Department of Computer Science & Engineering

AY: 2023 – 24 Faculty Journal Publication

S. No.	Name of Faculty	Designation	Title	Journal name	Month of Publication	Volume	Issue	DOI	ISSN	Indexed
1	Prof. Goutam Chakraborty	Distinguished Professor and Dean	A Novel Precomputed Optimal Procrastination Time Interval for Re-Clustering to Maximize Operation Time of Wireless Sensor Networks	IEEE TRANSACTIONS ON NETWORK AND SERVICE MANAGEMENT	September 2023	20	3	https://doi.org/10.1109/TNSM.2022.3229740	1932-4537	SCI
2	Dr. R. Kalpana	Professor & Head	Analysis on quantum reinforcement learning algorithms for prediction of protein sequence	Optical and Quantum Electronics	January 2024	56	-	https://doi.org/10.1007/s11082-023-06244-z	3068919	SCI
3	Dr. R. Kalpana	Professor & Head	Internet of Things (IOT) Based Machine Learning Techniques for Wind Energy Harvesting	Electric Power Components and Systems - Taylor & Francis	December 2023	-	-	https://doi.org/10.1080/15325008.2023.2293952	1532-5016	SCI

4	Dr.R.Nidhya	Professor	Hybrid Tasmanian Devil and Improved Simulated Annealing-Based Clustering Algorithm for Improving Network Longevity in Wireless Sensor Networks (WSNs)	Wireless Personal Communications	August 2023	132	-	https://doi.org/10.1007/s11277-023-10674-z	-	SCI
5	Dr. G. Arun Kumar	Assoc. Professor	LCO–EGC: levy chaotic optimization-based enhanced graph convolutional network for monitoring health of sports athletes	Wireless Networks	October 2023	-	-	https://doi.org/10.1007/s11276-023-03574-4	-	SCI
6	Dr. R. Sudhakar	Assoc. Professor	Classification of brain tumours from MRI images using deep learning-enabled hybrid optimization algorithm	Network: Computation in Neural Systems	November 2023	34	4	https://doi.org/10.1080/0954898X.2023.2275045	0954898X, 3616536	SCI
7	Dr. K. Sudhakar	Sr. Asst. Professor	Optimized feature selection-driven convolutional neural network using gray level co-occurrence matrix for detection of cervical cancer	Open Life Sciences	November 2023	18	1	10.1515/biol- 2022-0770	-	SCI
8	Dr. R. Sundar	Assistant professor	Design Energy Aware Optimized Grey Wolf Based Recurrent Neural Scheme for Bio Medical Application in Wireless Sensor Platform	International Journal of Intelligent Systems and Applications in Engineering (IJISAE)	August 2023	11	10	https://ijisae.org/index.php/IJISAE/article/view/3314	2147-6799	Scopus

9	Dr. R. Sundar	Assistant professor	Electronic Health Record Sharing in Cloud Computing with Privacy and Security Preservation Using Blockchain Technology	International Journal of INTELLIGENT SYSTEMS AND APPLICATIONS IN ENGINEERING	July 2023	11	10	https://ijisae.org/index.php/IJISAE/article/view/3295	2147-6799	Scopus
10	Dr. R. Sundar	Assistant professor	Heart Disease Detection by Machine Learning System	International Journal on Recent and Innovation Trends in Computing and	October 2023	11	10	https://doi.org/10.17762/ijritcc.v11i10.8749	2321-8169	Scopus
11	Dr. R. Sundar	Assistant professor	Detection of Breast Cancer using Deep Learning Techniques	International Journal on Recent and Innovation Trends in Computing and	October 2023	11	10	https://doi.org/10.17762/ijritcc.v11i10.8744	2321-8169	Scopus
12	Dr. R. Sundar	Assistant professor	An Effective Twitter Spam Detection Model using Multiple Hidden Layers Extreme Learning Machine	International Journal of Intelligent Systems And Applications In Engineering	September 2023	12	1	https://ijisae.org/index.php/IJISAE/article/view/3389/1976	2147-67992147	Scopus
13	Mr. Mohan.M	Assistant professor	XAutn: Blockchain-based cross domain authentication for digital certificates in the education sector	Journal of Intelligent & Fuzzy Systems	November 2023	-	-	10.3233/JIFS-235140	1064-1246	SCI
14	Mr.S.Srinivas Kumar	Assistant professor	Optimized Fuzzy C-Means (Fcm) Clustering For High-Precision Brain Image Segmentation And Diagnosis Using	Journal of Theoretical and Applied Information Technology	December 2023	101	24	https://www.jatit.org/volumes/Vol101No24/23Vol101No24.p	1992-8645	Scopus

15	Mr.Mohamed Yousuff A.R	Assistant professor	Leveraging deep learning models for continuous glucose monitoring and prediction in diabetes management: towards enhanced blood sugar control	International Journal of System Assurance Engineering and Management	January 2024	-	-	https://doi.org/10.1007/s13198-023- 02200-y	0976-4348	SCI
16	Ms.Ramya Palaniappan	Assistant professor	UNVEILING THE COMPLEXITY: UNDERSTANDING CLEFT LIP ANOMALIES: A REVIEW	Community Practioner	December 2023	20	12	https://www.researchgate.net/publication/376808324_UNVEILING_THE_COMPLEXITY_UNDERSTANDING_CLEFT_LIP_ANOMALIES_A_REVIEW	1,46,22,815	Scopus
17	Mr. G.Muthugurunathan	Assistant professor	Predictive Analytics in Stock Markets: Unleashing the Power of IoT and Machine Learning	International Journal of Intelligent Systems And Applications In Engineering	January 2024	12	12	https://ijisae.org/index.php/IJISAE/article/vi	2147 – 6799	Scopus
18	Mr. B. Bhaskar	Assistant professor	Protectors of the Android Domain: Research into Mobile Malware Detection and	International Journal of Intelligent Systems And Applications In Engineering	December 2023	12	1	https://ijisae.org/index.php/IJISAE/article/vi	2147 – 6799	Scopus
19	Mrs. V. Nirupa	Assistant professor	Detection and Classification of Diabetic Retinopathy Using Inception V3 and Xception Architectures	International Journal of Nutrition, Pharmacology, Neurological Diseases.	March 2024	14	1	https://journals.lww.com/ijnp/fulltext/2024/14010/detection_and_classification_of_diabetic.16.aspx	2231-0738	Scopus

20	Mr. K H Shabbeer Basha	Assistant professor	Analysis of Voltage Source Inverter with Photovoltaic Renewable Energy Source for Improving Power Quality in Solar	International Journal of Intelligent Systems and Applications in Engineering	January 2024	12	11	https://ijisae.org/index.php/IJISAE/article/view/4429	2147-6799	Scopus
21	Mrs. Deepthi. P	Assistant professor	Comparative study on Machine learning and Fuzzy logic based approach for enhancing Credit Card Fraud Detection.	International Journal of Intelligent Systems and Applications in Engineering	January 2024	12	12	https://ijisae.org/index.php/IJISAE/article/view/4504	2147-6799	Scopus
22	Mrs.ThripthiP. Balakrishnan	Assistant professor	Enhancing the Food Processing in Industry 5.0 based on Artificial Intelligence.	International Journal of Intelligent Systems and Applications in Engineering	January 2024	12	12	https://ijisae.org/index.php/IJISAE/article/view/4508 -	2147-6799	Scopus
23	Dr. R. Sundar	Assistant professor	Future directions of artificial intelligence integration: Managing strategies and opportunities	Journal of Intelligent & Fuzzy Systems	March 2024	46	3	https://content.iospress.com/articles/journal-of-intelligent-and-fuzzy-systems/ifs238830	1875-8967	SCI
24	Dr. R. Sundar	Assistant professor	Cloud computing encrypted image retrieval strategy in cloud computing using a hybrid optimization algorithm	Journal of Intelligent & Fuzzy Systems	March 2024	46	3	https://content.iospress.com/articles/journal-of-intelligent-and-fuzzy-systems/ifs237948	1875-8967	SCI

25	Mr.Mohan	Assistant Professor	Hybrid deep learning enabled breast cancer detection using IMAGES	Biomedical Signal Processing and Control	April 2024	95	-	https://doi.org/10.1016/j.bspc.2024.106310	1746-8108	SCI
26	Mr. Syed Abuthahir S	Assistant professor	Intelligent-of- things multi-agent system for smart home energy monitoring	Indonesian Journal Of Electrical Engineering and Computer Science	May 2024	34	3	10.11591/ijeecs.v34.i3.pp1858-1867	ISSN:1858-1867	Scopus
27	Mr.J.Nagaraj	Assistant professor	Improving The Cross-Layer Functionality To Overcome The Collision In Mobile Adhoc Network	Journal of Theoretical and Applied Information Technology	April 2024	102	8	http://www.jatit.org/volumes/Vol102No8/10Vol10	1992-8645	Scopus
28	Mr.M.Rajasekaran	Assistant professor	A Review of Power Management Approaches for Mobile Ad Hoc Networks	Journal Européen des Systèmes Automatisés	February 2024	57	1	18280/jesa.57011 4	2116-7087	Scopus
29	Mr.M.Rajasekaran	Assistant professor	White Hole Attacker Detection In Mobile Adhoc Network	Journal of Theoretical and Applied Information Technology	March 2024.	102	6	https://www.jatit.org/volumes/Vol102No6/23Vol102No6.pdf	1992-8645	Scopus

30	Mrs. M. Bommy	Assistant professor	Consistency, local stability, and approximation of Shapash explanation	TELKOMNIKA Telecommunication Computing Electronics and Control	June 2024	22	3	http://doi.org/10.12928/telkomnika.v22i3.25560	1693-6930	Scopus
31	Mr.B.Anandaraj	Assistant professor	Enhancing MANET Battery Life and Performance Using Cluster Node	International Journal of Engineering Trends and Technology	May 2024	72	5	https://doi.org/10.14445/22315381/IJE TT-V72I5P13 7	2231–5381	Scopus
32	Mrs.Sangeetha Murugan	Assistant professor	Early prediction of chronic heart disease with recursive feature elimination and supervised learning techniques	IAES International Journal of Artificial Intelligence (IJ-AI)	March 2024	13	1	- http://doi.org/10.11591/ijai.v13.i1.pp7 30-736	ISSN: 2252-8938	Scopus
33	Dr.D.J.Ashin Pabi	Assistant professor	Bio-cellulose-derived rGO-supported SmCoO3 hybrid composite photoanode for high performance dye-sensitized solar cells	Journal of Materials Science: Materials in Electronics	Jun-24	35	-	https://doi.org/10.1007/s10854-024-12898-6	Electronic ISSN 1573-482X	SCI

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IMPROVING THE CROSS-LAYER FUNCTIONALITY TO OVERCOME THE COLLISION IN MOBILE ADHOC NETWORK

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ABSTRACT

Collision avoidance in widest self organizing and easily formed network for making instant communication of Mobile Adhoc Network was a tedious task due to the mobility of the communication nodes. Many research work address to overcome the issues with the support of the physical layer as well as MAC layers protocols. But none of the methods has given solution to overcome the problem. Incorporating the Directional antenna in to the MAC layer functionality can support for hidden and exposed nodes problem to avoid collision .This research article discuss cross layer functionality with beam sector directional antenna technique in to Physical and hidden and exposed nodes table in MAC layer. This proposed work combines the physical and MAC layers to resolves the collision among the nodes; improve the signal power and routing efficiency in MANET. This antenna find out the receiver direction based on the hidden and exposed nodes location of the next hope received and focus the packet floating, this technique to support the Hidden and Exposed node problem in MANET also improve the routing efficiency and power optimization also this cross layer functionality does not require and Handshaking signals.. This work is simulated using Network simulation and result gained 35 % to 60% of improvement in overall MANET Network performance and metric value 30 % to 60 %, overall antenna gain in Beam sector Antenna 21.5 dBi.

Keywords: *MANET, Antenna, Physical Layer, MAC layer, Hidden and Exposed node, Cross Layer*

1. INTRODUCTION

Traditionally Omni directional antenna was used within MAC protocol through distribution Coordination Function in IEEE 802.11 named as CSMA/CA along handshaking technique. Recently these antennas are overcome by smart antenna [1] due to provide more number of nodes connectivity and gain power , some kind of antenna supports interference [2], long transmission range [3] and transmission capacity [4]. Many research related to Medium Access Control protocol based antenna provides the solution to Omni directional antenna limitations. Mahmud et al. [5] proposed GPS based MAC designed directional antenna for defend hidden and exposed terminal problem. Wang et al. [6] invented CMDMAC protocol to resolve the MANET Hidden and Exposed node

Hybrid Tasmanian Devil and Improved Simulated Annealing-Based Clustering Algorithm for Improving Network Longevity in Wireless Sensor Networks (WSNs)

Published: 01 August 2023

Volume 132, pages 1553–1576, (2023) Cite this article

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Aims and scope

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R. Nidhya, D. Pavithra, C. Vinothini & T. Maragatham

Abstract

Wireless Sensor Networks is identified to revolutionize the environmental research and science by deploying the sensor nodes over the area where monitoring and constant access through manpower is difficult. WSNs typically depends on the mean energy utilization of sensor nodes as it directly impacts the network lifespan. In this paper, Hybrid Tasmanian Devil, and Improved Simulated Annealing-based Clustering Algorithm (TDIOKTSACA) is proposed for constructing improved amount of clusters with efficient CH selection to sustain energy and prolong network lifetime. It specifically used TDOA for achieving potential CH selection based on evaluation of fitness factors that include energy and distance into account. It is proposed to improve QoS and optimize routing through

Design Energy Aware Optimized Grey Wolf Based Recurrent Neural Scheme for Bio Medical Application in Wireless Sensor Platform

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Keywords: Biomedical application, Bio-sensor, Cluster head, Energy consumption, Wireless sensor network, Patient database, Internet

ABSTRACT

Nowadays, the wireless-based human health monitoring framework is the most recent trending topic. Furthermore, biomedical sensor networks are used to identify and monitor human health conditions using biomedical applications. In this research, design a novel Grey Wolf based Recurrent Neural Scheme (GWbRNS) for enhancing the performance of WSN in biomedical applications by selecting less energy efficient Cluster Head (CH). Moreover, enhance the performance of patient monitoring with the help of a stored dataset. Initially, the biosensor node was designed to collect the information of the patient. Then update the fitness of the grey wolf in the recurrent network to identify the CH based on the lower energy consumption node. After the selection of CH, identify a secure gateway for forwarding the information to the center server. Finally, the patient information is saved in the patient database which is helpful to the medical staff and healthcare provider for monitoring the condition of people. Therefore, the crafted framework is put into practice using the Python programming language. The achieved results of the developed model are then juxtaposed with those of other established methods, considering factors like energy consumption, latency, power usage, and overall lifespan.

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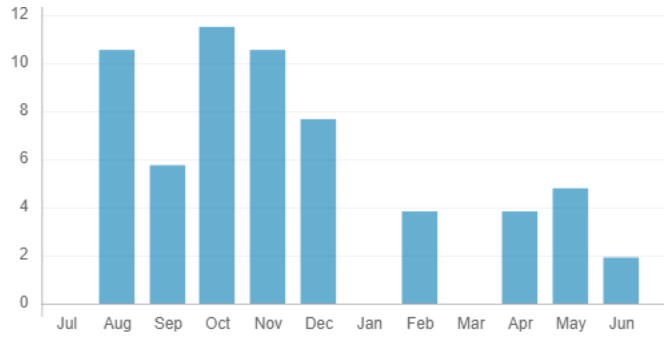

REFERENCES

Javaid, Mohd, et al. "Significance of sensors for industry 4.0: roles, capabilities, and applications." Sensors International 2 (2021): 100110.

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Internet of Things (IOT) Based Machine Learning Techniques for Wind Energy Harvesting

R. Kalpana, Subburaj V, R. Lokanadham, K. Amudha, G. N. Beena Bethel, Arvind Kumar Shukla, Pravin R. Kshirsagar & A. Rajaram ...show less

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Abstract

The Internet of Things (IoT) is a significant avenue for research in renewable energy, particularly in enhancing windmill performance, reducing wind energy costs, and mitigating risks in wind power. This article concentrates on leveraging IoT for assessing wind and solar energy, as well as estimating module lifespans. IoT has improved assessment methods, monitoring precision, and product testing, influencing power network reliability and inventory management in green energy. Predicting green energy output is crucial but challenging due to wind speed fluctuations. Machine learning (ML) techniques are applied to predict wind-based

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OPTIMIZED FUZZY C-MEANS (FCM) CLUSTERING FOR HIGH-PRECISION BRAIN IMAGE SEGMENTATION AND DIAGNOSIS USING DENSENET FEATURES

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ABSTRACT

Brain imaging techniques play a crucial role in identifying the causes of brain cell injury. Consequently, early diagnosis of such conditions can yield significant benefits, improving treatment prospects and minimizing potential patient complications. Among the most formidable challenges in medical image analysis is brain tumor segmentation. Challenges include limited spatial context, increased occurrences of false positives and negatives, the inability to distinguish tumor components, and a lack of preprocessing. To address these issues, we propose an approach that combines Optimized Fuzzy C-Means (FCM) Clustering with DenseNet Features and employs efficient preprocessing techniques. Our improved DenseNet architecture meticulously extracts relevant features from preprocessed images. FCM assigns each feature vector to one or more clusters based on their degrees of membership and its output encompasses cluster centers and membership values, indicating the degree of association for each data point with each cluster. Hence, FCM improves interpretability by distinctly delineating tissue regions through the utilization of these features. Markov Random Field (MRF) Optimization is probabilistic graphical model that capture spatial dependencies among neighboring pixels or regions in an image. As each MRI modality possesses the unique ability to emphasize distinct tissue characteristics. All the MRI Modalities (Flair, T1, T1c, T2) can be combined to get valuable and complementary wealth of information regarding the tissues and structures undergoing examination. Our optimized FCM model is experimented on the Original FLAIR -MR images of patients and Combined MRI Modalities (Flair, T1, T1c, T2).The Optimized Fuzzy C-Means (FCM) Clustering achieved train Dice Coefficient score of 99.18% and test Dice Coefficient score 98.64%, and the Optimized Fuzzy C-Means (FCM) Clustering with Combined MRI modality feature achieved train Dice Coefficient score 100% and test Dice Coefficient score of 99.413%.The results shows that the proposed model out performs the existing models.

Keywords: *Brain Image, Segmentation, DenseNet, Fuzzy C-Means, Optimization, Diagnosis*

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UNVEILING THE COMPLEXITY: UNDERSTANDING CLEFT LIP ANOMALIES: A REVIEW

December 2023 · Community practitioner: the journal of the Community Practitioners' & Health Visitors' Association 20(12):263-267
December 2023 · 20(12):263-267

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Abstract and Figures

Cleft lip, a prevalent congenital anomaly affecting approximately one in every 600 newborns in the United States, presents a significant challenge in prenatal development. This multifaceted condition involves a division between the two sides of the lip, often extending to the upper jaw's bones or upper gum due to incomplete tissue fusion before birth. The complexities surrounding cleft lip encompass not only its prevalence and varied classifications but also the diverse array of challenges individuals with this condition encounter throughout their lives. Understanding cleft lip involves dissecting its prevalence, which stands as the most common birth defect in the United States, with 27,000 to 33,000 cases emerging annually in the UK. Its occurrence exhibits variations across ethnicities, with higher incidences observed in certain populations such as Caucasian and Japanese groups. Numerous factors contribute to the development of cleft lip, spanning genetic predispositions to environmental influences. Smoking, alcohol consumption, nutritional deficiencies, and medication use during pregnancy are among the environmental factors implicated in cleft formation. Genetic factors, family history, and associated syndromes further underscore the complexity of this congenital anomaly. Anatomical variations present in individuals with cleft lip depict a distinctive pattern of nasal deformities, alveolar clefting, and skeletal discrepancies, profoundly impacting appearance, speech, and feeding functionality. These complexities necessitate a comprehensive treatment approach spanning infancy to adolescence. Surgical interventions, beginning around 3 to 6 months, aim to reconstruct the lip and restore function, followed by subsequent procedures targeting speech enhancement, dental development, and skeletal corrections as individuals mature. This abstract encapsulates the multifaceted nature of cleft lip anomalies, encompassing their prevalence, etiological factors, anatomical variations, and a comprehensive treatment approach. Understanding these intricacies is pivotal in providing holistic care and support to individuals affected by cleft lip conditions throughout their lives.

Cleft Lip in a Child

Figures - uploaded by Ramya Pal Author content

Protectors of the Android Domain: Research into Mobile Malware Detection and Defense

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Keywords: Android malware, Malware detection, Trojan horses, Ransom ware, supervised machine learning, Personal data security

ABSTRACT

Due to the ever-increasing amount of malware that can be found on mobile devices, Android malware detection has become an essential topic of study. It starts with an overview of android malware, including its many subtypes such as Trojan horses, adware, spyware, and ransomware, as well as the procedures that must be taken to avoid having malware installed on your device. In order to detect malicious programs, it performs an analysis on a number of attributes that have been collected from the application package files and system call traces of the device. The suggested solution makes use of a neural network model that was educated using a dataset consisting of both safe and harmful apps. This problem is solved with the assistance of android malware detection with the use of machine learning. In order to determine whether or not the Android application file that was uploaded includes malware or can be used safely, the system that has been presented makes use of a method for supervised machine learning that is known as a Neural Network. It gives an overview of the numerous methods that may be used to identify android malware, such as detection based on signatures, detection based on behaviors, and detection based on machine learning. Mobile devices, especially smartphones powered by Android, have emerged as indispensable aids in our day-to-day activities. On the other hand, a growth in the usage of mobile devices has resulted in an increase in the number of cyber-attacks, with malware being a serious concern. Malware designed for Android devices presents a serious threat to users of mobile devices since it has the potential to steal personal data, disrupt device functionality, and jeopardize the security of the device. As a result, it is more important than ever to identify and eliminate malware on Android devices.

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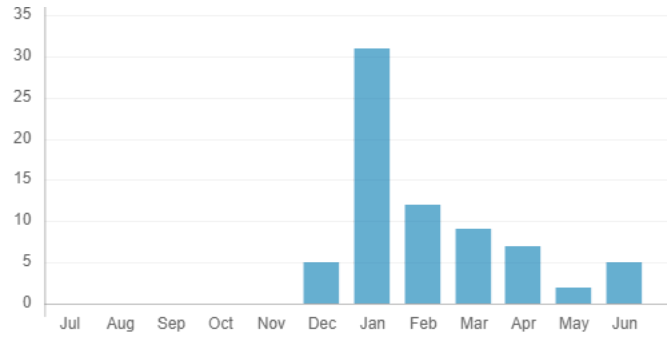

REFERENCES

A Review of Power Management Approaches for Mobile Ad Hoc Networks

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Abstract:

Internal node power management of the wireless network is becoming the most difficult task in the Mobile Adhoc Network. Power outages on any node in the MANET degrade overall communication network performance. Efficient power management solutions are required for all tiers of the MANET protocol. The Physical layer might keep track of the antenna transmission and reception power strategies, as well as the power management plans for idea nodes and sleep nodes. The MAC layer power management could increase the packet delivery ratio, average delay, average jitter, and network delay metrics. The network layer's power management is supported by the link's lifetime and node mobility. TCP/IP protocols enable reliable packet transmission, which improves the transport layer. This survey paper conducted a thorough survey of the MANET protocol stack. This survey paper conducted a thorough investigation of MANET protocol stack power management in order to identify factors that can be improved to achieve a better power management strategy in MANET nodes.

Keywords:

MANET, power management, antenna, protocol stack, energy, performance metric

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Analysis on quantum reinforcement learning algorithms for prediction of protein sequence

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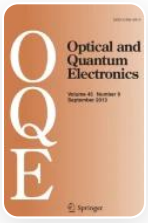

Optical and Quantum Electronics

Aims and scope

Submit manuscript

R. Kalpana, P. J. Sathishkumar, B. Shenbagavalli & S. Subburaj

Abstract

Protein structure expectation is a particularly mind boggling issue that it is frequently assaulted and disintegrated using four distinct levels and they are: 1-D forecast of underlying highlights along the essential succession of amino acids sequences, 2-D forecast of spatial connections between the sequence of amino acids, 3-D forecast of a tertiary structure of protein and quaternary structure of protein. This paper also try to introduce some assessment tools for finding the accuracy of result from applying ML and DL tools. And try to analyses and compare various algorithms based on deep learning methods verses machine learning methods used for sequence prediction. This paper also examines the turn of events and utilization of concealed Markov model, uphold vector machines, Bayesian techniques, and grouping strategies. This investigation will be helpful in creating future strategies to improve the exactness of protein auxiliary structure

Leveraging deep learning models for continuous glucose monitoring and prediction in diabetes management: towards enhanced blood sugar control

ORIGINAL ARTICLE Published: 17 January 2024

Volume 15, pages 2077–2084, (2024) Cite this article

International Journal of System Assurance Engineering and Management

Aims and scope

Submit manuscript

A. R. Mohamed Yousuff, M. Zainulabedin Hasan, R. Anand & M. Rajasekhara Babu

Abstract

Diabetes mellitus is a chronic metabolic disorder that affects millions of individuals worldwide, presenting significant challenges in disease management and long-term complications. Continuous Glucose Monitoring (CGM) has emerged as a valuable tool for monitoring blood glucose levels in diabetic patients, offering real-time data for enhanced disease control. However, the ability to predict glucose fluctuations in advance can greatly improve management strategies and minimize the risk of hyperglycemic or hypoglycemic episodes. This research paper proposes a novel approach to diabetes

Predictive Analytics in Stock Markets: Unleashing the Power of IoT and Machine Learning

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Keywords: Stock Markets, IoT, Machine Learning, Prediction

ABSTRACT

Stock markets are dynamic and complicated, so forecasting and decision-making are essential. This article examines how prediction Analytics, IoT, and ML might be used in stock trading to improve prediction skills and investing strategies. IoT provides real-time data sources including market sentiment research and streaming financial data from linked devices. This data, combined with modern machine learning algorithms, helps traders and investors find patterns, trends, and anomalies to anticipate stock price changes. With IoT and ML, market analysis may take into account historical data and real-time market dynamics. IoT devices like sensors and social media sentiment analysis tools can create prediction models in financial markets, according to this study. The research examines machine learning techniques including neural networks, decision trees, and ensemble approaches to show how they improve stock market forecasts. The paper also covers data privacy, model interpretability, and external issues while using predictive analytics in stock trading. Case studies and success stories demonstrate the practical uses and advantages of IoT and ML predictive analytics in stock market strategy. In conclusion, predictive analytics combined with IoT and machine learning may alter stock markets. Real-time data streams and complex analytical tools help market players make better choices, limit risks, and seize opportunities, transforming stock trading in the age of linked technology.

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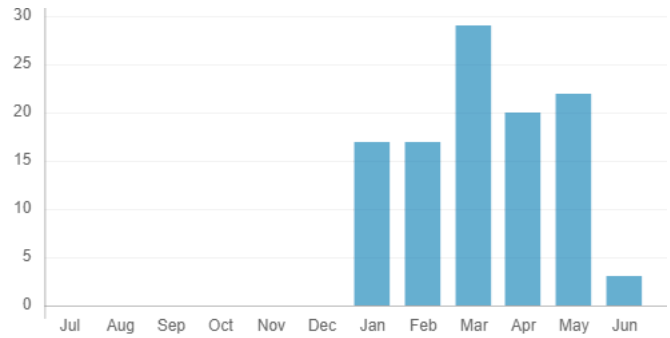

REFERENCES

Analysis of Voltage Source Inverter with Photovoltaic Renewable Energy Source for Improving Power Quality in Solar

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Keywords: MPPT (Maximum Power Tracking), Incremental Conductance (IC), Voltage Source Inverter (VSI), Photovoltaic

ABSTRACT

Power quality analysis are based on converter technique and grid connected linear, nonlinear loads. Power quality Contains different issues: stability, reliability, and THD (Total harmonic distortion). In the existing Perturb and Observe (P&O) algorithm technique and Cascaded Multilevel Inverter (DC-AC) methods have low distortion and power losses. So, to overcome problems the Power point maximum tracking based Incremental Conductance (IC) algorithm and Voltage Source Inverter (VSI) are to improve the energy generated by the cause of voltage distribution. The input source is a photovoltaic (PV) power generating unit of fundamental power generation calculated based on irradiance temperature. MPPT tracks the input voltage and produces maximum power output within particular conservation environments. The IC algorithm controls the MPPT output for proper pulse width modulation and regulates the interlope control. The DC–DC converter operates both bucks and boost for given proper conversion technique in inverter and output load. A voltage Source Inverter (VSI) converts DC to AC, which operates the switching operation based on pulse width modulation; the switching operation of the duty cycle continues to move in the opposite direction from that of the interruption when the whole system is at the right opposite end of the Power point maximum tracking for the positive structure working directions. The output result gains better maximum output voltage, reduces harmonics distortion and improve power quality.

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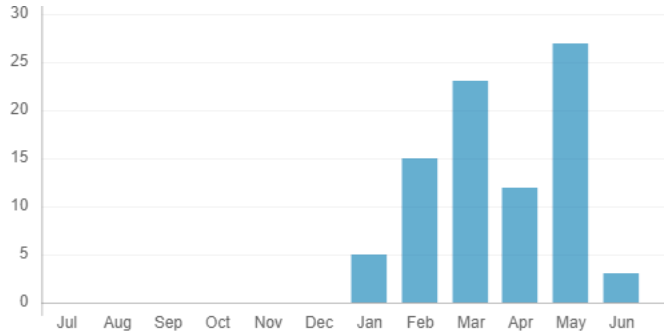

A Comparative Study on Machine Learning and Fuzzy Logic-Based Approach for Enhancing Credit Card Fraud Detection

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Keywords: Credit card fraud detection, Machine learning models, Artificial neural network, Support vector machine, Random Forest

ABSTRACT

The present research evaluates the efficacy of several machine learning models in credit card fraud detection, employing data sets of 284,407 transactions produced from online platforms. Careful data processing includes cleansing, scaling, mechanical properties, data imbalance management, and transient characteristics After preprocessing, five models— Artificial Neural Network (ANN), Support Vector Machine (SVM), Random were trained Forest (RF), Decision Tree (DT), and Naive Bayes (NB)—were assessed. Notably, ANN demonstrated an amazing performance of 97.6% accuracy, followed closely by SVM 95.5%, RF 94.5%, DT 92.3%, and NB 88.9% with the confusion matrices indicating high accuracy, true negatives, false positives, and false positives of each sample. It also gave little insight into the capacity to effectively identify false negatives. While ANN exhibited a very accurate, balanced detection of fraudulent and valid transactions, DT-NB showed a number of misclassifications rising disclosure. These arise from careful selection of machine learning models for credit card fraud detection, micro -And underline the significance of integration, with factors such as accuracy, translation, computational economy, and the etc. included. The study offers the standards and principles required to construct powerful and comprehensive credit card fraud detection systems, leading to gains in financial security and continually improving fraud prevention tactics.

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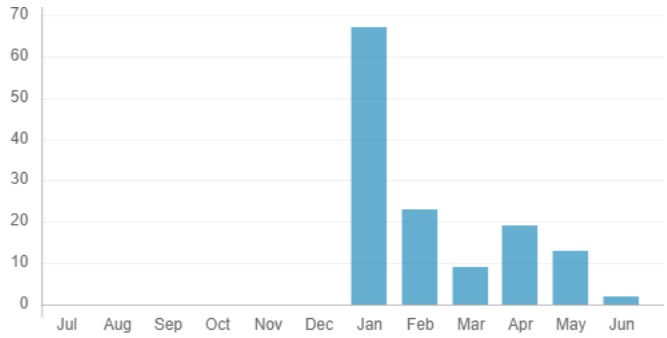

REFERENCES

Enhancing the Food Processing in Industry 5.0 Based on Artificial Intelligence

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Keywords: Artificial intelligence, machine learning, food industry 5.0, flexible food production

ABSTRACT

The new Industry 5.0 framework should taken into account which aims to incorporate value chain collaboration, human importance, and long-term viability in an industrial setting. During the present-day business sectors, human-robot collaboration is considered to be one of the best aspects. This demonstrates that contrasted to the previous edition, there will be a decreased risk of accuracy and that humans will conserve both labor and time. Machine learning encompasses artificial intelligence, which remains to be a crucial and encouraging factor in many different types of industries 5.0. Food, health, medication, and other firms continually produce positive results and continue to benefit consumers. This paper proposes artificial intelligence which offers data in a format that is accessible to individuals to access. Thus, the food industry 5.0, which is clearly explained in this paper, follows the convergence of artificial intelligence and human intelligence. As an outcome, industries will gain knowledge about latest developments in the food sector, particularly improved production, time savings, and economic growth. The production process is a flexible and personalized one as both human and AI are engaging in act. Therefore the preparation of foods in the promotive, hygienic, and healthiest manner is possible which will give good revenue for the food industries.

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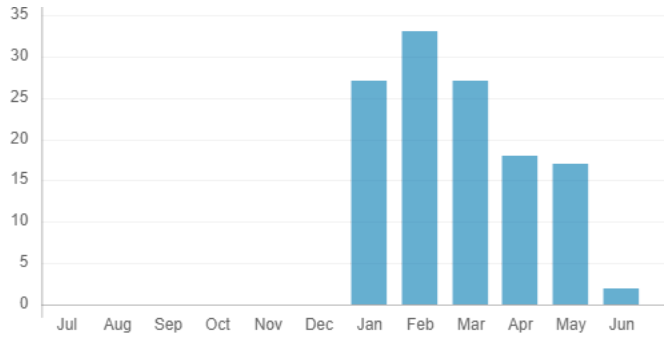

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Electronic Health Record Sharing in Cloud Computing with Privacy and Security Preservation Using Blockchain Technology

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Keywords: security protocols, Cryptographic Blockchain, public cloud system, encryption time, decryption time

ABSTRACT

Nowadays, electronic health records are an important system in cloud computing technology. Different types of algorithms are fostered various components by means of image based encryption for medical care applications. Although more security protocols were created among them without a doubt, not many procedures were proficient and hearty for the speedy recovery of reports from the cloud yet numerous conventions endure by reason of less security, privacy, and respectability. Existing techniques depended on encrypting the record in view of the key generation centre. To overcome the security issues a novel optimized Whale based Cryptographic Blockchain (WBCB) technique is proposed. Moreover, public cloud system is utilized to develop the technique efficiently. Here, the MATLAB platform is used for the implementation process. Furthermore, the developed technique is compared with conventional techniques such as encryption time, decryption time, etc.

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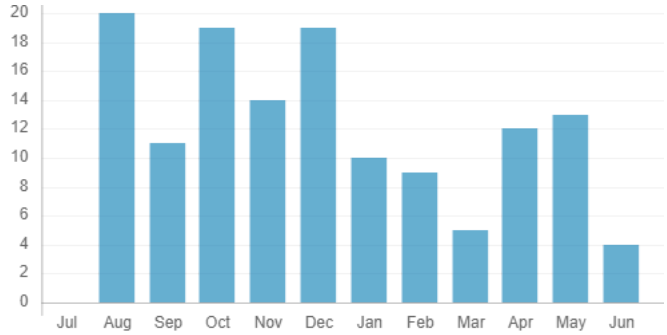

Consistency, local stability, and approximation of Shapash explanation

Tsehay Admassu Assegie, Bommy Manivannan, Komal Kumar Napa, Bindu Kolappa Pillai Vijayammal, Rajkumar Govindarajan, Sangeetha Murugan, Atinkut Molla Mekonnen

Abstract

Consistency, scalability, and local stability properties ensure that a model or method produces reliable and predictable outcomes. The Shapash helps users understand how the model makes its decisions. With machine learning (ML) system, healthcare experts can identify individuals at higher risk and implement interventions to reduce the occurrence and severity of disease. ML had achieved higher prediction accuracy even though the accuracy of their prediction depends on the quality and quantity of the data used for training. Despite the wider application and higher accuracy of different ML for disease prediction, the explanation of their predictive outcome is much more important to the healthcare professional, the patient, and even their developers. However, most of the ML systems do not explain their outcomes. To address the explainability issue various techniques such as local model agnostic explanation (LIME), and shapley additive explanation (SHAP) have been proposed over the recent years. Furthermore, the consistency, local stability, and approximation of the explanation remained one of the research topics in ML. This study investigated the consistency, stability, and approximation of LIME and SHAP in predicting heart disease (HD). The result suggested that LIME and SHAP generated a similar explanation (distance=0.35), compared to the active coalition of variable (ACV) explanation (distance=0.43).

Keywords

explainable artificial intelligence; interpretable artificial intelligence; interpretable machine learning; model explanation; predictive analytics;

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ORIGINAL ARTICLES

Detection and Classification of Diabetic Retinopathy Using Inception V3 and Xception Architectures

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International Journal of Nutrition, Pharmacology, Neurological Diseases 14(1):p 128-136, January-March 2024. | DOI: 10.4103/ijnpnd.ijnpnd_76_23

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Abstract

Patients with diabetes usually develop a condition called diabetic retinopathy (DR), resulting from retinal damage. This impairment usually happens when the glucose levels in the blood are elevated, finally causing a blockage in the blood vessels that feed a part of the eye called the retina and finally severing it from the blood supply. Therefore, the eye attempts to produce fresh blood cells. But these cells are either poorly developed or weak. So, it can be leaked out easily. Hence, to lessen the severe effects of this disease, these patients must be diagnosed as soon as possible. Earlier, a number of approaches were put forth to recognise this illness using machine learning algorithms, image processing, and other techniques. The diagnosis process of this disease involves pre-processing of coloured images of the fundus, extraction of clinical features and classification of retinopathy. In this research, fundus photography of the retina is utilised to accelerate the detection of various kinds of retinopathy caused by diabetes based on convolutional neural network (CNN) pre-trained transfer learning algorithm. Inception V3 and Xception are used in this model to determine and categorise diabetic retinopathy, respectively. As a result, people with this disease can lower their risk of exposure to permanent blindness.

Introduction

The main reason for vision loss in the world is due to the development of diabetic retinopathy in individuals. The likelihood of evolving retinopathy increases with the duration of diabetes. Diabetic retinopathy happens when the retinal blood vessels are obstructed by glucose. These ruptured

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Article Type: Research Article

Abstract: Numerous people are interested in learning yoga due to the increased tension levels in the modern lifestyle, and there are a variety of techniques or resources available. Yoga is practiced in yoga centers, by personal instructors, and through books, the Internet, recorded videos, etc. As the aforementioned resources may not always be available, a large number of people will opt for self-study in fast-paced lifestyles. Self-learning makes it impossible to recognize an incorrect posture. Incorrect poses will have a negative effect on the patient's health, causing severe agony and long-term chronic issues. Computer vision (CV)-related techniques derive pose features and ... Show more

Keywords: Yoga posture, activity recognition, deep learning, metaheuristics, computer vision

DOI: 10.3233/JIFS-233583

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Cloud computing encrypted image retrieval strategy in cloud computing using a hybrid optimization algorithm

Article type: Research Article

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Abstract: In today's rapidly evolving landscape of cloud computing technologies, security and privacy have become paramount concerns, particularly in sectors like healthcare and cloud storage services. One of the most critical challenges is safeguarding sensitive data, such as images, from unauthorized access and leakage during transmission. In this context, we propose a novel framework named Hybrid Buffalo Bat based Homomorphic Convolution (HBBbHC), designed to facilitate the retrieval of source images from encrypted representations during data transmission. The technique efficiently transforms plaintext data into ciphertext, employing blockchain technology for enhanced encryption during the transfer process. We have implemented the HBBbHC method using the Python tool and rigorously evaluated its performance in terms of resource utilization, encryption and decryption efficiency, and other relevant metrics. The results demonstrate that our approach significantly enhances data transmission efficiency, thereby elevating overall system effectiveness

Keywords: Cloud computing, homomorphic, blockchain technology, encryption time, Decryption time

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WHITE HOLE ATTACKER DETECTION IN MOBILE ADHOC NETWORK

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ABSTRACT

While making communication among the wireless nodes, which relies on without making infrastructure less network are vulnerable to security fall. One of the most affecting vulnerable security falling wireless networks is Mobile Adhoc Network. The most predominant kind of security falls are intruders and attackers whose roles are trying to diminish the internal performance of the Network. Many research works are concentrating to detect and prevent these two factors. This article concentrates on predicting white hole attackers inside the communication or not. White hole attackers is a kind of attacker whose role is to send the many duplicate packets to the neighboring node to increase the load of the neighbor nodes which affect the overall Mobile Adhoc network performance . Many existing research used the latest technique to predict the attackers which are additional overload to the network .To achieve this objective the WatchDog method introduces to monitoring the forwarded time of the every nodes present in the communication a node which make plenty of times forwarded the packet to the many nodes assumes as white hole attackers. The proposed Watchdog Algorithm with Classification Technique was implemented with Network simulator and the simulation results are compared with Machine learning based routing protocol then the compared results are proved the WatchDog based attacker methods performs well is more than 30 % better also the performance factors are excellent in 60%.

Keywords: *MANET, Attackers, White Hole Attackers, WatchDog Technique, Forward time, Threshold Value*

1. INTRODUCTION

One of the on demanding wireless networks for making instant communication without support of any basic infrastructure is Mobile Adhoc Network (MANET) as shown in the Figure 1. This Kind of Networks can easily moved instantly to any place and also has an advantage of limiting layers in the protocol stack. Due to this nature MANET was using in many applications like disaster management, earth quake, military etc. Many external forces are trying to crumble the MANET application usage by creating the mitigation on MANET performance factor. One of the famous mitigation creations is done when the transmission of the packets. Several categories of Attackers and Intruders are penetrated in the

Early prediction of chronic heart disease with recursive feature elimination and supervised learning techniques

Komal Kumar Napa, Angati Kalyan Kumar, Sangeetha Murugan, Kamaluru Mahammad, Tsehay Admassu Assegie

Abstract

Chronic heart disease (CHD) is a common complication among patients suffering in the cardiological intensive care unit, often resulting in poor prognosis and high mortality. Early prediction of CHD can reduce mortality by preventing the severity of the disease. This study evaluated the efficacy of on recursive feature elimination for predicting CHD using supervised learning techniques for predicting CHD. The study employed 1190 Cleveland Hungarian CHD dataset. Different supervised learning techniques (support vector machine, decision tree, k-nearest neighbor, Naive Bayes, stochastic gradient descent, adaptive boosting, and multilayer perceptron) were used to study the efficacy of the recursive feature elimination. Chest pain type, sex, blood sugar level, angina, depression, and slope were associated with CHD occurrence. The accuracy of the K-nearest neighbor and decision tree model was 89.91% for the feature-selected dataset indicating good predictive ability. Ultimately, the support vector machine and logistic regression with the selected features exhibited good discriminatory ability for early prediction of CHD. Thus, the recursive feature elimination is a good approach to develop a a model with higher accuracy to predict CHD.

Keywords

Cardiovascular disease; Classification model; Feature selection; Healthcare data analytics; Machine learning;

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Intelligent-of-things multiagent system for smart home energy monitoring

Ratna kumari Vemuri, Chinni Bala Vijaya Durga, Syed Abuthahir Syed Ibrahim, Nagaraju Arumalla, Senthilvadivu Subramanian, Lakshmi Bhukya

Abstract

The proliferation of IoT devices has ushered in a new era of smart homes, where efficient energy management is a paramount concern. Multiagent artificial intelligence-of-things (MAIoT) has emerged as a promising approach to address the complex challenges of smart home energy management. This research study examines MAIoT's components, functioning, benefits, and drawbacks. MAIoT systems improve energy efficiency and user comfort by combining multiagent systems and IoT devices. However, privacy, security, interoperability, scalability, and user acceptability must be addressed. As technology advances, MAIoT in smart home energy management will offer more sophisticated and adaptable solutions to cut energy consumption and promote sustainability. This article describes how energy status and internal pricing signals affect group intelligent decision making and the interaction dynamics between consumers or decision makers. In a multiagent configuration based on the new concept of artificial intelligence-of-things, this intelligent home energy management challenge is simulated and illustrated using software and hardware. Based on sufficient experimental simulations, this paper suggested that residential clients can significantly improve their economic benefit and decision-making efficiency.

Keywords

Artificial intelligence; Artificial intelligence-of-things; Energy management security; Multiagent; Smart home

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Enhancing MANET Battery Life and Performance Using Cluster Node

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Abstract

One of the commonly used wireless communications is a Mobile Ad hoc Network that can be formed without the need for any access point and is also able to make an instant communication network wherever it is needed. Every node's operation for transmission and receiving the packets is based on the internal battery. To provide the lifetime of the internal battery needs more research to overcome the difficulties. Many research work proposes several methods to improve the battery power in the nodes, but all the works have some limitations and are not able to improve the battery lifetime. This article focuses on improving the nodes' internal battery by using the cluster node, which is chosen by using the cluster node forming methods and assigned the responsibility of the cluster node to overcome the battery wastage. The proposed work is simulated using the Network simulator in Ad Hoc On-demand Vector protocol named CN-AODV to compare the performance, the latest techniques of cluster nodes called CN-AODV, and comparison analysis done with leach cluster named LC-AODV, Clustering Algorithms called CA-AODV with the parameters of power, energy consumption, cluster accuracy, network lifetime, cluster head lifetime, delay, link connectivity and node mobility. The results revealed that proposed work power utilization is 50 % and

Network: Computation in Neural Systems ›
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Research Articles

Classification of brain tumours from MRI images using deep learning-enabled hybrid optimization algorithm

Sudhakar Raju & Venkateswara Rao Peddireddy Veera

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ABSTRACT

Brain tumours are produced by the uncontrolled, and unusual tissue growth of brain. Because of the wide range of brain tumour locations, potential shapes, and image intensities, segmentation of the brain tumour by magnetic resonance imaging (MRI) is challenging. In this research, the deep learning (DL)-enabled brain tumour detection is developed by hybrid optimization method. The pre-processing stage used adaptive Wiener filter for minimizing the noise from input image. After that, the abnormal section of the image is segmented using U-Net. Afterwards, the data augmentation is accomplished to recover the random erasing, brightness, and translation characters.

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Optimised feature selection-driven convolutional neural network using gray level co-occurrence matrix for detection of cervical cancer

K Sudhakar [1], D Saravanan [2], G Hariharan [3], M S Sanaj [4], Santosh Kumar [5], Maznu Shaik [6], Jose Luis Arias Gonzales [7], Khursheed Aurangzeb [8]

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PMID: 38045489 PMCID: PMC10693012 DOI: 10.1515/biol-2022-0770

Abstract

Cervical cancer is one of the most dangerous and widespread illnesses afflicting women throughout the globe, particularly in East Africa and South Asia. In industrialised nations, the incidence of cervical cancer has consistently decreased over the past few decades. However, in developing countries, the reduction in incidence has been considerably slower, and in some instances, the incidence has increased. Implementing routine screenings for cervical cancer is something that has to be done to protect the health of women. Cervical cancer is famously difficult to diagnose and cure due to the slow rate at which it spreads and develops into more advanced stages of the disease. Screening for cervical cancer using a Pap smear, more often referred to as a Pap test, has the potential to detect the illness in its earlier stages. For the purpose of selecting features for this article, a gray level co-occurrence matrix (GLCM) technique was used. Following this step, classification is performed with methods such as convolutional neural network (CNN), support vector machine, and auto encoder. According to the findings of this experiment, the GLCM-CNN classifier proved to be the one with the highest degree of precision.

Keywords: accuracy; cervical cancer detection; convolutional neural network; feature selection; gray level co-occurrence matrix; pep test images.

Figures

XAutn: Blockchain-based cross domain authentication for digital certificates in the education sector

Article type: Research Article

Authors: Priya, S. Baghavathi (https://content.iospress.com:443/search?q=author%3A%28%22Priya, S. Baghavathi%22%29)[a] | Rani, P. Sheela (https://content.iospress.com:443/search?q=author%3A%28%22Rani, P. Sheela%22%29)[b] | Chokkalingam, S.P. (https://content.iospress.com:443/search?q=author%3A%28%22Chokkalingam, S.P.%22%29)[a] | Prathik, A. (https://content.iospress.com:443/search?q=author%3A%28%22Prathik, A.%22%29)[c] | Mohan, M. (https://content.iospress.com:443/search?q=author%3A%28%22Mohan, M.%22%29)[d] | Anitha, G. (https://content.iospress.com:443/search?q=author%3A%28%22Anitha, G.%22%29)[a] | Thangavel, M. (https://content.iospress.com:443/search?q=author%3A%28%22Thangavel, M.%22%29)[e] | Suthir, S. (https://content.iospress.com:443/search?q=author%3A%28%22Suthir, S.%22%29)[a;*]

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Abstract: Traditional testimony and electronic endorsements are extremely challenging to uphold and defend, and there is a problem with challenging authentication. The identity of the student is typically not recognized when it comes to requirements for access to a student's academic credentials that are scattered over numerous sites. This is an issue with cross-domain authentication methods. On the one hand, whenever the volume of cross-domain authentication requests increases dramatically, the response time can become intolerable because of the slow throughput associated with blockchain mechanisms. These systems still do not give enough thought to the cross-domain scenario's anonymity problem. This research proposes an effective cross-domain authentication mechanism called XAutn that protects anonymity and integrates seamlessly through the present Certificate Transparency (CT) schemes. XAutn protects privacy and develops a fast response correctness evaluation method that is based on the RSA (Rivest, Shamir, and Adleman) cryptographic accumulator, Zero Knowledge Proof Algorithm, and Proof of Continuous work consensus Algorithm (POCW). We also provide a privacy-aware computation authentication approach to strengthen the integrity of the authentication messages more securely and counteract the discriminatory analysis of malevolent requests. This research is primarily used to validate identities in a blockchain network, which makes it possible to guarantee their authenticity and integrity while also increasing security and privacy. The proposed technique greatly outperformed the current methods in terms of authentication time, period required for storage, space for storage, and overall processing cost. The proposed method exhibits a speed gain of authentication of roughly 9% when compared to traditional blockchain systems. The security investigation and results from experiments demonstrate how the proposed approach is more reliable and trustworthy.

Keywords: Zero Knowledge Proof, RSA accumulator, educational certificates, cross-domain authentication, blockchain

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LCO–EGC: levy chaotic optimization-based enhanced graph convolutional network for monitoring health of sports athletes

Original Paper Published: 02 December 2023

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Wireless Networks

Aims and scope

Submit manuscript

N. R. Rejin Paul, G. Arunkumar, Abhay Chaturvedi & Upendra Singh

Abstract

In this modern world, healthcare monitoring is essential to save human lives. The Internet of Things (IoT) plays a vital role in the monitoring of healthcare and also in improving healthcare diagnostics. The IoT is utilized to manage patients' information as well as to detect diseases early. Thus, we proposed Levy Chaotic Optimization-based Enhanced Graph Convolutional (LCO–ECG) Network for health monitoring in sports athletic. The Hyperparameter of enhanced graphical convolutional neural network is optimized using Levy Chaotic gravitational search algorithm (LCGSA). Also, using LCGSA, the weights are tuned to enhance the efficiency of the resulting ensemble model. The ECG model is applied to get more significant feature information. An action detection system's accuracy will increase as a result. Here, to validate the proposed method we

Heart Disease Detection by Machine Learning System

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Keywords:
Heart Disease, algorithms, artificial

R. Sundar, K. Maithili, T. Raghavendra Gupta, P L Srinivasa Murthy, G. Nagarjuna Rao

Abstract

Heart disease is a prevalent global health issue that impacts a substantial number of individuals worldwide. It is characterized by symptoms such as shortness of breath, muscle weakness, and swollen feet. However, the current diagnostic methods for heart disease have limitations in terms of accuracy and efficiency, making early detection challenging. Consequently, researchers are striving to develop an effective approach for early detection of heart disease. The lack of advanced medical equipment and qualified healthcare professionals further complicates the diagnosis and management of cardiac conditions., there have been approximately 26 million reported cases of heart disease, with an additional 3.6 million new cases identified annually. In the United States, a significant proportion of the population is affected by heart disease. Typically, doctors diagnose heart disease by considering the patient's medical history, conducting a physical examination, and assessing any concerning symptoms. However, this diagnostic method does not consistently provide accurate identification of individuals with heart disease. The importance of employing. There are numerous crucial elements in the process for developing a smart parking system in an IoT context. First, sensors are placed in parking places to gather up-to-the-minute occupancy information. Then, using wireless communication protocols, this data is sent to a central server or cloud computing platform. After that, a data processing and analysis module interprets the gathered data using algorithms and machine learning techniques and presents parking availability information to users via a mobile application or other user interfaces. For effective management and monitoring of parking spaces, the system also includes automated payment methods and interacts with existing infrastructure. “Patient 1,patient 2,patient 3 and patient 4.” Dyspnea can be described as a sensation of breathlessness and inadequate breathing, where one feels unable to take in enough air or breathe deeply. It involves the interplay of mechanoreceptors in the upper airways, lungs, and chest wall, along with peripheral receptors, chemoreceptors, and other sensory receptors. Edema refers to the accumulation of excessive fluid in the body tissues, leading to swelling. While edema can occur in any part of the body, it is more commonly observed in the lower extremities Ascites - The pathological buildup of fluid in the abdominal cavity is known as ascites. It is the most frequent cirrhosis consequence and happens in 50% of

Detection of Breast Cancer using Deep Learning Techniques

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R. Sundar, Ch Srinivasulu, Jayaraj Ramasamy, M. Baby Anusha, Madamanchi Brahmaiah

Abstract

Because of the current population boom in health research, early sickness diagnosis has become a vital concern. As the population expands, the risk of dying from breast cancer rises dramatically. Breast carcinoma has been identified whenever the second most dangerous of the previously described malignancies. The researcher automated illness detection system assists medical practitioners in disease diagnosis, provides consistent, effective, and punctual intervention, and reduces the risk of death. Any disease that is diagnosed appropriately and promptly may be treated with minimal human intervention. An overwhelming majority of people are unaware of their illness until it becomes chronic. It increases the world mortality rate. Breast carcinoma has emerged as one of the increasingly rare diseases that may be treated if detected early enough and before it spreads to other regions of the body. Breast carcinoma constitutes one of the most frequent malignancies in women globally, and early identification is critical for improving survival and treatment success. Breast cancer detection technologies in areas like mammography and ultrasound have limits outside in the sense of preciseness as well as sensitivity. Deep learning algorithms have begun to emerge as a potential strategy for enhancing the degree of certainty and efficiency belonging to breast cancer diagnosis in recent years. Deep learning is an artificial intelligence area that focuses down training multi-layer neural networks to gain knowledge of and extract complicated patterns from big datasets. Researchers have developed sophisticated models suited to successfully diagnosing breast cancer from several medical imaging modalities, which might involve mammograms, MRI scans, additionally histopathological images, by utilizing the power throughout deep learning algorithms. Breast carcinoma detection is an important subject of study with significant public health implications. Deep learning techniques, a subset of computational neuroscience (AI), demonstrate excellent results in identifying and identifying cases of breast cancer. Deep learning breast cancer detection technologies have significant research repercussions due to the fact that they enable early diagnosis, enhance exactness, automate screening processes, give personalized treatment, and together with expand healthcare services to underserved areas. Persevered research in this area has the potential to change breast cancer diagnostics, resulting in better patient outcomes and, eventually,

A Novel Precomputed Optimal Procrastination Time Interval for Re-Clustering to Maximize Operation Time of Wireless Sensor Networks

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Chotipat Pornavalai ; Sarayoot Tanessakulwattana ; Goutam Chakraborty All Authors

Abstract:
In wireless sensor networks, the energy consumption of sensors is not uniform over the whole region of deployment. The uneven energy usage occurs because some sensors hav... **View more**

Metadata

Abstract:
In wireless sensor networks, the energy consumption of sensors is not uniform over the whole region of deployment. The uneven energy usage occurs because some sensors have to transmit data to farther distances or have to transmit more data packets than others. This leads to a shorter duration of operation because some sensors' energy will deplete fast creating holes in the network. To alleviate this problem, we proposed an algorithm we named Procrastinated Clustering and Multi-Hop Routing (PCMR). To prolong the operation, it will optimally assign sensors with different precomputed procrastination periods to schedule the clustering and routing processes. In PCMR, sensors' clustering and routing intervals depend on their locations in the network with respect to the sink. The algorithm could reduce and balance energy consumption for sensors distributed over a wide area. Procrastination periods are precomputed off-line before deployment. Therefore, it is easy to implement and is efficient, even for a large network for which real-time reorganization would involve transmitting a large number of signaling packets. The results from simulations show that the proposed PCMR al
compared to existing w

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An Effective Twitter Spam Detection Model using Multiple Hidden Layers Extreme Learning Machine

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Abstract: In contemporary times, social networking sites have gained widespread popularity as tools for interaction and communication. Among these platforms, Twitter holds a significant position, facilitating news consumption, idea sharing, social discourse, and interpersonal communication. However, due to its wide user base, Twitter has also become a breeding ground for spam activities. Numerous studies have been conducted to detect spam on Twitter, employing both traditional and machine learning models. Addressing this issue, this paper introduces an innovative approach to Twitter spam detection using a multi-layered extreme learning machine (MELM). Additionally, the Word2Vec model is employed to map words in the dataset into multi-dimensional vectors. By introducing multiple hidden layers and adaptively initializing weights connecting input, first hidden layer, and bias, the MELM model advances beyond the conventional ELM model. The application of the least squares technique aids in determining output weights for the network. To assess the efficacy of the MELM model in detecting spam, extensive experiments were conducted on three spam datasets. The results demonstrate the MELM model's proficiency, achieving an accuracy of 0.8817, precision of 0.9057, recall of 0.8650, and an F-Score of 0.8848.

Keywords: *Twitter, spam detection, machine learning, word2vector, extreme learning machine*

1. Introduction

People have been signing up for online social networks (OSNs) more frequently lately. These websites, including Facebook, Twitter, and Instagram, have changed how people engage with one another and communicate with one another. Additionally, many industries have utilized OSNs as an ad and promotion instrument to increase selling. Twitter is famous widespread OSNs with incredible popularity having up to 313 million active clients based on the newest data. At the same time, the huge development of Twitter permits growing number of clients to share their data and connect together. Yet, the allure of Twitter's popularity has attracted spammers, resulting in the proliferation of such malicious actors. These Twitter spammers typically refer to users who post tweets containing advertisements, illicit drug sales, or messages that direct users to malicious external links [1]. This might cause phishing attacks or malicious uploads, etc.

Spammers on Twitter are not affecting the online social practice, as well threatened the privacy of cyber space. For instance, in September 2014, New Zealand's network system is melted that caused malicious uploading spam, the outcome that signaled the warning of Twitter spammers. Later, the enormous amount and higher threats of Twitter spam are crucial to be prohibited. To efficiently reduce spam activity in Twitter, several Twitter spam identification techniques are introduced, involving 1 with Twitter itself. To better skill, there are 3 significant types of approaches for Twitter spammer identification. In initial category, technique depends on client accounts and tweet content features. This feature is simply removed from tweets by little or no calculation. However, this feature is simply invented. The next category depends on strength feature resulting from the social graph that goals to discover the connection of receivers and senders. Hence, graph-based feature is analytically tedious to gather since creating a huge social or relationship graph is time and asset consumption. This is because of a mistake that a client might communicate by large but impulsive number of clients. The 3rd group emphases on tweets by URLs. For instance, IP blacklists and domains are extensively

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Department of Computer Science & Engineering

AY: 2023 – 24 Faculty Conference Publication

S.No.	Name of Faculty	Designation	Author Names	Paper Title	Name of the Conference	Type (National/ International)	Date	If published in journal, Journal name	DOI/ISBN	Indexed
1.	Dr. R. Nidhya	Professor	R.Nidhya, R.Kalpana, G.Smilarubavathy S M Keerthana	Brain Tumor Diagnosis with MCNN-Based MRI Image Analysis	1st International Conference on Optimization Techniques for Learning (ICOTL-2023)	International	19-02-2024	IEEE Xplore	979-8-3503-2805-9	Scopus
2	Dr. R. Nidhya	Professor	R Nidhya; R Kalpana; R Sudhakar; M Maranco; G Smilarubavathy	Smart System for Vechicle Number Plate Recognition Using Convolutional Neural Network(CNN)	1st International Conference on Optimization Techniques for Learning (ICOTL-2023)	International	19-02-2024	IEEE Xplore	979-8-3503-2805-9	Scopus
3	Dr. G. Arun Kumar	Assoc. Professor	N Raja Rajeswari, G Arunkumar, M Senthil Vadivu, Manish Gupta, R Sethuraman, M Rajkumar	Development of healthcare monitoring system with pollution control in industrial sectors using the Internet of Things	5th International Conference on Inventive Research in Computing Applications	International	28-08-2023	IEEE Xplore	https://doi.org/10.1109/ICIRCA57980.2023.10220589	Scopus
4	Dr. G. Arun Kumar	Assoc. Professor	D Jayalatchumy G ArunKumar D Saravanan	A Novel Graph Clustering Algorithm with Enhanced Security using Power Method and Homomorphic Encryption	1st International Conference on Optimization Techniques for Learning (ICOTL-2023)	International	20-03-2024	IEEE Xplore		Scopus

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7	Mr. K. Sathish	Asst.Professor	K.Sathish, G BRenuka, Meenuga Balachandra, BNaga lakshmi	Gesture Controlled VirtualMouse usingMedia Pipe	1st International Conference on Optimization Techniques for Learning (ICOTL-2023)	International	20-03-2024	IEEE Xplore		Scopus
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9	Mr.Shayez Ahamed	Asst. Professor	R.Krishnamoorthy K.P.Kaliyamurthi ShayeezAhamed; Nimmala Harathi; R.Senthamil Selvan	Multi Objective Evaluator Model Development for Analyze the Customer Behavior	1st International Conference on Optimization Techniques for Learning (ICOTL-2023)	International	15-02-2024	IEEE Xplore		Scopus
10	Mrs. R. Usha	Asst. Professor	R Usha; G VasundharaDevi; Basi Reddy.A; B. Divya; R.SenthamilSelvan	Integrating the Bigdata and Deep Learning Analysis Human Movement to Improve the Sports	1st International Conference on Optimization Techniques for Learning (ICOTL-2023)	International	15-02-2024	IEEE Xplore		Scopus

11	MrThangarasan T	Asst. Professor	T.Thangarasan, V. Karthikeyan, G.Arunkumar,Arul Prakash A, Keerthana R, Kamsala Gouthami	Code word Based Bi-Server Authentication and Key Exchange Encryption Technique	1st International Conference on Optimization Techniques for Learning (ICOTL-2023)	International	20-03-2024	IEEE Xplore		Scopus
12	Dr.D.J.Ashpin Pabi	Asst. Professor	A.Priyadharshini, P. Kamaleswari, D.Vanusha, D.J.Ashpinpabi, N. Krishnaraj	Password Authentication Key Exchange Protocol With Two Servers by IBE In Data Analytics	2023 5th International Conference on Inventive Research in Computing Applications (ICIRCA)	International	28-08-2023	IEEE Xplore		Scopus
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14	Dr .S Elango	Asst. Professor	RPraveena;T.R.Ganesh Babu; K.Sakthimurugan; S Elango	Microwave Metamaterial Absorber for X,C and Ku Band Applications	2023 9th International Conference on Smart Structures and Systems (ICSSS)	International	31-01-2024	IEEE Xplore	10.1109/ICSSS58085.2023.10407068	Scopus
15	Dr .S Elango	Asst. Professor	T.R. Ganesh Babu; R. Praveena; G.Sudha; S. Elango	Determination of Leaf Diseases Using Deep Learning	2023 9th International Conference on Smart Structures and Systems (ICSSS)	International	31-01-2024	IEEE Xplore	10.1109/ICSSS58085.2023.10407084	Scopus
16	Dr.R.Sundar	Asst. Professor	Dr.R.Sundar, Ramadass. S, Meeha. D, Shankar.S	Evaluating the Solution to predict the impact of Lung Cancer with an Advanced Computing	5th international Conference on Smart system and inventive Technology	International	14-03-2023	IEEE Xplore	rg/10.1109/ICSSIT55814.2023	Scopus
17	Mrs.M Bommy	Asst. Professor	Bommy M, V.Sesha Bhargavi, M.Makeshkumar, Samson Isaac.J, A. Hajira Banu, R. Vijaya Kumar	Prediction of Agricultural Surplus Labor Transfer Trend Based on Big Data Fuzzy Algorithm	2023 Second International Conference On Smart Technologies For Smart Nation (SmartTechCon)	International	18/08/2023 To 19/08/2023	IEEE Xplore	https://doi.org/10.1109/SmartTechCon57526.2023.10391711	Scopus

18	Mr.Thangarasan T	Asst. Professor	T Thangarasan, G.Moheshkumar, V Surendhiran, M Namasivayam, R Keerthana, MSaratha	Research and Application of Boundary Optimization Algorithm of Forest Resource Vector Data based on Conventional Neural Metwork	2023 Second International Conference On Smart Technologies For Smart Nation (SmartTechCon)	International	18-08-2023	IEEE Xplore	https://doi.org/10.1109/SmartTechCon57526.2023.10391589	Scopus
19	Mr. A. Kumar	Asst.Professor	R. Swathi, P.Liyaz S.Swarnalatha, Kumar Akuthota, BasiReddy A, SivaKumar Depuru	Enhancing Lung Segmentation Through Preprocessing of Medical Data Using Convolutional Neural	2023 IEEE 5th International Conference on Cybernetics, Cognition and Machine Learning Applications (ICCCMLA)	International	07/10/2023 To 08/10/2023	IEEE Xplore	https://doi.org/10.1109/ICCCMLA58983.2023	Scopus
20	Mr. A. Kumar	Asst. Professor	Kumar Akuthota, A. Ganesh, Basi Reddy Avula, Sivakumar Depuru	Machine Learning Models for Classification of Sensitive Financial Documents	2023 IEEE 5th International Conference on Cybernetics, Cognition and Machine Learning Applications (ICCCMLA)	International	07/10/2023 To 08/10/2023	IEEE Xplore	https://doi.org/10.1109/ICCCMLA58983.2023.10346685	Scopus
21	Mrs. R. Usha	Asst. Professor	R.Usha, Basi Reddy.A, P.Chandrakanth, R.Senthamil Selvan	Development of CNN Model to Avoid the Food Spoiling Level	ICCAMS-2023)	National	03-06-2024	IEEE Xplore	10.1109/ICCAMS60113.2023.10525936	Scopus
22	Mr.G.MuthuGuruna	Asst. Professor	G.Muthugurunathan S. Padmapriya; L.Leelavathy; Veera Talukdar, Ankur Gupta	Smart Conversations: Enhancing User Engagement through NLP in IoT Environments	ICRITO 2023	National	08-06-2024	IEEE Xplore	10.1109/ICRITO61523.2024.10522332	Scopus
23	Mrs.M Bommy	Asst. Professor	M.Bommy , T. Vivekanandan , Y. Sreeraman D. Jagadeesan	Mobile Ad Hoc Networks Supporting Adaptive Threat Detection through Intrusion Detection Effective Use of Machine Learning for Cyber Defense	ICSES 2023	National	25-03-2024	IEEE Xplore	10.1109/ICSES60034.2023.10465320	Scopus
24	Dr.Sreenivasulu G.	Asst. Professor	Sreenivasulu, G. Padmavathi, T. Nirisha, A. Oudah, M.Y. Saikumar, K.	Efficiency and Precision: Control Systems Empowered by Smart Image Processing	2023 3rd International Conference on Smart Generation Computing, Communication and Networking, SMART GENCON 2023	International	29/12/2023 To 31/12/2023	IEEE Xplore	https://ieeexplore.ieee.org/document/10442573/	Scopus

25	Mr.Ch.Hemanand	Asst. Professor	Sameer Yadav; Hemanand Chittapragada; V. Sidharthan; P.Vamsi Krishna; Anup Kumar	Evaluating the Effectiveness of Spam Message Classification and Detection based on Deep Bi-GRU Method	Seventh International Conference on Electronics, Communication and Aerospace Technology (ICECA 2023)	International	09-02-2024	IEEE Xplore	10.1109/ICECA58529.2023.10395622	Scopus
26	Mrs.G.Vasundhara	Asst. Professor	G Vasundhara Devi; R.Senthamil Selvan; D. Sharada Mani; Sakshi; Aashdeep Singh	Cloud Computing Based Medical Activity Supporting System	2024 2nd International Conference on Disruptive Technologies (ICDT)	International	15/03/2023 To 16/03/2024	IEEE Xplore	10.1109/ICDT61202.2024.10489245	Scopus
27	Prof. Goutam Chakraborty	Distinguished Professor	Cédric Bornand; Angelika Güsewell; Emilie Bovet; Gilles Bangerter; Alexia Stantzos; Goutam Chakraborty	Music and Emotions - A tool to create new playlists for a musical listening device in seclusion rooms in psychiatric hospitals	1st International Conference on Optimization Techniques for Learning (ICOTL-2023)	International	19-02-2024	IEEE Xplore	10.1109/ICOTL59758.2023.10435340	Scopus
28	Dr. R. Nidhya	Professor	Nidhya, R., Pabi, D.J.A.,Divyasree, U.,Harika, A., Alim, S.A.	Exploring Facial Recognition Technologies for Classroom Management	10th International Conference on Communication and Signal Processing, ICCSP 2024,	International		IEEE Xplore	DOI: 10.1109/ICCSP60870.2024	Scopus
29	Dr. G. ArunKumar	Assoc. Professor	Rajeswari, N.R., Arunkumar, G.,Vadivu, M.S.,Sethuraman, R.Rajkumar, M.	Development of Healthcare Monitoring System with Pollution Control in Industrial Sectors Using the Internet of Things	5th International Conference on Inventive Research in Computing Applications, ICIRCA 2023	International		IEEE Xplore	DOI: 10.1109/ICIRCA57980.2023	Scopus
30	Dr.R.Sundar	Asst.Professor	Jagadeesan, D,Sundar,R., Sreekanth, S., Theetchenya, S.,Anandaraj, B.	Real World Autonomous IoT Based Data Privacy Protection Using Machine Learning	8th IEEE International Conference on Science, Technology, Engineering and Mathematics, ICONSTEM 2023	International		IEEE Xplore	DOI: 10.1109/ICONSTEM56934.2023	Scopus
31	Ms.Sangeetha	Asst.Professor	Assegie, T.A.,Salau, A.O.,Sampath,K., Murugan.S., Lakshmi, B.	Evaluation of Adaptive Synthetic Resampling Technique for Imbalanced Breast Cancer Identification	Procedia Computer ScienceThis link is disabled., 2024,	International		Procedia Computer Science	doi.org/10.1016/j.procs.2024.04.095	Scopus

Total - 31

Brain Tumor Diagnosis with MCNN-Based MRI Image Analysis

R Nidhya ; R Kalpana ; G Smilarubavathy ; S M Keerthana All Authors

Abstract:
Brain tumors are critical life-threatening medical condition that requires timely and accurate diagnosis for effective treatment. Magnetic Resonance Imaging (MRI) is a wi... **View more**

Metadata

Abstract:
Brain tumors are critical life-threatening medical condition that requires timely and accurate diagnosis for effective treatment. Magnetic Resonance Imaging (MRI) is a widely used and non-invasive medical imaging technique for the detection and diagnosis of brain tumors. In recent years, deep learning approaches, particularly Convolutional Neural Networks (CNNs), have shown remarkable success in medical image analysis, including brain tumor detection. This paper presents a novel approach for brain tumor detection using a Modified Convolutional Neural Network (MCNN) on MRI images. The proposed solution will utilize a deep learning architecture that employs Convolutional Neural Networks (CNNs) for feature extraction and classification. The MCNN architecture consists of a deep Convolutional Neural Networks with a unique combination of convolutional layers, pooling layers, and fully connected layers. Furthermore, we introduce several modifications to the traditional CNN architecture, including the additional layers to improve feature extraction and spatial attention. These modifications aim to address the challenges associated with the complex and subtle nature of brain tumor images in MRI scans. The developed system will be evaluated using standard metrics such as accuracy, sensitivity, specificity, and F1 score. The results will be compared to existing methods for brain tumor detection to demonstrate the effectiveness and potential clinical utility of the proposed approach. The proposed model's superior performance highlights its potential to assist healthcare professionals in early and accurate brain tumor diagnosis, ultimately contributing to better patient care and outcomes. In the proposed CNN model, we observed the average accuracy value on the training data is 98%, with an average loss value of 0.14181. However, the findings on the test data show a significant difference: the average accuracy value on the test data is 90%, with an average loss value of 0.44037.

Published in: 2023 1st International Conference on Optimization Techniques for Learning (ICOTL)

Smart System for Vechicle Number Plate Recognition Using Convolutional Neural Network(CNN)

R Nidhya ; R Kalpana ; R Sudhakar ; M Maranco ; G Smilarubavathy **All Authors**

Abstract:
In the era of smart cities and advanced transportation systems, the need for efficient and accurate vehicle identification has become paramount. This paper introduces a s... **View more**

Metadata

Abstract:
In the era of smart cities and advanced transportation systems, the need for efficient and accurate vehicle identification has become paramount. This paper introduces a sophisticated system for vehicle number plate recognition leveraging the capabilities of Convolutional Neural Networks (CNNs). The proposed system aims to enhance security, streamline traffic management, and contribute to the evolution of intelligent transportation infrastructure. Its is also used to check for suspicious vehicles or vehicles that were involved in crime, in that case it is useful for the polices to browse the details of the accused vehicles. Integration of the trained CNN model into a comprehensive system capable of real-time video processing demonstrates the system's applicability in diverse environments. Deployment considerations span various platforms, from centralized servers to edge devices, ensuring adaptability to different deployment scenarios. The existing systems are based on different methodologies but still, it is a challenging task as some of the factors like high speed of the vehicle, non-uniform vehicle number plate, the language of vehicle number and different lighting conditions can affect a lot in the overall recognition rate. Proposed system, driven by CNN technology, stands as a robust solution for accurate and efficient automated identification.

Published in: 2023 1st International Conference on Optimization Techniques for Learning (ICOTL)

Date of Conference: 07-08 December 2023

DOI: 10.1109/ICOTL59758.2023.10435179

Date Added to IEEE *Xplore*: 19 February 2024

Publisher: IEEE

ISBN Information:

Conference Location: Bengaluru, India

Development of Healthcare Monitoring System with Pollution Control in Industrial Sectors Using the Internet of Things

N Raja Rajeswari ; G Arunkumar ; M Senthil Vadivu ; Manish Gupta ; R Sethuraman ; M Rajkumar **All Authors**

Abstract:
Rapid improvement in industrialization and urbanization leads to various impacts on environmental conditions. This leads to a rise in pollution that causes various constr... **View more**

Metadata

Abstract:
Rapid improvement in industrialization and urbanization leads to various impacts on environmental conditions. This leads to a rise in pollution that causes various constraints on human health. Earlier prediction and maintenance of pollution is the solution to obtain a greener ecosystem. This is done through machine learning techniques adopting the Internet of Things. The Internet of Things helps to obtain a smarter environment through real-time monitoring with the control system. Thus machine learning helps to analyze the amount of toxic substances that are emitted from the industries and recorded periodically. They are represented as online controlling and monitoring systems. The sensors and actuators with control devices are used to record the external environmental conditions. The prior intimation of the healthcare is monitored appropriately and intimated to solve earlier. The classification and detection of infections and diseases are done through image processing techniques. Thus the proposed system helps to obtain automatic detection of healthcare and pollution detection systems through machine learning with computational systems.

Published in: 2023 5th International Conference on Inventive Research in Computing Applications (ICIRCA)

Date of Conference: 03-05 August 2023

DOI: 10.1109/ICIRCA57980.2023.10220589

Date Added to IEEE *Xplore*: 28 August 2023

Publisher: IEEE

ISBN Information:

Conference Location: Coimbatore, India

A Novel Graph Clustering Algorithm with Enhanced Security using Power Method and Homomorphic Encryption

Publisher: IEEE

D Jayalatchumy ; G ArunKumar ; D Saravanan **All Authors**

Abstract: In recent years, privacy concerns have led to an increasing demand for secure data clustering algorithms that can protect sensitive data while maintaining the accuracy of... **View more**

Metadata

Abstract:

In recent years, privacy concerns have led to an increasing demand for secure data clustering algorithms that can protect sensitive data while maintaining the accuracy of the clustering results. By using homomorphic encryption to enable safe computation on encrypted data is one interesting strategy. Homomorphic encryption approach that allows addition and multiplication to be performed on encrypted data is the Paillier cryptosystem. In this study, we present an innovative approach for using the power iteration algorithm for clustering with the Paillier cryptosystem. An effective and scalable method for grouping large data sets is the power iteration clustering algorithm. We show that by using the Paillier cryptosystem, we can perform the necessary computations for the power iteration clustering algorithm on encrypted data without revealing any sensitive information. We prove our approach can achieve excellent accuracy while maintaining data privacy by evaluating it on many benchmark datasets. Our results show that the Paillier cryptosystem can be a viable solution for privacypreserving clustering applications.

Published in: 2023 1st International Conference on Optimization Techniques for Learning (ICOTL)

Date of Conference: 07-08 December 2023

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Date Added to IEEE *Xplore*: 19 February 2024

Publisher: IEEE

ISBN Information:

Conference Location: Bengaluru, India

Wireless IoT Gas and Smoke Detection System with ESP8266 and Blynk Integration

Publisher: IEEE

Arul Prakash A ; Subathra ; Rahin Batcha R ; Vijay Ramalingam ; G ArunKumar **All Authors**

Abstract: The Internet of Things (IoT) has revolutionized the way we interact with our surroundings, making it possible to monitor and control devices remotely. One critical applic... **View more**

Metadata

Abstract:
The Internet of Things (IoT) has revolutionized the way we interact with our surroundings, making it possible to monitor and control devices remotely. One critical application of IoT technology is in the domain of home and industrial safety, where the early detection of smoke and hazardous gases is of paramount importance. The IoT Smoke and gas Detector utilizes the ESP8266 microcontroller, a versatile and cost-effective IoT platform, as the central processing unit. This device is equipped with sensors capable of detecting smoke and a range of harmful gases, including carbon monoxide (CO), methane (CH4), and propane (C3H8). When dangerous levels of these substances are detected, the device triggers alarms, sends notifications to designated users, and records data for analysis. The Blynk platform, a user-friendly and customizable IoT dashboard, is used as the interface for this system. Users can access real-time data from the Smoke & Gas Detector on their smartphones or other devices, allowing them to monitor the safety of their environment remotely.

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DOI: 10.1109/ICOTL59758.2023.10435228

Date Added to IEEE *Xplore*: 19 February 2024

Publisher: IEEE

ISBN Information:

Conference Location: Bengaluru, India

Customized Creation of ERC 20 Standard Cryptocurrency on the Ethereum Network

Publisher: IEEE

R Rahin Batcha ; S. Vignesh ; Subathra ; D Saravanan ; G ArunKumar **All Authors**

Abstract: Cryptocurrencies like Bitcoin and Ethereum use the blockchain technology, that is known for providing significant security advantages. But there is more to Bitcoin and Et... **View more**

Metadata

Abstract:
Cryptocurrencies like Bitcoin and Ethereum use the blockchain technology, that is known for providing significant security advantages. But there is more to Bitcoin and Ethereum than that. They use digital signatures to verify users. A digital signature uses cryptography extensively. There are two different kinds of keys: private and public. The public keys is the location of a bitcoin wallet that a bitcoin user holds. At this address, anyone desiring to send Bitcoins should do so. Blockchain is a method of storing data that renders it challenging or impossible to alter, hack, or deceive the entire system. In this current endeavour, we develop a digital currency (a crypto tokens) that complies with the ERC 20 norm, can be traded on Ethereum platform, and is able to be sold in a public sale. The Electronic Token Exchange (ERC) 20 standard specifies the characteristics of tokens, including token transfer, total token supply, and other factors. Solidity-built smart contracts will be used to govern and control how the tokens are used. A test-driven process is used to build tokens. The production of test cases prior to the building of smart contracts is referred to as "test-driven" development.

Published in: 2023 1st International Conference on Optimization Techniques for Learning (ICOTL)

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Date Added to IEEE *Xplore*: 19 February 2024

Publisher: IEEE

ISBN Information:

Conference Location: Bengaluru, India

Gesture-Controlled virtual mouse using Media Pipe

K. Sathish ; G B Renuka ; Meenuga Balachandra ; B Naga Lakshmi **All Authors**

Abstract:A Human-Computer Interaction software that enables the user to interact with the computer just by the means of Hand-Gestures. The proposed system uses Machine Learning ba... **View more**

Metadata

Abstract:
A Human-Computer Interaction software that enables the user to interact with the computer just by the means of Hand-Gestures. The proposed system uses Machine Learning based Packages like Media Pipe in which a model named “Single Shot Detector” in the package has trained to detect the desired objects from the camera stream provided by OpenCV, It captures the hand gestures and the program triggers specific mouse function accordingly. This offers the user to carry multiple Mouse functions and also to access a few System level controls, It allows us for "Left, Right, and Double Click functions", “Scrolling”, “Cursor Navigation”, “Drag and Drop”, “Selection”, “Volume Up”, “Volume Down”, “Brightness Up”, and “Brightness Down”. It can also be used in times of pandemics, and few conditional use cases where we don’t have an option to hold a mouse such as in presentations while wearing Virtual Reality Headsets, etc. In this paper, we had proposed a revolutionary model that let the users to control their machines without any physical(external).

Published in: 2023 1st International Conference on Optimization Techniques for Learning (ICOTL)

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Date Added to IEEE *Xplore*: 19 February 2024

Publisher: IEEE

ISBN Information:

Conference Location: Bengaluru, India

Chatbot Based on Emotions Using Deep Learning

Publisher: IEEE

Nirupa V ; Renuka G B ; Naga Lakshmi B ; Sumanth Kumar C P ; Rudra Sekhar Reddy A ; Paramesh J **All Authors**

Abstract: Human emotions are unpredictable as they change very frequently. Human emotions areinvoluntary mental states of feelings and are accompanied by physiological changes. Emo... **View more**

Metadata

Abstract:

Human emotions are unpredictable as they change very frequently. Human emotions areinvoluntary mental states of feelings and are accompanied by physiological changes. Emotions which can be detected through the facial expressions play a major role and are very much important for non-verbal communication as they reflect on their faces. In the process of developing computer modeling of human's emotions, a lot researches have been made. Therefore, a chatbot detecting the emotions can be a better approach for detecting emotions. In this study, it demonstrate that Convolutional Neural Networks (CNNs) offer a superior method for detecting human emotions and develop a deep learning model that can accurately classify the facial expressions. The FER 2013 dataset was used in this study's training. The evaluation of the suggested approach produces pretty accurate findings, which could inspire academics to develop a Chabot model based on emotions in the future.

Published in: 2023 1st International Conference on Optimization Techniques for Learning (ICOTL)

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DOI: 10.1109/ICOTL59758.2023.10435281

Date Added to IEEE *Xplore*: 19 February 2024

Publisher: IEEE

ISBN Information:

Conference Location: Bengaluru, India

Multi Objective Evaluator Model Development for Analyze the Customer Behavior

Publisher: IEEE

R. Krishnamoorthy ; K. P. Kaliyamurthie ; BSH Shayeez Ahamed ; Nimmala Harathi ; R.Senthamil Selvan **All Authors**

Abstract: Predicting consumer behaviour elucidates demographics, tastes, and underlying patterns. By keeping tabs on consumer activity, businesses may learn more about their wants ... **View more**

Metadata

Abstract:
Predicting consumer behaviour elucidates demographics, tastes, and underlying patterns. By keeping tabs on consumer activity, businesses may learn more about their wants and requirements, allowing them to provide better suggestions and increase conversion rates. Numerous factors affect consumer choices, including customer economics, buyer segmentation, and product quality. The most pressing problem that needs fixing is extracting actionable insights from these massive data sets to predict customers' actions. Author presented the multi objective evolutionary method to considerably improve the precision of consumption-related predictions as part of a cutting-edge quantitative research approach for predicting and analyzing customers' consumption habits. As the foundation for the whole prediction model, the data is first compiled based on customer preference and behaviours. As part of the data preparation, min-max normalization eliminates extraneous or irrelevant information. The author uses the Word2vec model for extraction of features, and we adopt boosting ant colony optimization (BACO) for feature selection. Multi-objective evolutionary algorithms (MOEAs) are used to make the predictions. The performance of the proposed system is evaluated, and its metrics are compared with those of well-established methods. The results indicate that the proposed multi objective evolutionary algorithm (MOEA) technique outperforms traditional Machine Learning (ML), excessive gradient boosting (XGB), Artificial intelligence (AI), and naive bayes (HNB) algorithms in various performance metrics. These metrics include accuracy (96 per cent), prediction quality (97per cent), accuracy (98 %), Recall (94 %), F1 score (99 %), and forecast time fifty seconds). Therefore, the results indicate that the regression model is viable and can be maintained over time. The proposed system for predicting consumption behaviour has shown its effectiveness in enhancing profitability.

(Show More)

Published in: 2023 3rd International Conference on Advancement in Electronics & Communication Engineering (AECE)

Integrating the Bigdata and Deep Learning Analysis Human Movement to Improve the Sports

Publisher: IEEE

R Usha ; G Vasundhara Devi ; Basi Reddy.A ; B. Divya ; R. Senthamil Selvan **All Authors**

Abstract: Key technological tools driving the fast growth of integrated manufacturing may be found in information technologies including big data, deep learning, cloud computing, a... **View more**

Metadata

Abstract:

Key technological tools driving the fast growth of integrated manufacturing may be found in information technologies including big data, deep learning, cloud computing, and the Iot. Recent years have seen significant progress in the application of deep learning to the analysis of large datasets. This work focuses on the automated comprehension of human motions in free gymnastics movies as part of the research of a high-precision classification model for sports footage. This work uses deep learning and large-data-based computer imagery to identify and represent human motions in videos. Sports footage is classified using an independent narrative based on long- and short-term memory associations. Short-term and long-term memory networks learn the map relationship between word sequences and video frame sequences in S2VT. We recommend stressing freestyle gymnastics' building blocks. This study creates a competitive freestyle gymnastics routine database. Using predicted sampling and data and custom-built dataset evaluation, we can narrow training decoder-prediction decoder disparities. This research found rethinking sports footage categorization better. Deep learning video categorization with big data enhances user experience by classifying videos more correctly. Feature extraction networks automate free gymnastics movement descriptions and compare feature extraction results to classify lifting sports models.

Published in: 2023 3rd International Conference on Advancement in Electronics & Communication Engineering (AECE)

Date of Conference: 23-24 November 2023 **DOI:** 10.1109/AECE59614.2023.10428236

Date Added to IEEE *Xplore*: 15 February 2024 **Publisher:** IEEE

2023 1st International Conference on Optimization Techniques for Learning (ICOTL) | 979-8-3503-2804-2/23/$31.00 ©2023 IEEE | DOI: 10.1109/ICOTL59758.2023.10435192

Code word Based Bi-Server Authentication and Key Exchange Encryption Technique

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ABSTRACT

The data transfer and communication happening between the client and server or the source to destination should be made in some secure way. It must be protected and authenticated. the passwords related to that all will be stored in a centralized database. The majority of codeword-based user authentication systems assume complete reliance in the authentication server, this refers to the location where centralized databases store passwords in plain text or easily inferred code verification information. System defenses against server-side offline dictionary attacks are nonexistent. In the event that insiders or outsiders hack the authentication server, all user code words become public. which could have severe legal and financial ramifications for a business. A codeword-based client authentication and confidential key exchange system using cutting-edge bi-server architecture serves as the answer to the aforementioned problems. The sever providing the front-end service communicates directly with users in this setup; the control server remains in the background. The proposed system provides security against the offline dictionary attacks that can happen from any of the servers. The proposed work has been implemented by using java and netbeans IDE 6.1.

Key Terms: Codeword system, Key Exchange, User Verification User Authentication, Offline dictionary attack, Multi Server Authentication.

1. INTRODUCTION

The communication between the client and server will takes places in multiple places. Whenever an interaction or exchange of data taking place, the server uses the authentication. When a customer wants to do any exchange of data, its key has to be verified. For accessing the server response, the authentication is used by the customer. Typically, a server will employ a user name and password to verify your identity. Cards, tissue layer scans, voice recognition, and fingerprints will all be additional means of attesting.

The server typically provides a certificate—issued by a reputable third party like Thawte or Verisign—in response to a customer's request for authentication. This certificate attests to the server's ownership by the party the customer expects it to be. Authentication does not validate the tasks or files that an individual will access or perform. Authentication only identifies and

Password Authentication Key Exchange Protocol with Two Servers by IBE in Data Analytics

Publisher: IEEE

A. Priyadharshini ; P. Kamaleswari ; D. Vanusha ; D.J. Aspin Pabi ; N. Krishnaraj **All Authors**

Abstract:
Communication between two parties needs security, so this study introduces a protocol called PAKE (password-authenticated key extended exchange), here client segments its... **View more**

Metadata

Abstract:
Communication between two parties needs security, so this study introduces a protocol called PAKE (password-authenticated key extended exchange), here client segments its password into two equal parts that are stored in 2S (two servers). These 2 servers communicate or coordinate with each other without indicating passwords to each other. Two server-based PAKE protocols on the basis of IBE (Identity-Based Encryption), by using this implicit authentication can be achieved. If any server gets compromised by an adversary, the password of the client has to remain secure. Currently, when compared to Katz et al. EPAKE, two-party PAKE and IBE provable safe without random oracles can save computation in each server. Index Term-PAK, IBE, 2Server, Ant optimization

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ISBN Information:

Conference Location: Coimbatore, India

Ultra Wideband Frequency Selective Surface for Microwave Band Applications

R Praveena ; T.R. Ganesh Babu ; J. Kirubakaran ; S Elango **All Authors**

Abstract:
This paper is about creating and testing a special surface that can block specific frequencies of electromagnetic waves, and it's designed to work well regardless of the ... **View more**

Metadata

Abstract:
This paper is about creating and testing a special surface that can block specific frequencies of electromagnetic waves, and it's designed to work well regardless of the direction and polarization of the incoming waves. The unit cell of this FSS is composed of a square loop element combined with a crossed dipole featuring a circular groove element. Especially, the unit cell's size has been significantly reduced to 0.047 times the free-space wavelength (λ) corresponding to the lowest UWB frequency. The FSS in this work performs exceptionally well, as it has a bandwidth with a signal loss of -3dB that ranges from 3.05 GHz to 10.73 GHz. This bandwidth effectively covers the entire Ultra-Wideband (UWB) spectrum and the proposed FSS unit cell consists of a square-loop and a ring printed on opposite sides of a low-cost metamaterial substrate. Additionally, because of the small size of the individual unit cells in the FSS, it maintains its performance very well even when the electromagnetic waves hit it at angles as wide as 60 degrees, whether the waves have a perpendicular (TE) or parallel (TM) polarization.

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Date Added to IEEE *Xplore*: 31 January 2024

Publisher: IEEE

ISBN Information:

Conference Location: CHENNAI, India

Microwave Metamaterial Absorber for X, C and Ku Band Applications

R Praveena ; T.R. Ganesh Babu ; K. Sakthimurugan ; S Elango All Authors

Abstract:
This paper presents a Three-band polarization insensitive microwave metamaterial absorber (MMA). The proposed MMA (Metamaterial Absorber) consists of a unit cell made up ... **View more**

Metadata

Abstract:
This paper presents a Three-band polarization insensitive microwave metamaterial absorber (MMA). The proposed MMA (Metamaterial Absorber) consists of a unit cell made up of a top metallic patch and a ground metallic plane, with these components separated by an FR4 dielectric substrate that is extremely thin, with a thickness of only 0.014 times the wavelength (λ) of the incident electromagnetic waves. This structure has been designed to achieve excellent absorption properties in different frequency bands. The outcome of this work is used to find out the explosive detection, sensing and radar applications. The fabricated microwave Metamaterial Absorber (MMA) has been tested and validated through measurements. Its design was initially analyzed using numerical simulations performed with CST Microwave Studio Software.

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ISBN Information:

Conference Location: CHENNAI, India

Contents

Determination of Leaf Diseases Using Deep Learning

T.R. Ganesh Babu ; R. Praveena ; G. Sudha ; S. Elango **All Authors**

Abstract:
Agriculture is the back bone of India and it is going down because of many reasons and one of the main reasons is plants getting affected by diseases. In this process the... **View more**

Metadata

Abstract:
Agriculture is the back bone of India and it is going down because of many reasons and one of the main reasons is plants getting affected by diseases. In this process the data's are collected from Kaggle data set. The network includes three classes early blights, late blights and healthy conditions of the leaves which works on TensorFlow platform. In this work Convolutional Deep neural network helps the model to learn using various layers based on looping process. It uses the multiclass classification. This paper proposes of various modules which includes (i) Pre-processing module (ii) Normalization (iii) Layers (iv) Optimizer (v) Model fit (v) E-poach.

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Date of Conference: 23-24 November 2023

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Date Added to IEEE *Xplore*: 31 January 2024

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Conference Location: CHENNAI, India

Contents

Evaluating the Solutions to Predict the Impact of Lung Cancer with an Advanced Intelligent Computing Method

Publisher: IEEE

R. Sundar ; Sudhir Ramadass ; D. Meeha ; Balambigai Subramanian ; S Siva Shankar ; Gayatri Parasa All Authors

Abstract:
Using symptoms as a basis for diagnosing lung cancer, Lung cancer detection was accomplished using several different machine-learning regression strategies. By comparing ... **View more**

Metadata

Abstract:
Using symptoms as a basis for diagnosing lung cancer, Lung cancer detection was accomplished using several different machine-learning regression strategies. By comparing the efficacy of several regression algorithms for predicting lung cancer, considering factors including age, gender, chest discomfort, shortness of breath, alcohol intake, chronic illness, trouble swallowing, anxiety, and peer pressure. Lung cancer predictions and evaluations are made using regression methods such as the linear algorithm, polynomial regression, logistic regression, logarithmic regression, and multiple regression. With a predictive accuracy of 96%, multiple regression is superior to other regression techniques when identifying future lung cancer cases. The r-squared value, which can be calculated using several regression machine learning approaches, may also be used to evaluate the association between the various symptoms and lung cancer. Lung cancer is diagnosed using the r-squared value, which is calculated using several algorithms and takes into symptoms, including chronic illness.

Published in: 2023 5th International Conference on Smart Systems and Inventive Technology (ICSSIT)

Date of Conference: 23-25 January 2023

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Date Added to IEEE *Xplore*: 14 March 2023

Publisher: IEEE

ISBN Information:

Conference Location: Tirunelveli, India

ISSN Information:

Prediction of Agricultural Surplus Labor Transfer Trend Based on Big Data Fuzzy Clustering Algorithm

Publisher: IEEE

Bommy M ; Samson Isaac. J ; V. Sesha Bhargavi ; A. Hajira Banu ; M. Makeshkumar ; R. Vijaya Kumar Reddy All Authors

Abstract:
Rural surplus labor migration is a common concern in the global industrialization process. For India, which is both a big agricultural and highly populated country, this ... **View more**

Metadata

Abstract:
Rural surplus labor migration is a common concern in the global industrialization process. For India, which is both a big agricultural and highly populated country, this phenomenon not only has a direct influence on the country's socioeconomic growth but also has important practical significance in the quest of overall prosperity. Since India's reforms and opening up, the rural labor force has been a critical component in the country's road toward economic prosperity. The migration and redistribution of this labor force is a critical mechanism for improving labor resource allocation in response to regional, status, and structural alterations. It provides a fundamental incentive for economic and social advancement. The fuzzy clustering approach is used in this work to examine the transfer of rural surplus labor force. Each data point's degree of membership is defined by its closeness to a given cluster. The core premise entails applying statistical methods to calculate distances in a multi-attribute space, guaranteeing that each data point is closest to the center of its corresponding category, and giving a degree of membership accordingly. The study illustrates the algorithm's superiority over older approaches and emphasizes its broad application in actual circumstances.

Published in: 2023 Second International Conference On Smart Technologies For Smart Nation (SmartTechCon)

Date of Conference: 18-19 August 2023

DOI: 10.1109/SmartTechCon57526.2023.10391711

Date Added to IEEE *Xplore*: 19 January 2024

Publisher: IEEE

ISBN Information:

Conference Location: Singapore, Singapore

Research and Application of Boundary Optimization Algorithm of Forest Resource Vector Data Based on Convolutional Neural Network

Thangarasan T ; Moheshkumar G ; Surendhiran V ; Namasivayam M ; Keerthana R ; M. Saratha **All Authors**

Abstract:
With the deepening of the research and application of GIS (Geographic Information System), the boundary quality of GIS data is becoming more and more important for produc... **View more**

Metadata

Abstract:
With the deepening of the research and application of GIS (Geographic Information System), the boundary quality of GIS data is becoming more and more important for production and application, and the high accuracy of vector data is the trend of future development. The second-class survey results have the characteristics of accurate and reliable survey data, rich contents and diverse expressions, and can establish forest resources archives for local areas. Therefore, this study established a boundary optimization algorithm for vector data of forest resources based on CNN (Convolutional Neural Network). The network structure proposed in this paper consists of encoder and decoder, and the input dimension of source data is 64×64. The encoder consists of CL(Convolution layer), active layer and PL(Pool layer). The dimension of CL is 24×64×256, which respectively represents the width of convolution kernel, the number of input data columns and the number of convolution kernels. The results show that the vector data processed by the algorithm basically keeps the original shape unchanged, and reduces the redundancy of vector data. At the same time, from the test results, CNN has achieved the best results. Compared with GA (Genetic Algorithm), the accuracy of this method is 3.6% higher. The results verify the reliability of this algorithm.

Published in: 2023 Second International Conference On Smart Technologies For Smart Nation (SmartTechCon)

Date of Conference: 18-19 August 2023

DOI: 10.1109/SmartTechCon57526.2023.10391589

Date Added to IEEE *Xplore*: 19 January 2024

Publisher: IEEE

ISBN Information:

Conference Location: Singapore, Singapore

Enhancing Lung Segmentation Through Preprocessing of Medical Data Using Convolutional Neural Networks

Publisher: IEEE

Abstract:
Lung cancer is the leading cause of cancer-related death for women and the second leading cause of cancer-related death for men, according to a report by the World Health... **View more**

Metadata

Abstract:
Lung cancer is the leading cause of cancer-related death for women and the second leading cause of cancer-related death for men, according to a report by the World Health Organization in 2020. Detecting lung cancer through a three-dimensional X-ray of a patient's lungs, or a chest X-ray, is a common practice, but it can lead to errors caused by the human factor. To address this issue, advanced algorithms, and CAD technologies can be used to detect lung cancer. A network model can be trained using deep structural learning to detect details and deviations in the X-ray image. However, creating an accurate model using this technique is both time-consuming and advanced, and the model must be trained correctly. Despite the extensive research on various network architectures, the preprocessing technique of lung segmentation and its influence on such models remains largely unexplored. Thus, in this study, we aim to investigate the effect of applying lung segmentation to the training and testing data used by the CNN model on accuracy and loss. To achieve this, we developed two CNN models, one with and one without lung segmentation, respectively. The models were evaluated and compared, and our results demonstrate that lung segmentation can mitigate overtraining, resulting in a significant improvement in accuracy. We anticipate that this study will pave the way for further research in similar problem areas.

Published in: 2023 IEEE 5th International Conference on Cybernetics, Cognition and Machine Learning Applications (ICCCMLA)

Date of Conference: 07-08 October 2023

DOI: 10.1109/ICCCMLA58983.2023.10346717

Date Added to IEEE *Xplore*: 18 December 2023

Publisher: IEEE

Machine Learning Models for Classification of Sensitive Financial Documents

Kumar Akuthota ; A. Ganesh ; Basi Reddy A ; SivaKumar Depuru All Authors

Abstract:
This research proposes a machine learning-based approach for the automated classification of sensitive financial documents. The proposed method utilizes Support Vector Ma... **View more**

Metadata

Abstract:
This research proposes a machine learning-based approach for the automated classification of sensitive financial documents. The proposed method utilizes Support Vector Machines (SVM), Naive Bayes, and a rule-based classifier to classify categorized financial documents accurately. The system extracts relevant features from the documents and trains the models to classify them into predefined categories. The performance of each model is evaluated, and the results are compared to identify the best-performing model. The result shows that all methods achieved satisfactory results in terms of accuracy, F-Score, and execution time. The experimental results show that the Naïve Bayes classifier outperforms the other models, achieving an accuracy of 95% in classifying the financial documents. The total time consumption, which takes into account manual handling of missorts and classification of files that could not be sorted, was significantly lower for the Naive Bayes implementations. The proposed method can significantly reduce the time and effort required for manual classification and can improve the accuracy of the classification process. The version with a tolerance level performed best and showed higher precision, but lower accuracy. This research can have significant implications in the financial industry, where the automated classification of sensitive financial documents can improve operational efficiency and reduce the risk of errors.

Published in: 2023 IEEE 5th International Conference on Cybernetics, Cognition and Machine Learning Applications (ICCCMLA)

Date of Conference: 07-08 October 2023 **DOI:** 10.1109/ICCCMLA58983.2023.10346685

Date Added to IEEE *Xplore*: 18 December 2023 **Publisher:** IEEE

Development of CNN Model to Avoid the Food Spoiling Level

R. Usha ; R.Senthamil Selvan ; A Basi Reddy ; P. Chandrakanth **All Authors**

Abstract:
Food grains are sensitive to deterioration owing to precipitation temperature, humidity, and several other variables; thus, researchers are working toward novel approache... **View more**

Metadata

Abstract:
Food grains are sensitive to deterioration owing to precipitation temperature, humidity, and several other variables; thus, researchers are working toward novel approaches to preserve the dietary value of food to improve the shelf lifespan of food. Therefore, reliable methods of monitoring food deterioration are necessary to maintain current food safety standards. A prototype has been developed to monitor food quality and manage storage systems within domestic settings. The CNN (Convolutional Neural Network) model was initially utilized for fruit and vegetable classification. The proposed system utilizes actuators and sensors to monitor the emission of gases, humidity, and the temperature of vegetables and fruits to assess the degree of food spoilage. Furthermore, this measure effectively regulates the surrounding conditions and minimizes the occurrence of food deterioration whenever feasible. Customers are notified through text message when the food they ordered is about to deteriorate based on the product's freshness and condition. The used model has a confirmed accuracy of 96%. Some types of food could extend their storage life by two days, meaning the experiment succeeded.

Published in: 2023 International Conference on New Frontiers in Communication, Automation, Management and Security (ICCAMS)

Date of Conference: 27-28 October 2023

DOI: 10.1109/ICCAMS60113.2023.10525936

Date Added to IEEE *Xplore*: 15 May 2024

Publisher: IEEE

ISBN Information:

Conference Location: Bangalore, India

Smart Conversations: Enhancing User Engagement through NLP in IoT Environments

Publisher: IEEE

G. Muthugurunathan ; S. Padmapriya ; L. Leelavathy ; Veera Talukdar ; Ankur Gupta ; Manisha Mittal **All Authors**

Abstract:
The integration of NLP into IoT settings has emerged as a revolutionary framework, providing consumers with a more intuitive and participatory experience. This study exam... **View more**

Metadata

Abstract:
The integration of NLP into IoT settings has emerged as a revolutionary framework, providing consumers with a more intuitive and participatory experience. This study examines the capacity of NLP to improve user involvement in IoT ecosystems by facilitating intelligent interactions between people and linked objects. The exponential growth of IoT devices has resulted in a surge of data, necessitating the development of efficient and user-friendly interfaces to facilitate smooth interactions. NLP is crucial in connecting people and IoT devices by enabling the comprehension and production of language that resembles human communication. By adding NLP, IoT environments may give users with a conversational interface, allowing them to manage and monitor equipment with natural language instructions. This study focuses on doing a comprehensive examination of current NLP approaches and their suitability for use in IoT environments. This work examines the problems and potential of integrating NLP in various IoT situations. It specifically focuses on tackling concerns related to language variety, contextual comprehension, and the need for real-time processing. Moreover, the research examines the influence of intelligent dialogues on user involvement, highlighting the possibility of heightened user contentment, effectiveness, and availability. Case studies and practical examples demonstrate effective use of NLP in IoT applications.

Published in: 2024 11th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions) (ICRITO)

Date of Conference: 14-15 March 2024

DOI: 10.1109/ICRITO61523.2024.10522332

Date Added to IEEE *Xplore*: 14 May 2024

Publisher: IEEE

Mobile Ad Hoc Networks Supporting Adaptive Threat Detection through Intrusion Detection Effective Use of Machine Learning for Cyber Defense

Publisher: IEEE

M. Bommy ; T. Vivekanandan ; Y. Sreeraman ; D. Jagadeesan ; C. Sunil Kumar ; G. Asha **All Authors**

Abstract: Due to the ever-changing nature of MANETs, novel methods of adaptive threat identification are required to ensure user safety. In this study, we investigate how machine l... **View more**

Metadata

Abstract:

Due to the ever-changing nature of MANETs, novel methods of adaptive threat identification are required to ensure user safety. In this study, we investigate how machine learning may be used to improve MANET intrusion detection. To this end, we use a wide variety of machine learning models, such as Multilayer Perceptron (MLP) Neural Networks, Support Vector Machines (SVM), and Random Forests, and compare how well they can spot harmful activity in network data. The findings illustrate the advantages of the MLP Neural Network, giving heightened accuracy and flexibility. In addition, we develop a reinforcement learning-inspired adaptive learning technique to improve real-time intrusion detection by allowing the model to quickly adjust to changing network circumstances. Our results pave the way for future cross-domain applications and have far-reaching consequences for MANET network security. This study contributes to a more secure cyberspace by outlining the next steps for more adaptive and resilient protection of vital infrastructure, military networks, and emergency response networks.

Published in: 2023 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES)

Date of Conference: 14-15 December 2023

DOI: 10.1109/ICSES60034.2023.10465320

Date Added to IEEE *Xplore*: 19 March 2024

Publisher: IEEE

ISBN Information:

Conference Location: Chennai, India

Efficiency and Precision: Control Systems Empowered by Smart Image Processing

Gunji Sreenivasulu ; T Padmavathi ; Anagandula Nirisha ; Dudi Bhanu Prakash ; Mohammed Yousif Oudah ; K Saikumar All Authors

Abstract:
The rapid increase in the population has resulted in traffic jams on the roads. There was a corresponding increase in the number of calls for emergency services, such as ... **View more**

Metadata

Abstract:
The rapid increase in the population has resulted in traffic jams on the roads. There was a corresponding increase in the number of calls for emergency services, such as ambulances, police cars, and fire trucks. Maintaining rapid response times for emergency vehicles is critical right now. In this study, we present a smart traffic control system that integrates Internet of Things (IoT) chips into traffic signals and modifies their timing parameters. These chips will function in response to a road's estimated automobile count and the subsequent need for emergency vehicles along that route. The number of people in each automobile is going to be calculated using digital image analysis of the live camera feed. To make sure emergency vehicles get the help they require, GPS systems are going to be utilized to track the vehicles and update the chips with their current locations. It is envisioned that traffic lights on a road network will function by dynamically assigning weights for a particular node or the time among two consecutive lights. In order to maintain track of each node in the network, the weights assigned to each one must be updated in real-time.

Published in: 2023 3rd International Conference on Smart Generation Computing, Communication and Networking (SMART GENCON)

Date of Conference: 29-31 December 2023

DOI: 10.1109/SMARTGENCON60755.2023.10442573

Date Added to IEEE *Xplore*: 28 February 2024

Publisher: IEEE

ISBN Information:

Conference Location: Bangalore, India

Evaluating the Effectiveness of Spam Message Classification and Detection based on Deep Bi-GRU Method

Sameer Yadav ; Hemanand Chittapragada ; V. Sidharthan ; P.Vamsi Krishna ; Anup Kumar ; Muruganantham Ponnusamy All Authors

Abstract:
More and more people in the modern information era rely on SMS because of its low cost, great mobility, and ease of usage. However, as SMS has gotten more popular, spam m... **View more**

Metadata

Abstract:
More and more people in the modern information era rely on SMS because of its low cost, great mobility, and ease of usage. However, as SMS has gotten more popular, spam messages have emerged as a serious problem, with detrimental effects on not only people's daily lives but also public safety and social harmony. In light of this, research into the creation of technology for the intelligent classification of spam communications has assumed a higher priority, and spam message filtering has become an urgent issue demanding quick attention. The first three parts of the proposed method are preprocessing, feature selection, and model training. Chi-square and document frequency are employed for preprocessing. This study employs a genetic algorithm to select features. The models are then trained after feature selection with D-Bi-GRU. The proposed approach surpasses the two most common alternatives, GRU and Bi-GRU.

Published in: 2023 7th International Conference on Electronics, Communication and Aerospace Technology (ICECA)

Date of Conference: 22-24 November 2023

DOI: 10.1109/ICECA58529.2023.10395622

Date Added to IEEE *Xplore*: 09 February 2024

Publisher: IEEE

ISBN Information:

Conference Location: Coimbatore, India

Cloud Computing Based Medical Activity Supporting System

G Vasundhara Devi ; R.Senthamil Selvan ; D. Sharada Mani ; Mr. Sakshi ; Aashdeep Singh All Authors •••

Abstract:
The Internet of Things (IoT) has become an indispensable resource in contemporary healthcare, allowing for accurate patient data administration, efficient healthcare mana... **View more**

Metadata

Abstract:
The Internet of Things (IoT) has become an indispensable resource in contemporary healthcare, allowing for accurate patient data administration, efficient healthcare management, and realtime patient monitoring. The goal of the suggested system is to create a device that can monitor the oxygen level, temperature, and heart rate of patients using various sensors, and it can also halt backward blood flow by stopping saline solution. The suggested system may also monitor the room's humidity as well as temperature to enhance the patient's comfort. In an emergency, it is possible to promptly notify medical professionals and initiate necessary procedures by pressing an emergency button. Healthcare providers, including doctors and nurses, can use it to track their patients better and respond quickly to any problems.

Published in: 2024 2nd International Conference on Disruptive Technologies (ICDT)

Date of Conference: 15-16 March 2024

DOI: 10.1109/ICDT61202.2024.10489245

Date Added to IEEE *Xplore*: 11 April 2024

Publisher: IEEE

ISBN Information:

Conference Location: Greater Noida, India

Contents

Music and Emotions - A tool to create new playlists for a musical listening device in seclusion rooms in psychiatric hospitals

Publisher: IEEE

Cédric Bornand ; Angelika Güsewell ; Emilie Bovet ; Gilles Bangerter ; Alexia Stantzos ; Goutam Chakraborty All Authors

Abstract:
This article presents research designed to demonstrate the impact of a musical listening device in psychiatric intensive care. The results described in this work are base... **View more**

Metadata

Abstract:
This article presents research designed to demonstrate the impact of a musical listening device in psychiatric intensive care. The results described in this work are based on statistical data on the effect of listening to music, and on interviews with patients and caregivers. This contribution focuses on patients' listening strategies, as well as on the way caregivers appropriate the device. We elaborate the case study first. Finally, the article points out several improvements to the system suggested by the research findings, particularly through the use of artificial intelligence.

Published in: 2023 1st International Conference on Optimization Techniques for Learning (ICOTL)

Date of Conference: 07-08 December 2023

DOI: 10.1109/ICOTL59758.2023.10435340

Date Added to IEEE *Xplore*: 19 February 2024

Publisher: IEEE

ISBN Information:

Conference Location: Bengaluru, India

Contents

Department of Computer Science & Engineering

AY: 2023 – 24 Faculty Patent Published Details

S. No	Name of Faculty	Designation	Title	Application Number	Date of Filing	Publication Date
1	Dr S Elango	Asst. Professor	Automated Home Control Device	389956-001	10.07.2023	22.03.2024
2	Mr. S. Srinivas Kumar	Asst. Professor	Statistical Algorithms and Machine Learning Techniques for Predicting Stock Market Movements	2.02E+11	16/02/2024	03-08-2024
3	Mr. Gandi Ramakrishna	Asst. Professor	Patient Behavioral Analysis System Based On Intelligenthealthcare And Internet Of Things System	202341089680 A	29/12/2023	19/01/2024
4	Dr S Elango	Asst. Professor	IOT based Street cleaning vehicle	387875-001	07.06.23	25.08.23
5	Mr. S. Srinivas Kumar	Asst. Professor	Smart Inter-Transfer Data Drive	202341053751 A	08-10-2023	09-01-2023
6	Mr. S. Srinivas Kumar	Asst. Professor	Artificial Intelligence And Cognitive Language, Vision, And Emotion-Based Approaches To Dealing With Stress During Workplace Stress Management	202341078055 A	17/11/2023	29/12/2023
7	Mrs. Sangeetha.M	Asst. Professor	Artificial Neural Network based Capacitance Prediction Model for Optimal Voltage Control Generator	202341042519A	25.06.2023	01.09.2023
8	Ms. Ramya Palaniappan	Asst. Professor	Artificial Intelligence-Enhanced Prosthetic Limb For Intuitive Operation And Sensory Feedback	2.02341E+11	11-11-2023	22/12/2023

9	Mr. G.Muthugurunathan	Asst. Professor	Smart Device For Network Intrusion Detection	6338063	07.01.2024	18.01.2024
10	Mr. S. Srinivas Kumar	Asst. Professor	Smart Inter -Tranfer Data Drive	2.02E+11	28/8/2023	27/3/2024
11	Mrs.V. Nirupa	Asst. Professor	Embedded Technology Based Patient Drips L	202441033799 A	29-04-2024	03-05-2024
12	Dr. G. Sreenivasulu	Asst. Professor	IOT and ML Based Elders support System For Independence in Daily Life	2.02441E+11	06-04-2024	12-04-2024
13	Mrs. G. B. Renuka	Asst. Professor	Embedded Technology Based Patient Drug Level Monitoring System	2.02441E+11	29-04-2024	03-05-2024
14	Mr.M.Mohan	Asst. Professor	Infrared Projector For Vein Detection	404874-001	18/01/2024	03-01-2024
	Total=14					

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सत्यमेव जयते

ORIGINAL
क्रम सं/ Serial No. : 161006

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. : 389956-001

तारीख / Date : 10/07/2023

पारस्परिकता तारीख / Reciprocity Date* :

देश / Country :

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो *AUTOMATED HOME CONTROL DEVICE* से संबंधित है, का पंजीकरण, श्रेणी 13-03 में 1.Dr. S Elango 2. Dr.M.Shunmuga Priyan 3.Jammana Lalu Prasad 4.Vinod Kumar 5.Prof. Amruta Jagdish Killol 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 13-03 in respect of the application of such design to *AUTOMATED HOME CONTROL DEVICE* in the name of 1.Dr. S Elango 2. Dr.M.Shunmuga Priyan 3.Jammana Lalu Prasad 4.Vinod Kumar 5.Prof. Amruta Jagdish Killol.

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 : 22/03/2024

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

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/02/2024

(21) Application No.202441011029 A
(43) Publication Date : 08/03/2024

(54) Title of the invention : STATISTICAL ALGORITHMS AND MACHINE LEARNING TECHNIQUES FOR PREDICTING STOCK MARKET MOVEMENTS

(51) International classification :G06Q0040040000, G06K0009620000, G06N0020000000, A61B0005110000, H04L0047830000
(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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9)K Vetri
10)Anthony Savio Herminio da Piedade Fernandes
11)Jyoti Prasad Patra
12)Seepuram Srinivas Kumar
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11)Jyoti Prasad Patra
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12)Seepuram Srinivas Kumar
Address of Applicant :Assistant Professor,Department of Computer Science & Engineering,Madanapalle Institute of Technology & Science (UGC - Autonomous),Madanapalle,Pincode - 517325 Madanapalle ---------- ----------

(57) Abstract :
Statistical algorithms and machine learning techniques for predicting stock market movements is the proposed invention. The proposed invention focuses on understanding the functions of stock market. The invention focuses on analyzing the parameters of prediction of stock market movements using statistical algorithms.

No. of Pages : 11 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/12/2023

(21) Application No.202341089680 A
(43) Publication Date : 19/01/2024

(54) Title of the invention : PATIENT BEHAVIORAL ANALYSIS SYSTEM BASED ON INTELLIGENTHEALTHCARE AND INTERNET OF THINGS SYSTEM

(51) International classification	:A61B0007040000, G16H0040200000, A61B0005000000, A61K0036730000, 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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2)Suresh Babu P
Name of Applicant : NA
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(72)**Name of Inventor :**
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(57) Abstract :
In today's world the patient is not been getting sufficient treatment mostly in rural areas because of few factors which includes unavailability of doctor, appointment period, etc. Suppose if he gets on time appointment but then too the personal assistant is not appropriate at times and every time the patient needs to visit the doctor and take personal medication. The body temperature, blood pressure, heart sound sensor, and pulse rate sensor are all maintained by the Raspberry Pi 3 in the smart healthcare system. The smart healthcare system makes use of a variety of hardware. This work's main goal is to implement a heart sound signal acquisition system with an eye toward Internet of Things deployment. Additionally, this system has inbuilt sensors for monitoring important data, including body temperature.

No. of Pages : 11 No. of Claims : 4

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

सत्यमेव जयते

ORIGINAL
क्रम सं/ Serial No. : 142643

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.	:	387875-001
तारीख / Date	:	07/06/2023
पारस्परिकता तारीख / Reciprocity Date*	:	
देश / Country	:	

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो *IOT BASED STREET CLEANING VEHICLE* से संबंधित है, का पंजीकरण, श्रेणी 12-13 में 1.Dr. S. Kumarganesh 2. Dr. P. A. Gowri Sankar 3.Dr. K. Jayaram 4.Dr. S. Elango 5.Dr. P. Vijayalakshmi 6.Dr. K. Muthumanickam 7.Dr. K. Gowsic 8.Dr. M. Suganthi 9.Dr. A. Immanuvel 10.Dr. P. N. Palanisamy 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 12-13 in respect of the application of such design to *IOT BASED STREET CLEANING VEHICLE* in the name of 1.Dr. S. Kumarganesh 2. Dr. P. A. Gowri Sankar 3.Dr. K. Jayaram 4.Dr. S. Elango 5.Dr. P. Vijayalakshmi 6.Dr. K. Muthumanickam 7.Dr. K. Gowsic 8.Dr. M. Suganthi 9.Dr. A. Immanuvel 10.Dr. P. N. Palanisamy.

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 : 23/08/2023

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

*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 :10/08/2023

(21) Application No.202341053751 A
(43) Publication Date : 01/09/2023

(54) Title of the invention : SMART INTER-TRANSFER DATA DRIVE

(51) International classification :G06F0003060000, A61B0017221000, G11C0007120000, H02J0003320000, B05B0007240000
(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 present embodiment relates to data storage and retrieval devices, and more particularly is discloses a device to efficiently transfer an electronic data from one or more storage devices to a plurality of other devices with no purpose for a computing device. The device drive is configured to comprise a plurality of ports to receive a plurality of storage devices and further configured to accommodate a touch interfaced interactive console to correspondingly access a respective drive and interact aiming at the navigating and performing a hassle free transaction.

No. of Pages : 18 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :17/11/2023

(21) Application No.202341078055 A
(43) Publication Date : 29/12/2023

(54) Title of the invention : ARTIFICIAL INTELLIGENCE AND COGNITIVE LANGUAGE, VISION, AND EMOTION-BASED APPROACHES TO DEALING WITH STRESS DURING WORKPLACE STRESS MANAGEMENT

(51) International classification :A61B0005160000, A61B0005000000, A61B0005024000, G06K0009620000, H01L0023000000
(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 :
Artificial intelligence and cognitive language, vision, and emotion-based approaches to dealing with stress during workplace stress management is the proposed invention. The proposed invention focuses on studying/understanding the functions of stress management using algorithms of cognitive language, vision, and emotion-based approaches. The invention focuses on analyzing the parameters of stress during workplace stress management using algorithms of Artificial Intelligence.

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

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/06/2023

(21) Application No.202341042519 A
(43) Publication Date : 01/09/2023

(54) Title of the invention : ARTIFICIAL NEURAL NETWORK BASED CAPACITANCE PREDICTION MODEL FOR OPTIMAL VOLTAGE CONTROL GENERATOR

(51) International classification :G06N0003040000, G06N0003080000, H03L0001020000, G06N0003020000, H03L0001040000
(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 :
A target frequency can be produced by an electronic oscillator employing systems and techniques that use an artificial neural network processing module to correct a control voltage and provide a linear output response. One or more neurons in the processing unit of the artificial neural network are in communication with one or more inputs that correspond to the control voltage. The processing module for the artificial neural network is set up to offer a correction that is at least partially dependent on the control voltage and pre-determined DAC values. The pull ranges and linear control voltage transfer functions play a role in determining the pre-calculated DAC values.

No. of Pages : 11 No. of Claims : 3

patent

Office of the Controller General of Patents, Designs & Trade Marks
Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India

(http://ipindia.nic.in/index.htm)

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Application Details

APPLICATION NUMBER	202341077087
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	11/11/2023
APPLICANT NAME	1 . Mr.M.Selvam 2 . Dr.O.M.Saravanakumar 3 . Mr.A.P.Rajesh 4 . Dr. Supriya Gupta Bani 5 . Ms.Ramya Palaniappan 6 . Prof.B.Rajakumar 7 . Dr. Dahlia Sam 8 . Mr.Vinoth Kumar M 9 . Dr. Nitin R. Chopde 10 . Karimulla Syed
TITLE OF INVENTION	ARTIFICIAL INTELLIGENCE-ENHANCED PRO INTUITIVE OPERATION AND SENSORY FEED
FIELD OF INVENTION	COMPUTER SCIENCE
E-MAIL (As Per Record)	mail2patentipr@gmail.com
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	

Intellectual Property Office

Certificate of Registration for a UK Design

Design number: 6338063

Grant date: 18 January 2024

Registration date: 07 January 2024

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Dr. Sanjay Kumar, Dr. Vishnuvarthanan Govindaraj, Sabeena Gnana Selvi, Muthugurunathan Ganesan, Jayakumar Loganathan, Neha Pandey, Karunanidhi Subash, Vishwas Sharma, Dhayalini Karuppiah, Prof. (Dr.) Subhrendu Guha Neogi

in respect of the application of such design to:

SMART DEVICE FOR NETWORK INTRUSION DETECTION

International Design Classification:
Version: 14-2023
Class: 10 CLOCKS AND WATCHES AND OTHER MEASURING INSTRUMENTS, CHECKING AND SIGNALLING INSTRUMENTS
Subclass: 05 INSTRUMENTS, APPARATUS AND DEVICES FOR CHECKING, SECURITY OR TESTING

Adam Williams

Adam Williams
Comptroller-General of Patents, Designs and Trade Marks
Intellectual Property Office
The attention of the Proprietor(s) is drawn to the important notes overleaf.

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :10/08/2023

(21) Application No.202341053751 A
(43) Publication Date : 01/09/2023

(54) Title of the invention : SMART INTER-TRANSFER DATA DRIVE

(51) International classification :G06F0003060000, A61B0017221000, G11C0007120000, H02J0003320000, B05B0007240000
(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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5)Dr. Parthasarathi Patra Harekrushna
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(57) Abstract :
The present embodiment relates to data storage and retrieval devices, and more particularly is discloses a device to efficiently transfer an electronic data from one or more storage devices to a plurality of other devices with no purpose for a computing device. The device drive is configured to comprise a plurality of ports to receive a plurality of storage devices and further configured to accommodate a touch interfaced interactive console to correspondingly access a respective drive and interact aiming at the navigating and performing a hassle free transaction.

No. of Pages : 18 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :29/04/2024

(21) Application No.202441033799 A

(43) Publication Date : 03/05/2024

(54) Title of the invention : EMBEDDED TECHNOLOGY BASED PATIENT DRIPS LEVEL MONITORING SYSTEM

(51) International classification	:G16H0040670000, G16H0080000000, A61B0005000000, G16H0010600000, 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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4)VINOD

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(57) Abstract :

Improved wellness is the key to human fulfilment and achievement. The key to offering such joy is patient security, which is the absence of unwanted injury to the patient throughout medical procedures. Every stage of delivering care entails some level of risk or vulnerability. Saline, one of the most often used intravenous medicines, plays an important part in the treatment of patients who are genuinely sick. It is critical to monitor the saline jug's level because if it runs out, blood will flow into the container even if the needle is still near to the vein. Attendants or overseers at medical clinics are in charge of checking the level of the saline jug. The bulk ofthe time, owing to ignorance or an exceptional circumstance, the precise moment of extracting the needle from the patient's vein is forgotten, resulting in a big setback and should urge passing. Tele health services may necessitate remote monitoring. We proposed the intelligent clever saline level to avoid accidents caused by ignorant parents and to enable remote monitoring in telehealth administrations. A checking equipment that combings sensor and Internet of Things technologies. This framework was constructed with a load sensor and a tiny regulator that consumes very little power.

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

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Ministry of Commerce & Industry,
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Application Details

APPLICATION NUMBER	202441028450
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	06/04/2024
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FIELD OF INVENTION	COMMUNICATION
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PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	12/04/2024

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Application Details

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APPLICANT NAME	1 . B.Rajalakshmi 2 . G.Vishnupriya 3 . B.Shyamala Gowri 4 . S.Yaswanth 5 . A.Yuvanraj 6 . M Mohamed Harif 7 . Dr.Sundara Balamurugan .P 8 . Dr. B. C. Brightlin 9 . Dr.S.B.Prakalya 10 . Ms.G B Renuka
TITLE OF INVENTION	HARNESSING THE POWER OF XCEPTIONNET AND MOBILENET FOR COLON CANCER DETECTION
FIELD OF INVENTION	BIO-MEDICAL ENGINEERING
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Application Status

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Department of Computer Science & Engineering

AY: 2023 – 24 Faculty Book/Book Chapter Publication Details

S.No	Name of the Faculty	Designation	AUTHOR(S)	BOOK CHAPTER TITLE	ISSN/ISBN	Publisher
1	Dr. R. Nidhya	Professor	R. Nidhya, D. Pavithra, R. Kalpana, M. Kathirvelu & P. Jayarajan	Energy Harvesting Scheme Using Queuing Theory for Wireless Body Area Network	978-3-031-35965-1	Springer - EAI/Springer Innovations in Communication and Computing book series (EAISICC)
2	Dr. G. Arun Kumar	Assoc. Professor	Shivlal Mewada, K.S. Riya, Brahmadesam Viswanathan Krishna, G. Arunkumar	Internet of Things (IoT) and Machine Learning for transportation	ISBN 9781032335346	CRC Press Taylor and Francis Group Florida USA,
3	Dr. K. Sudhakar	Sr. Asst. Professor	P. V. Pramila, G. Dineshnath, K. Sudhakar, R. Jothilakshmi, H. C. Sudheendramouli, M. Sudhakar.	Sustainable Developments of Human-Machine Interaction for Knowledge Discovery and Management: Healthcare and Agricultural Domains	ISBN13: 9798369311868|EISBN13: 9798369311875	IGI Global
4	Dr. K. Sudhakar	Sr. Asst. Professor	U.Rahamathunnisa, Akash Mohanty, K. Sudhakar, S. Anitha Jebamani, R. Udendhran, Sureshkumar Myilsamy	Machine Learning and Deep Learning for Intelligent Systems in Small Aircraft Applications	ISBN13: 9781668499993	IGI Global
			U. Rahamathunnisa, K. Sudhakar, S. N. Padhi,	Sustainable Energy		

5	Dr. K. Sudhakar	Sr. Asst. Professor	Sumanta Bhattacharya, G. Shashibhushan, Sampath Boopathi	Generation from Waste Water: IoT Integrated Technologies	ISBN13: 9781668453476	IGI Global
6	Dr. K. Sudhakar	Sr. Asst. Professor	Akash Mohanty, U. Rahamathunnisa, K. Sudhakar, R. Sathiyaraj	Age of Computational AI for Autonomous Vehicles	9.78112E+12	Wiley
7	Mr. Gandi Ramakrishna	Asst. Professor	J. Jeyaranjani K.Rangaswamy,Gandi Ramakrishna	Navigating Green Computing Challenges and Strategies for Sustainable Solutions	ISBN 13: 9798369315521	IGI Global
8	Mr. J Nagaraj	Asst. Professor	B. Prabha, J. Nagaraj, Akula Hemanth, Atmakuri Kasi Viswanath, Bharath Gadde , Sowmithri Suravarapu	Enhancing Intelligent Video Surveillance: Deep Learning Approaches for Human Anomalous Behavior Recognition	978-981-99-9524-0	Advances in Data-Driven Computing and Intelligent Systems
9	Mr. G. Muthugurunathan	Asst. Professor	R. Dilip, V. Deepti, S. Mahadev, N. Tejashwini, G. Muthugurunathan, Manasa, Sabyasachi Pramanik	An Analysis of AI in Healthcare: A Comprehensive Study on India	9.79837E+12	IGI Global Publishing
10	Dr. G. Arun Kumar	Assoc. Professor	D. Saravanan, R. Parthiban, G. Arunkumar, D. Suganthi, R. Revathi, U. Palani	Detecting Healthcare Issues Using a Neuro-Fuzzy Classifier	9.78139E+12	Wiley Online Library
11	Dr. G. Arun Kumar	Assoc. Professor	Norma Ramírez-Asís, Ursula Lezameta-Blas, Anil Kumar Bisht, G. Arunkumar, Jose Rodriguez-Kong, D. Saravanan	Development of the Fuzzy Logic System for Monitoring of Patient Health	9.78139E+12	Wiley Online Library

12	Dr. G. Arun Kumar	Assoc. Professor	L. Rajeshkumar, J. Rachel Priya, Konatham Sumalatha, G. Arunkumar, D. Suganthi, D. Saravanan	Management of Trust Between patient and IOT using Fuzzy Logic theory	9.78139E+12	Wiley Online Library
13	Dr.R.SUNDAR	Asst. Professor	Sundar, R. Srikaanth, P.B. Naik, D.A. Karumudi, M, Boopathi, S	Achieving balance between innovation and security in the cloud with artificial intelligence of things: Semantic web control models	DOI: 10.4018/979-8-3693-1487-6.ch001	Wiley Online Library

Total - 13

Energy Harvesting Scheme Using Queuing Theory for Wireless Body Area Network

| Chapter | First Online: 30 September 2023

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Energy Harvesting Trends for Low Power Compact Electronic Devices

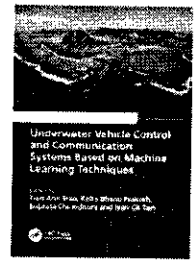
R. Nidhya, D. Pavithra, R. Kalpana, M. Kathirvelu & P. Jayarajan

Part of the book series: EAI/Springer Innovations in Communication and Computing ((EAISICC))

Abstract

Wireless devices assault the medical field because of its substantial different capacity. The patient point of interest in blinking provisional is to display on overhead exploiting obtainable innovations. Using advanced wireless technologies, this scenario has been conquered. Without being inculcating inside the human body, remote health checking and

Chapter



Internet of Things and Machine Learning for Transportation System Using Adaptive Enhanced K-Nearest Neighbor Algorithm

By Shivlal Mewada (/search?contributorName=Shivlal Mewada&contributorRole=author&redirectFromPDP=true&context=ubx), K.S. Riya (/search?contributorName=K.S. Riya&contributorRole=author&redirectFromPDP=true&context=ubx), Brahmadesam Viswanathan Krishna (/search?contributorName=Brahmadesam Viswanathan Krishna&contributorRole=author&redirectFromPDP=true&context=ubx), G. Arunkumar (/search?contributorName=G. Arunkumar&contributorRole=author&redirectFromPDP=true&context=ubx)

Book Underwater Vehicle Control and Communication Systems Based on Machine Learning Techniques (https://www.taylorfrancis.com/books/mono/10.1201/9781003320074/underwater-vehicle-control-communication-systems-based-machine-learning-techniques?refId=ee643620-b7c7-45e7-9606-2fb25eae9a36&context=ubx)

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ABSTRACT

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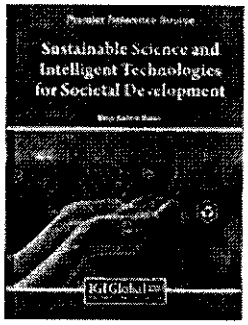

Sustainable Developments of Human-Machine Interaction for Knowledge Discovery and Management: Healthcare and Agricultural Domains

P. V. Pramila (/affiliate/p-v-pramila/452759/), G. Dineshnath (/affiliate/g-dineshnath/452760/), K. Sudhakar (/affiliate/k-sudhakar/452761/), R. Jothilakshmi (/affiliate/r-jothilakshmi/452762/), H. C. Sudheendramouli (/affiliate/h-c-sudheendramouli/452763/), M. Sudhakar (/affiliate/m-sudhakar/452764/)

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Abstract

Human-machine interaction (HMI) is an important field in knowledge discovery and management, allowing for improved user engagement, decision-making, and efficiency. It involves user-centered design, information architecture, visualization, recommendation systems, collaborative filtering, machine learning, feature extraction, dimensionality reduction, clustering, classification, evaluation, validation, text mining, sentiment analysis, topic modelling, information extraction, opinion mining, and language generation. A case study in the healthcare and agricultural domains demonstrated the practical implementation of HMI in knowledge discovery and highlighted the positive impact of HMI approaches in addressing challenges specific to healthcare knowledge management. In conclusion, HMI plays a pivotal role in knowledge discovery and management, enabling users to effectively explore and extract valuable insights from complex datasets.

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Introduction

The field of Human-Machine Interaction (HMI) focuses on the design, development, and study of systems and interfaces that facilitate interaction between humans and machines. HMI plays a crucial role in various domains, including knowledge discovery and management. Human-Machine Interaction (HMI) refers to the study, design, and implementation of interfaces and systems that facilitate communication and interaction between humans and machines. It encompasses the development of user-friendly interfaces, intuitive controls, and intelligent systems that enable effective collaboration and seamless integration between humans and technology. HMI involves understanding how humans interact with machines, including computers, software applications, robots, and other technological devices(Wittenberg, 2016). It aims to create user-friendly and efficient interfaces that enable effective communication and collaboration between humans and machines. The importance of HMI lies in its ability to enhance user experiences, improve productivity, and enable users to effectively utilize complex systems and technologies. By considering human capabilities, limitations, and preferences, HMI strives to design interfaces that are intuitive, engaging, and supportive of users' goals and tasks(Levin et al., 2000).

The evolution of HMI has been shaped by advancements in technology, ranging from early text-based interfaces to modern touchscreens, voice recognition, gesture control, and virtual reality. HMI has also been influenced by various disciplines, including human-computer interaction, cognitive psychology, design thinking, and user-centered design. Challenges in HMI include understanding user needs, preferences, and contexts of use, as well as designing interfaces that are accessible, inclusive, and adaptable to diverse users(Gorecky et al., 2014). Additionally, HMI must address issues of system reliability, data privacy, and ethical considerations, ensuring that interactions between humans and machines are secure, transparent, and trustworthy. Opportunities in HMI arise from emerging technologies such as artificial intelligence, machine learning, natural language processing, and augmented reality. These technologies offer new possibilities for creating intelligent and adaptive interfaces that can understand and respond to human intentions, preferences, and emotions(Mahmud et al., 2020).

Machine Learning and Deep Learning for Intelligent Systems in Small Aircraft Applications

U. Rahamathunnisa (/affiliate/u-rahamathunnisa/456529/), Akash Mohanty (/affiliate/akash-mohanty/456530/), K. Sudhakar (/affiliate/k-sudhakar/456531/), S. Anitha Jebamani (/affiliate/s-anithajebamani/456532/), R. Udendhran (/affiliate/r-udendhran/456533/), Sureshkumar Myilsamy (/affiliate/sureshkumar-myilsamy/456534/)

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Abstract

This chapter explores the integration of machine learning and deep learning techniques in small aircraft applications. The aviation industry is exploring innovative solutions to improve safety, efficiency, and performance in these operations. The chapter explores the advantages, challenges, and future prospects of implementing intelligent systems in small aircraft, including autopilot systems, navigation assistance, fault detection, and pilot support systems. Real-world case studies and applications demonstrate the transformative impact of these technologies on small aircraft operations. The chapter provides a comprehensive overview of the latest advancements in machine learning and deep learning, highlighting their pivotal role in improving small aircraft intelligence, safety, and efficiency.

Chapter Preview

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Introduction

The integration of machine learning and deep learning technologies into small aircraft applications represents a significant leap forward in the aviation industry. As aviation continues to advance, there is a growing demand for innovative solutions that enhance the safety, efficiency, and overall performance of small aircraft. Machine learning and deep learning have emerged as powerful tools to address these demands, offering the potential to revolutionize how small aircraft operate and interact with their environments. Small aircraft play a crucial role in various industries, from agriculture and surveillance to personal transportation. Ensuring the safety, efficiency, and reliability of these aircraft is paramount (Ali, 1990). Advancements in machine learning and deep learning are revolutionizing the development of intelligent systems for small aircraft applications, shaping their future.

One of the most critical aspects of small aircraft operations is safety. Machine learning has made significant strides in predictive maintenance. By analyzing data from sensors and historical maintenance records, ML algorithms can predict when components are likely to fail, allowing for proactive maintenance. This not only reduces the risk of in-flight failures but also extends the lifespan of critical aircraft components. Additionally, deep learning techniques can analyze complex sensor data, such as images and audio, to detect anomalies that may not be apparent through traditional methods (Li & Gupta, 1995). These advancements help small aircraft operators identify and address potential issues before they become critical.

Autonomous flight capabilities are becoming increasingly important in small aircraft applications. Machine learning algorithms can process data from various sensors, including GPS, lidar, and cameras, to enable precise navigation and obstacle avoidance. These systems are particularly valuable in scenarios where human pilots may face challenges, such as low visibility conditions or remote locations (Krishnakumar, 2002). Deep learning, with its ability to handle vast amounts of data, allows small aircraft to adapt to changing environments in real-time. This means improved safety and efficiency, especially for tasks like crop monitoring, where consistent and precise flight paths are essential.

Efficiency is a key factor in the operation of small aircraft, particularly for applications like aerial surveillance, search and rescue, or wildlife monitoring. Machine learning can optimize flight routes, taking into account factors like weather conditions, wind patterns, and fuel consumption (Volponi et al., 2004). By constantly analyzing and adjusting the flight plan, small aircraft can minimize fuel usage and extend their operational range. Deep learning, in combination with computer vision, can also aid in target identification and tracking during surveillance missions. These systems can automatically detect and classify objects of interest, reducing the workload on human operators.

Small aircraft operators can benefit from the collaboration between humans and intelligent systems. Machine learning models can provide real-time assistance to pilots by processing data from various sensors and offering suggestions for optimal decision-making. This human-machine collaboration not only enhances safety but also reduces pilot fatigue and workload (Long et al., 2007). Moreover, deep learning models can analyze data from on-board cameras to monitor pilot behavior. By detecting signs of fatigue or distraction, these systems can issue alerts or take corrective actions, ensuring that pilots remain focused and alert during their missions.

Advancements in machine learning and deep learning are transforming small aircraft applications by enhancing safety, efficiency, and reliability. Predictive maintenance, autonomous navigation, and optimized operations are just a few examples of how these technologies are reshaping the small aircraft industry (Buckley et al., 2014). The evolution of technologies will lead to more sophisticated and capable intelligent systems for small aircraft, benefiting traditional industries and opening new possibilities in urban air mobility and environmental monitoring, thanks to machine learning and deep learning algorithms.

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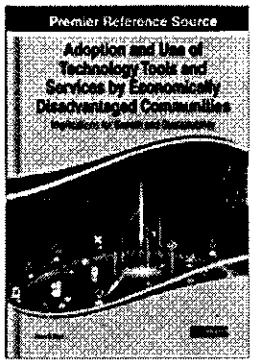

Sustainable Energy Generation From Waste Water: IoT Integrated Technologies

U. Rahamathunnisa, K. Sudhakar, S. N. Padhi, Sumanta Bhattacharya (/affiliate/sumanta-bhattacharya/455713/), G. Shashibhushan, Sampath Boopathi

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Abstract

This chapter investigates the conversion of wastewater into sustainable energy through the use of novel methods such as anaerobic digestion, microbial fuel cells, geothermal desalination, and internet of things (IoT) integration. It underlines the significance of wastewater treatment and energy sustainability, as well as the need for cost-effective solutions. IoT for real-time data collecting, analysis, and control can help with sustainable wastewater treatment and energy generation. Anaerobic digestion generates biogas, whereas microbial fuel cells convert organic molecules into energy. Geothermal desalination provides low-cost energy efficiency. IoT technology enhances performance, lowers energy consumption, and allows for remote monitoring and maintenance, all of which contribute to a more sustainable and resilient future.

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Introduction

Wastewater treatment is crucial for environmental health and public safety. The plants remove pollutants and ensure purity and cleanness' of water, but they consume energy, causing operational costs and carbon emissions. Researchers are exploring renewable energy sources like anaerobic digestion, microbial fuel cells, and geothermal desalination. The chapter also discusses the integration of IoT in these processes for enhanced efficiency and environmental benefits. Anaerobic digestion is a technology that uses microorganisms to break down organic matter in wastewater without oxygen, producing biogas as a by-product. This process converts organic waste into biogas, which can be used as a renewable energy source for electricity generation and heat production. Implementing anaerobic digestion in wastewater treatment plants not only manages organic waste but also recovers valuable energy, reducing reliance on non-renewable resources (Llácer-Iglesias et al., 2021).

Microbial Fuel Cells (MFCs) are a promising technology for sustainable energy production from wastewater. They use microorganisms' metabolic activities to generate electricity, allowing continuous electricity generation. MFCs have potential in wastewater treatment systems, offering simultaneous pollutant removal and energy recovery. Research aims to improve MFC performance and scalability for practical applications. Geothermal desalination is an innovative approach that combines geothermal energy with desalination processes, converting seawater or brackish water into freshwater. This approach offers high energy efficiency and reduced dependence on fossil fuels, addressing freshwater scarcity and generating renewable energy simultaneously (Chandrasekhar et al., 2020).

IoT technology improves bioenergy generation efficiency by enabling real-time monitoring, data collection, and analysis of parameters in anaerobic digestion, MFCs, and geothermal desalination systems. Operators can remotely monitor process variables, identify issues, and optimize energy production and water treatment efficiency (Boopathi & Myilsamy, 2021; Haribalaji et al., 2021; Sampath et al., 2022). IoT-based control and automation systems offer improved operational management, reduced energy consumption, and predictive maintenance, leading to cost savings and environmental

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Chapter 2

Age of Computational AI for Autonomous Vehicles

Akash Mohanty, U. Rahamathunnisa, K. Sudhakar, R. Sathiyaraj

Book Editor(s):Sathiyaraj Rajendran, Munish Sabharwal, Yu-Chen Hu, Rajesh Kumar Dhanaraj, Balamurugan Balusamy

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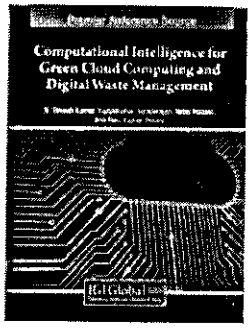
Summary

Autonomous vehicles have made a great impact on research and industrial growth over the past era. The automobile industry is now being revolutionized by self-driving (or driverless) technology owing to enhanced and advanced autonomous vehicles that make use of cutting-edge computational methods from the fields of machine intelligence and artificial intelligence (AI). Autonomous vehicles are now able to assess their surroundings with high accuracy, make sensible choices in real-time environments, and function legitimately without human intervention and technological advancements in the arena of computationally powerful AI algorithms. The development of autonomous vehicles relies heavily on cutting-edge computational technologies. The chapter aims to review the contemporary methods of computational models over time and presents the computational models in the arena of Machine Learning, its subset Deep Learning and Artificial Intelligence. The chapter initially discusses the role of AI, followed by its autonomy levels. The learning algorithms that perform continual learning are addressed along with advances in intelligent vehicles. We disparagingly evaluate the key issues with computational approaches for driverless complex applications. Integration of computational technologies is presented in brief, addressing how technologies can empower autonomous vehicles. Classification of technological advancements with future directions was given and concluded.

References

Parekh , D. , Poddar , N. , Rajpurkar , A. , Chahal , M. , Kumar , N. , Joshi , G.P. , Cho , W. , A review on autonomous vehicles: Progress, methods and challenges . *Electronics* , 11 , 14 , 2162 , 2022 .



Navigating Green Computing Challenges and Strategies for Sustainable Solutions

J. Jeyaranjani, K. Rangaswamy, A. Ashwitha, Ramakrishna Gandi, R. Roopa, P. Anjaiah

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Abstract

The adoption of green computing is crucial due to cost reduction and environmental responsibility. However, challenges hinder progress. This research explores solutions for balancing industrial growth with sustainability and addresses green computing obstacles. Recognizing industry's importance while mitigating its environmental impact is vital. Strategies to reduce waste and energy use, like cloud computing and virtualization, can help. Implementing a circular economy approach makes products regenerative and less wasteful. This research provides real-world case studies and insights, aiding businesses in adopting greener, more sustainable computing practices for a cost-effective, environmentally responsible tech landscape.

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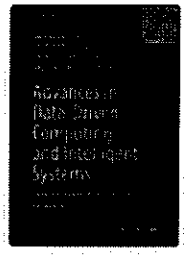
Introduction

Green computing and Green IT have become more well-known in recent years. They describe the environmentally responsible design and use of computer hardware, information technology, and communication technologies. This includes adopting energy-efficient servers, peripherals, and central processing units, as well as encouraging resource conservation and appropriate e-waste disposal. Modern technology and gadgets are all around us as if they were essential components of our daily existence, and their effects on the environment are something we cannot overlook. The scope of IoT is broad, ranging from everyday appliances to industrial machinery and environmental sensors.

On the other hand, green computing is a practice that focuses on environmentally conscious methods within the Information Technology realm. Its relevance has increased due to the rapid expansion of cloud computing and the associated energy costs. By utilizing energy-efficient hardware, optimizing data centers, and promoting efficient renewable energy adoption to power I.T. infrastructure, Green computing seeks to make I.T. systems and operations more energy-efficient and eco-friendly (Alsharif, 2023). Promoting an ecologically conscious and sustainable attitude towards technology is crucial. This can be achieved by reducing energy usage and minimizing technological waste. Cloud computing has significantly increased the cost of operating I.T. infrastructure. In response to this problem, green computing was created. Today, there is growing concern about the relationship between energy use and carbon emissions and the need to reduce both. The expansion of data centers has led to a significant increase in energy consumption, which has had detrimental effects on the environment. Enterprise data centers are responsible for more than 50% of a company's energy costs and roughly half its carbon footprint (Foley, 2007; Kumar, 2014).

Growing environmental concerns have brought considerable attention to green computing and sustainable design approaches in modern years (Jänick, 2012). This study explores the connection between these two concepts, highlighting the challenges and possibilities they provide for creating a more sustainable future. With the industry's rapid growth, energy consumption and electronic waste have become critical environmental concerns (Xu M. a., 2019). We need to find innovative strategies to mitigate the environmental impacts of information technology. This study examines ways to maximize energy efficiency, reduce electronic waste, and promote responsible technology usage. It also scrutinizes the tenets of sustainable design, emphasizing the need for environmentally friendly products that consider the entire life cycle. To help organizations, politicians, and consumers make well-informed decisions regarding technology usage and design, this study addresses these issues and promotes sustainable design practices. The journey towards a more sustainable and eco-friendly digital future begins with an understanding of these challenges and a commitment to responsible technology usage and design.



International Conference on Advances in Data-driven Computing and Intelligent Systems

ADCIS 2023: **Advances in Data-Driven Computing and Intelligent Systems** pp 77–87

Enhancing Intelligent Video Surveillance: Deep Learning Approaches for Human Anomalous Behavior Recognition

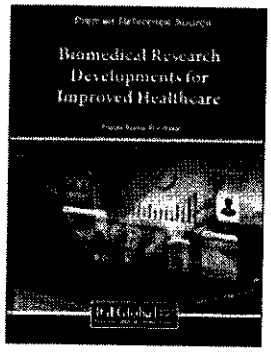
B. Prabha ✉, J. Nagaraj, Akula Hemanth, Atmakuri Kasi Viswanath, Bharath Gadde & Sowmithri Suravarapu

Conference paper | First Online: 26 February 2024

Part of the book series: Lecture Notes in Networks and Systems ((LNNS,volume 891))

Abstract

Modeling anomalous behavior pattern has become as a significant research domain in the recent years due to the security demands in public places. In literature some of the existing approaches such as statistical-based, density-based are applied for pattern detection whereas traditional approaches may not suitable for all scenarios, since they are



An Analysis of AI in Healthcare: A Comprehensive Study on India

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Abstract

Building computer devices and systems that can demonstrate learning, reasoning, and decision-making skills similar to those often associated with human intelligence is the focus of the field of artificial intelligence. It also includes working with data sets larger than what the human mind can process. A variety of academic disciplines, including computer science, data analytics, statistics, hardware and software engineering, languages, neuroscience, philosophy, and psychology, are all included in the interdisciplinary area of artificial intelligence. The development of artificial intelligence is increasingly taking centre stage in many countries' governmental agendas. Policymakers are primarily concerned with the application of artificial intelligence to social welfare, legal framework creation, economic consequences, implications for global security, and equity issues, among other things. Artificial intelligence has been the main driver of recent large and rapid breakthroughs in the technological area.

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Application

The term "artificial intelligence" describes computer programs that replicate human psychology. It is particularly made to mimic cognitive abilities and think ke a person. Any machine that exhibits traits often connected to human cognition, such learning and problem-solving, may also be referred to as "artificial intelligence." AI, a technique meant to simulating human thought processes to solve problems or speed up learning has a big influence on a lot of aspects of life. When robots are created to display unique intelligence that is different from human intelligence, this specific aspect of intelligence is often referred to as machine intelligence. Over the course of its long history—more than 70 years—computer scientists like Alan Turing, Marvin Minsky, and John McCarthy have made major contributions to the theoretical and technological underpinnings of artificial intelligence. Alan Turing, a British mathematician, led the way in developing the foundational ideas of computer science. His main goal when he started this project was to increase the effectiveness of decoding encrypted German messages sent during World War II (Turing, 2015).

After the war ended, he began thinking about artificial intelligence. One important academic book that explores artificial intelligence is Alan Turing's "Computing Machinery and Intelligence" (Turing, 2009). Artificial Intelligence is always evolving to provide benefits in several domains and industries. A cross-disciplinary approach that incorporates elements of mathematics, computer science, linguistics, psychology, and other fields links machines. AI is becoming more prevalent across a wide range of sectors and businesses, including but not limited to the banking and financial industries, smart cities, mobility and transportation, healthcare, education, and agriculture, among many other fields that are adopting this technology at an accelerating rate. These days, AI is widely used to solve socioeconomic problems. It is acknowledged as a viable means of addressing the key initiatives, targets, and objectives delineated in the UN Framework for Sustainable Development Goals (SDGs). In many countries, the rise of AI has become a major policy worry. When dealing with AI, policymakers take into account a number of factors, including the use of AI for societal improvement, the creation of regulatory frameworks, economic ramifications, concerns about global security, and challenges related to justice. There are a few things that must be taken into account while making AI plans. These include forming a nationwide task group and establishing challenging objectives. In order to use a pragmatic technique, it is essential to ascertain the variables that enable or bolster the intended result. Identifying the people or organizations having a stake in the issue is also very important. It is crucial to educate these stakeholders of the pertinent facts. In addition, interacting with different stakeholders is required to guarantee a thorough comprehension of the problem. It is advised that an extensive evaluation of the existing situation be conducted. For a realistic analysis, the information must be consolidated. Furthermore, building credibility and taking ethical values into account are essential steps in this process. The next phase of the process is to put the developed plan into practice.

In India, the Use of AI in the Healthcare Industry Is Growing Quickly

4Detecting Healthcare Issues Using a Neuro-Fuzzy Classifier

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Chapter 5

Development of the Fuzzy Logic System for Monitoring of Patient Health

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Summary

Rising healthcare expenses are a big issue for many people and governments. The high expense of the conventional hospital-based monitoring and care method has prompted researchers to look for cheaper alternatives. One way involves sending mobile equipment to patients' houses for remote monitoring and diagnosis. Enhancing the VLSI system by utilizing a single embedded chip for computation. Cell phone and Wi-Fi connection are used to improve the current framework and mobile-based health monitoring system. One of the promising options that might be used in future healthcare systems is radio frequency identification (RFID) technology. Vital sign sensors, such as those for measuring temperature, blood pressure (BP), heartbeat, sugar level, and oxygen level in the blood, may be incorporated into RFID tags for use in patient identification and monitoring. A mobile RFID-based healthcare system is proposed here, along with its design, implementation, and testing. The system includes portable wireless data acquisition equipment for vital signs and a fuzzy logic algorithm for continuous monitoring and assessment of patient health. The patient's condition is diagnosed using a set of fuzzy criteria based on his or her body temperature, blood pressure, heartbeat, oxygen level, and breathing per minute. The system is measured against the current gold standard in the industry, the Modified Early Warning Score (MEWS), to see how well it performs. The proposed system is superior to the MEWS system in several tests, demonstrating the efficacy of this fuzzy logic technique.

References

Desa, United Nations Population Division, II . Magnitude and speed of population ageing , in: *World Population Ageing 1950-2050* , Population Division, Desa, United Nations , World Assembly on Ageing,

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Chapter 6

Management of Trust Between Patient and IoT Using Fuzzy Logic Theory

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Summary

The machine-to-machine revolution was created by the advent of the Internet of Things. Offering innovative services to various sectors. The potential constraints or capabilities of these diverse intelligent devices may give rise to the generation of confidential data and novel concerns pertaining to security, privacy, and technological assurance. In a manner that is spread out. The provision of a scalable decentralized trust management mechanism for the access control system serves to mitigate these issues. Trust-based security models have been found to be more efficacious than cryptography-based security in detecting and preventing a range of insider threats through the analysis of trust scores. The article titled "Scalable Trust Management (STM)" presents a thesis that employs a fuzzy approach and incorporates various factors such as experience and classification device to ascertain the precise value of the trust score. The capability device has taken into account the formulation of the rule. The simulation results obtained from NS2 demonstrate that the use of STM technology can effectively enhance the energy efficiency and scalability of heterogeneous networks.

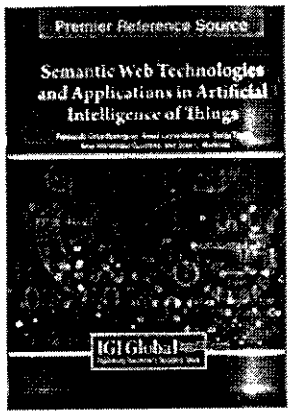
References

Sun , C. , Li , Q. , Li , H. , Shi , Y. , Zhang , S. , Guo , W. , Patient cluster divergence based healthcare insurance fraudster detection . *IEEE Access* , **7** , 14162 – 14170 , 2018 .

Web of Science® | Google Scholar

Kamienski , C. , Kleinschmidt , J. , Soininen , J.P. , Kolehmainen , K. , Roffia , L. , Visoli , M. , Maia , R.F. , Fernandes , S. , SWAMP: Smart water management platform overview and security challenges , in:

(13.)



Achieving Balance Between Innovation and Security in the Cloud With Artificial Intelligence of Things: Semantic Web Control Models

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Abstract

This chapter explores the integration of Semantic Web control models, innovation, and security in cloud computing, especially in the context of AIoT integration. The Semantic Web provides machine-understandable data and offers sophisticated control models that enhance innovation and security in cloud environments. Technologies like RDF, OWL, and SPARQL enable semantic interoperability, while control models focus on access control mechanisms and authentication strategies. The chapter introduces the concept of AIoT, integrating AI with IoT devices and discusses the potential of Semantic Web control models in managing security risks and fostering innovation.

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Introduction

The Semantic Web, a concept by Tim Berners-Lee, has revolutionized data management and information retrieval on the internet. It aims to improve the meaning of data, enabling machines to better understand and interpret information. Semantic Web control models govern access, manipulation, and dissemination of semantic data, fostering semantic interoperability, innovation, and security within digital ecosystems. Semantic Web control models use semantic enrichment to annotate data with metadata, enhancing querying, reasoning, and inference, enabling machines to perform complex tasks autonomously(Anwar, 2022). Key technologies include RDF (Resource Description Framework) and OWL (Web Ontology Language), which standardize data representation and linking, and SPARQL (SPARQL Protocol and RDF Query Language) for querying and manipulating RDF data, facilitating seamless access to semantic information (Martinez-Rodriguez et al., 2020).