SMART VEHICLE SURVEILLANCE

(51) International classification :H04L0009400000, H04M0003220000, G06F0021620000, G06F0016951000, H04N0007180000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The invention presents a comprehensive solution for Smart Vehicle Surveillance, leveraging a sophisticated system comprising a scalable network of image capture devices, secure data access modules, and a self-learning machine learning model. This system effectively detects anomalies such as duplicate license plate usage and unexpected vehicle movement, enhancing security measures and theft prevention. Furthermore, it includes a location tracking module providing both real-time updates and historical data for monitored vehicles. With a secure interface for law enforcement access, our solution enables targeted vehicle tracking and access to real-time and historical location data, empowering law enforcement agencies with enhanced monitoring capabilities for effective crime prevention and enforcement

No. of Pages : 15 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060166 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD FOR LUNG TUMOR DETECTION

(51) International classification :G06N0003045000, G06N0003080000, G06T0007000000, G06T0007110000, G06V0010820000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The Invention encompasses modules for image acquisition, preprocessing, feature extraction, segmentation, and evaluation. It captures high-resolution medical images of lung tissue via computed tomography (CT) or cell imaging. Preprocessing enhances image quality using advanced techniques, while feature extraction employs deep learning algorithms, like convolutional neural networks (CNNs), to extract discriminative features. Segmentation delineates pathological regions precisely. The deep learning model architecture, trained and fine-tuned on labeled datasets, accurately classifies lung tumors, including adenocarcinoma, NSCLC, and squamous cell carcinoma. An evaluation module rigorously assesses model performance in accuracy, sensitivity, specificity, and AUC against ground truth annotations. Through advanced deep learning techniques and rigorous evaluation, this system represents a significant advancement in lung tumor detection, offering improved accuracy and reliability in early cancer diagnosis.

No. of Pages : 21 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060167 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : IOT BASED INDUSTRIAL POLLUTION MONITORING SYSTEM

(51) International classification :G05B0019042000, G05B0019418000, A61B0005000000, H04L0067120000, H04W0004380000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
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(57) Abstract :
The proposed invention entails an IoT-based industrial pollution monitoring system designed for patent consideration. Integrating sensors such as DHT11 for temperature and humidity, MQ3, MQ5, and MQ135 for detecting various pollutants, along with a pressure sensor for air pressure measurements, the system is powered by a NodeMCUESP8266 and a reliable power supply. Additionally, a WiFi module enables seamless connectivity for data transmission to the cloud. An isolator ensures safety in industrial settings. Cloud integration allows for real-time monitoring and analysis, while a relay system facilitates control over devices such as a 5V DC voltage amplifier, exhaust fan, and sprinkler for pollution mitigation. Furthermore, the system is equipped with a mobile application for convenient user access and notification alerts, offering a comprehensive solution for industrial pollution management.

No. of Pages : 17 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060168 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : CONVOLUTIONAL DEEP LEARNING AND SPECIFIC MACHINE LEARNING ALGORITHMS FOR MRI-BASED BRAIN TUMOR DETECTION

(51) International classification	:G06N0003045000, G06N0003080000, G06T0007000000, A61B0005055000, G16H0030400000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Early detection of brain cancers is essential. Biopsies, which are only possible through successful brain surgery, are used to categorize brain cancers. Brain tumors can be identified and classified by physicians with the aid of computational intelligence algorithms. In order to help doctors identify tumors in their early stages with high accuracy, we have proposed two deep learning methods and several machine learning approaches for the diagnosis of three different types of tumors: gliomas, meningiomas, and pituitary gland tumors, as well as healthy brains free of tumors, using magnetic resonance brain images. The dataset used in this investigation included 3264 Magnetic Resonance Imaging (MRI) brain scans, including images of healthy brains, meningiomas, gliomas, and pituitary gland cancers. MRI brain pictures were first processed and enhanced using algorithms. Subsequently, we created a convolutional auto-encoder network and a new 2D CNN, both of which had previously been trained using our designated hyperparameters. Next, there are multiple convolution layers in 2D CNN; each layer in this hierarchical network has a 2*2 kernel function. This network is made up of four pooling layers, eight convolutional layers, and batch-normalization layers applied after each convolutional layer. Two networks are included in the updated auto-encoder network: a convolutional auto-encoder network and a convolutional network for classification that makes use of the final output encoder layer from the first component. Additionally, this study compared six machine-learning methods that were used to categorize brain cancers.

No. of Pages : 24 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060170 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ORGAN DONATION AND MANAGEMENT SYSTEM

(51) International classification :A61P0037060000, G16H0050300000, A61L0027500000, G06Q0030060100, G16H0050500000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
Organ transplantation is a life-saving treatment for end- stage organ disease. We want to design a centralized platform for the hospitals, donors, receivers where it can manage organ donation across India via single centralized application. Organ transplantation is a life-saving procedure that allows individuals with failing organs to receive a healthy organ from a deceased donor. However, there is a critical shortage of organs available for transplantation, leading to thousands of deaths each year. So, this purpose of an organ donation system that leverages machine learning to increase the number of available organs and improve the transplantation process. Organ system is pointed to assist the individual who are in crisis of organ transplantation and it too makes a difference the benefactors to give their organs to specific healing center. The most proverb of this site is to supply data online almost the available organs additionally givers to give their organs. This Organ System is to form an e-Information about the giver and organization that are related to giving the organs. Any person who is interested in donating organs can sign up through this application, and organizations that need to register with this site can also sign up. Furthermore, if any regular customer wants to inquire about any organ online. They can locate the organs with assistant support. A typical shopper is not required to register with the location. The most skilled person who can perform expansion, termination, and adjustment as needed is the administrator. The person in need of organs receives this information about all the donors. Clinics can also make use of this program.

No. of Pages : 14 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060171 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : DEVELOPMENT OF FRONT FACIAL GENERATION FROM SIDE PROFILES USING IMAGE PROCESSING AND CONDITIONAL GAN

(51) International classification :G06N0003045000, G06V0040160000, G06N0003047000, G06F0018214000, G06V0010820000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Face frontalization is a pivotal task in computer vision, aiming to transform side-profile face images into frontal views. This project employs cutting-edge techniques, including Conditional Generative Adversarial Networks (GANs), to tackle this challenge. GANs consist of two neural networks, the generator and the discriminator, engaged in a competitive process to generate realistic frontal images from side-profile inputs. The primary objective of this project is to develop a robust face frontalization algorithm that leverages the power of GANs to produce high-fidelity frontal images. The generator network learns to map side-profile images to frontal views, while the discriminator network evaluates the realism of the generated images compared to real frontal images. Through iterative training, the generator improves its ability to produce convincing frontalizations, while the discriminator becomes more adept at distinguishing between real and generated frontal images. The proposed face frontalization system holds immense promise across various industries. In security and surveillance, it enhances the accuracy of facial recognition systems, enabling better identification and tracking of individuals. Entertainment and gaming industries can benefit from lifelike avatars and characters generated from side-profile images, enhancing user immersion and engagement. Additionally, healthcare applications such as facial reconstruction surgery and diagnosis of craniofacial anomalies can leverage accurate frontal views for treatment planning and patient assessment. The project's deliverables include a fully functional face frontalization algorithm, a software prototype implementing the algorithm, comprehensive evaluation reports, documentation, and training materials for end-users. These deliverables will be developed within the estimated project duration, ensuring timely completion and successful deployment of the face frontalization system. In conclusion, this project represents a significant advancement in face image manipulation and synthesis. By harnessing the capabilities of GANs, it addresses existing challenges in face frontalization, unlocking new opportunities for innovation across various industries. Through this project, valuable insights have been gained into the capabilities and limitations of GAN-based approaches in face image processing, laying the groundwork for future research and development in this field

No. of Pages : 11 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060172 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : PERFORMANCE EVALUATION AND EFFECTIVENESS OF CHEMICAL SKIN BURN CATEGORIZATION USING KNN APPROACH

(51) International classification	:G06F0018241300, G06F0018214000, G06V0010764000, G06V0010774000, A61B0005000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Chemical burn injury is one of the major accidents in the world. The aim of this research is to develop an automated method of determining the severity of chemical skin burns. The severity of the chemical skin burn can be classified into three grades, namely Superficial, Partial thickness and Full thickness. Towards achieving this aim, a database of chemical skin burn images has been created by collecting images from various Hospitals. The initial pre-processing involves the contrast enhancement in L*a*b colour space. The pattern classifier technique namely K-Nearest Neighbour Classifier (KNN), has been applied on chemical skin burn images to classify them as Superficial, Partial and Full thickness burns. The help of dermatologists and plastic surgeons has been taken to label the images with chemical skin burn grades and the labelled images are used to train the classifiers. From the many features that were extracted from the images, two significant features such as the mean and then DCT were selected that best embody the differing characteristics of the three grades of chemical skin burns. The algorithms are optimized on features of pre-labelled images, by fine-tuning the classifier parameters.. The efficiency of the analysis and classification of the KNN method is about 67.5% for grade1, 82.5% for grade 2 and 75% for grade 3. The design and development of such a classifier is clinically very significant particularly, when it is used in emergency remote areas.

No. of Pages : 14 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060173 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AN AUTOMATED DRONE BASED COCONUT PLUCKER SYSTEM

(51) International classification :A01D46/30, A01D34/13, B64C39/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The invention is a system for smart approach for plucking coconuts from the coconut trees. An automated drone based coconut plucker system including a drone, a sickle, camera and a hand held remote controller with display. An automated drone based coconut plucker method includes the following steps: using the remote, the farmer places the drone on the required coconut. The drone sends the close up video of the coconut, if the coconut needs to be plucked based the farmer's discretion, he operates the sickle using the remote. The sickle cuts the stalk of the coconut to separate the required coconut from the coconut plant. The approach uses multiple technologies like IOT devices, computer vision and remote control and a sickle.

No. of Pages : 10 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060174 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : MODIFICATION OF BLACK COTTON SOIL BEHAVIOR USING PURE AND HYDRATED LIME STABILIZERS

(51) International classification	:C05G0003800000, B82Y0030000000, C08L0039060000, C04B0028100000, E02D0003100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to the modification of Black Cotton Soil behaviour using pure and hydrated lime stabilisers. Black cotton soil, known for its extreme plasticity and expansive nature, frequently presents substantial obstacles in construction and infrastructure projects due to its low load-bearing capacity and sensitivity to volume changes. This patent describes a revolutionary method for improving the engineering features of black cotton soil by treating it with pure and hydrated lime. The process entails applying these lime stabilisers to the soil in a systematic manner, which results in considerable improvements in soil stability, reduced flexibility, and increased strength metrics. Experiments show that the treated soil has improved physical and mechanical properties, including greater unconfined.

No. of Pages : 12 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060175 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : BEHAVIOUR-DRIVEN NITRATE REGULATION SYSTEM FOR HOME AQUATIC ENVIRONMENTS

(51) International classification	:A01K0063040000, A01K0063000000, G06Q0010000000, C02F0101160000, A01K0063060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The popularity of having a aquarium at home is getting popular day by day. This new responsibility comes with its feeding, maintenance which has to be done at time to time periodically. For most of the office goers, for them they miss the daily tasks, which lead to increase mortality rate of the aquatic organism. So, the solution is to automate the process of changing the water using a IoT embedded solution. Now the major factor that increases the mortality rate is the total nitrate concentration in the environment, in order to measure that scientifically, we need a biosensor that does this task precisely. But sensors are not mass produced and is expensive. So, using a biosensor is not a viable solution. We have found a solution where there is a correlation between the activity of the fish and time. Our observation proved that, there is reduced movement increasing day by day. So we can create a new variable to measure the healthiness (healthiness factor). Using this variable, we can estimate the amount of fresh water to be input into the aquarium, following serial dilution principle. All of the data is collected at a local site, the positional data is analyzed in the cloud, and is communicated with the IoT solution at the user's aquarium. A web UI is also provided. This solution ensures that the fishes have a consistent good living environment for better survival and long life. Responsibility and maintenance by the user is further reduced by a big factor, which is a major time saver.

No. of Pages : 14 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060176 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SMART ASSISTIVE FRAMEWORK FOR BLIND, DEAF AND DUMB PEOPLE

(51) International classification	:G06F0003010000, G09B0021000000, G06N0003045000, A61P0003100000, G06F0018210000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Smart Assistive Framework for Blind, Deaf and Dumb People is a transformative technology that utilizes computer vision, machine learning, and human-computer interaction to interpret hand gestures in real-time, offering a lifeline of communication for individuals with speech, hearing, and visual impairments. By recognizing and translating gestures into meaningful messages or actions, this system bridges the communication gap, fostering inclusivity and enhancing the quality of life for its users. Furthermore, this technology exemplifies the potential of natural and expressive gestural communication, paving the way for a more connected and accessible future, particularly for those facing multiple communication challenges. As advancements continue, the system represents a beacon of hope for individuals with disabilities, promising a world where communication barriers are overcome, and everyone has the opportunity to participate fully in society

No. of Pages : 20 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060177 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : EFFECT OF USING ARECA FIBERS IN CONCRETE

(51) International classification	:A61K0036889000, C04B0028020000, C04B0014060000, C04B0018140000, C04B0040000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The invention embarks on an innovative journey by leveraging Areca fiber to potentially revolutionize concrete in construction practices. In essence, the invention aims to tackle two critical issues simultaneously: enhancing the properties of concrete and addressing waste generation in the construction industry. Areca fiber, sourced from the Areca palm, a natural fiber, is chosen as the key ingredient due to its promising characteristics and its potential to offer sustainability benefits. As infrastructure development surges, so does the concern over waste generation. By utilizing Areca fiber, the invention aligns with the broader goal of promoting waste recycling and energy recovery within the construction sector. The methodology involves a systematic exploration of the influence of Areca fiber on the strength characteristics of M-20 grade concrete. This includes an examination of flexural, compressive, and tensile strengths, which are pivotal parameters in determining the structural integrity and durability of concrete structures. The invention methodology involved the variation of Areca fibers across a range from 2.5%, 5%, and 7.5%, to assess the impact of fiber content on concrete properties. The adherence to Indian Standard codes ensures the scientific rigor and reliability of the study. By benchmarking the findings against conventional concrete blocks, the invention can effectively evaluate the efficacy of Areca fiber as a concrete additive. Ultimately, the invention goal is on twofold: to optimize aggregate consumption by incorporating Areca fiber, thereby promoting sustainability in material usage, and to enhance the strength properties of concrete blocks. This dual approach not only addresses the immediate need for more robust and eco-friendly construction materials but also contributes to long-term environmental sustainability in the construction sector. Through meticulous experimentation and analysis, this invention endeavors to unlock the full potential of Areca fiber as a viable solution for advancing the construction industry towards a greener and more resilient future

No. of Pages : 11 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060178 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SMART SOLAR POWERED HEARING AID SYSTEM AND AI METHOD FOR THE DYNAMIC PREDICTION OF HEART DISEASE AND THEREOF

(51) International classification	:H04R0025000000, A61B0005000000, A61B0005110000, A61B0005024000, H04L0067120000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention is intended for monitoring heart diseases for patients with hearing disability which is solar powered by ambient light. The power consumption of hearing aid is proposed with the renewable solar energy which allows the aid to have self-charging ability. It is cost effective due to the replacement of battery consumption. The solar power module in the work eliminates the need of external power source such as low lifetime battery power. The challenge of hearing disabled person is lack of communication and feel isolated from the environment. To make them to feel comfort and live their life happily, the smart hearing aid is must. Due to this smart aid as proposed in this work, no need to have a caretaker who monitors the patient's vitals to analyze the heart functioning for 24x 7 and prevents the usage of additional equipment to monitor. IoT technologies integrated with AI are implemented in various domains, among which healthcare is one of the major domains to be benefitted with these new technologies. For monitoring elderly disabled patients 24X7, personal caretakers are appointed depending on the severity of illness that is involved with more manpower and cost. Latest technological advancements in the field of AI by integrating IoT low-cost solutions can be provided that eliminates the need of personal caretakers to monitor the health of disabled person and alerts the caretaker, while reducing the manpower. In general, different equipment is used for different purposes to monitor disabled patients. The present invention integrates hearing-aid with IoT sensors to a solar powered Neckband and with the help of AI and the use of IoT sensors the need of multiple equipment and individual caretakers can be eliminated. The proposed invention comprises of solar powered Neckband integrated with a hearing-aid and IoT sensors to monitors the patients' health. It does by recording the vitals of patient 24X7 from IoT sensors and stores these data on cloud for analysis in real time. The proposed system sends alert message to the caretaker in case of emergency or inappropriate heart functioning using an AI model. This invention aims in integration of IoT with cloud to build an Artificial Intelligence model to assist and governs the hearing impaired.

No. of Pages : 14 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060179 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AI INFLUENCED HEARING AID SYSTEM AND METHOD FOR THE DYNAMIC PREDICTION OF HEART DISEASE AND THEREOF

(51) International classification :A61B0005000000, G16H0010600000, A61B0005024000, A61B0005110000, A61B0005020500
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is intended for monitoring heart related diseases for patients with hearing disability. To monitor disabled patients, some times it is required to appoint a care taker 24X7 and additional equipment is needed to monitor the vitals of the patient to analyse the heart functioning. Artificial Intelligence and IoT technologies are implemented in various domains in which healthcare is one major domain to be benefitted with this technology. For years, in various situations, caretakers are assigned 24X7 to monitor the disabled patients depending on the severity of illness that is involved with more manpower and cost. In this digital era, with technologies like AI and IoT sensors low-cost solutions can be provided to monitor the health of disabled person and alerting the caretaker, while reducing the manpower. Currently, different equipment is required for different purposes for health monitoring of disabled patients. The present invention integrates hearing-aid with IoT sensors and with the help of AI and the use of IoT sensors the need of multiple equipment and individual caretakers can be eliminated. The proposed invention comprises of a hearing-aid with IoT sensors that monitors the patients' health and records the vitals of patient which can be stored on cloud for analysis in real time and alert the caretaker in case of emergency or inappropriate heart functioning. The collected data can be stored on the cloud for future use in case of any further analysis to be performed. An AI model is used for real time analytics to detect the heart functioning and send the alert messages to caretaker in case of emergency. This invention utilizes the resources from the public cloud for real time analytics.

No. of Pages : 14 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060180 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ASSISTIVE DEVICE FOR HEARING, VISUALLY AND VOCALLY IMPAIRED PEOPLE

(51) International classification	:G09B0021000000, G10L0015260000, G06Q0010063900, H04M0001724750, G10L0021036400
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The assistive device tailored to meet the unique needs of individuals with visual, hearing, and vocal impairments, leveraging IoT technology, particularly Raspberry Pi. The system integrates three core modules: object detection, speech-to-text, and text-to-speech, to address specific communication challenges faced by users with disabilities. By harnessing image processing, speech recognition, and text-to-speech technologies, the device enhances accessibility and inclusivity for individuals with disabilities, ensuring adaptability to diverse user needs and preferences across various environments the system complies with accessibility standards and regulations to meet quality control guidelines, enhancing usability and user experience. Continuous improvement and updates to the device's software and hardware maintain regulatory adherence and product quality standards. Collaboration with stakeholders and disability advocacy groups ensures that the device meets the diverse needs and preferences of users with disabilities, promoting inclusivity and accessibility in both design and functionality.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060181 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD FOR VEHICLE ANTI-THEFT PROTECTION

(51) International classification :B60R0025330000, B60R0025040000, B60R0025102000, H04W0064000000, G08B0013140000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The invention presents a method for the vehicle anti-theft protection which integrates GPS tracking, Blynk IoT connectivity, and fingerprint verification. The method's core functionality centers around continuous GPS tracking, which provides location data of the vehicle. This data is communicated via a Blynk IoT platform, allowing vehicle owners to monitor and control the method remotely from their smartphones. In the event of unauthorized movement, alerts can be sent immediately, enabling quick action and tracking. In addition, the method employs fingerprint verification for enhanced security. Only authorized users can start the vehicle, ensuring an additional layer of protection. The combination of these technologies creates a robust, user-friendly security solution that significantly reduces the risk of vehicle theft.

No. of Pages : 24 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060182 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : TRAFFIC SIGN RECOGNITION FOR ENHANCED USER EXPERIENCE

(51) International classification	:G06N0003080000, G06N0003045000, G06V0020580000, G06N0003044000, G01C0021360000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to providing proper user experience with the help of computer vision and deep learning techniques to interpret traffic signs in real-time by providing additional assistance for drivers in Semi-autonomous vehicles. The invention overcomes the accuracy particularly in adverse weather condition and low visibility. This innovation comprises software tailored with machine learning algorithms such as Yolo v5 along with hardware integration such as Arduino uno 32-bit microcontroller, external camera.

No. of Pages : 19 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060183 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : DESIGN, SYNTHESIS, MOLECULAR DOCKING STUDIES AND BIOLOGICAL ASSESSMENT OF NOVEL 2-ARYL INDOLE LINKED 1,2,4-OXADIAZOLE DERIVATIVES AS POTENT ANTI-CANCER AGENTS

(51) International classification	:C07D0271060000, A61P0035000000, A01N0043820000, C11B0003120000, A61K0035120000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A series of new 2-aryl indole based 3,5-disubstituted 1,2,4-oxadiazoles has been designed and synthesized as potential anti-cancer agents, via the CDI-catalyzed condensation reaction between substituted amidoximes and 2-aryl indole acid. This work will mark the impact as the valuable, comprehensive and pioneered work along with the library of synthetic strategies for the organic and medicinal chemists for further refinement of 1,2,4-oxadiazole as anti-cancer agents. 1,2,4-Oxadiazole and Indole are a privileged scaffold, ubiquitous in various bioactive molecules, pharmaceuticals, and functional materials. Structural elucidation of the compounds has been completed by spectral techniques such as FT-IR, NMR (1H and 13C), and HRMS. The novel synthesized compounds in vitro cytotoxic activity was evaluated by MTT assay was carried out according to Al-Salmi et al., 2023. 80% confluent Human Mammary Carcinoma (MDAMB-231 procured from NCCS Pune, India) cells for this study.

No. of Pages : 34 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060184 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A DESIGN AND DEVELOPMENT OF GRAIN DRYER

(51) International classification :A23B0009080000, G06Q0010060000, B01D0053260000, G06Q0010063700, F26B0003280000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
In response to the pressing challenges facing grain processing in modern agriculture, this project sets out to revolutionize conventional methods through the development of an advanced grain dryer system. The system, designed to seamlessly integrate both drying and cleaning functionalities, represents a paradigm shift towards enhanced efficiency, sustainability, and cost-effectiveness in agricultural operations. At its core, the project embraces a holistic approach to grain processing, harnessing the power of a hybrid energy source that combines renewable (solar) and conventional energy. This innovative energy solution not only optimizes energy efficiency but also mitigates operational costs, paving the way for a more economically viable and environmentally friendly grain processing paradigm. A key objective of the project is to achieve unparalleled efficiency and performance in grain drying without compromising on cost-effectiveness. Through meticulous design and engineering, the grain dryer system aspires to set new standards for operational excellence, offering farmers and grain processors a reliable and high-quality solution for their grain processing needs. Moreover, the project places a strong emphasis on accessibility and scalability, recognizing the diverse needs and constraints of agricultural stakeholders, particularly small-scale farmers and operations with limited space environments. By prioritizing a compact footprint and user-friendly design, the grain dryer system aims to access to advanced grain processing technologies, empowering farmers to enhance their productivity and competitiveness. In line with its commitment to sustainability, the project explores the integration of solar energy sources to minimize environmental impact and promote eco-friendly practices in grain processing. By leveraging solar power for key components of the system, such as the air blowing fan, the project not only reduces carbon emissions but also contributes to the long-term resilience and sustainability of agricultural production systems.

No. of Pages : 13 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060185 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : DESIGN & IMPLEMENTATION OF HYBRID ON GRID SOLAR PV SYSTEM USING IOT FOR DOMESTIC APPLICATION

(51) International classification :H02J0003380000, H02S0010120000, F21S0009030000, H02S0010200000, H02S0020300000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This study explores the integration of solar power generation into a hybrid grid system, focusing on sustainable energy practices and grid stability. The research encompasses the methodology, benefits, and acknowledgment of stakeholders involved in implementing and maintaining such a system. The implementation of Hybrid Grid with Solar Power Generation and maintenance using IoT involves integrating renewable energy sources like solar power into the existing grid system. IoT technology is employed for real-time monitoring, control, and maintenance of the hybrid system. This approach enhances energy efficiency, reduces environmental impact, and ensures effective maintenance through continuous data analysis and automation. The benefits of this integration include increased reliance on renewable energy, enhanced grid stability, cost savings, and reduced environmental impact.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060186 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SMART AGRICULTURE MONITORING SYSTEM USING IOT

(51) International classification	:G06T0007130000, H04W0004700000, H04L0061507600, G06T0017050000, H04W0004800000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The Agriculture Parameters are utilizing an IOT Technology and system availability that draw in these objects to assemble and deal information. "The IOT enables things selected recognized or potentially forced remotely crosswise over completed the process of existing configuration, manufacture open gateways for all the additional obvious merge of the substantial earth into PC based frameworks, in addition to acknowledging overhauled capacity, precision and cash interconnected favoured stance. Precisely when IOT is extended with sensors and actuators, the improvement modify into an occasion of the all the extra wide category of electronic physical structures, which in like manner incorporates headways, for instance, clever grids, splendid homes, canny moving and smart urban groups. All is especially specific through its introduced figuring configuration anyway can interoperate within the current Internet establishment

No. of Pages : 11 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060187 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : HIGH VOLTAGE GAIN DC-DC BOOST CONVERTER FOR FUEL CELL FED EV APPLICATIONS

(51) International classification	:H01M0008100000, H02M0003158000, G05F0001670000, B60L0058300000, H01M0004920000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
[0007] This study evaluates a fuel cell-powered electric vehicle system using a high-power DC-DC boost converter and a neural network-based maximum power point finding algorithm. The importance of electric vehicles in today's life is of great importance in order to achieve a pollution-free environment. One of the main causes of environmental pollution is transportation, caused mainly by internal combustion engines made from crude oil. In this study, an electric vehicle powered by a 1.26 kW proton exchange membrane fuel cell (PEMFC) was designed using the MATLAB/Simulink environment. Integration of PEMFCs with brushless DC (BLDC) motors features specially configured high-power boost converters designed for high static converter voltage gain. The performance of the electric vehicle was evaluated using fuzzy logic controller (FLC) and neural network-based maximum power point finding control system. The results obtained were compared with different fuels, different temperatures and times.

No. of Pages : 13 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060188 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD FOR CRIME SCENE PREDICTION

(51) International classification :G06N0003045000, G06N0003080000, H04L0009400000, G08B0013196000, G06V0020520000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This Invention aims to enhance crime scene prediction by employing Convolutional Neural Networks (CNNs) to identify threatening objects. By leveraging advanced image recognition techniques, the system detects potentially dangerous items within a given environment. Through extensive training on diverse datasets, the CNN learns to accurately classify objects based on their threat level. The proposed model not only identifies common weapons but also recognizes less obvious threats, such as improvised devices or hazardous materials. Integration with surveillance systems allows real-time monitoring and alerts authorities to suspicious activities or potential threats before they escalate into criminal acts. This predictive capability enables law enforcement agencies to proactively deploy resources and prevent crimes, thus enhancing public safety. The project bridges the gap between traditional crime prevention methods and cutting-edge AI technology, offering a proactive approach to law enforcement and ensuring a safer society.

No. of Pages : 14 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060189 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : APPLICATION FOR PREDICTION OF CROP DISEASES USING MACHINE ALGORITHMS

(51) International classification :G06N0020000000, G06Q0050020000, G06N0003045000, G06V0010820000, G16H0050700000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to the development of a mobile application that uses machine learning algorithm to predict agricultural crop diseases. Traditional crop disease detection methods often depend on farmers or agricultural specialists performing visual inspections, which can be time-consuming and subjective. This mobile application aims to give farmers with a simple and dependable tool for early detection and prediction of crop illnesses, allowing for timely intervention and reducing crop losses. The tool uses machine learning models built on large datasets of crop photos and associated disease signs to effectively predict the possibility of various agricultural diseases. The invention is a huge step forward in precision agriculture and has the potential to help farmers to use more sustainable techniques.

No. of Pages : 9 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060190 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AUTONOMOUS DRONES

(51) International classification :G05D0001000000, B64C0039020000, B64U0101300000, A61K0036730000, B64U0101000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This patent introduces a novel approach to autonomous drone technology by Raspberry Pi Zero W, a compact and affordable microcomputer. The system enables unmanned aerial vehicles to perform tasks independently, leveraging the computational capabilities of Raspberry Pi Zero W for onboard processing. The integration includes advanced AI algorithms such as computer vision and machine learning, empowering drones to navigate, make decisions, and adapt to complex environments autonomously. The relevance of this invention in today's world lies in its potential to address contemporary challenges. The compact size and low cost of Raspberry Pi Zero W make it accessible for widespread adoption, opening doors for applications in surveillance, environmental monitoring, disaster response, and last-mile delivery. The system's ability to operate autonomously reduces the need for constant human oversight, thereby enhancing efficiency and expanding the scope of drone applications in various industries. In a world increasingly reliant on technology, the proposed autonomous drone system offers a scalable and versatile solution, aligning with the demands of modern society. Its potential impact ranges from improving agricultural practices through precision farming to enhancing emergency response capabilities in disaster-stricken areas. The integration of AI with Raspberry Pi Zero W represents a cutting-edge advancement in the field of autonomous drones, promising a significant contribution to the evolving landscape of unmanned aerial systems

No. of Pages : 11 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060191 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SMART WASTE MANAGEMENT USING IOT

(51) International classification	:G06Q0010300000, H04L0067120000, B65F0001140000, G06Q0010047000, G06Q0010087000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Smart Bin is a groundbreaking smart waste management system designed to revolutionize the traditional waste collection and disposal processes. Leveraging Internet of Things (IoT) technology, advanced sensors, data analytics, and automation, Smart Bin optimizes every aspect of waste management, from collection to recycling. The system utilizes smart bins equipped with IoT sensors to monitor fill levels in real-time, enabling predictive analytics for optimized route planning and resource allocation

No. of Pages : 10 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/08/2024

(21) Application No.202441060192 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : AUTOMATIC STREET LIGHT USING LDR AND IR SENSORS

(51) International classification :F21W0131103000, F21S0008080000, F21V0023040000, B60Q0001140000, H05B0047110000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The Automatic Street Light Control System using LDR (Light Dependent Resistor) and Infrared Sensor is an innovative approach to enhance energy efficiency in urban lighting infrastructure. This system is designed to intelligently control streetlights by incorporating LDR for ambient light detection and an infrared sensor for real-time motion monitoring. The combination of these sensors ensures adaptive and responsive illumination, optimizing energy consumption while ensuring adequate visibility on the streets. Normally in many streets the streetlights will be remain ON during daytime because of few people's negligence and lack of responsibility towards it. So, to overcome this problem of manual switching On and OFF the streetlight, we can use automatic streetlight that uses LDR sensor to sense the sunlight and acts accordingly to it. This automatic street light system automatically switches ON lights when the sunlight goes below the visible region of our eyes. This is done by a sensor called Light Dependent Resistor (LDR) which senses the light like our eyes. It automatically switches OFF lights whenever the sunlight comes, visible to our eyes. So, by using this method there will be no wastage of electricity. People need to worry about switching ON and OFF the streetlight whenever it is required. In addition to the LDR, an infrared sensor is employed to detect the presence of vehicles or pedestrians on the streets. The sensor relays real-time data to the control system, allowing it to adjust the intensity of streetlights based on the density of traffic. In high-traffic areas, the system increases the brightness of the streetlights to enhance visibility and safety, while in low-traffic periods; it dims the lights to further conserve energy. The Automatic Street Light Control System is designed with an embedded microcontroller that processes sensor inputs and executes control commands. The system offers a reliable, cost-effective, and environmentally friendly solution for urban lighting, addressing the growing need for sustainable technologies in smart city initiatives. The implementation of this intelligent lighting system not only contributes to energy conservation but also promotes a safer and more efficient urban environment.

No. of Pages : 15 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060193 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SMART ELECTRICITY METER WITH AUTOMATIC SERVER UPDATES

(51) International classification :G01D0004000000, G06N0003080000, G08C0017020000, G06Q0030040000, G06Q0010109000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The traditional manual meter reading is not suitable for longer operating purposes as it uses many human and material resources. It brings additional problems in calculation of readings and billing manually. Now-a-days the number of electricity consumers is increasing to a great extent. It has become a hard task in handling and maintaining the power as per the growing requirements. Presently maintenance of the power is also an important task as the human operator goes to the consumer's house and produces the bill as per the meter reading. If the consumer is not available, the billing process will be pending, and human operator again needs to revisit. Going to each consumer's house and generating the bill is a laborious task and requires a lot of time. It becomes very difficult especially in the rainy season. If any consumer did not pay the bill, the operator needs to go to their houses to disconnect the power supply. These processes are time consuming and difficult to handle. Moreover, the manual operator cannot find the unauthorized connections or malpractices carried out by the consumer to reduce or stop the meter reading/power supply. Human error can open an opportunity for corruption done by the human meter reader. So, the problem which arises in the billing system can become inaccurate and inefficient

No. of Pages : 13 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060194 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : MICROCONTROLLER BASED WIND TURBINE MONITORING SYSTEM

(51) International classification :F03D0017000000, F03D0009250000, F03D0003040000, F03D0003000000, G01D0021020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The integration of sensor technologies within wind turbine systems has revolutionized the field of renewable energy by enabling real-time monitoring and analysis of crucial operational parameters. This abstract encapsulates a comprehensive report on a wind turbine monitoring system employing voltage, speed, and temperature sensors interfaced through the Thing Speak platform. The architecture of the monitoring system, encompassing the deployment and functionality of each sensor type.Specifically, the voltage sensor captures electrical fluctuations, the speed sensor records turbine rotation rates, and the temperature sensor monitors environmental conditions affecting turbine performance. These sensors are seamlessly integrated into Thing Speak, facilitating the aggregation and visualization of real-time data streams

No. of Pages : 10 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060195 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : LIDAR BASED SELF DRIVING CAR

(51) International classification	:G05D0001000000, H04N0007180000, B60W0060000000, G01C0021340000, G06Q0050400000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
As the population is increasing day by day, transportation has been a major issue. So we have developed an automated driving system which drives car automatically. Our goal is to help prevent traffic accidents and free up people's time by fundamentally changing car use. We have developed technology for cars that can drive themselves. We have made automated vehicles that are focused on giving automated driving experience to human drivers. This car is capable of sensing the environment, navigating and fulfilling the human transportation capabilities without any human input. A lidar is used for sensing the surroundings

No. of Pages : 4 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060196 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : EMOTION DETECTION FROM TEXT

(51) International classification	:G06N0003044000, G06N0003084000, G06N0003080000, G06F0040300000, G06N0005045000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Research on mental health has new directions to pursue due to the substantial rise in the usage of internet communication in recent years. The framework for recognizing emotions in English language text chats is presented in this paper as an attempt to humanize these relationships. According to the World Health Organization (WHO), depression is expected to rank among the top causes of death. Sentiment analysis is a relatively new field of study when it comes to text identification. Though several methods have been used in the past, including physiology assessed by wearable devices, written expressions from the text, spoken expressions from audio, and facial expressions observed from video, multi-modal approaches have also produced encouraging outcomes. It was selected due to its capacity to incorporate global statistics without depending on the local statistics or contextual information of individual words. The word counts have certain problems because the most common words—such as stop words—usually have low priority despite being highly focused. A method called LIME, which stands for local interpretable model-agnostic explanations, approximates any black box machine learning model with a local interpretable model to provide a reason for each individual prediction. The LSTM, which is "an extension of recurrent neural networks (RNNs) that is capable of handling long term dependencies," was applied to the generated embeddings. With an overall F1 score of 0.93, our model performed well. The model was better at identifying sadness and joy than other classifications, but it had a tougher time identifying surprise. Our method of employing GloVe Embedding has not been thoroughly investigated before on emotion recognition tests

No. of Pages : 12 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060197 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : IMPLEMENTATION OF SMART WASTE MANAGEMENT USING IOT

(51) International classification	:G06Q0010300000, H04L0067120000, G06Q0010047000, B65F0001140000, G06Q0010087000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
SmartWastePro is a groundbreaking smart waste management system designed to revolutionize the traditional waste collection and disposal processes. Leveraging Internet of Things (IoT) technology, advanced sensors, data analytics, and automation, SmartWastePro optimizes every aspect of waste management, from collection to recycling. The system utilizes smart bins equipped with IoT sensors to monitor fill levels in real-time, enabling predictive analytics for optimized route planning and resource allocation.

No. of Pages : 10 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060198 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : TESLA TOWER

(51) International classification :H02J0050120000, H02J0050100000, H04B0005260000, H01J0037320000, A61N0001372000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Our project TESLA TOWER includes technology like inductive coupling, capacitive coupling, microwaves, light waves and resonant inductive coupling. Our main aim is to generate wireless and safe electricity for long distance transmission. Since we are indulged in wireless transmission of electricity, so we won't need any more insulated cables. This vision is taken from Sir Nikola Tesla's WARDENCLYFFE TOWER. It works on the principle to achieve a condition called resonance. Here, the primary coil emits huge amount of current into the secondary coil to drive the secondary circuit with maximum energy. The fine-tuned circuit helps to shoot the current from primary to secondary circuit at a tuned resonant frequency. The Coil has ability to produce output voltages up to several million volts based upon the size of coil.

No. of Pages : 10 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060199 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : DUAL AXIS SOLAR TRACKING SYSTEM USING ARDUINO AND LDR

(51) International classification :H02S0020320000, F24S0030000000, F24S0030425000, F24S0050200000, F24S0030452000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Green and clean energy depends meanly on the Solar energy, especially at urban area. This paper presents the Arduino-based new design of dual-axis solar tracking system with high-efficiency using through the use of five-point sunlight sensors.The main objective of this research is to convert the maximum sunlight to electrical power by auto movement of the solar panel.This research is divided into two stages, first stage related to hardware design and the second related to software development. In hardware design, five light dependent resistors (LDR) have been used for tracking light direction source. Two linear actuators have been used to move the solar panel towards the maximum light intensity direction by using LDR sensors. Moreover, the software is constructed using C++ programming language and uploaded to the Arduino UNO platform. The efficiency of the designed tracking system has been examined and compared with fixed and single axis solar tracker and results shows that the new system has better efficiency than the fixed or single axis system,where the increment in voltage (?V) in tracking system as percentage with day time (10 am to 3 pm) has been increased with 10 to 17%.

No. of Pages : 13 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060200 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : DESIGN AND DEVELOPMENT OF VFD ENABLED SPEED CONTROL OF INDUCTION MOTOR USING 3RD DEGREE KERNEL-C2N MODEL

(51) International classification :H02P0001260000, G01R0011360000, H02J0003380000, H02P0023260000, H02P0027020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A typical induction motor requires a 3A current to do the work at its full load capacity (1 HP). However, in any industry, the requirement of an induction motor at its full load capacity is 3-4 hours in a 24-hour running condition. Therefore, the wastage of energy is around 50-60% of the total energy drawn by the induction motor in a typical working environment. This leads to unexpected budget flow and the production of extra harmonics to the line to which it is connected. In the proposed model VFD system will bring down the energy consumption and at the same time run the induction motor at its full load capacity without compromising the rated power. V/F control action has been planned to operate the induction motor at its full rated capacity while consuming less amount of power.

No. of Pages : 13 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060201 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ON GRID AND SOLAR BASED SMART CHARGING STATION FOR ELECTRIC VEHICLE

(51) International classification :B60L0053800000, B60L0053660000, B60L0053140000, G01R0031392000, B60L0053630000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
In this work is proposed the design of a system to create and handle Electric Vehicles (EV) charging procedures, based on intelligent process. Due to the electrical power distribution limitation, Electric Vehicles charging should be performed in effective way. This proposed Smart Electric Vehicle Charging station having many advance features like it will automatically maintain the power from different source and automatic switch the source based on availability of the source. In this implementation we are using two different source, solar system, and main supply. The controller will automatic switch the source based on its priority. ensuring uninterrupted charging. User-friendly features include an LCD display for real time monitoring of temperature and over-voltage faults. RFID payment technology enhances transaction security. The project prioritizes sustainability by integrating solar energy into the charging process. Advanced sensors monitor battery health, contributing to future smart charging infrastructure. The system's automatic source prioritization enhances efficiency and reliability. RFID controlled vehicle charging adds a layer of secure and convenient payment. The project aligns with the evolving landscape of electric vehicle technology. Integration of battery swapping technology hints at innovative advancements in EV charging stations.

No. of Pages : 11 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060202 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ENHANCING PRIVACY OF DECENTRALIZED ELECTRONIC HEALTH RECORDS USING BLOCKCHAIN

(51) International classification	:G16H0010600000, G06F0021620000, H04L0009000000, G16H0040670000, H04L0009400000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to the electronic health record systems using Blockchain technology. It is a big problem that most of time the patient`s medical data is scattered among all healthcare centers. A Blockchain technology-based electronic health record portal for patients, doctors, and other user to provide temper proof, secure, and efficient access to health records while maintaining the privacy of patient's health records. The aim of this invention is to deal with the various needs of patients, doctors, and third parties, as well as to see how the system could resolve privacy and security issues in the healthcare industry

No. of Pages : 17 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060203 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD FOR NETWORK ATTACK DETECTION PIPELINE

(51) International classification	:H04L0009400000, G06F0021550000, G06N0003080000, G06F0021560000, G06N0020000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The method presents that combines ensemble, deep learning, and machine learning techniques to identify botnet attacks in Internet of Things networks. We use machine learning algorithms to first detect attack presence based on statistical features using the BoTNeTIoT-L01 dataset, which contains traffic data from nine IoT devices with Mirai and Gafgyt botnet attacks. Then, by removing subtle patterns from the raw packet data, deep learning models increase the accuracy of detection. We then apply ensemble methods to combine the strengths of individual classifiers and improve the overall attack classification. For real-time threat detection in Internet of Things environments, this hybrid methodology provides a strong solution that strengthens network security against malicious activities. Our method effectively detects and mitigates botnet threats, protecting IoT infrastructures from potential cyberattacks, as demonstrated by empirical evaluation.

No. of Pages : 16 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060204 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD FOR DISCORD IMAGE LOGGER

(51) International classification :H04L0009400000, G06F0021620000, G06Q0030025100, H04L0067500000, H04L0009320000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The Invention comprises modules of the image logging system in Discord is designed to protect shared images by preventing direct downloads and instead extracting important user data such as IP addresses, User IDs, and tower locations. This data is securely stored on the Discord server for analysis and actions, ensuring user privacy and data security. By utilizing this collected data, we can enhance the user experience, provide personalized content, and implement targeted advertising strategies tailored to the preferences and needs of Discord users. Our commitment to privacy and security is evident through our adherence to data protection protocols and privacy regulations. The image logging module includes a logger and logger for data gathering, as well as Identity and Access Management and encryption techniques for extracting data from the receiver's end. These algorithms are specifically designed for real-time tracking of users through informative features extracted from acquired images. The performance evaluation module ensures reliable and effective data extraction from any given image. Additionally, the system's firewall with slightly lower security levels enables higher classification scores and superior accuracy in data gathering, highlighting the system's effectiveness

No. of Pages : 20 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060205 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR STOCK PRICE TREND ANALYSIS AND PREDICTION

(51) International classification	:G06Q0040040000, G06N0003080000, G06N0003045000, G06N0003044000, G16H0050200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
This invention presents a comprehensive exploration of machine learning methodologies for analyzing stock price trends, focusing on the comparison between Linear Regression, Long Short-Term Memory (LSTM), and Convolutional Neural Network (CNN) models. Through meticulous data collection, preprocessing, and model implementation, we investigate the predictive efficacy of each model and identify the most suitable approach for stock price trend analysis. Our findings reveal valuable insights into the strengths and limitations of each model, empowering stakeholders in the financial sector with actionable insights for informed decision-making

No. of Pages : 20 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060206 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : PRODUCTION OF ECO-FRIENDLY GEOPOLYMER CONCRETE AND BLOCKS USING INDUSTRIAL EFFLUENTS

(51) International classification	:C04B0028000000, C04B0111000000, C04B0018140000, C04B0040000000, C04B0018080000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The method of preparing eco-friendly geopolymer concrete using industrial effluents, in current investigation relates to the production of sustainable construction material, particularly method of preparing eco-friendly geopolymer concrete using industrial effluents like fly ash, Ground granulated blast furnace slag, metakaolin with aggregates. The materials are optimized by using various mix proportions and compressive strength is determined. The compressive strength of 7, 14, 28days are 28.21MPa, 39.43MPa, 43.38MPa respectively. The strength of the concrete is greater than the strength of concrete blocks manufactured by local company. Through this invention, the industrial effluents or debris are used for preparing the concrete blocks. We have taken an initiative to reduce the industrial waste, thereby reducing the dumping challenges and construction cost by creating eco-friendly green concrete

No. of Pages : 15 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060207 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD FOR CREDIT CARD FRAUD DETECTION

(51) International classification	:G06Q0020400000, G06N0020100000, H04W0012120000, G06Q0020420000, G06N0020000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The credit card fraud detection method presented in this patent offers a comprehensive solution for detecting and preventing fraudulent activities in financial transactions. Through a sophisticated framework comprising modules for data preprocessing, feature extraction, machine learning model training, real-time monitoring, anomaly detection, and security measures implementation, the method leverages advanced technologies to mitigate the risks associated with credit card fraud. The inclusion of machine learning algorithms such as logistic regression and random forests enhances predictive modelling capabilities, while the user interface module provides intuitive visualizations and alerts for efficient fraud analysis. Additionally, robust security measures, including encryption techniques and real-time monitoring using streaming data processing frameworks, ensure the confidentiality and integrity of sensitive data. This invention represents a significant advancement in the field of credit card fraud detection, offering a scalable, resilient, and user-centric solution to combat financial fraud effectively.

No. of Pages : 18 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060208 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : LIVE TICKETING AND TRAFFIC VIOLATION DETECTION SYSTEM

(51) International classification	:G08G0001017000, G08G0001010000, G06N0020000000, G08G0001054000, G08G0001040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The invention Live Ticketing and Traffic Violation Detection System presents a method for enhancing road safety and regulatory compliance through advanced camera and sensor technologies. By employing real-time data processing and machine learning algorithms, the system accurately identifies and documents various traffic violations such as speeding, red-light running, and illegal parking. Integration with existing traffic management infrastructure and collaboration with transportation authorities ensure seamless deployment and alignment with broader traffic management goals. Adherence to established regulations and continuous system optimization guarantee reliability and adaptability over time. This comprehensive approach to traffic monitoring and enforcement promotes trust among users and regulatory authorities while enhancing urban mobility and safety

No. of Pages : 20 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060209 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR EMOTION DETECTION

(51) International classification :G06V0040160000, G06N0003045000, G06F0003010000, G06N0003080000, G10L0025630000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
In human-computer interaction and emotional analysis, accurately understanding feelings in real-time is crucial but challenging and causes errors in user interactions. Our solution integrates efficient face detection using the Haar Cascade Classifier with a pre-trained Convolutional Neural Network (CNN) in TensorFlow for swift and accurate emotion deciphering. This fusion combines the Haar Cascade Classifier's face detection proficiency with the CNN model's speed and accuracy in emotion recognition. A deep face framework is used to detect the emotion accurately. Our goal is to develop a real-time system that reliably identifies emotions on faces, enhancing empathetic and responsive interaction between humans and computers. This holistic approach advances emotional analysis in human-computer interactions, aiming for more intuitive systems that can facilitate personalized user experiences.

No. of Pages : 19 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060210 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : INFORMATION SECURITY BY BIOMETRIC WATERMARKING

(51) International classification :H04L0009400000, H04L0009320000, G06F0021320000, G06N0003045000, G06V0040190000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The system proposes a multifaceted approach to bolster information security through the integration of biometrics data like fingerprint and iris in watermarking image using convolutional neural networks (CNNs), one-time password (OTP) verification, and a user interface (UI). Leveraging fingerprint and iris images as unique biometric identifiers, the system embeds them into digital content using watermarking for authentication purposes. CNNs are employed to accurately process and encode biometric features extracted from these images. OTPs add an additional layer of security by generating temporary codes for user verification. The UI streamlines user interaction, enabling seamless provision of biometric data and entry of OTPs for authentication. By synergistically combining these elements, the system offers robust information security measures, ensuring secure access control and authentication in diverse contexts.

No. of Pages : 16 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060211 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : IMPLEMENTATION OF RASPBERRY PI FOR CRACK DETECTION ON RAILWAY TRACKS

(51) International classification :G06F0003060000, H04W0084180000, H04N0007180000, H04L0067109500, H04W0012020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Using a three-tiered distributed structure, the architecture for monitoring big span bridges is proposed. Intelligent acquisition nodes and local controllers are used for data processing and compression. The 2G wireless network is utilized to transfer data in real-time between the central server and the local controller. It is tested and evaluated for six months on a long-span railway bridge. creation and suggestion of a unique wide span bridge monitoring architecture Implementing a distributed structure with three levels in the monitoring system Utilizing local controllers and intelligent acquisition nodes for data handling Using a 10-bit A/D converter to sample data with extreme accuracy Field sensor signal analysis and real-time compression in the acquisition nodes Results of processing are transmitted via IEEE802.11 wireless network to the local controller. Real-time data transfer between the central server and the local controller using a 2G wireless network The intelligent monitoring system was implemented and operated on a broad span railway bridge successfully for a period of six months.

No. of Pages : 10 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060212 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ON GRID AND SOLAR BASED SMART CHARGING STATION FOR ELECTRIC VEHICLE

(51) International classification :B60L0053800000, B60L0053660000, B60L0053140000, G01R0031392000, B60L0053630000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
In this invention the design of a system to create and handle Electric Vehicles (EV) charging procedures, based on intelligent process. Due to the electrical power distribution limitation, Electric Vehicles charging should be performed in effective way. This proposed Smart Electric Vehicle Charging station having many advance features like it will automatically maintain the power from different source and automatic switch the source based on availability of the source. In this implementation we are using two different source, solar system, and main supply. The controller will automatic switch the source based on its priority. ensuring uninterrupted charging. User-friendly features include an LCD display for real time monitoring of temperature and over-voltage faults. RFID payment technology enhances transaction security. The invention prioritizes sustainability by integrating solar energy into the charging process. Advanced sensors monitor battery health, contributing to future smart charging infrastructure. The system's automatic source prioritization enhances efficiency and reliability. RFID controlled vehicle charging adds a layer of secure and convenient payment. The invention aligns with the evolving landscape of electric vehicle technology. Integration of battery swapping technology hints at innovative advancements in EV charging stations.

No. of Pages : 11 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060213 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : EFFICIENT COMPRESSION AND TRANSMISSION OF DEEP LEARNING MODELS

(51) International classification :G06N0003045000, G06N0003080000, G06F0009500000, H04L0069040000, G06T0009000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to methods and systems for enhancing the efficiency of compression and transmission of deep learning models, particularly those utilized in image processing tasks. Deep learning models, while offering state-of-the-art performance, often require substantial computational resources and memory, posing challenges for deployment in resource-constrained environments and over bandwidth-limited networks. The proposed invention addresses these challenges by introducing novel techniques for compressing and transmitting deep learning models without compromising their accuracy or functionality. The inventive methods leverage advanced compression algorithms, model quantization, and knowledge distillation techniques to reduce the size of deep learning models while preserving their predictive power. Additionally, the invention incorporates strategies for optimizing the transmission of compressed models over network channels, minimizing latency and bandwidth requirements without sacrificing performance. Furthermore, the invention encompasses adaptive mechanisms for dynamically adjusting compression levels based on contextual factors such as available resources and network conditions. In various embodiments, the invention encompasses both generic compression techniques applicable to a wide range of deep learning architectures and specialized methods tailored for specific tasks within image processing, including but not limited to image classification, object detection, and semantic segmentation. The invention finds applications in diverse domains, including mobile devices, edge computing platforms, autonomous vehicles, and distributed computing environments. The proposed invention offers several advantages over existing approaches, including reduced model size, improved inference speed, lower computational overhead, and enhanced scalability. These benefits make the invention well-suited for real-world deployment scenarios where efficient utilization of computational resources and bandwidth is paramount.

No. of Pages : 11 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060214 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : COMPARATIVE ANALYSIS OF INTELLIGENT CONTROL TECHNIQUES FOR POWER QUALITY IMPROVEMENT IN INDUSTRIAL DRIVES

(51) International classification	:H02J0009060000, H02J0003010000, H02J0003180000, G06N0003043000, H02M0001000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
In this invention, a new control technique for intelligent controller is implemented for uninterruptible power supplies like computer and other applications. In the proposed scheme, conventional active and reactive power theory is implemented and intelligent controller based neural network and fuzzy logic system is executed to generate a reference compensated current for shunt active power filter to improve the performance of power quality issues. The switching strategy of voltage controlled active power filter is formulated and corresponding gate pulses is achieved by hysteresis controller. DC link capacitor voltage is regulated by conventional proportional integral controller of voltage control loop. To regulate the source current, hysteresis controller is used that is in phase with current control loop. In the proposed system, various control techniques are designed with shunt active power filter. The results are compared with conventional and intelligent techniques and the system model is implemented using MATLAB Simulink environment.

No. of Pages : 12 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060215 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : DEVELOPMENT OF REMOTE OPERATING (RO)-BOAT FOR WATER QUALITY DETECTION AND MANAGEMENT SYSTEM

(51) International classification	:G01N0033180000, H04W0004380000, C02F0001000000, G08C0017020000, G01S0019140000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The Remote Operating Boat (RO-BOAT) project intends to create a remotely controlled platform outfitted with advanced sensors for real-time water quality monitoring. Traditional methods for assessing water quality are frequently Labor -intensive and have limited coverage. The RO-BOAT system addresses these issues by exploring water bodies autonomously while constantly monitoring important factors such as pH, dissolved oxygen, turbidity, temperature, and conductivity. The system, which incorporates cutting-edge sensor technologies, wireless connection, and autonomous navigation algorithms, collects and analyses data in real time to develop comprehensive water quality maps. An easy-to-use interface allows operators to remotely manage the RO-BOAT and view monitoring data. The RO-BOAT system promotes proactive environmental conservation and pollution mitigation by providing fast and trustworthy information. Designing and developing a low-cost system for real-time water quality monitoring. The system includes sensors that detect physical and chemical characteristics of water. The Arduino model serves as the primary controller for processing sensor data. Sensor data can be seen on the internet using a Wi-Fi system. Detects and displays water's physicochemical quality in real time. The wireless, multi-sensor network is used for cost-effective monitoring. Water is tested for electrical conductivity, pH, TDS, turbidity, and temperature. Designed for use in lakes, reservoirs, and rivers with variable water quality. GPS is used for location tracking, and a radio frequency module is used for wireless communication.

No. of Pages : 12 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060216 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : NATURAL LANGUAGE PROCESSING-BASED FOOD CHATBOT FIFE “FOOD IN LIFE

(51) International classification	:H04L0051020000, G06F0040300000, G06F0016332000, G06F0040350000, G10L0015220000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A chatbot is a computer program built to establish a conversation on user interaction designed with natural language processing or various other algorithms for intent recognition. In today’s fast paced world where online food delivery is a rising business, to facilitate placing orders people rely on chatbots. The existing chatbots present in various food delivery platforms have the purpose of providing the menu and taking orders. This is the traditional functioning of a food chatbot which lacks the room for understanding the user’s health and mood. To overcome this problem, the proposed NLP based chatbot “FIFE” not only does the work of taking orders but suggests the orders on the basis of allergy recognitions, health issue identifier and mood empathizer by understanding the user’s needs completely. This invention can be further incorporated in any food business to cater to the user’s needs completely with a reliable chatbot

No. of Pages : 9 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060217 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYNTHESIS AND CHARACTERIZATION OF IMIDAZO[2,1-B]THIAZOLE-PIPERIDINE AND 2, 3- DIHYDROTHIOPHENE- 1, 1-DIOXIDES - IMIDAZO[2,1-B]THIAZOLE DERIVATIVES

(51) International classification	:C07D0417120000, A61P0031040000, C08G0083000000, G01N0024080000, A61P0025280000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
[007] A new class of synthesis of novel imidazo[2,1-b]thiazole-piperidine and 2, 3- dihydrothiophene- 1, 1- Dioxides-imidazo[2,1-b]thiazole derivatives. All the novel compounds were characterized by spectral analysis using 1H NMR, 13C NMR spectroscopy and HRMS. The crystal structure of one of the derivatives 9 was confirmed by single crystal X-ray diffraction technique. X-ray diffraction analysis for 9 has been reported in this patent. The crystal structure of 9 is stabilized by intermolecular and supramolecular interactions. Molecular docking studies of all the synthesized compounds were performed with DNA gyrase.

No. of Pages : 54 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060218 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : EVALUATION OF ASSIGNMENTS/SCRIPTS/DOCUMENTS (HANDWRITTEN/ONLINE) WITH THE HELP OF PROCTOR AI

(51) International classification	:G06Q0050200000, G09B0007020000, G06F0003048830, G09B0005000000, G09B0007000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Proctor AI is an advanced AI-powered educational tool designed to streamline the evaluation process for educators, utilizing various APIs such as Open AI API, Google Cloud, etc and various LMS integrations. This software automates the assessment of various work formats such as assignments/scripts/research papers/articles/record books/homeworks/projects/etc (Both handwritten and online documents are accepted). It supports multiple languages, and ensures academic integrity through plagiarism detection, citation analysis, and handwriting verification. Proctor AI also generates AI-suggested questions and detailed student progress reports, enhancing teaching and evaluation while improving educators' work-life balance. Additional features include automated re-evaluation updates and a user-friendly app interface with robust customer support. By adopting Proctor AI, educational institutions can enhance work-life balance for staff and provide students with unbiased reports, as a step of technological advancement in the education sector. This solution aims to improve the efficiency and effectiveness of the evaluation process, benefiting both educators and students.

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060219 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR ENHANCING CONVERSATIONAL AI CAPABILITIES

(51) International classification :G06F0040300000, G06N0020000000, G06N0003006000, G10L0015220000, G06N0005020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
A system and method for improving ChatGPT, a conversational AI model, are disclosed herein. The system employs a multi-faceted approach to enhance the functionality and performance of ChatGPT across various domains and applications. The method integrates advanced natural language processing techniques, including but not limited to, semantic parsing, sentiment analysis, and context-awareness mechanisms, to enable ChatGPT to generate more coherent, contextually relevant, and emotionally intelligent responses. Furthermore, the system leverages a robust feedback mechanism to continuously learn from user interactions and adapt its responses accordingly. This feedback loop, powered by machine learning algorithms, facilitates ChatGPT's ability to dynamically adjust its conversational style, tone, and language based on user preferences and situational context. Additionally, the system incorporates a knowledge enrichment module that integrates external knowledge sources such as databases, encyclopedias, and real-time data feeds. By accessing and synthesizing this vast repository of information, ChatGPT can provide more informative and accurate responses to user queries, thereby enhancing its utility as a virtual assistant and knowledge navigator. Overall, the disclosed system and method represent a significant advancement in the field of conversational AI, enabling ChatGPT to offer more engaging, personalized, and contextually relevant interactions across a wide range of applications and use cases.

No. of Pages : 12 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060239 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ENHANCING CONCRETE STRENGTH PROPERTIES WITH USE OF GLASS POWDER AND MINERAL ADMIXTURE AS PARTIAL REPLACEMENT OF CEMENT.

(51) International classification :C04B0028020000, C04B0018080000, C04B0028040000, C04B0033135000, C04B0007260000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Due to the constant accumulation of various local wastes that pose environmental risks, sustainable materials and their developments are in high demand in the modern era. About 7% of the greenhouse gas emissions into the environment from the construction sector come from the use of cement. From this angle, concrete's mechanical qualities might be improved by partially substituting cement with a substance having pozzolanic qualities. As an additional cementitious ingredient, fly ash has previously demonstrated its worth. By substituting a portion of the cement with fly ash, the enormous fly ash disposal issue from thermal power plants is reduced. Conversely, glass finds various uses in our daily lives. The lifespan of glass is finite. There is a compelling argument to be made for using waste glass because its safe storage or disposal presents an environmental risk. Therefore, the purpose of this study is to investigate the possibility of using leftover glass powder to partially substitute cement in concrete. With a 5% increase, glass powder is used to replace cement in the range of 15% to 25%. Fly ash is also used to substitute cement to a partial extent (10–30%). Compressive strength, split tensile strength, and flexural strength tests were used to evaluate its hardened properties at 7, 14, and 28 days. According to test results, adding glass powder to concrete in place of 20% of the cement by weight increased its compressive strength to 53.62 N/mm2, as opposed to 48.57 N/mm2 for regular concrete. Similar trends were seen in the tensile strength as well. By substituting 20% glass powder, the tensile strength increased to 3.57 N/mm2 from 3.09 N/mm2 for normal concrete. The compressive strength increased to 57.32 N/mm2 when fly ash was substituted for 20% of the cement by weight, as opposed to 48.57 N/mm2 for regular concrete. When fly ash is substituted for 20% of the original concrete, the tensile strength increases to 3.5 N/mm2, as opposed to 3.09 N/mm2 for regular concrete. Subsequent research showed that it is effective to substitute 20% glass powder and 20% fly ash for standard concrete in order to attain the same strength.

No. of Pages : 4 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060240 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD FOR DETECTING PRESENTATION ATTACKS ON GENUINE AND CONTACT LENS IRIS

(51) International classification :G06V0010820000, G06N0003080000, H04L0009400000, G06F0021550000, G06V0010800000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
Our pioneering iris presentation attack detection system combines YOLOv5, YOLOv7, and YOLOv8 models, finely tuned to discern genuine iris patterns from those altered by contact lenses. Integrated with a reference dataset, it ensures thorough training and evaluation. Hyper-spectral signature extraction modules capture spectral data from iris images for precise classification. A classifier compares these signatures against the dataset for authenticity. A fusion classifier enhances accuracy by combining outputs from YOLO models. Trained on diverse datasets, our system effectively differentiates genuine from altered iris patterns, bolstering security. With real-time processing and dynamic updates, it adapts to evolving threats. Seamlessly integrated into existing systems, it strengthens security against presentation attacks, mitigating unauthorized access risks.

No. of Pages : 19 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060241 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : EYE CONTROLLED VIRTUAL MOUSE

(51) International classification	:G06F0003010000, G06F0003030000, G06V0040160000, G06F0003048120, G02B0027010000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The invention to increase accessibility and usability for people with physical disabilities by providing a new interactive computer. By combining eye-tracking hardware with software algorithms, the system can achieve accurate and intuitive cursor control based on the user's face. This brief describes the intellectual and potential impact of the project, which includes improving the quality of life and independence of people with disabilities and exploring general applications of eye-tracking technology in human-computer interaction. We describe a system that presents a hands-free interface between human and computer. It uses a typical webcam to capture an input image. Controlling of mouse cursor is obtained by face movement as moving face up, down, left and right and mouse events are controlled through eye blinks, and keyboard events are controlled through hand gestures. To perform these operations different algorithms like Haar Cascade algorithm, Dlib. Our system is mainly aimed for disabled peoples to have effective communication with computer

No. of Pages : 14 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060242 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : STABILIZATION/SOLIDIFICATION AND REMEDIATION METHOD FOR ELECTROPLATING INDUSTRIAL SLUDGE

(51) International classification :B09B0003000000, A62D0003330000, A62D0101430000, C02F0011000000, C04B0111000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The studies were carried out using 15 different cements, fly ash, and lime combinations, each of which was combined with water. The study also looked at the best Solidification/Stabilization procedure for encapsulating inorganic hazardous wastes (heavy metals) within cement, resulting in a non-hazardous product. The compressive strength and metal content in the leachate of the stabilized/solidified product were examined.The best mixes are those that have a sludge:additive ratio of 50:50 is used, with the additives containing 50% cement. The best mixes are effective at hardening electroplating sludge (ETP sludge) waste sludge and lowering leachability to acceptable levels. As a result, the formulations are beneficial in terms of both achieving sufficient compressive strength and decreasing leachability. The sinter produced by a unique technique from ETP sludge and The benefits of this procedure are (1) partial cement substitution to save money, and (2) the introduction of the idea of WASTE TREATING WASTE for the ultimate safe disposal of metal-laden sludges on landfills

No. of Pages : 15 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060243 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SMART MIRROR USING RASPBERRY PI

(51) International classification	:G06V0040160000, A47G0001020000, A61K0036730000, H05B0047115000, G06Q0050060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The invention focuses on the development of a smart mirror system using Raspberry Pi technology. This smart mirror is designed to provide users with various functionalities such as displaying information like time, date, weather, news, and calendar updates. Additionally, the smart mirror incorporates a theft detection system using a camera IoT setup, which captures images of suspects when no one is at home and shares them with the owner via email. The system is customizable to suit user preferences, allowing adjustments to motion detection thresholds and notification settings. The integration of IoT technology and image processing algorithms enhances the utility of the smart mirror, making it a valuable addition to any home or office environment.

No. of Pages : 19 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060244 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : METHOD FOR KIDNEY TUMOR DETECTION

(51) International classification :G06F0008710000, A61B0005000000, C12Q0001688600, G06N0020000000, G16H0010600000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The kidney tumor detection integrates Data Version Control (DVC) into the detection system, ensuring reproducibility and transparency in machine learning processes. It facilitates collaboration between researchers and medical professionals, managing data pipelines for model creation and improvement. Users can safely upload medical photos for tumor detection, enhancing early diagnosis and treatment planning. The system ensures high availability and dependability, enabling prompt and precise analysis of uploaded images. Leveraging MLflow for model packaging and versioning, along with AWS computational power, ensures reliable performance. Overall, this method offers a dependable tool for improving patient outcomes and healthcare delivery through intuitive, efficient, and collaborative tumor detection.

No. of Pages : 16 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060245 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A NOVEL PLASMA SPRAY NICR/AL2O3 AND CR2C/ AL2O3 COATING DESIGN FOR HOT CORROSION PREVENTION AND TO ENHANCE THE EFFICIENCY IN BOILER TUBES

(51) International classification :C23C0004040000, C23C0004134000, C23C0004060000, C09D0005080000, C22C0019050000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Traditional steels and their alloys cannot resist corrosion at high temperatures seen in thermal power plant boilers. Due to higher working temperatures for boilers, the issue of hot corrosion has grown more straightforward. Several researchers have recently attempted to use surface coatings to lessen hot corrosion of boiler steels. These coating processes have been demonstrated to improve boiler steels corrosion resistance and boost their performance at high working temperatures. In the rigorous environment of boiler operations, corrosion harms the longevity and performance of crucial elements such as boiler tubes. To address this issue, the current work explores the corrosion resistance of Ni-Cr and Cr2C-based coatings applied using plasma spray in a replicated boiler environment. The coatings, which include NiCr/Al2O3 and Cr2C/ Al2O3, are applied on the T22 steel substrate and the efficiency of these coatings in preventing corrosion and maintaining the structural strength of T22 steel substrates is systematically evaluated. The results show that Ni-Cr and Cr2C based coatings function well, with significant increase in corrosion resistance compared to uncoated substrates. Furthermore, the effect of coating composition and microstructure on corrosion behaviour is examined, giving important information for the development of new corrosion-resistant materials for boiler applications.

No. of Pages : 12 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060246 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ENHANCEMENT OF BLACK COTTON SOIL BEHAVIOR USING BIO-POLYMERS

(51) International classification :G01N0033240000, E02D0003120000, C05G0005270000, A61P0007120000, C09K0017060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Soil treatment in construction engineering generally aims to improve soil characteristics such as aggregate stability, strength, and erosion resistance. Traditional soil treatment materials have several drawbacks, particularly in terms of environmental impact. As a consequence, an eco-friendly substitute for regular components is necessary. Xanthan gum and Guar Gum are the biopolymers that is widely used in cooking. Rheology and additive modifier it was used as a soil improvement material in the current study, and experimental tests were carried out with various soil types. The results show that Xanthan gum and Guar Gum interact directly with the charged surfaces of clayey particles, forming Gum matrices between uncharged particles that resemble hard plastic. As a result, the strengthening effect of Xanthan gum was found to be the strongest performance with well-graded fine-particle soils Studies with different percentages of Xanthan gum and Guar Gum revealed that the bonding strength stopped increasing at greater quantities. The physical needs was proven to be highly heavily reliant on the soil's moisture rate. Broadly speaking, the Xanthan gum and Guar Gum enhancing effect is found to be dependent on four factors: soil type, hydration level (e.g., moisture content), Xanthan gum content, Guar Gum content and mixing method

No. of Pages : 13 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060247 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : INCONEL 718 SUPERALLOY FOR OFFSHORE WIND TURBINE FOUNDATION

(51) International classification :B22F0010280000, B33Y0010000000, F03D0013250000, B33Y0080000000, E02D0027420000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
In the current offshore wind turbines, the materials such as steel, Iron and cast iron, aluminium and copper are used for the foundation. Therefore, failures like corrosion, oxidation, poor life, design structure and more human maintenance are presents in the foundation of the offshore wind turbines. To overcome these issues, Nickel based superalloy (Inconel 718) is the best solution for this problem. Also, it has to be manufactured with high Tensile strength, high microhardness, good surface roughness, good oxidation and corrosion resistance properties. Hence, Direct Metal Laser Sintering (DMLS) advance additive manufacturing method is used to develop fine and precise offshore wind turbine foundation using Inconel 718 superalloy. The foundation of the offshore wind turbine has the wind turbine roots (101), INCONEL 718 (103), above the sea level (102) whereas the concrete foundation (105) below the seabed (104). In this proposed work, Inconel 718 powder is selected to fabricate ASTM standard for tensile parts using DMLS machine. The morphology and the chemical composition of the Inconel 718 powder particles is obtained using Field Emission Scanning Electron Microscope (FESEM) with energy-dispersion X-ray spectroscopy. The proper selection of Rapid DMLS (Model : EOSINT M 280 DMLS machine) process parameters and its levels are considered based on pilot study to improve performance characteristics like Ultimate Tensile Strength (MPa), Microhardness (HV) and Surface Roughness (µm) for the foundation of the offshore wind turbine application. In DMLS printing, the operating process parameters such as Laser Power (LP~W), Scan Speed (SS~mm/s), Layer Thickness (LT~µm) and Preheat Temperature (PT~oC) whereas other process parameters like laser beam diameter (mm), scanning path, Laser type (ytterbium fibre laser) were kept at optimum levels. Taguchi L09 orthogonal array matrix is used for conducting experimental rums to find performance characteristics such as Ultimate tensile strength, Microhardness and surface roughness. Multi Criteria Decision Making (MCDM) method of Taguchi Grey Relational Analysis (TGRA) is selected to optimize the process parameters of obtaining better performance characteristics. Hence, the TGRA optimized process parameters levels in DMLS are highly recommended to the manufacturer for better production of Inconel 718 for offshore wind turbine foundation application

No. of Pages : 22 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060248 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SEWAGE MONITORING AND BLOCKAGE DETECTION SYSTEM

(51) International classification	:H04W0084180000, G06Q0050260000, H04L0067120000, H04W0004380000, E03F0001000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A smart city is the future goal to have cleaner and better amenities for the society. Smart underground infrastructure is an important feature to be considered while implementing a smart city. Drainage system monitoring plays a vital role in keeping the city clean and healthy. Since manual monitoring is incompetent, this leads to slow handling of problems in drainage and consumes more time to solve. To mitigate all these issues, the system using a wireless sensor network, consisting of sensor nodes is designed. The proposed system is low cost, low maintenance, IOT based real time which alerts the managing station through message when any manhole crosses its threshold values. This system reduces the death risk of manual scavengers who clean the underground drainage and also benefits the public. Water is most vital role within the regular life. India has announced a project of making 100 smart cities. For making a smart city one needs to consider many parameters such as smart water, smart electricity, smart transportation etc. As most of the cities in India have adopted underground drainage system, it is very important that this system should work in a proper manner to keep the city clean, safe and healthy. If they fail to maintain the drainage system the pure water may get contaminated with drainage water and can spread infectious diseases.

No. of Pages : 5 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060249 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A STERILIZATION DEVICE FOR HOSPITAL USE

(51) International classification	:A61L0002260000, A61L0002070000, A62B0023020000, A61K0033240000, A61L0002080000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A STERILIZATION DEVICE FOR HOSPITAL USE The present disclosure relates to a device for sterilization of masks, wherein the said device comprising: a supporting compartment, a bottom and top tray compartment, an UV lamps, and a UV chamber and UV light meter. Further, the present disclosure of novel device provides without adversely affecting other metrics of the mask such as filtration performance, fluid resistance and durability, reuseable the sterilized masks up to 30 times, and effectively quench many different pathogens including the SARS-CoV-2 strains.

No. of Pages : 25 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060250 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : MACHINE LEARNING MODEL BASED ON DEEP LEARNING ARCHITECTURE FOR SECURE MEDICAL IMAGE TRANSFER IN TELERADIOLOGY SECTOR

(51) International classification :G06N0003080000, G06N0003045000, G06T0007110000, H04L0009080000, G06T0007000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
It proposes a deep learning-based encoder-decoder neural network approach for the encryption and decryption of medical images. This is because the deep learning architecture consists of an encoder as a downsampling path and a decoder as an upsampling path. This architecture has been used many times in image segmentation tasks due to its capability of learning local and global features. Finally, the encoder is composed of repeated convolutional blocks followed by max- pooling layers that progressively reduce the spatial dimensions while increasing the feature depth. Encryption: In the process of encryption, keys are generated with a logistic map, one of the chaotic maps, and the output of the encoder is multiplied with this key. This section initializes a logistic map for the generation of a pseudo-random key array, reshapes it to the dimensions of the encoded image features, and element-wise multiplies the image features to obtain the encrypted image. Decryption: Upsample the encrypted features from the encoder path and concatenate them with corresponding features (skip connections). This reconstructs the original image at high resolution. For encryption/ decryption logistic chaotic function was employed in this work.

No. of Pages : 15 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/08/2024

(21) Application No.202441060251 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : FINFET-DRIVEN VLSI AMPLIFIER FOR ENHANCED EEG SIGNAL CLARITY AND NOISE

(51) International classification	:A61B0005000000, H01L0029660000, H03F0003450000, A61B0005369000, H01L0029780000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :

ABSTRACT This invention relates to a novel amplifier design for electroencephalography (EEG) signals, leveraging Fin Field-Effect Transistor (FinFET) technology to achieve enhanced signal clarity and noise reduction. The proposed amplifier, implemented in Very Large Scale Integration (VLSI) technology, utilizes FinFET devices to provide a high gain, low noise, and high bandwidth amplifier suitable for EEG applications. The design incorporates a novel current-reuse technique and a common-gate topology to achieve a high gain of [insert gain value] dB, while maintaining a low noise figure of [insert noise figure value] dB. The amplifier's high bandwidth of [insert bandwidth value] Hz enables the capture of high-frequency EEG signals, while the FinFET devices ensure low power consumption and high reliability. Simulation results demonstrate significant improvements in EEG signal clarity and noise reduction, making this amplifier an attractive solution for various EEG applications, including brain-computer interfaces, neurological disorder diagnosis, and patient monitoring systems.

No. of Pages : 10 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060253 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SMART FLORICULTURE INSPECTION AND QUALITY CONTROL ROBOT FOR THEFLOWER SUPPLY CHAIN

(51) International classification	:G01N0021950000, B25J0009160000, B07C0005342000, G01N0021880000, G06T0007000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention relates to a smart floriculture inspection and quality control robot (100) for the flower supply chain The robot (100) comprises a robotic inspection unit, an artificial intelligence (AI) analysis module, an automated sorting mechanism and a real-time data reporting module. The robotic inspection unit equipped with high-resolution cameras and sensors for capturing detailed images and data of flowers. The artificial intelligence (AI) analysis module configured to process the images and data from the robotic inspection unit to assess flower quality parameters, including color, size, shape, and signs of defects or diseases. The automated sorting mechanism for categorizing flowers into different quality levels based on the AI analysis, including at least one category for premium quality, one for standard quality, and one for rejected flowers. The real-time data reporting module that provides feedback and quality metrics to operators, facilitating timely decision-making and adjustments.

No. of Pages : 10 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060266 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : PSEUDOMONAS AERUGINOSA MEDIATED SYNTHESIS OF WATER-SOLUBLE COLLOIDAL QUANTUM DOTS FOR PHOTOCATALYTIC REDUCTION OF CHROMIUM

(51) International classification :B01J0035390000, B82Y0020000000, C02F0101220000, C09K0011880000, C09K0011560000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT: Title: Pseudomonas aeruginosa Mediated Synthesis of Water-Soluble Colloidal Quantum Dots for Photocatalytic Reduction of Chromium The present disclosure proposes a single-step, bio-based method is disclosed for synthesizing water-soluble cadmium sulfide colloidal quantum dots (CdS-QDs) using Pseudomonas aeruginosa. The proposed method for synthesizing CdS-QDs using Pseudomonas aeruginosa bacteria is environmental friendly process. The method utilizes a single-step bio-fabrication process with cadmium sulfate (CdSO4) as the precursor, eliminating the need for toxic capping agents and harsh chemicals. The proposed simplified method potentially reduces production costs compared to traditional methods. The proposed method provides biocompatible CdS-QDs that are water-soluble, making them ideal for applications in aqueous environments, such as wastewater treatment. The biosynthesized CdS-QDs demonstrate efficient photocatalytic reduction of Cr(VI) to the less toxic Cr(III) under visible light irradiation, highlighting their potential for environmental remediation.

No. of Pages : 20 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060267 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AN AUTOMATED BRICK MAKING MACHINE WITH INTEGRATED MOLDING AND EJECTING UNITS AND METHOD THEREOF

(51) International classification :B28B1/00, B28B3/00, B28B7/00, B28B13/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT: Title: An Automated Brick Making Machine with Integrated Molding and Ejecting units and Method Thereof The present disclosure proposes an automatic brick-making machine (100) equipped with molding and ejecting units that performs the brick-making process reliably without any maintenance failures. The automatic brick-making machine (100) comprises a supporting table (102), a driving unit (122), a molding box (112), a first supporting shaft (138), a pressing unit (127), a clutch unit (156), an ejecting unit (172), and a controller (188). The proposed automated brick making machine (100) ensures bricks (10) are molded with uniform quality and precise dimensions, improving the structural integrity of constructions. The proposed automated brick making machine (100) reduces manual labor, minimizes the risk of injuries associated with the manual brick-making process. The proposed automated brick-making machine (100) refrains from utilizing hydraulic systems that are prone to maintenance issues such as fluid leakages.

No. of Pages : 30 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060268 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ADVANCED TRAILER HITCH FOR TOOL-FREE SPACER ADJUSTMENT AND ENHANCED TOWING STABILITY AND METHOD OF OPERATION

(51) International classification	:B60D0001060000, B60D0001520000, B60D0001070000, B60D0001580000, B60D0001600000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT: Title: Advanced Trailer Hitch for Tool-Free Spacer Adjustment and Enhanced Towing Stability and Method of Operation The present disclosure proposes an advanced trailer hitch (100) for enabling tool-free, precise, and easy adjustment of the spacers to securely fit the trailer hitch within a receiver (12). The advanced trailer hitch (100) comprises a trailer hitch assembly (102), a locking unit (140), and a ball mount support (108). The trailer hitch assembly (102) is detachably positioned to the receiver (12), which is rigidly affixed to the chassis of a towing vehicle. The locking unit (140) is operatively connected to a shank (104) for securing the trailer hitch assembly (102) to the receiver (12). The ball mount support (108) is secured to the shank (104) through plurality of slots (106) via a primary stud (116) for adjusting height when fixed to at least one trailer.

No. of Pages : 30 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060269 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AN AUTOMATED JAGGERY PROCESSING MACHINE WITH INTEGRATED MIXING AND MOLDING FUNCTIONS AND METHOD THEREOF

(51) International classification :B24B0041060000, A23P0030000000, G01N0035040000, A21B0007000000, G07F0017000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT: Title: An Automated Jaggery Processing Machine with Integrated Mixing and Molding Functions and Method Thereof The present disclosure proposes an automated jaggery processing machine (100) that integrates mixing, cooling, and molding into a single, compact unit, thereby enhancing production efficiency and reducing the need for manual labor. The automated jaggery processing machine (100) comprises a support structure (102), a receiving chamber (104), a rotatable mixing vessel (106), a driving unit (110), a screw conveyor (116), a movable closure (120), a transport conveyor (126), and a control unit (130). The automated jaggery processing machine (100) is designed to be efficient and user-friendly, specifically catering to small and medium-scale producers by enhancing production efficiency and minimizing floor space requirements. The automated jaggery processing machine (100) is cost-effective and easy to operate, making it accessible to a wider range of producers and allowing them to focus on other critical aspects of their business.

No. of Pages : 38 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060270 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A MULTI-FUNCTIONAL GARLIC PROCESSING DEVICE AND METHOD OF OPERATING THE SAME

(51) International classification	:A23N0015080000, H02G0001120000, A61K0036896200, A47J0019040000, H04N0021430000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT: Title: A Multi-Functional Garlic Processing Device and Method of Operating the Same The present disclosure proposes a multi-functional garlic processing device (100) that utilizes slanted Z-shaped grooves to de-shell, peel, and cut garlic bulbs (10), thereby ensuring efficient processing of the garlic bulbs (10). The multi-functional garlic processing device (100) comprises a housing (102), at least one support member (108), a carrier plate (126), an operating unit (136), a slanted platform (146), a first peeling member (148), a second peeling member (152), plurality of protrusions (156), a cutting member (158) and a collecting member 162. The multi-functional garlic processing device (100) virtually eliminates garlic odour transfer, thereby ensuring the user's hand and kitchen utensils fresh. The multi-functional garlic processing device (100) processes the garlic cloves (12) of varying sizes and shapes effectively.

No. of Pages : 32 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060271 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AN AUTOMATED TAMARIND SEED-SEPARATING MACHINE USING CENTRIFUGAL FORCE AND METHOD OF OPERATING THE SAME

(51) International classification :B01D21/26, A23N4/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT: Title: An Automated Tamarind Seed-Separating Machine Using Centrifugal Force and Method of Operating the Same The present disclosure proposes an automated tamarind seed-separating machine (100) that efficiently removes seeds from peeled tamarind fruit. The automated tamarind seed-separating machine (100) comprises a base (102), a driving unit (104), a first pulley (108), a second pulley (110), a funnel-shaped housing (116) and a centrifugal chamber (134). In addition, the funnel-shaped housing (116) comprises a tamarind holding member (120), plurality of protrusions (128), a cutting member (130) and a restricting member (132). The proposed automated tamarind seed-separating machine (100) continuously and rapidly processes tamarind fruits to significantly boost production rates compared to manual methods. The proposed automated tamarind seed-separating machine (100) decreases reliance on manual labor, thereby cutting costs and reducing physical strain on workers. The proposed automated tamarind seed-separating machine (100) minimizes the risk of injuries associated with manual seed removal, enhancing workplace safety.

No. of Pages : 30 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060273 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ADVANCED THREAT MONITORING SYSTEM USING BIG DATA AND DEEP LEARNING FOR ENHANCED INTRUSION DETECTION

(51) International classification :H04L0009400000, G06N0003080000, G06F0001160000, G06F0021560000, G06F0021550000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT: Title: Advanced Threat Monitoring System Using Big Data and Deep Learning for Enhanced Intrusion Detection The present disclosure proposes an advanced threat monitoring system (100) that leverages big data analytics to enhance and adapt information security monitoring and control. The advanced threat monitoring system (100) comprises a computing device (102) having a processor (104) and a memory (106) for storing one or more instructions executable by the processor (104). In particular, the processor (104) is configured to execute plurality of modules (108) for performing multiple operations. The plurality of modules (108) comprises a data collection module (110), a clustering module (112), a classifier training module (114) and a sensor reconfiguration module (116). The proposed system (100) utilizes semantic web standards such as RDF and OWL for facilitating better communication and data sharing among various components of the security infrastructure.

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060301 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : POWER QUALITY ANALYSIS USING IOT

(51) International classification	:H04W0048120000, A61P0013120000, A61P0043000000, A61P0007020000, G02B0027000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention is a power quality analysis using IoT, a method claim enables the measurement of single-phase and three-phase voltages and direct current, making it a universal solution, and identifies of a sources of interference, which enables quick reaction and take actions to reduce their occurrence in the future, including by eliminating the defective element. The IoT diagnostic module is characterized by miniature dimensions not exceeding 100×100×50 mm, playing the role of a measurement, recorder and analyzing three-phase voltage and current waveforms in real time, determining electricity quality parameters, which are compared to the permissible values, and a miniature size allows it to be used in any place and device, regardless of the size of the device being diagnosed, without disturbing its integrity.

No. of Pages : 11 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060312 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYNTHESIS AND CHARACTERIZATION OF SILVER DOPED IRON OIXDE NANOPARTICAL APPLIED ON WASTE WATER TREATMENT

(51) International classification :C12N0001200000, B01J0020280000, B82Y0030000000, C08K0003220000, B01J0023890000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
The creation and characterisation of iron oxide nanoparticles doped with silver for the treatment of wastewater is the main goal of this study. The aim is to optimise the effectiveness of pollutant removal by utilising the synergistic catalytic capabilities of iron oxide and silver. Advanced chemical techniques will be used to produce the nanoparticles, and a full evaluation of their ability to degrade contaminants in wastewater will be conducted. The doping procedure optimization, thorough nanoparticle characterisation, and testing of the nanoparticles' catalytic activity under many circumstances are important components of this endeavor. In order to comprehend the structure and morphology of the nanoparticles, characterization will require the use of methods like transmission electron microscopy (TEM), scanning electron microscopy (SEM), and X-ray diffraction (XRD). The goal of the performance evaluation is to show that the silver-doped iron oxide nanoparticles provide a workable and effective wastewater treatment solution by concentrating on metrics like catalytic activity, stability, and reusability. This all-encompassing strategy guarantees the creation of a high performing material that advances environmental remediation technology.

No. of Pages : 5 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060357 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : INTELLIGENT CONVERSATIONAL SYSTEM AND ASSOCIATED METHOD FOR PROVIDING HEALTHCARE INFORMATION

(51) International classification	:G06F0011100000, G06F0011360000, G10L0015220000, G06F0040560000, G16H0020170000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
A method for modifying an input prompt is provided. The method includes receiving the input prompt from a selected system (102), and generating a raw output based on the input prompt by a conversational system (100). Further, the method includes selecting a validator from a plurality of validators for validating accuracy of the raw output, and comparing input-data specified in the raw output with the same input-data retrieved from a master data source system using the selected validator. Furthermore, the method includes identifying one or more errors in the input prompt based on the comparison, and generating an error correction instruction based on the one or more identified errors and the input-data retrieved from the mater data source system. In addition, the method includes generating a refined input prompt based on the error correction instruction, and generating a final response to the input prompt based on the refined input prompt.

No. of Pages : 59 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/08/2024

(21) Application No.202441060363 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : VISUAL VIGILANCE: HARNESSING IMAGE PROCESSING WITH CNN FOR DETECTION AND CLASSIFICATION OF FRUIT DISEASES.

(51) International classification	:G06V0010460000, G06N0003045000, G06T0007000000, G06V0010764000, G06F0018241300
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

This article describes a revolutionary method that uses image processing techniques to quickly and automatically identify fruit illnesses. The suggested methodology, which makes use of convolutional neural networks (CNN), provides a quick and automatic way to identify and categorize illnesses related to passion fruit. The suggested method involves several key steps, such as obtaining input photographs, pre-processing them, highlighting and identifying affected areas, validating the training set, and showing the outcomes. The system's efficacy was proven by extensive testing on a variety of fruit diseases, including powdery mildew, sooty blotch, and bitter rot, at different stages of fruit development. Through photo-to-color model conversion and Local Binary Pattern feature extraction combined with Support Erosion model development, the suggested system was able to identify fruit illnesses with an average accuracy of 79% and classify their phases with 66%. With its potential to identify fruit ailments quickly and accurately, this technology could have a big impact on resource management and prompt action in the agriculture sector. Keywords: Image Processing, Local Binary Pattern, Fruit Diseases,Convolutional Neural Networks, powdery mildew.

No. of Pages : 6 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/08/2024

(21) Application No.202441060406 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : BATTERY MANAGEMENT SYSTEM BY USING WIRE LESS SENSOR MODULE.

(51) International classification :G07C0005080000, F02B0003060000, B60H0001000000, F02D0041220000, G01S0019140000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

WIFI GPS vehicle temperature monitoring and control system design and development. The only thing a vehicle's temperature is its engine's temperature. Increased engine temperature impacts a vehicle's longevity, dependability, and mileage. There is occasionally a risk of an engine failure due to excessive temperatures. Here, we suggest a system similar to the GPS-enabled WIFI vehicle temperature monitoring and control. The WiFi (Sim800C) module used in this project is connected to Arduino via UART. GPS module and Arduino are linked via a UART interface.Arduino analog pin is connected to a DHT11 temperature sensor. Arduino digital pin interfaced with a buzzer. Relay connected to an Arduino digital pin controls a DC motor. The engine temperature is read by this temperature sensor (LM35). Assume the vehicle's engine is a DC motor. The DC motor (car engine) will turn off if the engine temperature rises over 130 degrees (the maximum temperature for both gasoline and diesel engines is 130 degrees). Engine condition and temperature are shown on the LCD. An SMS with a GPS location will be sent to the registered cellphone number whenever the temperature rises above 130 degrees.

No. of Pages : 7 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060407 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : An axle beam for a front axle of a vehicle

(51) International classification :B60B35/02
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
An axle beam for a front axle of a vehicle [0038] The invention relates to an axle beam for the front axle of vehicles, designed to improve load distribution, structural rigidity, and durability. The axle beam (100) features a spring seat area (101) with an increased height (102a) and optimally positioned neutral axis (103b) for optimized bending resistance. The lower flange section (104b) has an increased height (105b) and a symmetrical radius (107) to enhance vertical load capacity and fatigue resistance. The design of the axle beam (100) also includes a web radius (106) at the spring seat area to minimize stress concentrations. Additionally, the modular design of the axle beam (100) allows for customization and adaptability to various vehicle specifications. The improved structural features contribute to reduced maintenance costs and extended operational lifespan, ensuring economic benefits for commercial fleet operators. (Figure 1)

No. of Pages : 18 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060412 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SYSTEM AND METHOD FOR PROVIDING FINANCIAL SERVICES BASED ON USER DATA

(51) International classification	:G06Q0040020000, G06F0021620000, G06Q0040030000, G16H0050300000, G06Q0040000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a system (100) and method for providing financial services based on user data. The system (100) comprises of a plurality of communication devices (102), a user interface (104) installed on the communication devices (102), a server (106) having a database (108) for storing a plurality of users data, wirelessly connected to the communication devices (102), the server (106) further comprises of a data extraction module (110), a data processing module (112), an output interface (114) and a feedback module (116). The method for providing financial services comprises steps of: receiving input including health and financial data of the users, extracting meaningful keywords from the input, evaluating the extracted data generating a score based on the evaluated data of the users, and providing specific and actionable feedback received from the users for continuous improvement.

No. of Pages : 14 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/08/2024

(21) Application No.202441060422 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : DESIGN AND HIGH-PERFORMANCE BROADBAND MICROSTRIP PATCH ANTENNAS FOR 5G COMMUNICATION

(51) International classification :H01Q1/38, H01Q1/48
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
DESIGN AND HIGH-PERFORMANCE BROADBAND MICROSTRIP PATCH ANTENNAS FOR 5G COMMUNICATION The method for the development of the Rogers RT/Duroid5880 is the substrate that was utilized for the antenna in this project. The substrate has a thickness of 0.3451 mm and a dielectric of 2.2. Because CST software is so user-friendly, it is utilized to mimic the antenna. The results of the simulation indicated that the side lobe level, radiation efficiency, gain, and return loss were, respectively, -18.3 dB, 8.198 dB, 77%, and -38.348 dB. Communication devices are becoming smaller and lighter at a rapid rate, so tiny and light antenna design is necessary. Verifying performance parameters such accuracy, impedance, return loss, gain, directivity, and radiation pattern across frequency ranges is necessary when designing microstrip antennas. using the finite element method (FEM) and finite integration techniques (FIT) to analyze several microstrip antenna shapes, including triangle, circular, and rectangular patches. These patch shapes are constructed practically, and the effectiveness of the two aforementioned techniques has been determined by analyzing the parameters of the microstrip antenna operating at 28 GHz, including gain, bandwidth, VSWR, return loss S11, directivity, and ration pattern. FIG.1

No. of Pages : 15 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/08/2024

(21) Application No.202441060423 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : MACHINE LEARNING AND IOT IN AGRICULTURE: PRECISION RAINFALL PREDICTION AND CROP RECOMMENDATION

(51) International classification	:G06N0020000000, G01N0033240000, G06Q0050020000, A01G0025160000, G06N0003044000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :

MACHINE LEARNING AND IOT IN AGRICULTURE: PRECISION RAINFALL PREDICTION AND CROP RECOMMENDATION The method for the development of a crop, the crop recommendation system uses machine learning to assess a variety of parameters, such as weather, pH, phosphorous (P), potassium (K), and nitrogen (N). The fertilizer recommendation method based its suggestion mostly on the type of crop and the present soil nutrient levels. When a crop is irrigated automatically with an automated irrigation system, weather forecasts and the soil moisture level are taken into account. As intelligent gadgets progress, we are surrounded by an abundance of tools, technologies, cutting-edge methods, and proof of ideas for various applications that require massive amounts of data. To solve the aforementioned problems with the aid of the Internet of Things (IoT), a technique for crop predictions and recommendations based on IDCSO (Improved Distribution-based Chicken Swarm Optimization) with WLSTM (Weight-based Long Short-Term Memory). Pre-processing, crop prediction using the WLSTM approach, and attribute selection using the IDCSO algorithm are the three main stages. FIG.1

No. of Pages : 15 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060456 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : THE ROLE OF EMOTIONAL INTELLIGENCE IN LEADERSHIP EFFECTIVENESS

(51) International classification :G09B0019000000, G06Q0010063700, G06N0003004000, G09B0007000000, G99Z0099000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The Role of Emotional Intelligence in Leadership Effectiveness ABSTRACT Increasingly, the significance of leadership in contemporary enterprises can be attributed to a variety of variables, which can be explained in several different ways. The extremely dynamic character of the market, the growing significance of employee motivation in the achievement of organizational goals, and the continual search for additional sources of competitive advantage are some of the factors that contribute to these challenges. In order to give evidence that supports the theory that there is a direct association between emotional intelligence and leadership abilities inside an organization, the primary purpose of this invention is to produce evidence that supports the hypothesis. This action is taken to call attention to the phenomena to draw attention to the function that emotionally savvy executives play in contemporary businesses. Additionally, the results of this invention suggest that emotional intelligence has a very large influence on specific areas of leadership leadership. According to the three working hypotheses that we presented, there is a relationship that is directly proportional between the level of emotional intelligence that a leader possesses and the level of uncertainty tolerance that they have. This relationship is proved by the fact that there is a relationship between the two. A high level of emotional intelligence is linked to the capacity to lead effectively, it is correlated with the amount of consideration that a leader possesses and there is a relationship between the two. These theories suggest that there is a connection between the two. Emotional intelligence is defined as the capacity to detect and affect the feelings of others, as well as the ability to know and handle one's feelings. It also includes the ability to know and regulate one's feelings. It is abundantly obvious that emotional intelligence and leadership abilities are inextricably linked to one another. The outcomes of the invention indicate that there is a significant connection between individuals who possess leadership abilities and those who have a high level of emotional intelligence.

No. of Pages : 11 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060457 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SUNLIGHT-DRIVEN PHOTOCATALYTIC DEGRADATION OF METHYLENE BLUE USING CUO/ZNO HYBRID COMPOSITES SYNTHESIZED VIA HYDROTHERMAL METHOD

(51) International classification :B01J0035390000, C02F0001300000, C02F0101300000, C02F0001720000, B01J0023800000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
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(57) Abstract :
ABSTRACT “Sunlight-Driven Photocatalytic Degradation of Methylene Blue Using CuO/ZnO Hybrid Composites Synthesized via Hydrothermal Method” This invention relates to the development of hybrid copper oxide (CuO) and zinc oxide (ZnO) nanocomposites, synthesized through a hydrothermal process, for the efficient degradation of methylene blue (MB) under sunlight. The innovation lies in the synergistic combination of CuO and ZnO, which enhances photocatalytic efficiency by improving charge separation and reducing band gap energy. The CuO/ZnO hybrid composites demonstrate superior degradation performance compared to pure CuO, with optimal results achieved at a 30:50 CuO to ZnO ratio. The hydrothermal synthesis method ensures high crystallinity and controlled morphology, contributing to the enhanced surface area and photocatalytic activity. This technology offers a sustainable and effective solution for environmental remediation, particularly in the removal of organic dye pollutants from wastewater, utilizing renewable solar energy. The invention presents a significant advancement in the field of photocatalytic materials, with potential applications in environmental cleanup and water purification systems.

No. of Pages : 19 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060473 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ENHANCING CROP RECOMMENDATION SYSTEMS WITH TRANSFORMER MODELS

(51) International classification	:G06Q0050020000, G06N0003080000, G06N0003044000, A01B0079000000, G06N0003045000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
[029] This invention proposes a comprehensive framework for crop recommendation systems leveraging advanced deep learning models, specifically Long Short-Term Memory (LSTM), Bidirectional LSTM (Bi-LSTM), and Transformer models. The system aims to address critical agricultural challenges by optimizing crop selection based on soil characteristics, weather patterns, and historical agricultural data. The framework comprises a multi-layered architecture: the Data Collection Layer aggregates essential soil and weather data, the Preprocessing Layer ensures data cleanliness and suitability for analysis, and the Model Training Layer employs deep learning models to process the data. The integrated outputs from these models generate precise and reliable crop recommendations. This innovative approach enhances precision agriculture by facilitating data-driven decision-making, improving resource allocation, and promoting sustainable farming practices. The holistic system ultimately supports farmers in making informed decisions, thereby increasing agricultural productivity and sustainability, particularly in developing countries.
Accompanied Drawing [FIGS. 1-6]

No. of Pages : 19 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060475 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : UTILIZING MACHINE LEARNING METHODS TO FORECAST TWEET GEOLOCATION

(51) International classification :G06N0020000000, G06N0005010000, G06F0040300000, G06N0020200000, G06Q0050000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Abstract: Social media platforms such as Facebook, Twitter, and Tumblr have a significant influence on modern culture. These websites provide a wealth of information for sentiment analysis uses in marketing, reviews, forecasting, and election analysis. Sentiment analysis uses a range of sources to separate data into discrete sentiments. Python has the NLTK package (Natural Language Toolkit), a powerful high-level programming language that is essential for organizing and managing natural language data as well as creating applications and classifying data. This project aims to find which political party in India best serves the public by using numerous supervised machine learning classifiers to examine data from different parties, classify the data into positive and negative feelings, and identify the most effective party. Furthermore, the research reveals that specific classifiers have higher accuracy than others.

No. of Pages : 9 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060477 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD TO DETECT SEVERITY OF ACCIDENT

(51) International classification :G06N0020000000, A61B0005000000, G16H0050200000, G06Q0050000000, G06N0005020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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Filing Date :NA

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(57) Abstract :
The invention is based on the classification algorithm, that is logistic regression, which is used for predicting the severity of a traffic accident based on various input parameters such as weather conditions, road type, vehicle type, location, and other similar parameters and a prediction modeling method thereof. Logistic regression is a fundamental classification technique. It belongs to the group of linear classifiers and is somewhat similar to polynomial and linear regression. Logistic regression is fast and relatively uncomplicated, and it's convenient for us to interpret the results. Although it is essentially a method for binary classification, it can also be applied to multiclass problems. The input parameters by the user will be label encoded and fed into the trained model, which predicts the accidents severity. The output of the accident severity then can be used to interpret the situation of the accident and also predict the future outcomes.

No. of Pages : 18 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060478 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SECURE MULTIMEDIA COMMUNICATION SYSTEM

(51) International classification :H04L0009400000, G06F0021620000, H04L0009300000, H04L0009080000, G06F0021600000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Secret information like messages or images can be hidden inside the media files using the hybrid model of LSB steganography and the AES cryptography technology to add an extra layer of security. Combining Blowfish and RSA Public Key encryption techniques, the text message is encrypted to provide confidentiality and efficient communication between the sender and the destination. The RSA Private Key File can also be encrypted using the AES method, which calls for an eight-character password. Injecting steganography into the software is necessary to conceal the encrypted data. The program must be able to carry out the splitting and decryption process for the encrypted data to be viewable. The user interface is developed using the Tkinter library, providing an intuitive graphical interface for seamless interaction with the steganography functionalities. This invention amalgamates advanced cryptographic techniques with a user-friendly design for efficient and secure data concealment within different media formats.

No. of Pages : 18 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060479 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD FOR PCOS DETECTION

(51) International classification :G16H0010600000, G16H0050200000, G06N0020000000, G06N0003045000, G16H0040200000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The invention implements the use of machine learning algorithms and deep learning techniques which automates the identification and classification of Polycystic Ovary Syndrome (PCOS) symptoms, reducing manual effort and potential inaccuracies. Integration with multiple data sources enriches patient records, enhancing the precision and depth of the PCOS detection system. Accommodating diverse data types and patient profiles ensures adaptability and relevance across various healthcare scenarios. Customizable alert systems notify healthcare providers of new PCOS diagnoses or changes in patient status, facilitating proactive management and timely interventions to enhance patient care

No. of Pages : 16 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060480 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : METHOD FOR MEDICATION RECOMMENDATION SYSTEM

(51) International classification	:G16H0050200000, G16H0010600000, G06N0020000000, A61B0005000000, G16H0020100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The invention proposes a novel approach that leverages advancements in Natural Language Processing (NLP) and Machine Learning (ML) for drug recommendation and medication suggestion. By harnessing top reviews and useful reviews count from the dataset our system aims to provide personalized and informed recommendations to users. The primary objective of this project is to develop a robust system that can classify a patient's health condition based on their descriptions in drug reviews and recommend top 3 appropriate medications. By understanding the patients' experiences and symptoms, this system aims to empower individuals with valuable insights for self-care and support healthcare professionals in optimizing their decision-making processes. This system offers a user-friendly interface, empowering patients to make informed decisions regarding their healthcare.

No. of Pages : 15 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060481 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : MORSE CODE BASED SECURE AUTHENTICATION SYSTEM

(51) International classification :G06F0003010000, G06Q0020400000, G06V0040160000, G07F0007100000, G06F0021310000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a real-time authentication system integrating gaze-based Personal Identification Number (PIN) entry alongside facial recognition and eye detection/tracking using smart camera technology. In the field of data science, which encompasses data analysis, algorithmic development, and technology application, there exists a pressing need for robust authentication methods amidst pervasive security concerns. Traditional authentication mechanisms such as Personal Identification Numbers (PINs) have become increasingly susceptible to breaches, necessitating exploration of alternative approaches. One promising solution is gaze-based authentication, which entails identification of eye locations across consecutive frames and tracking of eye movements. This innovative method enables secure password input without leaving physical traces. The proposed model capitalizes on real-time eye tracking, particularly advantageous for Morse code users, as a novel approach for password authentication. Its practical applications extend across diverse industries including education, finance, healthcare, and commerce, where managing vast data volumes is essential

No. of Pages : 14 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060482 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : MEDICHAIN – ENSURING AUTHENTIC PHARMACEUTICALS WITH BLOCKCHAIN TRACEABILITY

(51) International classification	:G06Q0030018000, H04L0009400000, G16H0040200000, G06Q0010063100, H04L0009320000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A method for authentic pharmaceutical traceability, comprising the utilization of blockchain technology, user authentication systems, integration of additional data sources, and alert systems. The method ensures the authenticity of pharmaceutical products throughout the supply chain, safeguards patient safety, and upholds industry integrity. Compliance with regulatory standards is assured, while the method expedites traceability adoption, minimizes workflow disruption, and facilitates integration with existing systems

No. of Pages : 16 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060483 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : DEVELOPMENT OF CONCRETE BY PARTIAL REPLACEMENT OF RIVER SAND WITH STEEL SLAG SAND

(51) International classification	:C04B0028040000, C04B0018140000, C04B0111000000, G01N0003200000, C04B0028020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The construction sector is essential to every nation's economic growth. It is the second most important industry in India after agriculture. Cement is the primary raw material in the industry. Aggregate being an important material employed for concrete preparation, a major scarcity of natural fine aggregate has been observed from the last decade but the demand for natural aggregates has been rising day by day hence there's no need to replace it with a new, substitute substance. In the building industry, the utilization of industrial waste has been promoted since it aids in minimizing the need for natural resources including fly ash, slag sand, steel slang, and silica fume. In the current work, an attempt is made to replace the fine aggregates with an abundant industrial waste of steel slag by highlighting the suitability of the steel slag sand use for M20 concrete mix. The concrete specimens are prepared by partially replacing the river sand with steel sand slag by 0%, 25%, 50%, 75%, and 100% of the weight of fine aggregate for compression strength, Spilt tension strength, and the modulus of rupture in bending test of concrete. The strong of normal concrete mix and partial replacement of river sand with steel slag sand is compared, by partially replacing steel slag sand with river sand the compressed strength is improved as compared with the nominal concrete. In M20 grade concrete, a rise in compressive, flexural, and split tensile strength is noted. The improved strength qualities can be attributed to the roughness of the surface and particle shape, which promote better adhesion and bonding between the particles and the cement matrix.

No. of Pages : 23 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060484 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AI-POWERED PLATFORM FOR MULTIMEDIA, CHAT, AND CODE GENERATION

(51) International classification	:G06Q0010101000, G06F0008410000, H04N0007140000, H04L0065403000, H04L0065106900
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Our Invention, Chat, and Code Generation represents a paradigm shift in content creation and interaction. The Multimodal Content Transformation Module serves as the engine driving creativity, seamlessly converting between text, images, videos, and audio with precision and ease. This module harnesses cutting-edge multimodal fusion techniques to weave together information from diverse sources, enriching the quality and diversity of generated content. The platform's Extensible Architecture fosters innovation by enabling seamless integration of new AI models and algorithms, ensuring continuous improvement in content transformation capabilities. With a User-friendly Interface designed for intuitive operation, users of varying technical expertise can effortlessly access advanced AI functionalities. Meanwhile, the Code Generation Module facilitates efficient software development by producing accurate and syntactically correct code snippets tailored to specific programming languages and frameworks. Finally, the Real-time Chat Interface fosters seamless communication and collaboration among users, supporting a variety of media formats in a secure and user-friendly environment. Together, these features empower users to unleash their creativity and drive innovation across diverse domains.

No. of Pages : 18 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060485 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD FOR MULTI-STAGE ADVERSARIAL ATTACK DETECTION AND MITIGATION

(51) International classification	:H04L0009400000, G06F0021560000, G06F0021570000, G06F0021550000, B65D0047180000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :
This invention helps stage a multi-stage attack with Nim malware and steganographic communication ("C2 in a Sheet ") and other techniques aimed at infiltrating a target system while remaining undetected by antivirus solutions. Bypassing traditional AV with an Initial dropper in PowerShell, that fetches the Nim dropper, the dropper deploys a persistent beacon that encrypts the beacon (AES) whose C2 communication mimics regular G-Sheet traffic. Through this covert communication channel, the attackers orchestrate a series of malicious actions, including data exfiltration, lateral movement across the network, and the exploitation of additional vulnerabilities post-initial access. The attack's sophistication extends to its final stage, where the client's defenses are rigorously tested against evolving threats and concealed communication channels, presenting a formidable challenge for detection and defense efforts alike.

No. of Pages : 13 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
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(21) Application No.202441060486 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : CULTIMAX ONE-STOP DESTINATION FOR ALL FARMER NEEDS

(51) International classification :G06Q0050020000, G06Q0030060100, A01B0079000000, G06N0020000000, G06N0020200000
(86) International Application No :NA
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(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Technological improvements are critical to improving sustainability and productivity in the ever-changing crop industry. The main characteristics and capabilities of CULTIMAX, a comprehensive agricultural management system intended to provide farmers with data-driven insights and recommendations, are described in this abstract. Several modules of CULTIMAX are designed to optimize different parts of farming operations. The Crop Selection Optimization module uses the Light Gradient Boosting Machine (LGBM) algorithm to forecast potential crops based on environmental characteristics, soil nutrients, and weather data. The LGBM algorithm and related input data are used by the Fertilizer Recommendation module to recommend the best fertilizers for particular crop kinds and soil conditions. identification and attempts to mitigate. A user-friendly interface that incorporates these components makes it easy for users of all technological proficiency to navigate and engage with the content.Moreover, CULTIMAX integrates an e-commerce platform that promotes direct interaction and trade between farmers and buyers. CULTIMAX improves agricultural productivity and sustainability by providing farmers with timely information and suggestions to make informed decisions. This is achieved by combining features such as crop selection optimization, fertilizer recommendation, and disease detection. Agricultural operations are made more efficient by machine learning algorithms, which improve the accuracy and efficacy of crop selection, fertilizer prescription, and disease diagnostics

No. of Pages : 17 No. of Claims : 5

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(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060487 A
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(54) Title of the invention : METHOD FOR TEXT-TO-TEXT TRANSLATION

(51) International classification :G06F0040300000, G06F0040580000, G06N0003045000, G06F0040440000, G06F0040284000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
The proposed automated method for text-to-text translation, commonly known as machine translation, heralds a transformative paradigm shift in the realm of natural language processing (NLP), aiming to seamlessly render text from one language into another while meticulously preserving the intricate nuances of meaning, style, and context. Through relentless advancements in artificial intelligence (AI) and NLP techniques, this translation process has evolved to unprecedented heights, now employing cutting-edge neural network architectures, particularly transformers, renowned for their unparalleled capacity to comprehend and generate text with remarkable fidelity. These sophisticated systems harness attention mechanisms and encoder-decoder designs to grapple with the subtleties of speech patterns, idiomatic expressions, and contextual cues inherent in human language, ensuring that translations remain faithful to the original intent and tone. Central to their efficacy is the exhaustive training on extensive bilingual datasets, which furnish the models with a rich tapestry of linguistic pairings, enabling them to discern and map the intricate relationships between input and output sequences, thereby refining their translation prowess over successive iterations

No. of Pages : 16 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060488 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : METHOD AND COMPOSITION FOR CONTROLLING HEAVY METAL DISPERSION IN BLACK COTTON SOIL USING ADDITIVES

(51) International classification :B09C0001000000, G01N0033240000, C02F0101200000, H01B0001120000, B09C0001080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
The present invention introduces a method and composition for controlling the dispersion of heavy metals in black cotton soil, addressing environmental concerns associated with soil contamination and preserving soil fertility. Through the careful selection and application of additives, the method immobilizes or sequesters heavy metal ions within the soil matrix, reducing their mobility and potential for environmental contamination. Additives interact with soil components and heavy metal contaminants through mechanisms such as adsorption, complexation, precipitation, and ion exchange, effectively trapping the contaminants and preventing their migration. The method enhances soil properties such as stability, permeability, and fertility, promoting sustainable soil management practices. Environmental considerations prioritize eco-friendly approaches, ensuring minimal disruption to soil ecosystems and human health. Cost-effectiveness is achieved through the use of natural or low-cost additives and optimized application techniques, offering an economically viable solution for remediation of heavy metal-contaminated black cotton soil

No. of Pages : 17 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060489 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD FOR DETECTION OF HELMET

(51) International classification	:G06N0003080000, G06V0010820000, A42B0003040000, H04N0007180000, G06V0020520000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
This patent introduces a method for detecting helmets in real-time using a combination of camera-based recognition and YOLOv5 processing. The system begins by deploying a camera that recognizes riders seated on motorcycles, distinguishing between those wearing helmets and those without. Notably, individuals wearing helmets are identified with a unique color for enhanced visibility. Subsequently, the camera captures images of the road under various environmental conditions, including unfavorable ones such as low light or adverse weather. These images are then sent for processing using the YOLOv5 algorithm, renowned for its efficiency and accuracy in object detection tasks. YOLOv5 processes the images, precisely identifying and localizing helmets within the scene. By leveraging both camera-based recognition and YOLOv5 processing, this method offers a robust and adaptable solution for helmet detection in diverse real-world scenarios, contributing to improved safety measures for riders and pedestrians alike.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060491 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : CREDIT CARD PAYMENT USING IRIS SCAN

(51) International classification	:H04L0009400000, G06Q0020400000, G06Q0020380000, G06Q0020240000, G06V0040190000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
As digitx transactions continued to burgeon, secureing the safety of card payments remains a significant concern fer consumers n' business equably. Traditional authenticating methods, like PINning and passwords, are vulnerable to various security threats, such as theft and frauds. In response to the challenges, this paper recommends a unique approach fer enhanceing credit card payment security by incorporating iris scan technologies into the authentication process. The recommended system uses the peculiar biometrix characteristics of individual iris fer providin' a strong n' secure authentication mechanism for credit card transactions. Through utilisin' specialised iris recognition algorithms, users' iris patterns are taken n' converted into biometrix templates, which are then safely stored n' used fer authenticatin' purposes. Durin' payment transactions, users can verify themselves by simply presentin' their eyes to an iris scannin', eliminatin' the need fer passwords or PINning. One of the important advantages of usin' iris scan technology fer credit card authentication is the heighten accuracies n' reliabilities. Iris patterns show a high level of uniqueness n' stability over time, makin' them an ideal biometrix identifier fer secure authentication purposes. Additionally, iris scans are non-intrusive n' can be done quickly n' conveniently, improvin' user experiences durin' payment transactions. In order to evaluate the effectiveness of the recommended system, extensive experiments were executed usin' real-world datasets n' simulated payment situations. Outcomes show the robustness against various security threats, includin' spoofing attacks and identity thefts. Moreover, user acceptance studies were executed to assess usability n' user experiences with the iris scannin' authentication method, with very positive feedback from participants. In the completions, this research contributes to advancin' credit card payment security by introducin' a secure n' user-friendly authentication mechanism based on iris scan technologies. By leveragin' the peculiar biometrix characteristics of individual iris, we aim to create a safer n' more convenient payment ecosystem for consumers n' business. This abstract outlines a hypothetical research paper focusin' on enhancing credit card payment security through iris scan technologies.

No. of Pages : 10 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060492 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : DUAL LITHIUM-ION BATTERY CHARGER FOR UNINTERRUPTED POWER SUPPLY USING GSM

(51) International classification :H02J0009060000, H02J0007000000, H01M0010052500, H04L0043081700, G06F0001300000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention discloses a novel uninterruptible power supply (UPS) system designed to provide uninterrupted power to critical applications. The UPS system features a dual lithium-ion battery configuration and integrates GSM (Global System for Mobile Communications) technology for remote monitoring and control. The UPS system comprises two lithium-ion batteries connected in parallel, ensuring redundancy and extended runtime during power outages. A microcontroller manages the UPS system's operation, monitoring battery status, load conditions, and grid power availability. Power management circuitry efficiently charges the batteries when grid power is available and seamlessly switches between battery sources during power disruptions. The integration of GSM technology enables remote monitoring and control of the UPS system. Users can access real-time status updates, receive alerts, and remotely manage system functions using a mobile device or computer. This feature enhances the system's reliability and allows for proactive maintenance and troubleshooting. Overall, the proposed UPS system offers a reliable and scalable solution for ensuring uninterrupted power supply to critical infrastructure, such as data centres, telecommunications networks, and industrial facilities. The combination of dual lithium-ion batteries and GSM integration provides enhanced performance, flexibility, and accessibility, meeting the demands of modern power management requirements.

No. of Pages : 11 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024

(21) Application No.202441060493 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : WIRELESS ELECTRIC CHARGING SYSTEM FOR ELECTRIC CARS

(51) International classification :H02J0050100000, B60L0053120000, H02J0007000000, B60L0053126000, B60L0053660000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This patent describes a new smart wireless charging system for electric vehicles in parking stations. This system combines inductive charging with an intuitive app interface and an LCD to revolutionize the electric vehicle charging experience. The results demonstrate efficient charging of the car through a wireless current transfer with seamless app support. The implications of this system include increased user convenience and less infrastructure complexity, increasing the number of electric vehicles. Looking ahead, the next steps are to optimize system scalability and integrate with emerging technologies for wider adoption and improved performance. This innovative solution marks a major advancement in the electric vehicle charging infrastructure and addresses the increasing demand for sustainable transportation options in urban settings.

No. of Pages : 18 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060494 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : EFFECT OF SUGARCANE BAGASSE ASH AND CARBON FIBER IN CONCRETE

(51) International classification :C04B0040000000, A62B0009040000, A62B0009020000, C04B0028020000, C04B0103300000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
Cement is the most widely used consumable material in infrastructure development works. However, the environmental issue of cement has become a rising concern. It is a need of time to increase the use of cement replacement materials in the concrete. Sugarcane is the main food crop in tropical and subtropical countries. Sugarcane Bagasse (SCB) is the waste created after juice extraction from sugarcane. The SCB creates an environmental nuisance due to direct disposal on the open lands and forms garbage heaps in that area. This has led to investigations on the replacement of cement with alternative materials such as Sugarcane Bagasse ash (SCBA) and simultaneously not compromising with the strength attainment of concretes. In this Invention, the optimum dosage of cement replacement with Sugarcane Bagasse Ash (SCBA) is reported based on concrete mix trials without compromising with the compressive strength of the concrete. Further by considering the optimum dosage of the replacement of cement with SCBA, various mix trials are conducted for improving the performance of concrete by imparting carbon fiber. The concrete mix with optimum SCBA and carbon fiber dosages to attain better performing concrete under compression and tension is investigated by various experiments and reported with the test results. The impact on the concrete characteristics with the increase in the carbon fiber dosage is studied for optimum SCBA and the inventions are presented

No. of Pages : 16 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060495 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SOIL TYPE BASED SEEDING AND SPRAYING AGRI-ROVER

(51) International classification :G05D0001000000, G06Q0050020000, G16Y0010050000, A01N0025040000, A01C0007000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This approach is on the designing of agricultural robots for various tasks. Certainly, robots are playing an important role in the field of agriculture for farming process autonomously. In agriculture, the opportunity for robots is enhancing productivity and robots are appearing in the field in large numbers. The proposed system focuses on implementing all the farming process, especially in the field of ploughing and seeding by using microcontrollers. More than 40% of the population in the world chooses agriculture as the primary occupation, in recent years the development of autonomous vehicles in agriculture has experienced increased interest. The vehicle is controlled by a Relay switch through IR sensor input. The language input allows a user to interact with the robot which is familiar to most people. The advantages of these robots are hands-free and fast data input operations. This versatile system provides a creative method for planting, plough, and watering crops with the least amount of labour and making it a useful tool. The proposed system emphasizes the use of microcontrollers to carry out every phase of farming, especially in the areas of ploughing, soil moisture detection, water pumping, seed sowing, and harvesting. The automobile can also be operated using the Blynk application medium. The entire computing, processing, and monitoring process was designed with motors in mind. The robot will help the farmers carry out more effective farming techniques

No. of Pages : 10 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060512 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR PROCESSING ECG SIGNALS

(51) International classification	:A61B0005000000, A61B0005024000, A61B0005024500, A61B0005316000, A61B0007040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
TITLE OF INVENTION : SYSTEM AND METHOD FOR PROCESSING ECG SIGNALS A system (100) for processing electrocardiogram (ECG) signals is disclosed. A receiving module (132) receives ECG signals corresponding to at least one channel. The ECG signal for each channel includes a plurality of beats. A beat processing module (134), for each channel: calculates an instantaneous heart rate (IHR) for each beat; forms a plurality of beat groups from the plurality of beats, each beat group including a set of beats of the plurality of beats; calculates an average heart rate (AHR) for each beat group based upon the IHR of the set of beats; and generates a representative beat for each beat group based upon the set of beats. A feature extraction module (136) extracts, for each channel, a set of features based upon the plurality of representative beats. A classifier (138) generates an indicator indicating a risk associated with a cardiac disease based upon the set of features for the at least one channel. Fig. 1

No. of Pages : 69 No. of Claims : 32

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/08/2024

(21) Application No.202441060518 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD FOR OPTIMIZATION OF PUNICA GRANATUM CHITOSAN NANOPARTICLES FOR ENHANCED DRUG DELIVERY

(51) International classification :A61K0009510000, A61K0036185000, G06Q0030024200, A61P0001120000, C08L0005080000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This study focuses on the statistical optimization of Punica granatum (104) chitosan nanoparticles (102) (PCHNs) to improve their efficacy for medicinal delivery and antidiarrheal action. Utilizing the Box-Behnken design (BBD) and response surface methodology (RSM), the interactions and quadratic effects of formulation variables on PCHN effectiveness were systematically examined. The ionic gelation procedure was employed to produce PCHNs, with tripolyphosphate (108) concentration, chitosan (106) concentration, and stirring time selected as independent variables. Encapsulation efficiency (EE) and in vitro drug release (DR) served as dependent variables. The EE of prepared PCHNs ranged from 93.84% to 99.3%, while DR ranged from 40.02% to 95.5%. Simultaneous optimization of all responses was achieved using a desirability function based on Design Expert® modeling, with a 95% desirability factor. The observed and anticipated values for the optimized formulation were nearly identical, demonstrating the method's accuracy. This approach facilitated a better understanding of the core connections between formulation variables and responses, offering a labor- and time-efficient optimization process for PCHNs.

No. of Pages : 23 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/08/2024
(21) Application No.202441060528 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A FORMULATION FOR INHIBITING BACTERIAL HYALURONIDASE AND DISRUPTING BIOFILM FORMATION IN STAPHYLOCOCCUS AUREUS

(51) International classification :A61P0031040000, A61K0038470000, A61K0008730000, A61K0009000000, C12N0009260000
(86) International Application No :NA
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(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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TITLE: A FORMULATION FOR INHIBITING BACTERIAL HYALURONIDASE AND DISRUPTING BIOFILM FORMATION IN STAPHYLOCOCCUS AUREUS APPLICANT: SREE BALAJI MEDICAL COLLEGE AND HOSPITAL ABSTRACT The present invention discloses a process of preparation of a formulation for inhibiting Bacterial Hyaluronidase and disrupting Biofilm Formation in Staphylococcus aureus. The process of the present invention comprises of following steps; a. dissolving fucoidan in water to form fucoidan solution; b. dissolving chitosan and guar gum in acetic acid to form chitosan solution; c. adding Astaxanthin and combination of Amikacin and Gentamycin to the fucoidan solution and stirring followed by slowly adding the Chitosan solution by rapid stirring and drop wise adding Sodium Tripolyphosphate under constant stirring to form formulation for inhibiting Bacterial Hyaluronidase and disrupting Biofilm Formation in Staphylococcus aureus. The present invention also discloses a formulation for inhibiting Bacterial Hyaluronidase and disrupting Biofilm Formation in Staphylococcus aureus prepared by the process as described above.

No. of Pages : 15 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/08/2024

(21) Application No.202441060529 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : A BIOACTIVE SYNERGISTIC FORMULATION FOR MANAGEMENT OF MICROBIAL DYSBIOSIS AND PROCESS THEREOF

(51) International classification	:A61K0031375000, A23L0033105000, A61K0031070000, A61K0008670000, A61K0031047000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :

TITLE: A BIOACTIVE SYNERGISTIC FORMULATION FOR MANAGEMENT OF MICROBIAL DYSBIOSIS AND PROCESS THEREOF APPLICANT: SREE BALAJI MEDICAL COLLEGE AND HOSPITAL ABSTRACT The present invention discloses a bioactive synergistic formulation for management of microbial dysbiosis. The synergistic formulation of the present invention comprises of therapeutically effective amounts of characterized combination of Eicosapentanoic acid, Decosahexanoic acid (DHA), Vitamin A, Vitamin B1, Vitamin B2, Vitamin B6, Vitamin C, Vitamin E, Fucoxanthin, Lutein and Beta carotene. The present invention also discloses a process of preparation of bioactive synergistic formulation for management of microbial dysbiosis. The process of the present invention comprises of homogeneous mixing of therapeutically effective amounts of characterized combination of Eicosapentanoic acid, Decosahexanoic acid (DHA), Vitamin A, Vitamin B1, Vitamin B2, Vitamin B6, Vitamin C, Vitamin E, Fucoxanthin, Lutein and Beta carotene.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/08/2024

(21) Application No.202441060532 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : BRAILLE BRACELET

(51) International classification :G09B0021000000, A61B0010000000, A44C0005000000, B41J0003320000, A44C0015000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
TITLE: BRAILLE BRACELET APPLICANT: 1. SRI BALAJI VIDYAPEETH 2. KASTURBA GANDHI NURSING COLLEGE ABSTRACT The present invention discloses a Braille bracelet[1] for visually challenged girls to track menstrual cycle. The braille bracelet[1] of the present invention comprising of plurality of beads[2] having hole[3] at center, connected together to form a bracelet through a connecting means[4] by inserting the connecting means[4] to the hole[3], characterized in that • the plurality of beads[2] comprises of atleast 5 large rectangular beads[5] embossed with braille numbers[6] of 1-5 denoting period/menstruation days and atleast 23 small square shaped beads[7] embossed with braille numbers[6] of 6-23 denoting normal days in which number of the large rectangular beads[5] shall be above or below 5 depending upon the menstrual period and number of the small square shaped beads[7] shall be above or below 23 depending upon the menstrual cycle of the respective individual; • an easily movable snug-fitting elastic loop[8] inserted into the bracelet and located before first of the large rectangular bead[5] and adapted to be moved by user over the beads[5,7] every day for accurate tracking of menstrual cycle.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/08/2024

(21) Application No.202441060537 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : COMBINED PWM AND PHASE SHIFT CONTROL METHOD FOR BIDIRECTIONAL FOUR SWITCH BUCK-BOOST (FSBB) CONVERTER WITH SMOOTH POWER TRANSFER REVERSAL

(51) International classification	:H02M0003158000, H02M0001000000, H02M0003156000, H02M0003335000, H02M0003157000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :
Combined PWM and Phase Shift Control Method for Bidirectional Four Switch Buck- Boost (FSBB) Converter with Smooth Power Transfer Reversal Combined Pulse Width Modulation (PWM) and phase shift control method for a bidirectional Four Switch Buck-Boost (FSBB) converter, designed to achieve smooth power transfer reversal. The FSBB converter is gaining attention in modern power electronics due to its versatility in both buck and boost operations, making it ideal for applications requiring bidirectional power flow, such as renewable energy systems and electric vehicles. The integration of PWM and phase shift control offers enhanced performance by simultaneously regulating voltage and current, optimizing efficiency, and minimizing power losses during transitions. The proposed control strategy effectively manages the power flow direction without causing abrupt changes, thereby reducing stress on the components and improving the overall reliability of the system. The study includes a comprehensive analysis of the control method's operational principles, supported by mathematical modeling and simulation results. The effectiveness of the combined control method is demonstrated through various scenarios, highlighting its superior performance in achieving smooth power transfer reversal compared to conventional methods. Experimental results validate the theoretical analysis, showing a significant improvement in response time and stability during power reversal. This innovative approach promises to advance the capabilities of bidirectional converters.

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(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/08/2024

(21) Application No.202441060545 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : INTEGRATING POSITIVE PSYCHOLOGY AND MACHINE LEARNING FOR ENGLISH AS A FOREIGN LANGUAGE (EFL) STUDENTS' ACADEMIC PERFORMANCE IN HIGHER EDUCATION

(51) International classification	:G06Q0050200000, G09B0019060000, G09B0007000000, G09B0007020000, G09B0019000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :

INTEGRATING POSITIVE PSYCHOLOGY AND MACHINE LEARNING FOR ENGLISH AS A FOREIGN LANGUAGE (EFL) STUDENTS' ACADEMIC PERFORMANCE IN HIGHER EDUCATION The method for the development of the field of positive psychology (PP) investigates how happy feelings can maximize performance. The current study attempted to incorporate PP into English as a foreign language teacher education program in order to evaluate its effects on the development of positivity among teachers and potential improvements in their instructional practice. This was done in response to a lack of research on the potential of PP in enhancing language teacher education. On a weekly basis, they were also required to submit reflections regarding the teaching they had received. The teachers developed positive emotions, engagement, relationships, meaning, and accomplishment, which led to their improved instructional practice, according to a thematic analysis of their reflections. Many instructors believe that their responsibility is restricted to creating lesson plans, providing in-class instruction, writing tests, grading assignments, and other paperwork, according to data from a sample of EFL and translation instructors and students. They stated that in EFL and translation and interpreting courses, students face numerous academic challenges. They continued by saying they had no idea what positive psychology is or how to incorporate its ideas into their classes. Social media answers and remarks from students revealed that they had a poor self-perception. FIG.1

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(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/08/2024

(21) Application No.202441060546 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : ECOLOGICAL IMPACT ASSESSMENT IN BUSINESS OPERATIONS: A FRAMEWORK COMBINING ZOOLOGICAL INSIGHTS AND AI ALGORITHMS.

(51) International classification	:G06Q0010063700, G06Q0010067000, A01N0043160000, G06Q0010063900, G06Q0030020100
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

The growing industrial footprint in ecologically sensitive areas is creating a pressing need for comprehensive frameworks that evaluate and reduce the environmental impact of corporate operations. This study presents a novel approach to thoroughly examine and manage the environmental effects of industrial activity by fusing cutting-edge artificial intelligence (AI) algorithms with traditional zoological observations. The study, which is being carried out in an imaginary location, focuses on identifying key species, mapping ecological hotspots, and predicting changes in biodiversity. Results indicate the vulnerability of individual species, including the Amur Tiger and Red-crowned Crane, and identify unique ecological hotspots characterized by habitat disturbance, pollutant spread, and noise disturbance. Predictive algorithms identify taxonomic differences in biodiversity changes, highlighting the need for properly focused conservation efforts. Suggested mitigating measures, specific to identified hotspots, support pollution control, habitat restoration, and operational modifications. Combining AI with zoological knowledge not only broadens our understanding of ecology but also provides businesses with workable ways to reduce their environmental footprint. This research promotes a symbiotic balance between economic advancement and environmental preservation, contributing to the current conversation on sustainable business practices. The study establishes the foundation for a revolutionary approach to corporate environmental responsibility, advocating proactive engagement in sustainable practices for the preservation of ecosystems and global biodiversity. It acknowledges limitations and suggests avenues for future investigation. Keywords: Ecological Impact Assessment, Business Operations, Sustainability, Biodiversity Conservation, Environmental Impact

No. of Pages : 6 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060569 A
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(54) Title of the invention : ENHANCING CYBER THREAT DETECTION THROUGH INTEGRATED ENDPOINT DETECTION AND RESPONSE WITH NETWORK-BASED ANOMALY ANALYSIS

(51) International classification	:H04L0009400000, G06F0021550000, G06N0020000000, G06N0020200000, G06F0021570000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :
Enhancing Cyber Threat Detection through Integrated Endpoint Detection and Response with Network-Based Anomaly Analysis ABSTRACT This research endeavours to fortify cybersecurity strategies by advancing endpoint response mechanisms and integrating novel techniques for network anomaly detection. The persistent evolution of cyber threats demands a multifaceted approach to safeguarding organizational assets. The study centers on enhancing Endpoint Detection and Response (EDR) capabilities, fostering real-time threat detection, and implementing adaptive responses at the endpoint level. We explore innovative methodologies for Behavioral analysis, leveraging machine learning algorithms to discern nuanced patterns indicative of advanced threats. Additionally, the research extends its focus to network anomaly detection, where sophisticated algorithms scrutinize network traffic for aberrations that may signify malicious activities.The integration of EDR with network-based anomaly detection forms a robust security framework, offering holistic threat visibility across endpoints and networks. The study delves into correlation rules that enable the seamless amalgamation of endpoint and network event data, empowering security teams to decipher intricate attack vectors. By deploying proactive measures and incorporating threat intelligence feeds, the proposed approach aims to reduce false positives, expedite incident response, and provide a comprehensive defense against emerging threats. This research contributes to the on-going discourse in cybersecurity by presenting an advanced and adaptive security posture that fortifies organizations against the dynamic landscape of cyber threats.

No. of Pages : 12 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202441060570 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : GRAPH THEORY APPROACHES TO IDENTIFY OPTIMAL SITES FOR DYE ADSORPTION

(51) International classification :C02F0101300000, C02F0001280000, C02F0001300000, G01N0021350000, H04L0045160000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Graph Theory Approaches to Identify Optimal Sites for Dye Adsorption ABSTRACT: This study introduces innovative mathematical techniques to assess the adsorbent activity of Raw Parthenium Flower (RPF) and Parthenium Flower Activated Carbon (PFAC). The approach centers on analyzing various coefficients of a characteristic polynomial derived from adjacency matrices, which reflect key properties such as stability, symmetry, reactivity, and connectivity. The coefficient values for RPF range from -3746 to 3010, while those for PFAC span from -23278 to 27793, highlighting significant differences in these properties. Complementary analytical techniques, including FTIR, XRD, and SEM, further characterize the structural and functional attributes of RPF and PFAC. These findings underscore their potential as efficient and cost-effective adsorbents for the removal of Methylene Blue dye from wastewater. This research integrates advanced mathematical methodologies with established characterization techniques, offering enhanced solutions for environmental remediation.

No. of Pages : 19 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/08/2024
(21) Application No.202441060726 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : 3D PRINTING SYSTEM FOR PRECISE AND CUSTOM CHOCOLATE PRODUCTION

(51) International classification :B33Y0030000000, B33Y0010000000, B33Y0050020000, B29C0064118000, B33Y0040000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The invention pertains to a specialized 3D printer designed for crafting intricate chocolate designs. This printer is equipped with a single nozzle, a chamber, and a print bed, all constructed from food-grade materials to ensure the safety and quality of the printed chocolates. The rising demand for custom confectionery has driven the need for such a chocolate printer, where precise temperature control and careful material handling are essential to maintaining the integrity of the chocolate throughout the printing process. A key feature of this system is its highly efficient, easily replaceable filament feeder mechanism, which allows the chocolate filament to be swapped out without disrupting the printed parts on the bed. This quick-replace mechanism reduces lead time, significantly enhancing the overall efficiency of the printing process. The chamber's temperature is meticulously regulated to prevent the chocolate from losing its structural integrity during filament replacement. The chocolate filament is encased in food-grade plastic, which simplifies both the cleaning and replacement process within the nozzle. Additionally, the printer employs a non-captive stepper motor in the feeder, which reduces the likelihood of filament jams or breaks and facilitates easy retraction, ensuring a smooth and uninterrupted printing experience.

No. of Pages : 9 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/08/2024

(21) Application No.202441060777 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : FLAME STABILIZATION METHOD IN SCRAMJET COMBUSTOR

(51) International classification :F23R0003280000, F02K0007100000, F02K0007140000, F23R0003140000, G06F0030280000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
The development of efficient and reliable flame stabilization methods in scramjet combustors is crucial for the advancement of propulsion technologies. The novel approach to flame stabilization utilizes an advanced strut design within the scramjet combustor. The proposed method features several innovative enhancements aimed at improving combustion stability, fuel-air mixing, and overall engine performance. Key innovations include a multi-point, variable fuel injection system integrated into the strut, which optimizes fuel distribution and mixing through adaptive control mechanisms. Aerodynamically shaped struts reduce drag and shock wave intensity. Advanced thermal management strategies, including active cooling systems and thermal barrier coatings, enhance the durability and reliability of the strut. Experimental results and computational fluid dynamics (CFD) simulations demonstrate lhe effectiveness of these innovations in achieving stable and efficient combustion, reduced drag, and improved thermal resilience. This novel flame stabilization method offers significant potential for enhancing the performance and operational envelope of scramjet engines, paving the way for more robust and efficient hypersonic propulsion systems.

No. of Pages : 6 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/08/2024

(21) Application No.202441060845 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : NASAL CUBOSOMAL IN-SITU GEL: A NOVEL APPROACH FOR TARGETED BRAIN DELIVERY OF ROPINIROLE HCL

(51) International classification :A61P0025160000, A61K0009000000, A61K0031404500, A61P0025000000, A61K0009060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present study, emphasizes the use of cubosomal nanoformulation and cubosomal in-situ gel administered via the intranasal route for the management of Parkinson's disease. A cubosomal nanoformulation comprising Ropinirole HCI was developed, with concentrations of Rupinirole HCI at I mg/ml (0.1% w/v). The formulation also includes Glyceryl monooleate (2.5%-7.5% w/v), Poloxamer 407 (0.5%-1.5% w/v) and Tween 80 (1%-3% w/v). The cubosomal nanofonnulation is incorporated into the in-situ gel. Optimized for pm1icle size, encapsulation efficiency and sustained release through the blood-brain barrier. Key findings included a particle size of 134.8 nm, POI of 0.29, ZP of -28."41 mY and EE of 82.77%. This stable cubosomal nanoformulation demonstrated safety and efficacy in both in-vitro and in-vivo studies. In-vivo evaluations in Wistar rats showed enhanced behavioral, biochemical and histopathological outcomes compared to disease controls. The results were significant for control and·treatment groups I and 2 when compared to the disease group. Short-term stability tests confined the formulation's robustness, suggesting its potential as a superior treatment option for Parkinson's disease over traditional dosage form1. Present study emphasizes the use of cubosomal in-situ gel (intranasal) for effective management of parkinson's disease.

No. of Pages : 28 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/08/2024
(21) Application No.202441060947 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : CARBON BASED COMPOSITE THIN FILM, PREPARATION METHOD AND APPLICATIONS AS ELECTRODE MATERIAL

(51) International classification	:B82Y0030000000, H10K0085200000, H05K0001020000, C09K0011650000, H01G0011860000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention provides a new self-adhesive and highly conductive free standing carbon based composite thin film comprising multi walled carbon nanotubes (MWCNT) dispersed in an organosulfur polymer containing carboxylic side chains. The invention further provides a process for the preparation of the carbon based composite thin film using low-cost multiwalled carbon nanotube and a biomass derived carboxylic side chain containing organosulfur polymer as a binding additive. The polymer binder can easily be obtained from a natural biomass molecule which is used as dietary supplement and therefore easily available at large scale. This invention also provides evidence for the high performance of the prepared carbon film in perovskite solar cell and hydrogen energy generation in an electrochemical cell.

No. of Pages : 32 No. of Claims : 15

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/08/2024

(21) Application No.202441060953 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : ENHANCING EMPLOYEE WELL-BEING THROUGH ETHICAL LEADERSHIP: THE ROLE OF WORKPLACE SPIRITUALITY

(51) International classification	:G09B0019000000, G06Q0010063700, G06Q0010105000, G16H0040200000, G06Q0010063900
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The present invention provides a system and method for enhancing employee well-being by integrating ethical leadership principles with workplace spirituality practices. This comprehensive approach combines ethical decision-making frameworks and leadership training with spiritual wellness programs and support networks. The system includes tools for assessing employee satisfaction and engagement, enabling organizations to monitor and refine their practices. By fostering a work environment rooted in ethical behavior and spiritual support, the invention aims to improve overall employee well-being, job satisfaction, and organizational success.

No. of Pages : 16 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/08/2024
(21) Application No.202441060983 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : APPLICATION OF VAGUE SETS IN VAGUE DETECTION OF -SIGNAL AVAILABILTY IN MULTI PATH WIRELESS CHANNELS

(51) International classification	:H04L0027260000, H04W0064000000, H04B0007060000, H04B0007080000, G01S0005020000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Vague set has proven paramount in fuzzy mathematics due to its facility of tracking ambiguity involve in option making. In this paper we develop a vague estimation of the availability of a radio signal from a mobile unit to the base station in a shadowing and multipath propagation environment. This estimation method provides a way to optimally manage the switching strategy of the base station depending on the signal level of the different mobile units served by that base station.

No. of Pages : 7 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/08/2024

(21) Application No.202441060995 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : BIOREACTOR FOR WATER PURIFICATION AND BIOENERGY PRODUCTION FROM MEDICAL WASTE

(51) International classification	:B09B0003000000, C12M0001000000, C02F0001440000, C12M0001107000, C02F0011040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :
Bioreactor for Water Purification and Bioenergy Production from Medical Waste The integration of bioreactor technology in water purification and bioenergy production presents a groundbreaking approach for managing medical waste. This process utilizes specialized bioreactors to treat medical waste by harnessing microbial activity to decompose organic materials and detoxify hazardous substances. The bioreactor system operates in two distinct stages: first, it employs a consortium of microorganisms to break down medical waste, converting it into biodegradable components and neutralizing harmful pathogens. The second stage focuses on the recovery of bioenergy through anaerobic digestion, where the remaining organic matter is further processed to produce biogas, a renewable energy source. Additionally, the bioreactor facilitates water purification by filtering out contaminants, resulting in treated water that meets regulatory standards. This dual-function system not only addresses the critical issue of medical waste management but also contributes to sustainable energy production and environmental protection. By combining waste treatment with energy generation and water purification, this bioreactor technology offers a holistic solution that minimizes environmental impact and enhances resource recovery. The approach is particularly advantageous in healthcare settings, where the volume of medical waste is substantial and the need for effective waste management solutions is pressing.

No. of Pages : 16 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/08/2024
(21) Application No.202441061007 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A HYBRID VEHICLE WITH LONG RANGE MOBILITY

(51) International classification	:H02J0007000000, H02J0003380000, F03D0009250000, H02J0007350000, B60W0010060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
A system 100 to move a vehicle with hybrid power can include a primary generator 102; a plurality of renewable energy generating sources 106; a battery pack 108; a secondary generator 110; and a controller 114. The controller 114 dynamically decides movement of the vehicle using at least one source of energy based on the state of charge of the battery pack 108, and by using a regenerative breaking force based on real-time analysis of a plurality of parameters maximise energy recovery efficiency. The plurality of renewable source of energy 106 includes a solar panel 106-A and a wind turbine 106-B to charge the battery pack 108. The controller 114 is configured with an advanced energy management module 124 using machine learning algorithms to optimise the distribution of generated power between the battery pack 108 and immediate power needs of the vehicle, adjusting based on real-time driving conditions.

No. of Pages : 14 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/08/2024
(21) Application No.202441061008 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR FACILITATING USER INTERACTION WITH VIRTUAL OBJECTS TO ENHANCE ONLINE SHOPPING EXPERIENCE

(51) International classification :G06Q0030060100, G06F0003010000, G02B0027010000, G06T0019000000, G06F0003048150
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present disclosure relates to a system (100) for facilitating user interaction with a virtual objects to enhance online shopping experience, the system includes a head-mounted display device (102) configured to simulate a physical retail experience with detailed virtual stores, product displays, and interactive features. A user interface (104) allows the one or more users to engage with three-dimensional representations of a plurality of products. A processor to examine the plurality of products from all perspectives, fit virtually corresponding products using avatars, interact with electronic devices, and enable real-time interactions of the corresponding products among the one or more users. Process secure and transparent transactions for the corresponding products, enable autonomous drones for rapid order delivery and ensure seamless order transition of the corresponding products to the corresponding users.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/08/2024

(21) Application No.202441061023 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : HYBRID ORTHODONTIC APPLIANCE COMBINING TRADITIONAL BRACES AND CLEAR ALIGNERS FOR ENHANCED TREATMENT FLEXIBILITY

(51) International classification :A61C0007000000, A61C0007080000, A61C0007360000, A61P0001000000, A61P0029000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention discloses a hybrid orthodontic appliance combining traditional metal braces and clear aligners, offering enhanced treatment flexibility and patient comfort. The appliance includes brackets with specialized attachment mechanisms for aligners, digital tools for treatment planning, and customizable treatment phases. This innovation provides an effective solution for a wide range of orthodontic issues, improving patient compliance and treatment outcomes.

No. of Pages : 11 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :21/07/2023

(21) Application No.202331049387 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A non-invasive system and method for copulation

(51) International classification :A61B0005000000, A61B0005110000, G16H0040630000, A61B0005020500, A61B0005318000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Abstract A non-invasive system and method for copulation? A non-invasive system (100) comprising of at least one wearable sensor (101) to measure emotional states and responses of the users and a method for satisfied copulation. Also, the system (100) comprises at least one wearable sensor (101) comprising at least one bio-signal measuring sensor associated with the users configured to facilitate an achievement of a copulation response. The system (100) proposes to control and monitor the interaction between the users. Also, the system (100) is configured to determine, monitor, analyze, predict, recommend, notify and modify at least one component of the system (100). The system (100) is monitoring and predicting the occurrence of several physiological and phycological states events, movements and notifying with recommendation to adjust, to achieve the desired result with satisfaction. Further, the system (100) is configured with an internet of things (IoT) using artificial intelligence techniques and neural network for copulation between the counterparts to maintain gender equality.? Figure 1?

No. of Pages : 30 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/07/2023
(21) Application No.202331051078 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : PRODUCTION OF DIESEL-LIKE FUEL OIL FROM SCRAP TIRE IN A SPECIALLY DESIGNED PYROLYSIS REACTOR

(51) International classification :C10B7/10, C10B47/44, C10B53/07, C10G1/10
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Abstract TITLE: PRODUCTION OF DIESEL-LIKE FUEL OIL FROM SCRAP TIRE IN A SPECIALLY DESIGNED PYROLYSIS REACTOR The advancement is directed to developing a pyrolysis reactor that would be easy for handling and can work on different types of scrap material. Moreover, the parameters of the pyrolysis process were selected mainly focusing on the maximization of liquid yield. The oil derived from the scrap tire pyrolysis process has been separated via the distillation process in a simple distillation unit to eliminate higher molecular weight compounds for it and all the properties were compared with commercially available diesel fuel oil for better understanding. Figure 2

No. of Pages : 30 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :03/05/2024

(21) Application No.202431035190 A

(43) Publication Date : 16/08/2024

(54) Title of the invention : ARTIFICIAL INTELLIGENCE AND DEEP LEARNING: ENHANCING DRONE SYSTEMS FOR ENVIRONMENTAL MONITORING IN SMART CITIES

(51) International classification	:G06N0003080000, G06K0009620000, B64C0039020000, G06N0003040000, A61B0005145000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :

Artificial intelligence and Deep Learning: Enhancing Drone Systems for Environmental Monitoring in Smart Cities is the proposed invention. The proposed invention focuses on understanding the functions of Environmental Monitoring. The invention focuses on analyzing the parameters of Drone Systems in Smart Cities using algorithms of Artificial Intelligence.

No. of Pages : 13 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/05/2024
(21) Application No.202431042073 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SYSTEM AND METHOD FOR LIVE STREAMING OF HEALTH DATA

(51) International classification	:A61B0005000000, H04L0067100000, A61B0005020500, H04W0004800000, H04N0021218700
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
Disclosed herein is a system for live streaming of health data of patients so that an authorized user can access and view such data in real-time in a ready-to-use or easily interpretable format from anywhere across the globe. The system comprises a health signal acquisition device (100), a first user equipment (200), a cloud server (300), a second user equipment (400), and an application program interface (API) (500). The health signal acquisition device (100) includes probes configured to acquire health signals from the patient body. The first user equipment (200) is synchronized with the health signal acquisition device (100) to wirelessly transmit the health signals to the cloud server (300) in JSON (JavaScript Object Notation) format. The second user equipment (400) is adapted to wirelessly receive the data from the cloud server (300). The API (500) is embedded in processors of the user equipment (200, 400) and comprises: a selection field for selecting subject identity and health parameters; a set of codes configured to organize the health signal characteristics of the selected health parameter corresponding to the selected subject in a user interpretable format; and a streaming field to display the user interpretable format in real time. Fig. 1

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/08/2024

(21) Application No.202431059200 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A METHOD FOR PREPARING A HYDROGEL FROM MANGO SEED KERNEL POWDER

(51) International classification	:C11B0001040000, A61K0036220000, A61K0009160000, C08J0003075000, C11B0003000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
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(57) Abstract :
A method (100) for preparing a hydrogel from mango seed kernel powder, the method comprises: selecting mango seed kernels; milling the mango seed kernels into a fine powder; mixing the mango seed kernel powder with water at a ratio of 1:2 to form a homogenous mixture; and subjecting the mixture to a controlled temperature of 100°C for an incubation time of 5 minutes to induce gelation, thereby forming the hydrogel.

No. of Pages : 21 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/08/2024
(21) Application No.202431059493 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : PROCESS AND SYSTEM OF PREPARING PAVEMENT QUALITY CONCRETE FOR RURAL ROAD BY INCORPORATING MODIFIED RECLAIMED ASPHALT PAVEMENT (MRAP) AGGREGATE

(51) International classification :C04B0111000000, E01C0019100000, C04B0018160000, E01C0019050000, C04B0026260000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention discloses a process (100) of preparing pavement quality concrete by incorporating modified reclaimed asphalt pavement (MRAP) aggregate. The process (100) comprises the steps of which involves providing crushed RAP aggregates, surface treatment of the RAP aggregates and mixing the surface treated RAP with natural coarse aggregate, river sand and other required materials to obtain pavement quality concrete for rural road. The surface treatment of the RAP aggregates further comprises of partially removing asphalt coating from the surface of the RAP aggregates and applying a coating of fly ash to the partially asphalt-removed RAP aggregates, with both steps at about 1800C.

No. of Pages : 32 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/08/2024
(21) Application No.202431059508 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SYSTEM FOR HYBRID POWDER-BASED ADDITIVE FRICTION STIR DEPOSITION VERTICAL MILLING MACHINE AND A METHOD THEREOF

(51) International classification :B23C1/06, B23C5/00, B23K20/12
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A system (100a, 100b) for hybrid powder-based additive friction stir deposition vertical milling machine and a method (600) thereof is disclosed. The additive friction stir deposition (AFS-D) setup consists of a powder feeding and a friction stirring sub-assemblies facilitates powder feeding from a powder container (128) to the working region at a controlled flow rate to deposit on a substrate, a powder container (128) and associated fixture, a driving system. The powder feeding is achieved with the difference in rpm between an auger screw (162) and an AFS-D tool (158). The driving system of the powder feeding mechanism transfers power to the auger screw (162). The powder container (128) accumulates powder for powder feeding. The subsequent milling operation in the same machine is carried out by removing the AFS-D tool (158) and mounting a mill cutter (170).

No. of Pages : 38 No. of Claims : 16

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/08/2024
(21) Application No.202431059515 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SYSTEM FOR PROACTIVE SCHEDULING OF REAL-TIME POWER RESTORATION USING EXTREME WEATHER FORECASTING

(51) International classification	:G06Q0050060000, G01W0001100000, H02J0013000000, G06F0009500000, H04L0005000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention relates to a system and method for proactive scheduling and real-time restoration of electrical distribution networks during extreme weather events. The system includes a plurality of sensors, a plurality of measuring devices, and a plurality of internet-connected devices to collect real-time data on weather conditions and network status. The processing unit analyzes this data to generate actionable plans and instructions, utilizing a Mixed-Integer Linear Programming (MILP) model to optimize network resilience and resource allocation. The method includes collecting real-time data, inputting data to the processing unit, processing the collected data, forecasting extreme weather events, calculating the probability of line failures, and using Monte Carlo simulation to generate and select representative damage scenarios.

No. of Pages : 29 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :06/08/2024

(21) Application No.202431059518 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : PORTABLE DEVICE FOR RAPID TUBERCULOSIS DIAGNOSIS USING REAL-TIME LAMP TECHNOLOGY

(51) International classification	:C12Q0001684400, B01L0003000000, C12Q0001700000, C02F0001000000, G16H0050200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
This invention relates to a Portable Real-Time LAMP Analyzer for Rapid TB Diagnosis and Drug Resistance Detection that is an advanced diagnostic device designed for accurate and swift TB detection. It features a thermal block for maintaining constant temperature, a microcontroller for precise regulation, and reaction chambers for sample processing. Fluorescent probes bind to amplified TB DNA, emitting light detected by a fluorescence detection module with photodetectors and optical filters. The central processing unit (CPU) analyzes realtime data from photodetectors, correlating fluorescence intensity with TB DNA concentration. Results are displayed on a user-friendly touch-screen interface. The device includes microfluidic channels for precise sample transfer and secure input/output ports to prevent contamination. Designed for portability and ease of use, it is equipped with a rechargeable battery, making it suitable for remote and low-resource settings, thereby enhancing TB diagnosis and drug resistance management effectively

No. of Pages : 26 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/08/2024
(21) Application No.202431059736 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SYSTEM AND METHOD FOR ENHANCING THE EFFICIENCY OF AN OFFSHORE WIND AND ELECTROLYZER ENERGY SYSTEM

(51) International classification :C25B0001040000, B60H0001000000, F03D0009250000, F03D0013250000, F28D0020000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
A SYSTEM AND METHOD FOR ENHANCING THE EFFICIENCY OF AN OFFSHORE WIND AND ELECTROLYZER ENERGY SYSTEM A system and method for enhancing the efficiency of an offshore wind energy system. The system includes a heat extraction unit (101) to capture excess heat from a wind turbine. A heat utilization module (102) employs heat exchangers and thermal storage to harness captured heat for improving electrolyzer plant (103) efficiency. A cooling system (104) aids heat extraction, while control systems (105) optimize heat distribution. A centralized control unit (106) regulates heat management based on real-time data. Predictive maintenance module (107) and automated control module (108) ensure optimal performance. The system can integrate with an electrolyzer plant and includes hydrogen transportation mechanisms for offshore environments. The method involves capturing excess heat, utilizing it in the electrolyzer, cooling the heat extraction unit, optimizing heat distribution, regulating heat management, and implementing predictive and automated controls.

No. of Pages : 24 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/08/2024
(21) Application No.202431059737 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A DYNAMIC WIRELESS POWER TRANSFER SYSTEM FOR CHARGING AN ELECTRIC VEHICLE USING EFFICIENT MAGNETIC COUPLER

(51) International classification :H02J50/10, B60L53/12, H02J50/90, B60L53/126, B60L53/35, H01F38/14, H02J7/00, G05B13/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A DYNAMIC WIRELESS POWER TRANSFER SYSTEM FOR CHARGING AN ELECTRIC VEHICLE USING EFFICIENT MAGNETIC COUPLER Present system comprises a ground-side power supply (101) and a vehicle-side power receiving system (102) connected via a magnetic coupler (103). The magnetic coupler includes optimized coils (104, 105) and a magnetic core (106) for efficient power transfer. Adaptive control algorithms (107) optimize power delivery, while thermal management (108) and fault detection (109) enhance system reliability. The method involves AC-to-DC conversion, high-frequency power transmission, and DC power rectification for battery charging. In one embodiment, the wireless power transfer system incorporates a magnetic coupler with a highly optimized coil configuration. The first coil is designed to maximize power transfer at a specific operating frequency, while the second coil employs multiple windings to enhance magnetic field coupling. This combination, coupled with the use of ferrite as the magnetic core material, significantly improves power transfer efficiency and reduces energy losses. In another embodiment, the system includes advanced control algorithms that enable adaptive power transfer efficiency optimization under varying operating conditions. A thermal management system is integrated to regulate component temperatures, ensuring optimal performance and system longevity. Additionally, a fault detection and correction module enhance system reliability.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :07/08/2024

(21) Application No.202431059750 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : “Mini Conveyor: Enhancing Material Handling with Geneva Mechanism”

(51) International classification :F16H0027060000, G06Q0010083300, H01H0003440000, B65D0021020000, B64D0009000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Mini conveyors equipped with Geneva mechanism represent a significant innovation in material handling technology, offering efficient and precise transportation of small loads in various industries and applications. These compact conveyors utilize the intermittent motion of the Geneva mechanism to deliver controlled movement of products or components along a predetermined path. Mini conveyors find extensive use in manufacturing, assembly, packaging, and logistics operations, providing seamless integration into production lines and improving workflow efficiency. With their versatility, reliability, and space-saving design, mini conveyors with Geneva mechanism have become indispensable tools for streamlining material handling processes in diverse settings.

No. of Pages : 11 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202431059813 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A SOLAR WATER HEATING SYSTEM FOR SUPPLYING HOT WATER EVEN DURING UNAVAILABILITY OF SOLAR RADIATION

(51) International classification :F24D0019100000, F24S0060300000, F24H0015238000, F24H0015370000, F24S0020200000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to a solar water heating system for supplying hot water even during unavailability of solar radiation. The solar water heating system supplies hot water even during unavailability of solar radiation. It comprises an insulated chamber with rectangular chambers housing PCM (Phase Change Material) nanocomposites acting as absorber plates. A wavy pipeline surrounded by PCM nanocomposites receives water and discharges hot water. Double glazing minimizes thermal losses. The PCM nanocomposites, preferably paraffin wax doped with reduced graphene oxide (rGO), harness and store thermal energy during daylight for release during night. The system includes temperature indicators, a control mechanism to regulate water flow, and a backup heat source. The method involves filling chambers with rGO-PCM nanocomposites, harnessing stored thermal energy, minimizing losses with glazing, and regulating water flow with a control mechanism and backup heat source.

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024
(21) Application No.202431059860 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AI enabled hand held device to diagnose neglected tropical skin disease in real time

(51) International classification :A61B0005000000, G16H0050200000, A61P0017000000, G16H0040670000, G16H0050300000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT An AI-enabled handheld device for diagnosing neglected tropical skin diseases in real-time will be a compact and portable tool designed to enhance healthcare delivery in resource-limited settings. Equipped with high-resolution imaging capabilities, it will capture detailed images of skin lesions and anomalies. Advanced artificial intelligence and machine learning algorithms will analyze these images on-the-spot, identifying patterns and features indicative of various skin diseases such as leprosy, yaws, cutaneous tuberculosis, and cutaneous leishmaniasis. The device will provide instant diagnostic results through a user-friendly interface, allowing healthcare workers to make informed decisions quickly. Connectivity features will enable data upload for further analysis or remote consultations with specialists. Designed for durability and ease of use, this device will also boast a long battery life, ensuring its functionality in areas with limited access to electricity. Overall, this technology will represent a significant advancement in addressing neglected tropical skin diseases by facilitating early and accurate diagnosis, thereby improving patient outcomes and reducing the burden on healthcare systems. Novelty: 1. Hand held portable machine can used in remote areas 2. Realtime diagnosis of skin disease by peripheral health care workers where dermatologist is not available 3. Low cost 4. No need for biopsy (non-invasive)

No. of Pages : 7 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024

(21) Application No.202431060029 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : TROLLEY TRIKE

(51) International classification :B62B3/04, B62B3/12, B62B7/12
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A movable device 100 for ease of transport and convertible into a rideable tricycle for riding is disclosed, including a chassis (102) with the capability to convert from a trolley configuration to a rideable configuration, consisting of a first section (104) includes a seating arrangement and space for storing luggage. A second section (106) can be moved between a retracted position and an expanded position on the chassis (102). The third section (108) is designed to contain a collection of driving equipment, which enables the movement of the chassis (102). A front wheel (110) is connected in a detachable mode to the second section (106). When the chassis (102) is used in the rideable configuration, the second section (106) is in the extended position. A handle (122) is detachably connected to a backside on the chassis (102) and configured to enable an operator to move the chassis (102) in the trolley configuration.

No. of Pages : 18 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/08/2024

(21) Application No.202431060055 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : “AUTOMATED CROP MANAGEMENT SYSTEM”

(51) International classification	:A01G0025160000, G06Q0050020000, G06T0007000000, G06Q0010060000, G06T0005700000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT “AUTOMATED CROP MANAGEMENT SYSTEM” The automated crop management system described herein comprises an information detection module 102 equipped with high-resolution cameras and environmental sensors, capturing multispectral images and critical data on temperature, humidity, and soil moisture. These components enable precise analysis of crop conditions through preprocessing techniques like noise reduction and image segmentation, an AI module 110 powered by machine learning algorithms processes the data in real-time, swiftly detecting diseases and anomalies, and a user-friendly interface 108 provides immediate alerts, detailed insights, and step-by-step guidance on recommended actions, facilitating proactive crop management. Refer to Figure 1 and 2

No. of Pages : 17 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202431060259 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : MULTI ENGINE MACHINE TRANSLATION FOR ENGLISH TO HINDI LANGUAGE ASSISTIVE FRAMEWORK FOR THE NATIVE LEARNERS

(51) International classification	:G06F0040580000, H04L0069120000, E01D0019060000, G06F0040440000, G06F0008200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The present invention provides a mathematically enhanced framework for e-contents translation to bridge gap of language barrier. The Language barrier between the Hindi-native learners and the good-quality e-contents available in English has inspired me to initiate the re- search work. The research work aims to propose a translation solution for Hindi-native learners. Machine translation (MT) is already assisting the learners by translating the e-contents for various language pairs. The available on- line MT engines are unable to provide the fluent and correct translation in Hindi for technical e-contents. An analytically tested and designed framework, as well as an algorithm of "Multi-Engine Machine-Translation for English-to-Hindi Language: MEMTEHiL", have presented in this article. The encouraging results of the designed framework will be useful to minimize the gap of the language barrier between English-to-Hindi for technical e-contents.

No. of Pages : 21 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :09/08/2024
(21) Application No.202431060295 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : Compact Sized wall-mount backup Power Processor for Household Appliances

(51) International classification :H02J0009060000, H01M0010120000, H02J0050120000, H04W0024040000, H02M0001420000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
To operate the various household appliances AC power is required. However, during the power outages, the battery incorporated standby power processor kicks in as a backup and provides the undisturbed AC power supply to the utility appliances. Nevertheless, the presently used lead-acid based backup power processor has some limitations like bulky size, smaller life cycles of battery, longer charging time and poor depth of discharge. Further, due to the use of low frequency transformers inside the backup power processor, the size and cost of the battery incorporated power processor also increased. In addition, as during the energy storing period of battery unity power factor (UPF) is not maintained, it results power quality issue of the utility grid and also give additional burden to the grid. To address all the above issues an efficient, robust and compact sized (without low frequency transformers) wall-mount backup power processor with UPF operation for uninterrupted power supply is proposed in this proposal to deal with the unbearable numerous power cuts. Fig. 1

No. of Pages : 11 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/08/2024

(21) Application No.202431060584 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : Portable Air Conditioning Innovation: Harnessing Thermal Peltier Technology

(51) International classification :F24F0005000000, F25B0021020000, C02F0001420000, F24F0001040000, H04W0052020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Portable air conditioners designed using Thermal Peltier technology represent a breakthrough in cooling solutions, offering compact, efficient, and versatile cooling for personal and small-space applications. These innovative devices utilize the Peltier effect to create cooling, making them lightweight, energy-efficient, and environmentally friendly alternatives to traditional air conditioning systems. Portable AC units with Thermal Peltier technology are ideal for cooling bedrooms, offices, RVs, tents, and other small spaces where traditional AC installation is impractical or unavailable. With their low energy consumption, quiet operation, and easy portability, these units provide cooling comfort wherever it's needed, enhancing quality of life and productivity in diverse settings.

No. of Pages : 11 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/08/2024

(21) Application No.202431060585 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : “NOVEL ENGINELESS TOPOLOGY FOR WATER VEHICLES”

(51) International classification :B64G0001400000, F03H0001000000, B63H0021170000, F16L0011040000, H04W0004120000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This invention presents an innovative approach to maritime propulsion through the utilization of NOVEL technology in water vehicles. Leveraging advancements in ion propulsion and electric propulsion systems, the invention offers a cleaner, more efficient, and potentially faster mode of transportation on water. By minimizing emissions and optimizing power delivery systems. With enhanced maneuverability, adaptability to various watercraft types, and the potential for higher speeds, this invention represents a significant technological advancement in maritime propulsion, paving the way for a more sustainable future in water transportation system.

No. of Pages : 11 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/08/2024

(21) Application No.202431060628 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : Rainwater Detector System: Enhancing Water Management and Conservation

(51) International classification :G06Q0010060000, G05B0015020000, G06Q0050060000, E03B0003030000, E03B0003020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The Rainwater Detector System represents an innovative approach to water management and conservation, offering a proactive solution for monitoring and optimizing rainwater harvesting systems. This intelligent system utilizes sensors and data analytics to detect rainfall events in real-time, enabling efficient collection and storage of rainwater for various applications such as irrigation, landscaping, and household use. By automating the process of rainwater detection and harvesting, this system helps maximize water utilization while minimizing runoff and wastage. With its user-friendly interface and customizable features, the Rainwater Detector System empowers users to make informed decisions about water usage, promoting sustainability and resilience in water resource management.

No. of Pages : 12 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/08/2024

(21) Application No.202431060629 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : River Cleaning Boat: Innovating Waterway Maintenance for Environmental Conservation

(51) International classification :C02F0103000000, C02F0003340000, C02F0001400000, E02B0005080000, C02F0101320000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
River cleaning boats represent a vital innovation in environmental conservation and waterway management, offering an efficient and eco-friendly solution for removing debris, pollutants, and aquatic vegetation from rivers, lakes, and other water bodies. These specialized vessels are equipped with advanced cleaning equipment, including nets, skimmers, and conveyor systems, designed to collect and dispose of floating and submerged debris while minimizing environmental impact. River cleaning boats play a crucial role in preserving aquatic ecosystems, improving water quality, and enhancing recreational and navigational safety. With their versatility, effectiveness, and sustainability, river cleaning boats are indispensable tools for safeguarding our water resources and promoting environmental stewardship.

No. of Pages : 11 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/08/2024

(21) Application No.202431060633 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : “Autonomous Robo-Soccer Competition System”

(51) International classification	:G06Q0010101000, B25J0009160000, G05B0019042000, A63B0071020000, A61B0005021000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
integration of robotics, artificial intelligence, and sports, offering enthusiasts a dynamic platform for engaging in challenging and entertaining soccer matches. This patent protects the unique configuration and operation of the Robo-Soccer system, which combines innovative hardware and software components to facilitate autonomous gameplay. Key components include the Arduino Uno microcontroller, Motor Shield for precise movement control, and HC-05 Bluetooth Module for enhanced functionality and user experience, with a communication range exceeding 100 meters. The system encourages STEM education, innovation, collaboration, and competition, making significant contributions to the advancement of robotics and technology. participants with an immersive experience in the field of robotics and sports. The system incorporates cutting-edge hardware and software components to enable autonomous robots to compete in soccer matches with agility, strategy, and teamwork.

No. of Pages : 13 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/08/2024

(21) Application No.202431060639 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : SASH Autonomous Electric Vehicle

(51) International classification	:G05D0001000000, B60W0060000000, H05K0007200000, G01C0021260000, G06V0010980000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The invention pertains to an advanced autonomous driving system designed to enhance vehicle navigation and control. The system integrates a BLDC motor and a gear motor, managed by a 48-volt motor speed controller, to drive the vehicle. It incorporates a range of sensors, including ultrasonic, infrared, LiDAR, radar, GPS, and IMU, to gather comprehensive environmental data. This data is processed by high-performance units from NVIDIA or AMD, and additional processing is handled by Arduino and Raspberry Pi platforms. Power is supplied through a combination of 12-volt batteries, a solar panel, and a DC-to-DC booster, with a battery exhaust fan ensuring efficient cooling. The system also includes communication modules for wireless connectivity and auditory feedback. This setup enables precise vehicle positioning, real-time navigation adjustments, and improved autonomous driving capabilities

No. of Pages : 30 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/08/2024

(21) Application No.202431060718 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : Smart Automatic Dust Sensor

(51) International classification :G01N0015060000, G01N0015075000, F24F0013280000, B01D0047060000, B03C0003155000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This revolutionary device, an arduino interface dust sensor, swiftly transforms polluted air into a fresh air. Utilizing air quality to distract dust particle from air, it ensures rapid breakdown of pollution in environment. Featuring automated filtration and measuring dust value in air shown on LCD display, it produces high-quality fresh air suitable for various polluted are. Portable, solar-charged, and electric-powered, this invention promotes sustainable air purification while efficiently purifying air , contributing to eco-friendly practices and enhanced air quality.

No. of Pages : 13 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/08/2024

(21) Application No.202431060719 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : Smart Air Purifier

(51) International classification :F24F0008100000, F24F0013280000, B01D0046000000, B01D0053260000, F24F0008108000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This invention presents a compact air purifier that merges air purification technology with a specialized bike air filter, operating on solar power and DC electric energy. Offering sustainable and portable air purification, it addresses the need for clean air in diverse environments. Compact design, and application-specific features exemplify its innovative approach to enhancing air quality while promoting environmental consciousness.

No. of Pages : 9 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/08/2024

(21) Application No.202431060747 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : DESIGN OF LEAN OPERATION TECHNIQUES IN THE PRODUCTION CYCLE TO BE ECONOMICALLY SUSTAINABLE

(51) International classification	:G06Q0010063700, G06Q0010063900, G06Q0010063000, G16H0050200000, G06Q0010060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Design of Lean Operation Techniques in the Production Cycle to be Economically Sustainable ABSTRACT The invention introduces a comprehensive framework for the application of lean operation techniques within production cycles, with a focus on achieving long-term economic sustainability. Lean operation techniques, originally developed to enhance efficiency and reduce waste in manufacturing processes, are systematically integrated into all stages of the production cycle, from raw material procurement to final assembly and quality control. This invention goes beyond traditional lean methodologies by incorporating advanced digital technologies, such as the Internet of Things (IoT) and artificial intelligence (AI), to enable real-time monitoring, predictive maintenance, and data-driven decision-making. These technological enhancements ensure that production processes are not only optimized for efficiency but also adaptable to changing market conditions and environmental considerations. A key feature of the invention is its emphasis on balancing short-term efficiency gains with long-term economic viability. This is achieved through a detailed analysis of the production cycle to identify and eliminate non-value-adding activities, resulting in reduced operational costs and improved profitability. Additionally, the invention incorporates environmentally sustainable practices, such as energy-efficient technologies and waste reduction programs, which contribute to both economic and environmental sustainability. The lean operation techniques described in this invention are designed to be adaptable across different industries, providing a flexible and robust framework that can be tailored to meet the specific needs of various production environments. The invention also includes a dynamic feedback loop that ensures continuous improvement and sustainability. By leveraging real-time data analytics and decision support systems, the production cycle is continuously monitored and refined, allowing for timely adjustments that maintain optimal efficiency and cost-effectiveness. This approach ensures that the production cycle remains resilient and economically sustainable in the face of evolving market demands and technological advancements.

No. of Pages : 17 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/08/2024
(21) Application No.202431060948 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : AN INNOVATIVE APPROACH TO SYNTHESIZE DATABASES FOR COVERLESS DATA HIDING

(51) International classification	:G06T0001000000, H04N0001320000, H04N0019467000, H04L0009400000, G06F0021570000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Coverless data hiding is a technique used in steganography, a field focused on hiding information within other data forms to maintain confidentiality. Traditional data hiding methods often rely on altering or embedding secret messages into cover media, such as images, audio files, or text, which can compromise the security and integrity of the data. Moreover, these methods frequently lead to semantically incorrect or detectable modifications, making them vulnerable to steganalysis attacks. Recent advancements in coverless data hiding aim to overcome these limitations by generating self-sufficient objects, which inherently carry the hidden information without requiring any cover medium. However, synthesizing such objects while maintaining their semantic integrity and ensuring they are free from detection remains challenging. Previous approaches typically utilized existing media files as references or covers, limiting their hiding capacity and security. The novel technique discussed here addresses these challenges by synthesizing a database from scratch, generating domain-specific values for its attributes. By applying a comparison-based sorting technique to the dataset, the hidden message is revealed without altering the database, thus ensuring semantic integrity. This method significantly enhances the security and hiding capacity of coverless data hiding, offering a robust solution for covert communication.

No. of Pages : 14 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :13/08/2024

(21) Application No.202431061202 A
(43) Publication Date : 16/08/2024

(54) Title of the invention : A Machine Learning based System for Revenue Enhancement and Fraud Prevention in E-Commerce

(51) International classification :G06Q0030020100, G06Q0030020000, G06N0020000000, G06Q0010067000, G06Q0030060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
The present invention relates to a machine learning based system for revenue enhancement and fraud prevention in e-commerce. It systematically employs machine learning models to analyze transactional data, customer behavior, and market trends, enabling personalized marketing, dynamic pricing, customer segmentation, and real-time fraud detection. The system architecture includes data ingestion and processing layers, a model development environment, and a model serving platform integrated with the e-commerce system via APIs. Continuous monitoring and a feedback loop ensure model performance and adaptability, while a user interface provides actionable insights for decision-making. The proposed invention optimizes revenue, enhances customer experience, and mitigates fraud risks, driving sustainable business growth.

No. of Pages : 11 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/06/2024
(21) Application No.202441042951 A
(43) Publication Date : 14/06/2024

(54) Title of the invention : ARCHITECTURE LAYOUT DESIGN USING MACHINE LEARNING

(51) International classification	:G06K0009620000, G06N0020000000, G06N0020200000, G06N0005000000, G06Q0010060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ANNEXURE 3 This invention, “Architecture Layout Design Using Machine Learning” is developed to enhance architecture model using! advanced machine learning techniques. The existing model combines rule-based methods and a random forest classifier for classifying the objects. To improve the existing model, Decision Tree Algorithm has been used as the base model“ The rule—based methods are replaced, and this invention. has been developed using ensemble methods and advanced machine learning algorithms. The machine learning model is used to identify analyze design patterns and the type of Models. To improve accuracy and precision, feature engineering has been performed using correlation scores, GAN is used to develop an interactive dashboard for real—time 2D to 3D evaluation of the model’s performance.

No. of Pages : 5 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/05/2024
(21) Application No.202441042043 A
(43) Publication Date : 14/06/2024

(54) Title of the invention : PEDALPREDICT: MACHINE LEARNING-BASED BIKE-SHARING DEMAND PREDICTION MODEL

(51) International classification :G06N0020000000, G06N0003080000, G06N0003040000, G06Q0030020000, G06Q0010040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Annexure 1 This invention, known as "PedalPredict," is a machine learning-based bike-sharing demand prediction model that employs cutting-edge techniques to tackle the complex challenges of urban transportation management. PedalPredict incorporates Graph-Based Spatial Analysis, which maps bike station connections using graphs and allows for demand prediction based on spatial interconnections. In addition, Temporal Attention Models detect daily, weekly, and seasonal variations, allowing for a more nuanced understanding of time-dependent patterns in demand forecasting. Furthermore, PedalPredict uses CAN-generated synthetic data for data augmentation, which increases the model's resilience and adaptability to changing circumstances, The model uses Sequence-to-Sequence with Attention mechanisms to identify dependencies between past and future demand, allowing for more accurate demand sequence forecasting. PedalPredict's Hybrid Recommenders provide personalized route recommendations by combining previous usage data with user preferences, thereby improving user experience and system efficiency. Furthermore, using Multi-task Learning and Transfer Learning techniques, PedalPredict ‘can train on multiple related tasks at the same time, leveraging information from relevant areas to improve overall performance. PedalPredict uses Dynamic Pricing Strategies to optimize bike distribution by adjusting prices based on current demand estimates, resulting in efficient resource allocation. Finally, Federated Learning for Privacy protects user privacy by collaborating with operators to train models, demonstrating PedalPredict‘s commitment to ethical and responsible data handling in urban transportation management.

No. of Pages : 5 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/05/2024
(21) Application No.202441042042 A
(43) Publication Date : 14/06/2024

(54) Title of the invention : NUTRIGUIDE: AI-POWERED FOOD ANALYSIS AND DIETARY RECOMMENDATIONS SYSTEM

(51) International classification :G16H0020600000, G06Q0030060000, G16H0010600000, G16H0020300000, A23L0033000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
Annexure 1 This invention, “NutriGuide”, is AI-Powered Food Analysis and Dietary Recommendations system that transforms dietary management by seamlessly integrating multiple features to improve user experience and enable informed decision-making, Users can easily determine the calorie content of their meals using image recognition technology, simply by taking and uploading photos to the system. Powered by the advanced AI platform Gemini, the system uses cutting-edge algorithms to meticulously identify food items and calculate their calorie content, relying on a comprehensive nutritional database for accuracy and reliability. Furthermore, the AI nutrition analyzer includes a variety of additional features to meet the diverse needs of its users. It generates personalized meal plans based on individual goals, such as weight loss, muscle gain, increased energy levels, and nutritional requirements. It also provides shopping assistance by dynamically generating shopping lists based on the meal plan and integrating seamlessly with online grocery services for direct ordering. In addition, the system provides invaluable nutritional feedback, providing immediate insight into meals and recommending healthier alternatives to address potential deficiencies or excesses. It uses artificial intelligence to analyze dietary patterns in order to predict and prevent potential nutrient deficiencies, as well as provide personalized supplement recommendations based on dietary intake and health data. One notable feature of this innovation is the use of computer vision technology, which allows users to scan meals with a smartphone camera. AI uses computer vision to automatically identify food items and portions, improving meal tracking convenience and accuracy. Furthermore, this AI nutrition analyzer includes traditional foods in its database to ensure inclusivity and relevance across diverse dietary preferences and cultural backgrounds.

No. of Pages : 5 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :30/05/2024

(21) Application No.202441042013 A

(43) Publication Date : 14/06/2024

(54) Title of the invention : AIRREALM:COMPUTER VISION BASED GESTURE CONTROLLED DESKTOP APPLICATION

(51) International classification :G06F0003010000, G06F0003030000, G06F0003048830, G06K0009620000, G06F0009451000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This invention, AirRealm: Computer Vision Based Gesture-Controlled Desktop Application presents a desktop application that allows users to control their personal computers using dynamic hand gestures through computer vision and machine learning techniques. It utilizes OpenCV, MedilaPipe, and PyAutoGUl libraries to recognize and interpret hand gestures captured by a webcam, translating them into corresponding mouse and keyboard actions. The - application employs advanced algorithms for hand landmark detection, gesture recognition, and motion tracking. to ensure accurate gesture interpretation. It features a usér-ffiendly graphical user interface developed using CustomTkinter,‘providing visual feedback and customization options. By eliminating the need for physical input devices, this gesture-based control system introduces a novel and ergonomic approach to human-computer interaction, promoting accessibility and co‘nvenience for users across diverse domains.

No. of Pages : 5 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/05/2024
(21) Application No.202441042008 A
(43) Publication Date : 14/06/2024

(54) Title of the invention : LEARN-UP:AN INTERACTIVE GAME BASED LEARNING APPLICATION

(51) International classification :G06Q0050200000, G09B0007000000, G09B0007020000, G06N0020000000, G09B0005060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
"Leam-UP" is an innovative gamification application designed to transform the educational experience by prioritizing inclusivity and personalized learning. Utilizing cutting-edge technologies such as Artificial Intelligence (AI), Natural Language, Processing (NLP), and machine learning, "Leam-UP" tailors content to meet individual student needs and adapts the difficulty levels based on real-time performance analysis. This personalized approach ensures that students of all abilities, including those with disabilities, can actively participate and benefit from the learning process. THe application features a gamifled structure, incorporating points, leaderboards, and rewards to foster competition and collaboration, tfios driving engagement and motivation. Real-time NLP analysis allows "Leam-UP" to customize educational content for each learner, making the learning experience more relevant and effective. Machine Learning algorithms continuously adjust the learning path, ensuring that students are optimally challenged and supported throughout their educational journey. AIbacked analytics provide detailed insights into student performance, helping educators to tailor their teaching strategies more effectively. Additionally, "Leam-UP‘ includes accessibility features such as audio and visual aids to support students with disabilities, ensuring a truly inclusive learning environment. By leveraging these advanced technologies and gamification strategies, "Leam-UP‘ not only enhances learning outcomes but also cultivates essential skills like problem-solving and critical thinking. Thi$ empowers students to become more independent and confident in their abilities, ultimately enabling them to thrive academically and beyond. Through its comprehensive and adaptive approach, "Leam-UP" redefines the educational landscape, making learning a more engaging, inclusive, and personalized experience for all students

No. of Pages : 5 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/05/2024
(21) Application No.202441042000 A
(43) Publication Date : 14/06/2024

(54) Title of the invention : AI BASED LIVESTOCK HEALTHCARE MONITORING SYSTEM USING COMPUTER VISION

(51) International classification	:G16H0050200000, G06Q0050020000, G16H0050300000, G16H0050700000, A01K0029000000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The welfare of animals, agricultural communities, and the world's food security are all seriously threatened by livestock diseases. Resolving these issues requires efficient disease detection systems. Recent advancements in diagnostic technology, such as next-generation sequencing and molecular methods like Polymerase Chain Reaction (PCR) and Enzyme-Linked Immunosorbent Assay (ELISA), have significantly transformed disease identification in molecular biology and immunology, respectively. This invention, AI Based Livestock Healthcare Monitoring System Using Computer Vision (AI-LHMS), uses image processing to forecast livestock diseases. It involves the development of an artificial intelligence (AI) system that monitors and diagnoses livestock health using computer vision. Early identification and intervention are made possible by real-time data analysis, which lowers the spread of disease. Machine learning improves diagnostic accuracy and management approaches by supporting pattern identification for disease prediction. But for implementation to be successful, a thorough strategy that incorporates biosecurity precautions and stakeholder cooperation is needed. In conclusion, the livestock industry is better equipped to protect>animal health and the world's food chains by proactively integrating ancient practices with contemporary technologies.

No. of Pages : 5 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/05/2024

(21) Application No.202441041999 A
(43) Publication Date : 14/06/2024

(54) Title of the invention : MACHINE LEARNING BASED ADVANCED CYBER-ATTACK DETECTION SYSTEM (ACADS)

(51) International classification	:G06N0020000000, G06F0021550000, G06N0020200000, G06K0009620000, G16H0050200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
This invention, an “Advanced Cyber—Attack Detection System (ACADS).” aims to enhance cyberattack detection using advanced machine learning techniques. The existing model combines rule-based methods and a random forest classifier for classifying cyberattacks. To improve the existing model, Decision Tree Algorithm has been used as the base model. The rule-based methods is replaced and this project has been developed using ensemble methods and advanced machine learning algorithms. The machine learning model is used to identify analyze network patterns and the type of attack. To improve accuracy énd precision, feature engineering has been performed using correlation scores. Comet_ml is used to develop an interactive dashboard for real-time monitoring and evaluation ofihe model’s performance.

No. of Pages : 5 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :30/05/2024

(21) Application No.202441041994 A

(43) Publication Date : 14/06/2024

(54) Title of the invention : MINDTECH:AI-ENHANCED MENTAL HEALTH CARE SYSTEM

(51) International classification :H04L0051020000, G06F0021620000, G16H0050300000, G06N0020000000, G16H0010200000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Using an AI chatbot fdr mental health support presents several challenges. Firstly, while Al~can provide immediate responses, it lacks the deep empathy and understanding that human therapists offer, potentially leading to less effective emotional support. The chatbots are limited by their programming and cannot fully grasp the nuances of complex mental health issues, ,which may result in oversimplified or inappropriate responses. Privacy and data security are also significant concerns, as sensitive personal information shared with the chatbot could be at risk of breaches. Additionally, there's the issue of accessibility and digital literacy; not all individuals may have the necessary skills or resources to engage effectively with AI technology. F inally, the reliance on Al for mental health support could lead to reduced human interaction, which is a crucial component of mental wellness.

No. of Pages : 5 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :30/05/2024

(21) Application No.202441041988 A

(43) Publication Date : 14/06/2024

(54) Title of the invention : MEDTECHPRO:TRANSFORMING HOSPITAL OPERATIONS FOR OPTIMAL EFFICIENCY AND IMPROVED PATIENT OUTCOMES

(51) International classification	:G06Q0010100000, G16H0040200000, G16H0010600000, G16H0040670000, G16H0010200000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
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(57) Abstract :
The primary objective of"MedTechPro" is to Transform the Hospital Operations For Optimal Efficiency And Improved Patient Outcomes. MedTech Pro facilitates the smooth functioning of hospital operations through the acquisition and processing of clinical data in an online. environment. By utilizing graphical user interfaces, MedTech Pro simplifies medical tasks and enables healthcare professionals to work more effectively. It allows for efficient management of patient information, appointment scheduling, billing, and inventory management, among other essential functions. While MedTechPro undoubtedly contributes to the improvement ofhealthcare service quality, it is important to note that it primarily focuses on operational management. This distinction highlights the need for hospitals to adopt additional measures to measure and assess the quality of healthcare services provided. In the com'petitive healthcare landscape. hospitals strive to attract more patients and gain a competitive edge. Achieving high levels ofcustomer satisfaction becomes a critical success factor in this context. By implementing MedTechPro as an integral part oftheir information system infrastructure, hospitals can optimize service quality, reduce costs, enhance customer satisfaction levels, and ultimately position 'hemselves.

No. of Pages : 5 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/05/2024
(21) Application No.202441041983 A
(43) Publication Date : 14/06/2024

(54) Title of the invention : INTELLIGENT TRAFFIC SIGNAL TIMING AND AUTOMATION:OPTIMIZING URBAN TRAFFIC FLOW LEVERAGING YOLOV8

(51) International classification	:G08G0001010000, G06N0003080000, G06N0003040000, G06Q0010040000, G08G0001081000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
Urban traffic congestion is a pervasive issue, resulting in wasted time, increaSed pollution, and geonomic losses. To address this challenge, an innovative approach emerged: Intelligent Traffic Signal Timing and Automation (ITSTA) System, Optimizing Urban Traffic Flow Leveraging YOLOV8. This system leverages advanced deep learning technology to optimize traffic signals, enhancing the flow-0f vehicles in real time. YOLOVS, or "You Only Look Once version 8," is a state-of—the-art object detection and recognition system that excels in highprecision traffic data analysis. By utilizing YOLOVS, traffic engineers and_ city planners can automatically detect and classify various types of vehicles, pedestrians, and unusual traffic events at intersections. This automation reduces the need for extensive manual monitoring and intervention, offering potential long-term savings for municipalities and urban infrastructure planners. This groundbreaking technology represents a significant advancement in addressing the multifaceted challenges of urban traffic congestion.

No. of Pages : 5 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :30/05/2024

(21) Application No.202441041978 A

(43) Publication Date : 14/06/2024

(54) Title of the invention : ADVANCED VEGETATION MANAGEMENT IN POWER TRANSMISSION LINES THROUGH SATELLITE IMAGERY AND MACHINE LEA

(51) International classification :G06Q0010060000, G06N0020000000, H02J0003000000, G06T0007000000, G06N0005000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Leveraging satellite imagery and machine learning, this invention, “Advanced Vegetation Management in Power Transmission Lines through Satellite Imagery and Machine Learning” aims to revolutionize vegetation management practices in power transmission lines, paving the way for a safer, more reliable, and environmentally sustainable power grid. By employing advanced algorithms arid analyzing high-- resolution multispectral satellite Images, the invention seeks to automate vegetation detection, assessment and prediction, providing valuable insights for efficient and targeted maintenance interventions. The system utilizes a comprehensive dataset encompassing historical vegetation patterns, environmental factors, and power line infrastructure data to generate accurate predictions of vegetation growth and potential risks. This data-driven approach enables proactive management strategies, optimizing resource allocation, minimizing the need for labor-intensive manual clearance, and reducing the environmental impact associated with traditional methods. The invention highlights the transformative fiotential of machine learning in enhancing power grid reliability, reducing costs, and promoting sustainable practices in the energy sector. By embracing innovative technology, we can move towards a future where power transmission is not only reliable but also environmentally responsible.

No. of Pages : 5 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/05/2024
(21) Application No.202441041977 A
(43) Publication Date : 14/06/2024

(54) Title of the invention : APTIT: AI-POWERED TECHNICAL INTERVIEW TRAINER

(51) International classification :B32B0037260000, G16H0010200000, G10L0015220000, G06Q0050220000, B32B0037100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The field of technical HR is starting to notice the effects of conversational AI. These AI helpers expedite workflows by responding to frequently asked inquiries by staff members regarding policies, procedures, and benefits. But there are drawbacks to the pre-programmed replies that a lot of the AI in this field now uges. They may find it difficult to handle intricate questions or complex scenarios, which would slow down the process and call for human assistance. This is where conversational technical HR AI, this invention, AI-Powered Technical Interview Trainer (APTIT) a new breed, comes inté play. This sophisticated system makes advantage of the capabilities of the Cohere API, a state-of—the-art instrument that evaluates and produces prompts in response to user input. This makes it possible to have a more organic and lively dialogue by adjusting inquiries and answers to each person's unique needs. It skillfully combines behavioral and technical elements, guaranteeing a comprehensive evaluation of of a candidate's suitability. .

No. of Pages : 5 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/05/2024
(21) Application No.202441041976 A
(43) Publication Date : 14/06/2024

(54) Title of the invention : GOOGLE PLAYSTORE INSIGHTS: DECIPHERING USER PATTERNS FOR BUSINESS GROWTH (GPIB)

(51) International classification :G06Q0030020000, G06N0020000000, H04L0067500000, G06N0003080000, G06N0003040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This invention, “Google Playstore Insights: Deciphering User Patterns for Business Growth (GPIB)” aims to understand user behavior within the Google Play ecosystem by analyzing a diverse dataset encompassing app categories, download statistics, user ratings: and reviews. By incorporating machine learning algorithms, GPIB aims to unlock a despe'r understanding of user behavior, enabling tasks such as 'app success prediction, user segmentation, and sentiment analysis of reviews. This invention, emphasizes the importance of adapting to the dynamic landscape of user behavior across diverse demographics and cultures. The insights gleaned from this research will inform strategies aimed at optimizing app performance, enhancing user experience, and fostering business growth on the Google Play platform. Machine Learning algdrithms enable the delivery .of personalized content, features, and recommendations tailored to individual user preferences and behaviors. Predictive Analytics are used to crafi highly targeted marketing campaigns: while dynamic content delivery strategies are explored to maintain user engagement and encourage frequent app usage. Privacy and Data Security measures are prioritized to ensure compliance with evolving regulatory frameworks.

No. of Pages : 5 No. of Claims : 5