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Department of CSE [Artificial Intelligence & Machine Learning]

FACULTY PATENTS LIST (A.Y.2023-24)

S. No	Application Number	Title of The Patent	Name of The Faculty	Patent Office Journal No	Published Date	Status
1	389610-001	Telescopic Walking Aid For Handicap	B.Prashanth Azmeera Ramesh	NA	05/07/2023	Granted
2	391229-001	Ai Based Micro Gps Tracking Chip	Dr S Rao Chintalapudi	NA	26/07/2023	Granted
4	202341032941	systematic approach to study the factors that have an impact on cyber defense using artificial intelligence techniques	Mamatha B	33/2023	18/08/2023	Published
5	399996-001	Iot Based Device For Weather Monitoring And Natural Disaster Prevention	Shaik Sharif	NA	15/11/2023	Granted
6	202341089249	Method And System For Enabling Unconventional Data-Agnostic Integration Of Plurality Of Models	Dr S Rao Chintalapudi G Parvathi Devi M Ravindran	02/2024	12/01/2024	Published
7	202441000724	Early Prognosis Of Kidney Diseases Along With Feature Exraction Technique Through Classification Models	Mamatha B	06/2024	09/02/2024	Published
8	202441006260	Early And Accurate Prediction Of Kidney Diseases Using Algorithms Of Deep Learning	Mamatha B	06/2024	09/02/2024	Published
9	202441021732	A Cognitive Insight System For Enhancing Explainability In Deep Learning Models	G Aravind Md Shareef Bushra Tarannum	13/2024	29/03/2024	Published

10	202441025043	Blockchain-Based Framework For Analyzing The Security And Privacy Of Iot Devices For Future Enhancement Of Source Location	Dr. Mahesh Kotha	14/2024	05/04/2024	Published

CO-ORDINATOR

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INTELLECTUAL PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

सत्यमेव जयते

ORIGINAL
क्रम सं/ Serial No. : 150699

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. : 389610-001

तारीख / Date : 05/07/2023

पारस्परिकता तारीख / Reciprocity Date* :

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो *TELESCOPIC WALKING AID FOR HANDICAP* से संबंधित है, का पंजीकरण, श्रेणी 24-05 में 1.Cmr Technical Campus 2. B. Prashanth 3.Azmeera Ramesh 4.Najeema Afrin 5.Ch. Rekha 6.G Pavan Kumar 7.Dr. K. Srujan Raju 8.Dr. Avala Raji Reddy 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 24-05 in respect of the application of such design to *TELESCOPIC WALKING AID FOR HANDICAP* in the name of 1.Cmr Technical Campus 2. B. Prashanth 3.Azmeera Ramesh 4.Najeema Afrin 5.Ch. Rekha 6.G Pavan Kumar 7.Dr. K. Srujan Raju 8.Dr. Avala Raji Reddy.

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 : 21/12/2023
Date of Issue

महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
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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.

INTELLECTUAL PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS | GEOGRAPHICAL INDICATIONS

सत्यमेव जयते

ORIGINAL
क्रम सं/ Serial No.: 148007

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. 391229-001

तारीख / Date 26/07/2023

पारस्परिकता तारीख / Reciprocity Date*

देश / Country

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो *AI BASED MICRO GPS TRACKING CHIP* से संबंधित है, का पंजीकरण, श्रेणी 14-03 में 1.Cmr Technical Campus 2. Sandhyarani 3.S.V Suji Aparna 4.Nam Vasundhara 5.J Prasannababu 6.D Sandhya Rani 7.S Rao Chintalapudi 8.Dr. Avala Raji Reddy 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 14-03 in respect of the application of such design to *AI BASED MICRO GPS TRACKING CHIP* in the name of 1.Cmr Technical Campus 2. Sandhyarani 3.S.V Suji Aparna 4.Nam Vasundhara 5.J Prasannababu 6.D Sandhya Rani 7.S Rao Chintalapudi 8.Dr. Avala Raji Reddy.

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 07/11/2023

महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/05/2023

(21) Application No.202341032941 A
(43) Publication Date : 18/08/2023

(54) Title of the invention : SYSTEMATIC APPROACH TO STUDY THE FACTORS THAT HAVE AN IMPACT ON CYBER DEFENSE USING ARTIFICIAL INTELLIGENCE TECHNIQUES

(51) International classification	:B33Y 500000, G06F 162800, G06N 200000, G06Q 100800, G06Q 502000
(86) International Application No Filing Date	:PCT// :01/01/1900
(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 :
Systematic approach to study the factors that have an impact on cyber defense using artificial intelligence techniques is the proposed invention. The invention mainly focuses on securing the data which is very important for smoother operation of digital transactions. The invention focuses on analyzing the various threats and the possible solution to it. The predictive algorithms are used and results of prediction are displayed on the display unit.

No. of Pages : 13 No. of Claims : 5

INTELLECTUAL PROPERTY INDIA

सत्यमेव जयते

ORIGINAL

क्रम सं/ Serial No. : 158322

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 : 399996-001

तारीख / Date : 15/11/2023

पारस्परिकता तारीख / Reciprocity Date* :

देश / Country :

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो *IOT BASED DEVICE FOR WEATHER MONITORING AND NATURAL DISASTER PREVENTION* से संबंधित है, का पंजीकरण, श्रेणी 10-06 में 1.Dr. B L Raju 2. Gunrathi Bharath Kumar Goud 3.Dr. Maddukuri Sree Vani 4.Jajimoggala Sravanthi 5.Shaik Sharif 6.Dr. Sunil Tekale के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

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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.

उकार की जांडिया

महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न

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जारी करने की तिथि : 23/02/2024

Date of Issue :

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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 :28/12/2023

(21) Application No.202341089249 A
(43) Publication Date : 12/01/2024

(54) Title of the invention : METHOD AND SYSTEM FOR ENABLING UNCONVENTIONAL DATA-AGNOSTIC INTEGRATION OF PLURALITY OF MODELS

(51) International classification :G06N0020000000, G06F0030000000, G06Q0010100000, G06N0005040000, G06F0016332000
(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 :
METHOD AND SYSTEM FOR ENABLING UNCONVENTIONAL DATA-AGNOSTIC INTEGRATION OF PLURALITY OF MODELS
ABSTRACT The present invention discloses a method and system for enabling unconventional data-agnostic integration of a plurality of models. The system includes interfaces to receive input from diverse models, each associated with distinct data types or formats. A unified representation generator processes the input, creating a format-independent representation. A model integration module utilizes an adaptive algorithm to analyze the unified representation, accommodating the varying data types and formats from different models. The integrated result is outputted, providing a comprehensive analysis. The system dynamically updates the integration algorithm based on model input and performance feedback, ensuring continual adaptability. This innovation facilitates seamless integration of disparate models, overcoming data heterogeneity challenges and enabling efficient collaboration across diverse modeling environments. The disclosed method and system find applications in fields where diverse models contribute to a holistic analysis, fostering enhanced decision-making processes.

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/01/2024

(21) Application No.202441000724 A
(43) Publication Date : 09/02/2024

(54) Title of the invention : EARLY PROGNOSIS OF KIDNEY DISEASES ALONG WITH FEATURE EXTRACTION TECHNIQUE THROUGH CLASSIFICATION MODELS

(51) International classification :G06K0009620000, A61P0013120000, H04W0004029000, A61K0036076000, G01N0015140000
(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 :
Early prognosis of kidney diseases along with feature extraction technique through classification models is the proposed invention. The proposed invention focuses on understanding the functions of early progress of kidney diseases. The invention focuses on analyzing the parameters of feature extraction technique using algorithms of classification models.

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

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :31/01/2024

(21) Application No.202441006260 A

(43) Publication Date : 09/02/2024

(54) Title of the invention : EARLY AND ACCURATE PREDICTION OF KIDNEY DISEASES USING ALGORITHMS OF DEEP LEARNING

(51) International classification :G06N0003040000, G06K0009620000, G06N0003080000, G01N0033680000, G16H0050200000

(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)C. Helin Gunitha
5)S. Jayasree
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(57) Abstract :
EARLY AND ACCURATE PREDICTION OF KIDNEY DISEASES USING ALGORITHMS OF DEEP LEARNING A method for the development of the computer-aided automated diagnostic (CAD) can play an important role in predicting CKD. CAD systems, such as deep learning algorithms, are critical in disease diagnosis due to their high classification accuracy. In this research, numerous clinical variables of CKD were used, and seven cutting-edge deep learning algorithms ANN, LSTM, GRU, Bidirectional LSTM, Bidirectional GRU, MLP, and Simple RNN were developed to predict and classify CKD. The proposed artificial intelligence-based techniques were used to extract and evaluate characteristics from pre-processed and fitted CKD datasets using five distinct methodologies. The suggested Deep neural model outperforms the other four classifiers Support Vector Machine (SVM), K-Nearest Neighbor (KNN), Logistic regression, Random Forest, and Naive Bayes classifier) with a 100% accuracy. The proposed approach could help nephrologists detect CKD. Apoptosis Inhibitor of Macrophage (AIM) or a partial peptide of it, or a nucleic acid containing a base sequence encoding the same, or a screening method for a preventative or therapeutic drug for renal disease. It deals with the diagnosis, prediction, and monitoring of kidney problems through the detection of cytokines, cytokine-related substances, and chemokines in urine. FIG.1

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(54) Title of the invention : A COGNITIVE INSIGHT SYSTEM FOR ENHANCING EXPLAINABILITY IN DEEP LEARNING MODELS

(51) International classification :G06N0003040000, G06N0005040000, G06N0003080000, G06N0010000000, G06N0020000000
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(57) Abstract :
A COGNITIVE INSIGHT SYSTEM FOR ENHANCING EXPLAINABILITY IN DEEP LEARNING MODELS ABSTRACT The disclosed cognitive insight system 100 enhances explainability in deep learning models by employing a quantum-based architecture 108 to analyze and interpret decision-making processes. Leveraging quantum computing principles, the system 100 extracts cognitive insights, offering a comprehensive understanding of the intricate thought processes within deep learning models. The method involves generating interpretable explanations for model outcomes, presented in a human-understandable format to improve transparency and comprehension. This approach facilitates user interaction and feedback, allowing iterative refinement of the cognitive insight system 100. The system 100 further supports features such as data preprocessing, feedback loop mechanisms, quantum entanglement principles, visualization modules, and security measures. Overall, this innovative system contributes to advancing the interpretability of deep learning models, promoting transparency and aiding users in comprehending complex decision-making mechanisms. FIG. 1

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(54) Title of the invention : BLOCKCHAIN-BASED FRAMEWORK FOR ANALYZING THE SECURITY AND PRIVACY OF IOT DEVICES FOR FUTURE ENHANCEMENT OF SOURCE LOCATION

(51) International classification :H04L0009320000, H04L0009060000, G06F0021620000, H04L0067120000, G06F0021640000
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(57) Abstract :
The invention disclosed herein presents a blockchain-based framework designed to significantly enhance the security, privacy, and accuracy of source location identification within Internet of Things (IoT) networks. This framework integrates decentralized ledger technology to establish a verifiable and immutable record of data transactions across IoT devices, ensuring data integrity and traceability. By leveraging smart contracts, the system autonomously enforces predefined security policies, restricting data access and transmission to authorized entities only, thereby bolstering privacy and security. Additionally, the framework incorporates an innovative algorithm specifically developed to accurately determine the source location of IoT data. This algorithm addresses and mitigates common challenges and vulnerabilities associated with source location identification, such as spoofing and tampering. Through its comprehensive approach combining blockchain technology, smart contract policy enforcement, and advanced source location algorithms, the disclosed framework offers a robust solution to the prevailing issues of security, privacy, and data integrity in the rapidly expanding realm of IoT. Accompanied Drawing [FIGS. 1-2]

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(54) Title of the invention : IOT-INFUSED DRONE SWARMS WITH A PARADIGM SHIFT IN MANAGING DISASTERS AND MONITORING ENVIRONMENTAL HEALTH

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(57) Abstract :
Abstract This research presents an investigation of the integration of the Internet of Things (IoT) with a swarm of drones in disaster management and environmental monitoring. Traditional methods are plagued by inefficiencies and delays due to extensive manual operations that have limited coverage and require longer response times. Our approach is to integrate IoT sensors into drones and utilize swarm intelligence algorithms to enhance the accuracy and operational efficiency of data collection. We implemented the simulations on MATLAB and NS-3 to test IoT-enabled drone swarms, which successfully covered 95% of the area with 98% accuracy in data transmission at 200 kbps. Subsequent environmental field testing in urban forests and water resulted in a 30% improvement in data accuracy and a 40% reduction in response times over traditional techniques. Extensive performance metrics demonstrated significant improvements for all workload classes, with a 50% response time efficiency gain and 30%+ cost savings compared to state-of-the art solutions, as well as improved scalability and reliability. These results suggest that IoT drones could be an innovative approach to disaster mitigation, performing predictive and diagnostic environmental sensing with line-of-sight response and data acquisition with high accuracy, speed, and cost-benefit. This confirms the potential for broader uses, including those in agriculture, infrastructure inspection and urban planning.

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