INTELLECTUAL PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

सत्यमेव जयते

क्रम सं/SL No :044191457

पेटेंट कार्यालय,भारत सरकार | The Patent Office, Government Of India

पेटेंट प्रमाण पत्र | Patent Certificate

(पेटेंट नियमावली का नियम 74) | (Rule 74 of The Patents Rules)

पेटेंट सं. / Patent No.	:	547275
आवेदन सं. / Application No.	:	202141028520
फाइल करने की तारीख / Date of Filing	:	25/06/2021
पेटेंटी / Patentee	:	1.Dr. Y. Manju Sree (Assistant Professor) 2.Dr. C. Venkatesh (Professor) 3.Dr. G. Ravikumar (Professor) 4.Dr. A V V Sudhakar (Associate Professor)

प्रमाणित किया जाता है कि पेटेंटी को, उपरोक्त आवेदन में यथाप्रकटित *POWER QUALITY AND INTELLIGENT DIGITAL PROTECTION RELAYS IN MICROGRID* नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख जून 2021 के पच्चीसवें दिन से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled *POWER QUALITY AND INTELLIGENT DIGITAL PROTECTION RELAYS IN MICROGRID* as disclosed in the above mentioned application for the term of 20 years from the 25th day of June 2021 in accordance with the provisions of the Patents Act,1970.

अनुदान की तारीख : 07/08/2024
Date of Grant :

पेटेंट नियंत्रक
Controller of Patents

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, जून 2023 के पच्चीसवें दिन को और उसके पश्चात प्रत्येक वर्ष मे उसी दिन देय होगी।

Note. - The fees for renewal of this patent, if it is to be maintained, will fall / has fallen due on 25th day of June 2023 and on the same day in every year thereafter.

*चूंकि पेटेंटी व आविष्कारकों की संख्या अधिक है, पेटेंटी व आविष्कारकों के नाम पृष्ठ संख्या 2 पर जारी हैं।
*Since the Number of Patentees / Inventors is more, the name of Patentees / Inventors are continued on Page No. 2

INTELLECTUAL PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS
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पेटेंट प्रमाणपत्र के लिए अनुलग्नक/Annexure to Patent Certificate

पेटेंट सं. / Patent No.	:	547275
आवेदन सं. / Application No.	:	202141028520
फाइल करने की तारीख / Date of Filing	:	25/06/2021
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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/01/2022

(21) Application No.202241004467 A
(43) Publication Date : 04/02/2022

(54) Title of the invention : AI and IOT based future PV asset operation with simple integrated system

(51) International classification :H02J0003140000, H02J0003000000, G06Q0050060000, G05B0015020000, H02J0003320000
(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 :
Methods and methods for optimizing the regulation of energy supply and demand with IoT and AI are described in this innovation. In an energy control unit, one or more algorithms for scheduling energy consumption devices based on predicted energy supply and demand are included inside the unit. Devices whose energy consumption may be planned or delayed are triggered when energy consumption is at its lowest cost. Activation of battery storage and other energy sources (for example, solar cells) to sell energy to the power grid occurs at times that are set to correspond to advantageous cost circumstances.

No. of Pages : 14 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/06/2022

(21) Application No.202241037614 A
(43) Publication Date : 08/07/2022

(54) Title of the invention : CLOUD BASED HYBRID GRID TIED SOLAR VEHICLE SUPER CHARGING STATION

(51) International classification :G07B0015020000, G07F0007080000, G07F0015000000, B60L0053300000, G07F0017000000
(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 :
This innovation is a charging station powered by the sun and can be used for electric and hybrid automobiles. When a vehicle parks in a space with a charging station, the driver may pay for both the space and the power by using a credit card, debit card, cash, a smart card, or a network link to a database such as EZ-Pass. As long as the car is linked to the station, the station will charge the vehicle's battery automatically. The charging station turns off when the vehicle's battery is at its maximum capacity. The only costs the client is responsible for are those associated with using space and power. To resume charging, clients must re-insert their smart card or credit card in the reader if the charging circuit is interrupted. When the billing process is initiated, an adequate amount of money is deducted from the payment method. If the user plugs their smart card before leaving the establishment, any money not utilized for charging is loaded back onto their account or smart card.

No. of Pages : 17 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/09/2022

(21) Application No.202241053342 A
(43) Publication Date : 23/09/2022

(54) Title of the invention : Remote Patient Monitoring system using IoT and 5G Technology

(51) International Classification :G06Q0050220000, G16B0020000000, G06Q0050000000, H04L0029080000, C12Q0001688600
(86) International Application No Filing Date :PCT// :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 global pandemic caused by COVID-19 had a significant impact on healthcare, social life, and economic activity all across the globe. Under pandemic conditions, as well as during the post-pandemic emergence of COVID-19, technology is an essential component in the provision of comprehensive and easily available digital health services. Therefore, 5G systems and e-health solutions that are enabled by 5G are of the utmost significance. This invention focuses on techniques for making effective use of 5G to provide suitable digital services for use in e-health applications. In addition to this, it provides a comprehensive analysis of the challenges with implementation, alternative remedies, and future research recommendations for 5G in order to address the health concerns raised by COVID-19.

No. of Pages : 16 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :14/04/2023

(21) Application No.202341027529 A
(43) Publication Date : 05/05/2023

(54) Title of the invention : RECOGNITION OF OCULAR DISEASE FROM FUNGUS IMAGES USING MACHINE LEARNING APPROACH

(51) International classification :A61P 270200, G06N 030400, G06N 030800, G06N 200000, G10L 152200
(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
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(57) Abstract :
The growth of fungi on surfaces has been the source of many diseases, including ocular diseases. Researchers have been making progress in detecting ocular diseases from fungus images using Machine Learning (ML) approaches. These ML approaches have been made possible by the advanced technologies of computing, sensing and data-analysis. ML methods are divided into supervised, unsupervised and reinforcement learning techniques. Supervised techniques are used to classify the type of fungus, while unsupervised techniques are used to cluster the type of infection. Reinforcement learning is used to perform segmentation based on the desired criteria. The objective of this work is to develop a method for recognizing ocular disease from fungus images using ML approaches. To achieve this, a set of features were extracted and validated for recognizing the type of fungus and the type of infection. These features included color and texture. Additionally, a classification model was developed using off-the-shelf algorithms for recognition. Finally, the method was evaluated using benchmarking datasets and performance metrics. The results suggested that the method proposed is promising for recognizing ocular disease from fungus images. In conclusion, this work provides an insight into the potential of ML approaches for recognizing ocular diseases from fungus images. Future work in this topic could include exploring different ML algorithms and deep learning approaches for achieving more accurate ocular disease recognition.

No. of Pages : 10 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/06/2023

(21) Application No.202341043272 A
(43) Publication Date : 01/09/2023

(54) Title of the invention : Deep Learning (DL) Techniques For Prevention Of Train Accident & Prediction Of Breakdown in the System

(51) International classification :G06N0003040000, G06N0003080000, G06K0009620000, G06F0011340000, G06F0011070000
(86) International Application No
Filing Date :PCT//
: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 proposed invention presents a system and method for preventing train accidents and predicting system breakdowns using deep learning techniques. By leveraging historical and real-time data from various sensors, equipment performance records, and environmental conditions, a deep learning model is trained to analyze the train system's behavior. The system continuously monitors the real-time data, detects anomalies, and issues early warnings when deviations from normal behavior are detected. The deep learning model incorporates advanced algorithms such as convolutional neural networks (CNNs), recurrent neural networks (RNNs), and long short-term memory (LSTM) networks to analyze visual data, time-series data, and complex patterns. The system further incorporates predictive maintenance capabilities to proactively identify potential equipment failures. The proposed invention aims to revolutionize railway safety and system reliability, ensuring passenger safety, optimizing maintenance practices, and improving overall operational efficiency.

No. of Pages : 23 No. of Claims : 10

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

(21) Application No.202441029722 A
(43) Publication Date : 19/04/2024

(54) Title of the invention : DYNAMIC GRID INTERACTION PROTOCOL ENHANCED WITH ARTIFICIAL INTELLIGENCE FOR ELECTRIC VEHICLE INTEGRATION

(51) International Classification :G06Q0050060000, H02J0003000000, H02J0003380000, G06Q0010040000, G06Q0010060000
(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 proposed invention introduces a groundbreaking Dynamic Grid Interaction Protocol Enhanced with Artificial Intelligence (AI) for Electric Vehicle Integration. This innovative system revolutionizes the management of energy systems and transportation networks by enabling real-time coordination and optimization of electric vehicle charging and discharging. By integrating dynamic grid interaction protocols with AI algorithms, our invention empowers users to efficiently manage energy consumption while providing grid operators with valuable insights into energy demand patterns and grid conditions. Through predictive modeling and optimization, the system anticipates future energy demand, maximizes the utilization of renewable energy sources, and enhances grid stability. Moreover, by democratizing access to clean energy and empowering communities to actively participate in energy management, our invention fosters economic growth, environmental sustainability, and social equity. Our invention represents a transformative leap forward in the pursuit of a cleaner, smarter, and more resilient energy future.

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(21) Application No.202441027149 A
(22) Date of filing of Application :01/04/2024
(43) Publication Date : 12/04/2024

(54) Title of the invention : AUGMENTED REALITY CURRICULUM ENHANCEMENT TOOL FOR SUPPORTING NATIONAL EDUCATION POLICY GOALS

(51) International classification :G09B0007020000, G09B0007000000, G09B0019000000, G06T0019000000, G09B0005020000
(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 Augmented Reality Curriculum Enhancement Tool (ARCET) represents a transformative innovation in education, leveraging augmented reality (AR) technology to revolutionize teaching and learning practices. ARCET enhances traditional curriculum content by overlaying immersive AR experiences onto the physical environment, facilitating interactive and engaging learning experiences for students. Through customizable AR modules aligned with national education policy goals, ARCET empowers educators to create dynamic and adaptable learning environments that cater to diverse learning styles and abilities. By fostering experiential learning, promoting critical thinking skills, and supporting collaborative learning activities, ARCET addresses the evolving needs of modern education and prepares students for success in the digital age.

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

INTELLECTUAL PROPERTY INDIA

सत्यमेव जयते

ORIGINAL
क्रम सं/ Serial No. : 163138

पेटेंट कार्यालय, भारत सरकार | The Patent Office, Government Of India

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

डिजाइन सं. / Design No. : 406443-001

तारीख / Date : 03/02/2024

पारस्परिकता तारीख / Reciprocity Date* :

देश / Country :

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो *EV BATTERY HEALTH MONITORING DEVICE* से संबंधित है, का पंजीकरण, श्रेणी 13-02 में 1.Dr. Pappula Sampath Kumar 2. Mr. Mahit V. Jain 3.Dr. Nooney Karthik 4.Mrs. Ponnuri Naga Lakshmi 5.Mr. Sanam Subrahmanyam 6.Dr. Ch.Hariprasad 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 13-02 in respect of the application of such design to *EV BATTERY HEALTH MONITORING DEVICE* in the name of 1.Dr. Pappula Sampath Kumar 2. Mr. Mahit V. Jain 3.Dr. Nooney Karthik 4.Mrs. Ponnuri Naga Lakshmi 5.Mr. Sanam Subrahmanyam 6.Dr. Ch.Hariprasad.

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 : 05/04/2024

महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
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*पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति दी गई है तथा देश का नाम। डिजाइन का स्वत्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/06/2024

(21) Application No.202441044769 A

(43) Publication Date : 21/06/2024

(54) Title of the invention : A KEY MANAGEMENT PROTOCOL IN CIPHER TEXT POLICY FOR CLOUD DATA SHARING

(51) International classification :H04L0009080000, H04L0009300000, G06F0021620000, H04L0009000000, H04L0067109700

(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 :
Ciphertext policy attribute-based encryption (CP-ABE) is a promising cryptographic technique for the fine-grained control of access to outsourced data in the cloud. Nevertheless, the application of key management is impeded by certain disadvantages. Another issue that requires immediate attention is the primary escrow issue. We suggest that the privacy protection of front-end devices, such as smartphones, is generally limited. Consequently, clients are at risk of key exposure if private keys are entirely held by these devices, a risk that was inherently present in previous research but is rarely observed. Additionally, the practical application of ABE is restricted by the substantial client decryption overhead. In this paper, we suggest a collaborative key management protocol for CP-ABE. Without the addition of any additional infrastructure, our construction enables the distributed generation, issuance, and storage of private keys. A fine-grained and immediate attribute revocation is offered for key updates. The collaborative mechanism that has been proposed is capable of effectively resolving both critical escrow issues and critical exposure. In the interim, it significantly reduces the overhead associated with client decryption. The performance of our scheme in terms of cloud-based outsourced data sharing on mobile devices is somewhat superior to that of other representative CP-ABE schemes on the basis of a comparison. Lastly, we offer evidence of the proposed protocol's security.

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/04/2024

(21) Application No.202441034385 A
(43) Publication Date : 03/05/2024

(54) Title of the invention : SYSTEM AND METHOD FOR GPS-INTEGRATED SMART IRRIGATION SYSTEM WITH FARMER ALERTS AND AUTOMATED OPERATION.

(51) International classification :A01G0025160000, G06Q0010060000, A01G0025090000, G06Q0050020000, 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
Filing Date :NA

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(57) Abstract :
The present invention pertains to a novel smart irrigation system that seamlessly integrates cutting-edge GPS technology, an Arduino microcontroller, and automated operational functionalities based on sensor data. This innovative system revolutionizes traditional irrigation methods by precisely determining the geographical coordinates of the irrigation system, thereby enabling targeted and efficient water distribution. By leveraging sensor data, the system autonomously initiates irrigation cycles at optimal intervals, ensuring that crops receive the precise amount of water needed for optimal growth. Furthermore, real-time alerts are provided to farmers, allowing them to remotely monitor and manage irrigation activities. This holistic approach not only optimizes water usage in agricultural fields but also significantly enhances crop yield while minimizing water wastage. The incorporation of GPS technology, Arduino microcontroller, and automated operation marks a significant advancement in agricultural practices, offering a sustainable and eco-friendly solution for modern farming challenges.

No. of Pages : 18 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

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

(21) Application No.202441035048 A

(43) Publication Date : 10/05/2024

(54) Title of the invention : SMART PARKING SYSTEM USING IOT TO MONITOR VEHICLE PRESENCE.

(51) International classification :G08G0001140000, G06Q0050300000, B60W0030060000, G06Q0050260000, G06Q0010060000

(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 :
Urbanization issues arise as a result of the growing concentration of people in large cities. In this case, a lot of cities are using technology to reduce their environmental effect while boosting output and efficiency to meet the increasing demand. Among these, smart transportation promises to meet the growing demand from passengers and is crucial for enabling mobility in metropolitan areas. The disclosed invention describes a smart parking system using Arduino Uno, Node MCU, IR sensors, micro servo motor, LCD display, and RFID technology. In the disclosed smart parking system, an Arduino Uno and NodeMCU process the data and control the micro servo motor that opens and closes the parking gate. The RFID technology is used to identify automobiles and follow their movement in order to overcome these difficulties. The Drivers will get real-time parking availability data on the LCD screen, and infrared sensors will identify when a car is parked in a space. Users can reserve parking spaces and receive real-time information about parking availability through web-based applications. Cloud-based servers like Amazon Web Services (AWS) or Microsoft Azure can host these applications, which can be developed with web development frameworks like Django or Ruby on Rails. The disclosed smart parking system has the ability to increase parking efficiency and convenience for both drivers and parking lot operators and eliminating the need for individuals to keep an eye on the lot.

No. of Pages : 14 No. of Claims : 5

INTELLECTUAL PROPERTY INDIA

ORIGINAL
क्रम सं/ Serial No. : 183227

पेटेंट कार्यालय, भारत सरकार The Patent Office, Government Of India

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

डिजाइन सं. / Design No.	:	427361-001
तारीख / Date	:	18/08/2024
पारस्परिकता तारीख / Reciprocity Date*	:	
देश / Country	:	

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो *AI-POWERED ENERGY-EFFICIENT WASTE COMPACTION DEVICE* से संबंधित है, का पंजीकरण, श्रेणी 09-09 में 1.Dr.T.Judgi 2. Dr. J. Madhusudhanan 3.Dr.Sanjay Sharma 4.Dr. Ashish Kumar Sharma 5.Dr.Anand M 6.Dr.Pappula Sampath Kumar 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 09-09 in respect of the application of such design to *AI-POWERED ENERGY-EFFICIENT WASTE COMPACTION DEVICE* in the name of 1.Dr.T.Judgi 2. Dr. J. Madhusudhanan 3.Dr.Sanjay Sharma 4.Dr. Ashish Kumar Sharma 5.Dr.Anand M 6.Dr.Pappula Sampath Kumar.

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 24/10/2024

महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
Controller General of Patents, Designs and Trade Marks

*पारस्परिकता तारीख यदि कोई हो। जिसके अनुरूप की गई है तथा देश का नाम। डिजाइन का स्वत्वाधिकार पंजीकरण की तारीख से दस वर्ष के लिए होगा जिसका नवीकरण, अधिनियम एवं नियम के प्रावधान के अधीन, पाँच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण हेतु करने के लिए नहीं हो सकता है।

*The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration and may under the terms of the Act and Rules be extended for a further period of five years. This Certificate is not to be used in legal proceedings or overseas for registration abroad.

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application: 09/11/2024

(21) Application No.202421086498 A

(43) Publication Date : 06/12/2024

(54) Title of the invention : AI-ENHANCED IOT SYSTEM FOR REAL-TIME BATTERY AND PMSM MOTOR EFFICIENCY MONITORING IN ELECTRIC VEHICLES

(51) International classification : H02J7/00, B60L58/10, G06N20/00, G06N3/00, G16Y10/35, G01R31/396, G01R31/367

(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 an AI-enhanced IoT system for real-time monitoring and optimization of battery and Permanent Magnet Synchronous Motor (PMSM) efficiency in electric vehicles (EVs). This system employs IoT sensors and AI algorithms to track and analyze battery health, state of charge, temperature, motor load, and efficiency metrics. The AI component predicts potential inefficiencies, enabling dynamic adjustments to both battery usage and motor operation to maximize energy efficiency, extend battery life, and enhance motor performance. This integrated system optimizes energy consumption, contributing to sustainable EV operation by balancing component longevity and energy use efficiency. By seamlessly integrating AI with IoT, the system achieves enhanced energy efficiency, extended battery and motor life, and a reduction in EV maintenance costs. This comprehensive solution empowers drivers with real-time insights and automated optimizations, contributing to a more reliable, sustainable, and user-friendly EV experience. The system is designed to adapt to diverse vehicle models, ensuring broad applicability across the electric vehicle industry.

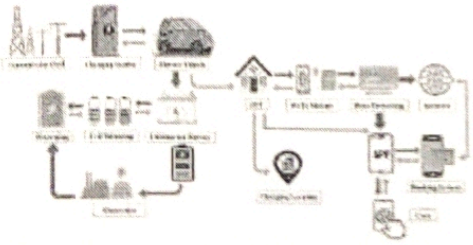

Fig. 1 Flow diagram of proposal invention

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :19/11/2024

(21) Application No.202441089432 A

(43) Publication Date : 29/11/2024

(54) Title of the invention : IOT-ENABLED DUAL-ARM ROBOTIC SYSTEM FOR ENHANCED PRECISION AND REAL-TIME MONITORING IN ENDOSCOPIC CARDIAC SURGERIES

(51) International classification :A61B0034300000, A61B0034000000, A61B0017000000, A61B0090000000, A61B0034200000

(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 :
IOT-ENABLED DUAL-ARM ROBOTIC SYSTEM FOR ENHANCED PRECISION AND REAL-TIME MONITORING IN ENDOSCOPIC CARDIAC SURGERIES The method for the development of the suture pulling force is estimated using a neural network structure that combines Long Short-Term Memory (LSTM) networks with a modified Inception Resnet-V2. By altering the tool positions gathered from the master-slave robotic system, the interaction is recorded under two distinct artificial skin conditions and two distinct scenarios at 13 image viewing angles, confirming the viability of the suggested network using the generated database. Many commercial robots have been created for a variety of surgical procedures. We have examined the current commercially available robotic surgical systems in light of the recent advancements in surgical robotics and its substantial market potential. In addition to many other surgical specialties like gynecology, general surgery, otolaryngology, cardiothoracic surgery, and neurosurgery, RS has transformed the field of urology by empowering surgeons to carry out intricate procedures with increased accuracy and precision. Robotic-assisted surgery is becoming more and more common due to a number of advantages, including improved access to the surgical site, a three-dimensional image that enhances depth perception, smaller scars, improved range of motion that enables the surgeon to perform more complex surgical procedures, and fewer postoperative complications.

No. of Pages : 16 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :12/10/2024
(21) Application No.202441077484 A
(43) Publication Date : 25/10/2024

(54) Title of the invention : Remote Monitoring and Automatic Protection System for a Solar Plant Using IoT

(51) International classification :H02S50/00, H02J13/00, G05B23/02, G16Y10/35, G16Y40/10, G16Y40/30, G08C17/02
(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 present invention relates to a remote control and monitoring system for solar plants, specifically designed to enhance the operational reliability and safety of Direct Current (DC) motors utilized in solar applications. The system integrates a voltage and current sensing module utilizing a 219INA sensor, a microcontroller for data processing, and a relay module for fault protection. Using a Pulse Width Modulation (PWM) controller, the system effectively manages the DC motor's operation (The approach developed in the patent can be used for any appliance in an Industry and can be integrated) while continuously monitoring critical electrical parameters. Key features of the invention include real-time data acquisition and analysis, automated disconnection of the motor during overvoltage or overcurrent conditions, and remote monitoring capabilities via an Internet of Things (IoT) platform, specifically configured with a user-friendly interface using the Thingspeak application. This system not only provides operators with timely alerts but also facilitates efficient control from remote locations, significantly reducing the need for manual oversight.

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(57) Abstract :
The present invention introduces "Universe X.0," a groundbreaking system and method designed for the autonomous monitoring and detection of Earth like environmental conditions in extraterrestrial environments. This innovative solution harnesses the power of Internet of Things (IoT) technologies, advanced sensor networks, machine learning algorithms, and state of the art space communication protocols to deliver real time data on critical environmental parameters such as dust concentration, water presence, and salinity levels. At the core of Universe X.0 is a synchronized communication framework that ensures reliable, low latency data transmission between space based sensors and Earth bound users. This synchronization enables seamless interaction among multiple satellites and ground stations, optimizing data collection and processing capabilities. Through machine learning techniques, the system employs adaptive learning, continuously refining detection algorithms to enhance accuracy over time. Upon identifying conditions analogous to those found on Earth, Universe X.0 generates customizable notifications, empowering users to make informed, real time decisions during space exploration missions. With a strong emphasis on habitability assessments and resource discovery, the system supports multi parameter detection, offering comprehensive environmental monitoring capabilities. By integrating adaptive machine learning, robust IoT communication, and a synchronized framework, Universe X.0 addresses the urgent need for advanced environmental monitoring in space exploration. This invention not only enhances mission reliability but also contributes to a deeper understanding of extraterrestrial environments. Furthermore, it fosters universal peace through technological advancement, setting the stage for future exploration missions aimed at fostering peaceful interactions with potential extraterrestrial entities and promoting sustainable resource management across the universe.

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