

# **2024 IEEE 9th International Conference on Engineering Technologies and Applied Sciences (ICETAS 2024)**

**Bahrain  
20-22 November 2024**

**Pages 1-812**



**IEEE Catalog Number: CFP24N08-POD  
ISBN: 979-8-3503-6315-9**

**Copyright © 2024 by the Institute of Electrical and Electronics Engineers, Inc.  
All Rights Reserved**

*Copyright and Reprint Permissions:* Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

***\*\*\* This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP24N08-POD
ISBN (Print-On-Demand):	979-8-3503-6315-9
ISBN (Online):	979-8-3503-6314-2
ISSN:	2769-450X

**Additional Copies of This Publication Are Available From:**

Curran Associates, Inc  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: (845) 758-0400  
Fax: (845) 758-2633  
E-mail: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

CURRAN ASSOCIATES INC.  
**proceedings**  
.com

## TABLE OF CONTENTS

Attendance Management System Based on Vehicle Number Plate Using Image Processing and Optical Character Recognition (Ocr).....	1
<i>Wan Nur Azhani W. Samsudin, Chew Chin Tatt, Rohana Abdul Karims, Wan Syahirah W. Samsudin</i>	
Assessing Dust Accumulation and Its Impact on Solar PV Performance .....	6
<i>Husham M. Ahmed, Haitham Alqahtani, Zeyad M. Ismail, Noaman M. Noaman, Lina S. Calucag, Omar Alhawi</i>	
Multi-Fault Detection in Fluid Catalytic Cracking Unit Using Hybrid CNN-LSTM Deep Learning Model .....	11
<i>Ali Husain Altaif, Syed Mohammad Ali Javed, Ali Mahmood Abdullah, Ali Mohammed Ashoor, Noaman M. Noaman, Rajkumar Palaniappan</i>	
Design and Control of an Air Levitation Ball System for Mechatronics Education and Research .....	17
<i>Raniya Mubeen, Nadiya Mubeen, Zainab Binth Mohd B. Alam, Zied Ben Hazem, Nivine Güler</i>	
An Intelligent Controller Design for Hybrid AC/DC Microgrids.....	23
<i>Faiqa Abubaker, Farooq Alam, M. Tayyab Yaqoob, Syed Sajjad Zaidi, Sameer Qazi</i>	
Development of a 3D-Printed Omnidirectional Spherical Robot for Industrial Safety Monitoring Using YOLO and ROS2 .....	29
<i>Ali Husain Altaif, Ali Mahmmmed Ashoor, Ali Mahmood Abdulla, Syed Mohammad Ali Javed, Fadhel Abbas Husain, Sathees Kumar Nataraj, Divya S Das</i>	
Development of a Vision Based18-DOF Hexapod Robot Controlled by ROS2.....	35
<i>Syed Mohammad Ali Javed, Hussain Khalid Abbas Fakhrawi, Raza Ahmed Muzaffar, Ali Husain Altaif, Sathees Kumar Nataraj, Divya S Das</i>	
A Fuzzy Logic Controlled Solar Tilt Angle Optimization for a PV System.....	41
<i>Nivine Guler, Zied Ben Hazem, Zeyad Mohammed Ismail, Minu Theresa Mathew, Diksha Gupta</i>	
Implementation of Microcontroller Based Automatic Solar Panel Cleaning System.....	47
<i>Ayman Hani Marhoon, Shaikha Mohamed Almaheed, Lulwa Mohamed Ali, Zeyad Ismail, Noaman M Noaman, Haitham Alqahtani, Minu Theresa Mathew</i>	
Unveiling the Generalizability Gap: A Cross-Domain Evaluation of Machine Learning Algorithms for Network Intrusion Detection.....	53
<i>Muhammad Iqrar Amin, Menging Shen, Shams Ul Arfeen Laghari, Mithiiran Parthipan, Shankar Karuppayah</i>	
Multi-Agent Approach for Methane Emission Monitoring from an Industrial Facility Using Cooperative Quadrotor Unmanned Aerial Vehicles.....	60
<i>Ghulam E Mustafa Abro, Ayman M Abdallah, Ibrahim Al Jalal</i>	
Multistep Meshed Multivariate Energy Load Forecasting Through GSO Algorithm Using LSTM Selection Techniques in NOAA Energy Facility .....	64
<i>Abdulwahab Deji, Sheroz Khan, Muhammad Islam, Noor Maricar, Elfadhil Adam, Abbas Hassan Abbas Atya</i>	
Evaluating Disaster-Ready Communication Networks: A Real-World Testbed Using Raspberry Pi .....	76
<i>Alwan Abdullah, Shams Ul Arfeen Laghari, Selvakumar Manickam, Shankar Karuppayah</i>	

Supervised Learning for Accurate Tooth Segmentation and Numbering in Panoramic X-Ray Images .....	83
<i>Wan Syahirah W. Samsudin, Wan Aidie Idhan Wan Osman, Wan Nur Azhani W. Samsudin, Syamimi Mardiah Shaharum, Nur Zahirah Mohd Ali, Rajkumar Palaniappan</i>	
Analysis of IoT-Based Smart Cities: Implementation and Security Issues.....	88
<i>Sheeba Shahid, Sven Eselgrimm, Asadullah Shah</i>	
Benign/Malignant Breast Cancer Detection in Histopathology Image Using Fused Deep-Learning Features .....	93
<i>Shabnam Mohamed Aslam</i>	
Impact of Environmental Factors on Solar PV Output: An Experimental Approach .....	99
<i>Omar A. Alhawi, Lina S. Calucag, Haitham Alqahtani, Husham M. Ahmed, Zeyad M. Ismail, Noaman M. Noaman</i>	
Evaluating the Impact of Internal Fan Integration on the Performance of Solar Stills Linked to External Air-Cooled Passive Condenser.....	106
<i>Mohammad R. Teerky, Mohammed N. Dalati, Youssef M. Altechheh, Husham M. Ahmed, Noaman M. Noaman, Zeyad M. Ismail</i>	
Assessment of Reliability-Based Pre-Determined and Post-Determined Distributed Generation Location.....	111
<i>Mohd Ikhwan Muhammad Ridzuan, Ahmad Zairi Mohd Zain, Nur Nabihah Rusyda Roslan, Nur Zahirah Mohd Ali</i>	
Performance Metrics Analysis for Diabetes Prediction Using Machine Learning Algorithm .....	117
<i>Saida O. Said, Nurul Liyana Binti Mohamad Zulkufli, Asmarani Binti Ahmad Puzi, Asadullah Shah</i>	
Optimizing Stock Market Prediction Through Integration of Market News and Stock Prices with Machine Learning Models.....	122
<i>Amit Sharma, Sunil Kumar, Chitta Shyamsunder, B. Devender, V. S. Nishok, Kawerinder Singh Sidhu</i>	
Enhancing Cybersecurity in Wireless Sensor Networks: Sybil Attack Detection with DSSF-OGAN and Swarm Search-Based Deep Learning .....	128
<i>Balamurugan K S, Venkatesh Jayaraman, Vinmathi M S, Surendran R, Savitha U</i>	
Analyzing Electric Vehicle Charging Behavior for Future Standard and Fast Charging Infrastructure Planning Using Monte Carlo Tree Search.....	134
<i>M. Nagaraj, Aravindh R, B. R. Senthil Kumar, S. Manikandan, Ramaganesh Marimuthu, B. Praveen</i>	
Direction to Secure Routing: An Effective Model for Selecting Optimal Cluster Heads in WSN Cyber Security.....	140
<i>K S Balamurugan, Venkatesh Jayaraman, Maheswari Marimuthu, Surendran R, Punithavalli N</i>	
Intelligent Cyber Security Model for Network Level and Node Level in WSN Using Adaptive Neural Network .....	146
<i>K S Balamurugan, Sathiya V, Venkatesh Jayaraman, Surendran R, Mariammal Alias Nithya. M</i>	
Novel Multi-Faceted Technique for Enhancing the Performance of Wireless Sensor Network in Cyber Security Uses .....	151
<i>Srihari G, Ramesh T, Sadish Sendil M, Surendran R, Rajendran P</i>	

SVM Based Sentiment Analysis for Online Shopping Reviews .....	157
<i>Rajesh Kumar Oad, Sumbul Ghulamani, Umair Jamil Ahmad, Amina Shaikh, Asadullah Shah</i>	
Innovative Image Processing Methods for Lung Cancer Detection and Stage Prediction .....	163
<i>Tamilvizhi T, Shakila Devi G T, Venkatesh Jayaraman, G Kalyani, K S Balamurugan</i>	
Diabetic Retinopathy Detection Using Image Processing and Machine Learning Techniques .....	169
<i>Ayasha Malik, Veena Parihar, Kazim Raza Talpur, Syeda Meraj, Asadullah Shah, Shilpa Saini</i>	
Machine Learning-Based Liver Cancer Classification Using Gene Expression Microarray Data .....	175
<i>Amena Mahmoud, Syeda Meraj, Shilpa Saini, Sapna Juneja, Kazim Raza Talpur, Asadullah Shah, Wesam Ahmed</i>	
Binary Classification of Tuberculosis CXR Images Across Diverse Range of CNN Architectures: A Comparative Study .....	179
<i>Syeda Meraj, Asadullah Shah, Ahsiah Ismail, Tengku Mt Sembok, Syed Shadab, Syed Aftab</i>	
Dual-Mode Fluorescent and Colorimetric Sensors Powered by Machine Learning for High-Security Authentication and Anti-Counterfeiting .....	184
<i>S. Sathish Kumar, M. Kumar, T. Gobinath, M. Saravana Karthikeyan, M. Sivachitra, L. Anba Rasu</i>	
Design and Development of Highway Wind Turbine for Power Generation .....	191
<i>Hasan Al Asfoor, Iftikhar Ahmad, Ahmed Abdelrhman, Wajid Khan</i>	
Numerical Model for Designing Renewable Energy Communities Under Italian Framework .....	196
<i>Haseeb Uddin Ahmed, Nayyar Hussain Mirjat, Abdul Khaliq Junejo</i>	
Machine Learning Techniques for Accurate Staging of Lung Carcinoma from Low-Radiation CT Scans.....	202
<i>Vinston Raja R, Surendran R, Ramya G Franklin, K S Balamurugan, R Gnanaselvam</i>	
Machine Learning in Oncology: SVM-Based Classification of Lung, Breast and Liver Cancer from MRI Scans .....	208
<i>Surendran R, Sundara Rajulu Navaneethakrishnan, Rajasekar B, K S Balamurugan, M. Sudhagar</i>	
Efficient Authentication Scheme: AI-Assisted Detection Model for Node Capturing Threats in Cyber Security Applications .....	214
<i>Surendran R, M Krishnamoorthy, Babu T, K S Balamurugan, Alagu Manoharan</i>	
Enhancing WSN Cyber Security: An Innovative Routing Framework with Cross-Layer Protocol Designs .....	220
<i>K S Balamurugan, Nirmalrani V, Sivabalan A, Surendran R, Geetha P</i>	
Parameters Identification for Effective IoT Based School Bus Monitoring in Zanzibar .....	226
<i>Intisaar O. Said, Abdul Rafiez Bin Abdul Raziff, Zainab Senan Mahmud Attar Bashi, Asadullah Shah</i>	
A Comparative Study of Reliability and Loss Minimization in DG Placement Using Hybrid Analytical-Grey Wolf Optimization .....	230
<i>Ahmad Zairi Mohd Zain, Mohd Ikhwan Muhammad Ridzuan, Nur Nabihah Rusyda Roslan, Nur Zahirah Mohd Ali</i>	
Design of Pentagon Shaped Fractal Antenna for Wideband Applications.....	235
<i>Suruthi S, Senthamizh Selvi R, Atshaya R, Gopika J</i>	

Investigating Algorithmic Techniques for Breast Cancer Detection.....	240
<i>Mekala Harsha Vardhan Reddy, G. Ramkumar, Prabakaran. B, Dinesh Mavaluru</i>	
Machine Learning Models for Network Intrusion Detection Based on ResNet-GAN Model.....	245
<i>Guhan K, G. L. Karthik, D Gayathri Devi, Sheikameer Batcha S, Subhalaxmi Chakraborty, P Vishnu Prasanth</i>	
Early Medical Diagnosis of Breast Cancer in Women Using Support Vector Machine Algorithm in Comparison with CNN Algorithm.....	252
<i>Mekala Harsha Vardhan Reddy, G. Ramkumar, Jayakaviya, Ravi Samikannu</i>	
Sign Language Recognition for Deaf People Using Novel HMM Compared with CNN and LSTM .....	258
<i>Vamsi Reddy, S. John Justin Thangaraj, Uma Maheswari, Ephraim Basal J</i>	
Microarray Data Classification Accuracy Enhancement Using Support Vector Machine in Comparison with K-Nearest Neighbour .....	263
<i>P. Yaswanth Kumar Reddy, K. Malathi, Karthik K R, Vidhya Prakash Rajendran</i>	
Multi-Classifying 47 the Gadget's Defect is Determined by Comparing Characteristics Using Random Forest and Naive Bayes.....	268
<i>Syed Sadik, R Puviarasi, Kavitha S, Mritha Ramalingam</i>	
Evaluating Traffic Flow Prediction Accuracy Using Support Vector Machines and Feedforward Neural Networks.....	273
<i>M. Raja Reddy, K. Sashirekha, Gayathri J, Crecent Boniface Sembuli</i>	
Handwritten Identification Using K Nearest Neighbor and Compared with Feature Extraction Precision Naive Bayes Algorithm.....	277
<i>P. Ravikiran, K. Sashirekha, Ashwini A, Vivekananth Padmanabhan</i>	
Productive Palmprint Identification and Recognition in the Field of Biometric Using Novel Novice Convolutional Neural Network and Compared with Support Vector System Based on Accuracy .....	281
<i>Pindiga Girish, K. Sashirekha, Kousalya, Vivekananth Padmanabhan</i>	
Deep Learning-Driven Drug Development by Identifying Human Protein Targets .....	285
<i>K S Balamurugan, Sathish Kumar P. J, Manju Priya A, Surendran R, G. Kalyani</i>	
Optimizing Diabetes Forecasting by Comparing Random Forest and Support Vector Machine Algorithms.....	291
<i>R. Durga Sai Ganesh, K. Sashirekha, Janani M Z, Vidhya Prakash Rajendran</i>	
Prediction of Optimal Nearest Delivery Personnel for Delivery of Products Using Support Vector Machine Against Logistic Regression Algorithm for Better Accuracy.....	296
<i>Vasantha Naga Vasu, K. Sashirekha, Sowmya R, Vidhya Prakash Rajendran</i>	
Deep Learning Approach for Early Prediction and Diagnosis of Breast Cancer Tumors.....	301
<i>G. Kalyani, Sivasangari A, Sathish Kumar P. J, Surendran R, M. Kala Mathumari</i>	
Early-Stage Lung Cancer Prediction and Stage Classification Using Machine Learning .....	306
<i>Premkanna Gopalakrishnan, K S Balamurugan, T. Kumaresan, Surendran R, G. Kalyani</i>	
Road Accidents Prediction Using Decision Tree in Comparison to Linear Regression .....	312
<i>N. Girish Chandra Choudhary, T. Rajesh Kumar, Vishwanathan Nagarajan, A. Rajalingam</i>	
Data Analytics for Clinical Decision Support: Leveraging Deep Learning Models for Enhanced Recognition .....	316
<i>Surendran R, Vijayalakshmi Pasupathy, Natarajan C, G. Kalyani, K S Balamurugan</i>	

Prediction of Identical Twins Using Naive Bayes Algorithm Compared with Random Forest Based on Biometrics .....	321
<i>A Ruthwik Reddy, A. Mohan, B Sai Rithika Reddy, Anand Anbalagan</i>	
Navigating the Complexity: Comparative Assessment of Machine Learning Approaches for Log S Prediction .....	325
<i>Imane Aitouhanni, Amine Berqia</i>	
Artificial Neural Network Based Predictive Model for Android Malware Detection Using a Sine Cosine Algorithm for Feature Engineering.....	330
<i>Shirina Samreen</i>	
Performance Evaluation of Multi Layer Perceptron and Support Vector Machine in Email Spam Detection .....	336
<i>Nallagorla Ramojirao, S. Anusuya, Vijay Yaswanth Reddy Bade, Crecent Boniface Sembuli</i>	
A Hybrid Deep Learning Framework Combining Convolutional, Transformer, and GRU Models with Mixture of Experts for RNA Sequence Analysis .....	341
<i>Musaab Nabil Ali Askar, Azian Azamimi Abdullah</i>	
Tongue Based Disease Prediction Using ANN Algorithm Comparing with RNN .....	346
<i>M. G. Sabari Nandhaa, S. Anusuya, Rajamani. K, Crecent Boniface Sembuli</i>	
Comparative Study of KNN Over CNN for Music Genre Classification to Improve Accuracy .....	351
<i>Sai Sree Charan N, S. Anusuya, Sakthi Bhalan Pandiarajan, Crecent Boniface Sembuli</i>	
Analysis of Email Spam Detection Using Naive Bayes and Support Vector Machine Classification Algorithms.....	355
<i>Nallagorla Ramojirao, S. Anusuya, Harshavardhini, Crecent Boniface Sembuli</i>	
Using Image Processing Techniques to Compare Accuracy with the Canny Algorithm for Predicting Rice Quality Analysis.....	360
<i>E. Likhith, Mahaveera Kannan, Likhita Movva, Prasanalakshmi Balaji</i>	
Early Forecasting of Stock Marketing Price Using SVM Classifier by Comparing with Decision Tree for Improved Accuracy.....	365
<i>P. Akhilesh, S. Prem Kumar, A G Vimalkumar, Dickson J. Nkongo</i>	
SVM-Based Currency Identification System with Naive Bayes Prediction Accuracy Comparison.....	371
<i>Sai Akhil Kumar Sreeharikota, G. Ramkumar, Dinesh Ram R, Ravi Samikannu</i>	
Forecasting of Rainfall Using Novel SVM and Compare Prediction Accuracy with Logistic Regression Algorithm.....	376
<i>V Chandra Babu, G. Anitha, Pasupuleti Sai Sanjana, Salim Lahmiri</i>	
Higher Accuracy of Crop Recommendation Using K-Nearest Neighbors Algorithm Algorithm Over Decision Tree Algorithm .....	380
<i>P. Phanindra Sai Kumar, S. Prem Kumar, Koushik K V S, Dickson J. Nkongo</i>	
Automated Fake News Detection Using Logistic Regression Over Decision Tree with Improved Accuracy.....	385
<i>C. Balaji, G. Anitha, V Pavithra, Salim Lahmiri</i>	
Handwritten Digit Classification Using Support Vector Machine Algorithm Comparing with Logistic Regression for Improving Accuracy .....	390
<i>Shaik Aamin, R. Balamanigandan, Sajith S, Rajkumar Palaniappan</i>	

Data Quality Issues for Speech Emotion Recognition System Using Novel Logistic Regression Algorithm and Compare Accuracy with Random Forest Algorithm .....	395
<i>G. Sai Sarath Chandra, T. Rajesh Kumar, Konda Harshitha, Vivekananth Padmanabhan</i>	
Face Mask Detection Using Autoencoder Algorithm Comparing with Recurrent Concurrent Neural Network for Improving Accuracy.....	400
<i>G Manikanta Reddy, Mahaveerakannan, Kalpana L, Prasanalakshmi Balaji</i>	
Improved F-Measures Over Gaussian SVM for Handwritten Digit Recognition Using LSTM to Increase Accuracy.....	405
<i>Shivam Sangam, T. Rajesh Kumar, Varsha Raghu, Vivekananth Padmanabhan</i>	
Comparing Logistic Regression Algorithm with K-Nearest Neighbor Algorithm to Extract Features from Images for Prescriptive Analysis of Mushroom Contamination .....	410
<i>Sk Yaseen Ahmed, T. P. Anithaashri, Pakalapati Chandralekha, K. Suresh Manic</i>	
A Novel Method to Predict the Accuracy of Loan Sanction Using KNN Algorithm and Compare with Decision Tree Algorithm .....	415
<i>Jayadeep Reddy, S. Prem Kumar, Sam Thomas, Dickson J. Nkongo</i>	
Frame Blocking Technique for Speech Emotion Recognition Using Novel Logistic Regression Algorithm Compared with Decision Tree Algorithm for Accuracy.....	419
<i>G. Sai Sarath Chandra, T. Rajesh Kumar, Meenakshi Srinivasan, Vivekananth Padmanabhan</i>	
Prediction of Insufficient Accuracy for Transmitting Patient Details: A Comparison Between the DES Algorithm and the Advanced Encryption Standard Algorithm.....	424
<i>Thenepalle Midhun Kumar, K. Malathi, Pranay Br, K. Suresh Manic</i>	
Efficiency Analysis of Predicting Handwritten Equation Solver Using CNN Over SVM Algorithm.....	429
<i>Ch. Sadeepya, S. Radhika, Akshaya S, Su-Qun Cao</i>	
A Comparative Analysis of K-Nearest Neighbors and Support Vector Machine for Human Emotion Detection Based on Voice Patterns to Improve Accuracy.....	434
<i>Uday Krishna N, W. Deva Priya, Sureshsekar, B. Sundaravadivazhagan</i>	
Spam Detection Using Radial Base Function and Compare the Prediction Accuracy Using Naive Bayes Algorithm.....	439
<i>V. Pranitha, K. Thinakaran, Rajabalaji S V, Salim Lahmiri</i>	
Higher Prediction of Crime Occurrences in Urban Areas Using Random Forest Algorithm Comparing with Decision Tree Algorithm to Improve Accuracy .....	443
<i>P. Hemanth Kumar, S. Saraswathi, Visnu S, Ranjit Singh Sarban Singh</i>	
Evaluating the Accuracy of Patient Length of Stay Predictions Through a Comparison of Deep Belief Networks and Convolutional Neural Networks.....	449
<i>Chandragiri Vasanth Kumar, Saravanan M. S, Rajkumar B, Ranjit Singh Sarban Singh</i>	
Enhancing Human Voice Gender Classification: A Comparative Analysis of Support Vector Machine and Convolutional Neural Network Algorithms .....	455
<i>Veeramreddy Sunil Kumar Reddy, Saravanan M. S, R Tarunprasad, Ranjit Singh Sarban Singh</i>	
Improving Accuracy in Human Voice Recognition for Gender Classification Using Machine Learning Algorithms.....	460
<i>Veeramreddy Sunil Kumar Reddy, Saravanan. M. S, Obli Prakash Pc, Ranjit Singh Sarban Singh</i>	

Efficient Predictive System for the Detection of Brain Tumor Using Naive Bayes Algorithm Compared with Support Vector Machine Algorithm .....	465
<i>P. Vamsi, T. P. Anithaashri, Shilpalakshmi Prasad E, Anand Anbalagan</i>	
Assessment of Bioenergy Prediction and Optimization: Comparative Analysis Between Long Short-Term Memory Networks and XGBoost Algorithm .....	470
<i>J. Poorna Prasad, D. Manikavelan, S Prasna, Kamalakannan Machap</i>	
Sign Language Recognition for Deaf People Using Novel CNN Compared with GCN and BERT .....	476
<i>G. T. Vamsi Reddy, S. John Justin Thangaraj, Sri Siva Shyla R, A. Rajalingam</i>	
Convolutional Neural Network Vs. Random Forest for Accurate Human Face Recognition in Cybercrime Analysis .....	481
<i>R K Sumanth Reddy, A. S. Vickram, Prathambigai S S, Mohammad Khalid</i>	
Enhancing Accuracy in Early Pneumonia Diagnosis with a Novel Support Vector Machine and Convolutional Neural Network .....	484
<i>R. Balamanigandan, Vasireddy Divya, Rajkumar Palaniappan</i>	
Exploring Performance Disparities: A Comparative Study of LabGuard Web and Android Applications in Lab Equipment Maintenance .....	487
<i>M Kartik Balaje, Loganayagi S, Dharani Devi, A Rajalingam</i>	
Efficient Predictive Analysis for Intrusion Detection Using Recurrent Neural Network Compared Over Convolutional Neural Network with Better Accuracy.....	499
<i>B. Pavan, S. Saraswathi, M Geethanjali, Ranjit Singh Sarban Singh</i>	
High Speed Intrusion Detection Using Lexicographic Method in Compared Over Artificial Neural Networks with Better Accuracy.....	504
<i>B. Pavan, S. Saraswathi, Ramya B, Ranjit Singh Sarban Singh</i>	
Enhancing Brain Tumor Detection Accuracy with an RNN Model Compared to R-CNN Classification .....	508
<i>Y. R. V. N. Sai Lakshmi, Nagaraju. V, V Pavithra, Su-Qun Cao</i>	
Phishing Attack Detection Using Logistic Regression and Novel Random Forest Algorithm to Improve Accuracy .....	512
<i>P. Ganesh, S. Kalaiarasi, Sajith S, R. Durga</i>	
Anonymous Threat Creators Detection in Social Media Using Support Vector Machine Technique with Improved Accuracy Compared with Random Forest Technique .....	517
<i>Nallagatla Naga Yaswanth, R. Balamanigandan, R Tarunprasad, Rajkumar Palaniappan</i>	
Improved Accuracy in Detection of Driver Drowsiness Using Novel Random Forest Classifier Compared with Decision Tree Classifier .....	522
<i>D. Nikitha, Dinesh Ram R, S. Kalaiarasi, R. Durga</i>	
Comparison of Kneighborsclassifier with RF Algorithm to Improve Accuracy for Phishing Attack Detection in Website.....	527
<i>P. Ganesh, S. Kalaiarasi, Sajith S, R. Durga</i>	
Classification of Human Emotions Based on Voice Patterns to Improve Accuracy Using Convolutional Neural Network Over Random Forest .....	531
<i>Uday Krishna N, A Rathna, Karthikeyan S, B Sundaravadivazhagan</i>	

Remote Healthcare Monitoring Architecture for Diabetes Patients Using Logistic Regression in Comparison Support Vector Machine for Improving Precision.....	537
<i>M Nishanth Naren, V. Karthick, Obli Prakash Pc, A. P. Senthil Kumar</i>	
Blockchain-Enabled EHR Access Management in the Metaverse Healthcare Framework: A Multi-Dimensional Approach .....	541
<i>Faheem Ullah, Jingsha He, Nafei Zhu, Cai Muhan, Ahsan Wajahat, Ahsan Nazir, Siraj Uddin Qureshi, Muhammad Yaqoob Koondhar</i>	
An Improved Naive Bayesian Human Activity Recognition System with Machine Learning Via Support Vector Machine .....	546
<i>Cr. Kirankumar, Ek. Subramanian, Sinduja S, Mathivanan V</i>	
A Handwritten Digit Recognition Using with Convolutional Neural Networks with Compared K-Nearest Neighbor with Improved Accuracy .....	552
<i>Kalakada Karthik, K. Malathi, Likhita Movva, K. Suresh Manic</i>	
Detection of Ddos Attacks in Iot Networks Using Machine Learning Algorithms .....	557
<i>Alwan Ahmed, Asadullah Shah, Alwan Abdullah, Shams Ul Arfeen Laghari</i>	
Ris-Enhanced 6G Networks: Advanced User Location Prediction with Generative Models .....	562
<i>Muhammad Anas, Aqsa Ahmed, Syed Areeb Ali, Muhammad Farrukh Shahid, Zuhaib Ashfaq Khan, M. Hassan Tanveer</i>	
Prediction of Less Error for Water Renewable Energy Generation Using Long Short Term Memory by Comparing CNN Algorithm to Reduce Mean Square Error .....	568
<i>K. Bhargav, A. Prabhu Chakkaravarthy, Sabeena S, Mohd Ubaidullah</i>	
Improving Accuracy in Ecg Signal for Heart Malfunctioning Using Machine Learning Using CNN Autoencoder Compared to CNN1d .....	574
<i>Suriya Narayanan S, Ammal Dhanalakshmi M, V Pavithra, Vidhya Prakash Rajendran</i>	
Predicting and Classifying Ofdm Modulated Signals for 6G Wireless Network.....	580
<i>Sannad Bilal, Muhammad Farrukh Shahid, Zuhaib Ashfaq Khan</i>	
Valorization of Waste Heavy Fuel Oil Ash into Supercapacitor Electrodes Using Organic Electrolytes.....	586
<i>Atif Alzahrani</i>	
DDoS Attack Detection Using Smart IDS.....	590
<i>Amine Berqia, Habiba Bouijij, Oussama Ismaili, Manar Chahbi</i>	
Machine Learning-Driven Condition Monitoring and Fault Detection in Manufacturing .....	596
<i>Amena Mahmoud, Kazim Raza Talpur, Asadullah Shah, Shilpa Saini, Sapna Juneja, Manal Sobhy Ali Elbelkasy</i>	
Human Fingerprint Reputation Gadget in Cybercrime Analysis Using Naive Bayes in Evaluation Over Stepwise Polynomial Regression.....	600
<i>A. Bhanu Prakash Reddy, A. S. Vickram, Jumana Haseen S, Mohammad Khalid</i>	
Comparative Analysis of Multispectral Satellite Image Segmentation for Land Cover Classification: Novel Naive Bayes Vs. Convolutional Neural Networks.....	606
<i>M Vignesh, Uma Priyadarsini P. S, R. Naveena, Sanjeev Sharma</i>	
Design and Production of a Solarpowered Rotary Charcoal Dryer for Rural Farmers in Nigeria.....	612
<i>Momodu Oziegbe Glory, Bashir E. Musa, Abdulwahab Deji, Sheroz Khan, Gafar M. O. Ali, Noor Maricar, Muhammad Islam, Hashim Abdelrahim M Barakat</i>	

Enhanced Image Forgery Detection Accuracy Using a SVM Over Linear Regression.....	619
<i>P. Sandeep, Uma Priyadarsini P. S, Chethan S, Sanjeev Sharma</i>	
Comparative Analysis of Cyber Crime Breaches Using Random Forest Over Decision Tree to Improve Accuracy .....	625
<i>K. Venkateshwarprasad, G. Arul Freeda Vinodhini, Vijit Joon, Mathivanan V</i>	
Enhancing Solar Still Performance Utilizing Internal and External Reflectors.....	632
<i>Mahmood H. Mohammed, Husham M. Ahmed, Noaman M. Noaman, Zeyad M. Ismail</i>	
Advanced Varactor Fabrication and Characterization: Paving the Way for Next-Generation Reconfigurable Antenna Systems .....	638
<i>Omar S. Abdulwahid, Ahmed Alqurashi, Saad G. Muttlak, Mohamed Missous</i>	
Numerical Analysis of Multi Effect Diffusion Solar Still with Measured Solar Radiation .....	642
<i>Ghaleb Ibrahim, Husham M. Ahmd</i>	
Enhancement of Secured Clustering in Health Care Data Sets Using Triple- DES Algorithm to Improve Accuracy in Comparison with Diffie Hellman Algorithm.....	648
<i>V. Tharun, Nivedita, S. Sivasakthiselvan, B. Hamid</i>	
Simulation and Comparison of Single Gate Mosfet and Novel Double Gate Mosfet to Improve the Quantum Capacitance.....	653
<i>P. Hemanth Kumar, Mohan Chokkalingam, Vidya Saranya S, Bushra Hamid</i>	
Comparative Analysis of FPA-LS-SVM Model in Comparison with FPA-ELM, LS-SVM and ELM Model in Earthquake Prediction .....	660
<i>A. Surya, S. Sobitha Ahila, Anna Magdalene Joseph, Anand Anbalagan</i>	
Design of Hilbert Curve Shaped Fractal Antenna with Increased Fractal Stages to Enhance Radiation Efficiency by Comparing with Conventional Fractal Antenna .....	667
<i>Kn Lalithendra Kumar, G. Uganya, Shanthi, Ravi Samikannu</i>	
Prediction of Earthquake Magnitude with Improved Accuracy Using FPA-LS-SVM Model in Comparison with LS-SVM Model .....	672
<i>A Surya, Muneesh Kannan M, Pinnamraju Tarun V Prudvi Varma, Farkhanda Qamar</i>	
Effective Classification of Ocular Disease Using Resnet-50 in Comparison with Squeezenet .....	678
<i>Y. Chiranjeevi, R. Sugumar, Sidra Tahir</i>	
Moving Object Detection Using Eigen Background in Comparison with Gaussian Mixture Model to Measure F-Score.....	684
<i>M. Monika, Kirupa Ganapathy, Muhammad Fahad Zia</i>	
EEG Signal Classification for Epileptic Seizure Detection Using Multi Class Convolutional Neural Network Compared with Statistical Pattern Recognition .....	691
<i>Nidhrabangi Ramana, G. R. Suresh</i>	
Foreground Detection in Dynamic Scenes Using Convolutional Neural Networks in Comparison with Gaussian Mixture Model to Measure F-Score.....	697
<i>G. Sudeepa, Kirupa Ganapathy, M. Ramesh, Maram F Almufareh</i>	
Improving Parkinson's Disease Prediction Accuracy: A Comparative Analysis of Logistic Regression and Decision Tree Models .....	705
<i>M. Evelyn Joyce Jebaselvi, K. Somasundaram, Ghadah Naif Alwakid</i>	

Relative Analysis Prediction for Threat Detection with Random Forest Algorithm Over Knearest Neighbour Algorithms .....	711
<i>Manasa. K, V. Parthipan, Kamil Iqbal</i>	
Integrating Uav-Acquired Data Augmentation and Deep Learning for Solar Panel Defect Detection.....	717
<i>Fida Hussain Dahri, Amjad Ali, Muhammad Yaqoob Koonthar, Ghulam E Mustafa Abro</i>	
Increasing the Peak Signal-To-Noise Ratio in Encoding Medical Data with a Cover Image Using a Watermarking Algorithm Compared with Wavelet Algorithm .....	723
<i>Srinivasan. R, Rashmitha Khilar, Wasi Haider</i>	
Improving Detection and Counting Accuracy of Humans Using Convolutional Neural Networks Compared to Principal Component Analysis.....	729
<i>Prahalathan B, Christy S</i>	
Enhancing the Accuracy of Fingerprint Image Using Novel Fuzzy Logic System in Comparison with Random Forest .....	734
<i>R. Nitika, Rashmita Khilar</i>	
Comparison of Decision Tree with Linear Discriminant Analysis to Accurately Predict Pulsar Stars to Explore Space Efficiently.....	740
<i>B. Dharmateja, Terrance Frederick Fernandez</i>	
Accuracy Improvement of Online Shopping Recommendation System with Natural Language Processing Using Novel XgBoost Classification Compared with Logistic Regression Method Based on Time.....	746
<i>Bogi Reddy Anil, B. T. Geetha</i>	
Advanced Encryption Standard Algorithm in Comparison with FERNET Algorithm for Reducing Encryption Time of H.264 Encoded Video Files .....	750
<i>Bhargav Sankar, Sheela D</i>	
Strengthening Public Exam Integrity: Reliable Attendance Verification and Impersonation Detection Using Image Recognition Fusion of Convolutional Neural Network and K – Nearest Neighbors .....	755
<i>Lakshmi Narasimha Nmv, R. Senthil Kumar</i>	
Predictive Analytics on Maritime Object Detection and Classification Accuracy Using Multi-Layer Perceptron in Comparison with Residual Networks (ResNets).....	759
<i>P. Jayanth, G. Kumaran</i>	
Interference Prevention in Cognitive Radio Networks.....	766
<i>Bakhtawar Gul, Atif Elahi, Mohamad A. Alawad, Noor Maricar, Muhammad Islam, Noor Gul, Gafar M. O. Ali, Hashim Abdelrahim M. Barakat, Sheraz Khan</i>	
Designing a Chatbot Using Long Short Term Memory Algorithm to Evaluate the Accuracy in Comparison with Naive Bayes Algorithm.....	771
<i>K. Prathyusha, S. Sivasakthiselvan</i>	
Comparative Analysis of Human Activity Recognition Using Deep Neural Networks .....	777
<i>Syed Ali Faraz Kazmi, Athar Ali, Faiza Hussain, Halika Hameed, Syed Ashar Ali</i>	
Efficient Prediction of Malicious Social Bots with URL Features Using DenseNet Compared Over ResNet50 with Improved Accuracy.....	783
<i>Ramakrishna. C, G. Irinloretta</i>	

Enhanced Forecasting Methods for Best Route Analysis by Random Forest Algorithm Over Naive Bayes Algorithm.....	789
<i>G. Santosh Kumar, Palanikumar S</i>	
Enhanced the Accuracy in Handwritten Character Recognition Using Novel Open Scale-Invariant Feature Transform Algorithm Over Principal Component Analysis.....	796
<i>Mohammed Kashif Khan, S. Christy, Wasi Haider</i>	
Comparative Analysis of Titanic Data Prediction Using Logistic Regression and Support Vector Machine for Enhanced Accuracy.....	802
<i>L. Sreenivasulu, J. Mohana, Naveen Karthik</i>	
Higher Accuracy of Drought Prediction Using Linear Discriminant Analysis Algorithm Over AdaBoost Algorithm.....	807
<i>Samudrala Krishna Koteswararaol, J. Mohana, P S Jagathiswari</i>	
Lossy and Lossless Image Compression Using Convolution Neural Network Algorithm Over Gradient Boost Algorithm with Improved Accuracy .....	813
<i>B. Vayusuth, J. Mohana, Roselin Sheela. J</i>	
Forecasting the Efficiency of Bitcoin Market Price Using Novel Apriori Algorithm and Compare the Prediction Accuracy with Linear Regression Algorithm .....	818
<i>D Naveen, J Chenni Kumaran, Jumana Haseen S</i>	
Improving the Efficiency of Bitcoin Market Price Prediction Using Novel Decision Tree Algorithm and Compare the Prediction Accuracy with K-Nearest Neighbor Algorithm(KNN).....	823
<i>D Naveen, J Chenni Kumaran, Velisetty Venkata Narasimha Karthik</i>	
Boosting Solar Still Performance Through Condenser, Fan, and Reflectors Integration .....	828
<i>Husham M. Ahmed</i>	
Machine Learning for Disease Biomarker Detection from Genome Expression Data .....	834
<i>Priyanka Surendran</i>	
Trend Fusion with Hybrid SVM and RNN for Dynamic Trend Forecasting and Sentiment Analysis .....	840
<i>V. Jenifer, T. Kamala Kannan</i>	
ML-Based Intelligent Control and Optimization for Enhanced BGP Path Selection in SDN .....	846
<i>Ammar K. Al Mhdawi, Amjad J. Humaidi, Ayad Al-Dujaili, Noaman M. Noaman, Husham M Ahmed, Mohammed I. Younis</i>	
An Enhanced VANET SDN Control Plane: Leveraging Hybrid Gaussian SVM-Dijkstra Approach.....	853
<i>Ammar K. Al Mhdawi, Amjad J. Humaidi, Ayad Al-Dujaili, Noaman M. Noaman, Husham M Ahmed, Mohammed I. Younis</i>	
Comprehensive in Vivo and in Vitro Platform for Evaluating Drug Efficacy Against Cancer Cells in Patient Treatment.....	861
<i>Gowri S, K S Balamurugan, A G Noorul Julaiha, Surendran R, G Kalyani</i>	
Evaluation of Machine Learning Methods for Pancreatic Cancer Detection Using CT Scans.....	867
<i>Jabez J, L Kartheesan, Surendran R, Savitha U, K S Balamurugan</i>	
Assessing the Effectiveness and Design Aspects of Optimization Methods for Analyzing Big Data in Breast Cancer Prediction .....	873
<i>Bindhya Thomas</i>	

Synergistic Deep Learning Pipeline for Dermatological Image Classification: Cascaded U-Net Denoising and Feature-Selective CNN with Fused Feature Extraction.....	880
<i>R Priyanka Pramila, R. Subhashini, Surendran R</i>	
A Neural Network Approach for Early Prediction of Heart Failure: A Machine Learning Study .....	886
<i>Hamid Musharaf, Muneeb Ur Rahman, Attique Ur Rehman, Tahir Muhammad Ali, Farzeen Ashfaq</i>	
An Effective Technique for Early Cirrhosis Prediction Using Machine Learning .....	892
<i>Muhammad Tayyab, Muhammad Muneeb, Tahir Muhammad Ali, Azka Mir, Sayan Kumar Ray</i>	
Early Prediction of Type 2 Diabetes Using Machine Learning .....	899
<i>Daud Mir, Yasir Munir, Tahir Muhammad Ali, Azka Mir, Siva Raja A. L Sindiramutty</i>	
An Integrated Framework for Effective Prediction of Chronic Kidney Disease .....	906
<i>Syed Muhammad Ali Aoun, Muneeba Javed, Attique Ur Rehman, Tahir Muhammad Ali, Farzeen Ashfaq</i>	
A Machine Learning Framework for Effective Prediction of Breast Cancer.....	914
<i>Laiba Azeem, Zeba Nawaz, Attique Ur Rehman, Tahir Muhammad Ali, Sayan Kumar Ray</i>	
LilyDoll: Designing a System for the Detection of Autism Spectrum Disorder.....	920
<i>Danish Javed, Noor Zaman Jhanjhi, Navid Ali Khan, Sumathi Balakrishnan, Wei Wei Goh</i>	
Immersive Presentation with Personalization and Customization in Virtual Reality Environment (VRE) to Enhance Classroom Pedagogy .....	927
<i>Ferdian Aditya Pratama, Wei Wei Goh, Sumaiya Rahman Oishee, Charles Sharma Naidu</i>	
AI-Driven Cyber Security for Brands and Users on Social Media Advertisement.....	934
<i>Femina Sardana, K. K. Mishra, Abdullah, Muhammad Tayyab</i>	
Data Imbalance Correction in Feature Selection for Large Scale Product Lines.....	939
<i>Maria Zameer, Huzaifa Bin Azhar, Bushra Hamid</i>	
Empowering Healthcare Accessibility: Machine Learning-Driven Predictive Modeling for Health Insurance Premiums in India .....	944
<i>Ajay Sharma, Arun Malik, Shamneesh Sharma, Isha Batra, Manzoor Hussain</i>	
Comparison of Mod-Evasive and Modsecurity Modules for Apache Web Server in Lamp Environment .....	951
<i>Ahmad Armghan Bashir, Noshina Tariq</i>	
Securing Data Communication Among Iot Devices.....	961
<i>Syeda Mariam Muzammal, Muhammad Adnan Aslam, Ruqia Bibi, Sadia Ali, Nz Jhanjhi, Muhammad Tayyab</i>	
Impact Analysis of Artificial Intelligence in Cybersecurity in 4IR .....	967
<i>Azmee Zaheer, Animesh Singh</i>	
Synergetic Control Design to Controlled PWM Buck Power Converter.....	973
<i>Ekhlal Kadhum Hamza, Suha S. Husain, Hasanain Maytham Jasim, Ammar K. Al Mhdawi, Abdulkareem Sh. Mahdi Al-Obaidi, Noaman M. Noaman, Mohammed Majid Msallam, Amjad J. Humaidi, Husham M. Ahmed</i>	
The Utilization of AI in Fraud Detection in Smart Cities.....	979
<i>Chetan Trivedi, Sunil Kumar, Abdullah, Ahmed J. Obaid, Amna Faisal</i>	

Comparative Analysis of Frequent Pattern Mining Algorithms on Healthcare Data.....	987
<i>Nz Jhanjhi</i>	
Navigating the Cybersecurity Measures and Vulnerabilities Associated with Influencer Marketing Including Data Privacy and Protection.....	997
<i>Muskan Arora, K. K. Mishra, Abdullah, Fatima Tu Zehra</i>	
Improving Security for Smart Logistics Through Blockchain and IoT .....	1003
<i>Uswa Ihsan, Humaira Ashraf, Amna Faisal</i>	
Detecting Hallucinations in Textual Data: Insights from Machine Learning Models in Contextual QA.....	1009
<i>Sanjana Umrao, Aditya Parashar, Ved Prakash Chaubey, Shamneesh Sharma, Farzeen Ashfaq</i>	
AdUARX: An Immersive Mobile Augmented Reality Application for Navigating Adamson University Using A* Algorithm.....	1016
<i>Marie Bernadette M. Gerali, Jerome Alvez, Rovic Jake A. Hiwatig, Hyacinth Ashley G. Radovan, Ma. Christina Navarro, Patricia Anne E. Sugapong, Jay Abaleta</i>	
NFT Minting DApp: A Decentralized Application for Converting Digital Assets into Non-Fungible Tokens .....	1022
<i>Zaryab Khan, Mirza Hamad Baig, Muhammad Waqas, Syeda Mariam Muzammal, N. Z. Jhanjhi, Muhammad Tayyab</i>	
An Intelligent Technique for Effective Multi-Disease Prediction .....	1029
<i>Ahsan Abdullah, Attique Ur Rehman, Sabeen Javaid, Tahir Muhammad Ali, Azka Mir, Sayan Kumar Ray</i>	
Quantum Dot-Based Hidden Markers with Machine Learning Algorithms for Enhanced Forensic Investigation and Document Security.....	1035
<i>Amit Sharma, V. B. Gopala Krishna, Bandam Narendar, Virendra Kumar Verma, T. Srihari, V. S. Nishok</i>	
An Empirical Examination of Machine Learning-Based Attack Classification in Internet of Things Networks .....	1041
<i>Virendra Kumar Verma, Guhan K, Ch. Ramakrishna, Savita Verma, Amit Sharma, S. Praveena</i>	
Face Recognition Check in System .....	1047
<i>Du Shanni, Raja Kumar Murugesan, Afizan Azman, Zahrah A. Almusaylim</i>	
Chinese Herbal Medicine Identification Based on Image Classification .....	1053
<i>Gong Yuhang, Sayan Kumar Ray, Humaira Ashraf, Zahrah A. Almusaylim</i>	
Using ML Algorithm to Study Chinese Tourist Behaviour in Malaysia.....	1060
<i>Fan Xing, Syeda Mariam Muzammal, Shabana Anjum Shaik, Zahrah A. Almusaylim</i>	
Credit Card Fraud Detection with Hybrid Machine Learning Models .....	1067
<i>Ooi Jin Jie, Nz Jhanjhi, Sayan Kumar Ray, Siva Raja Sindiramutty, Zahrah A. Almusaylim</i>	
Seasonal Analysis of PV Performance: Optimizing Fixed Panel Angles for Maximum Efficiency.....	1073
<i>Husham M. Ahmed, Lina S. Calucag, Haitham Alqahtani, Noaman M. Noaman, Zeyad M. Ismail, Omar A. Alhawi</i>	
Study of the Impact of Smoking and Alcohol Consumption on the Physical Health of South Korean Residents and Development of Machine Learning Predictive Models.....	1077
<i>Lyu Renjie, Goh Wei Wei, David Asirvatham, Navid Ali Khan</i>	

Maximizing eSports (Apex Legends) Players Arena Performance with Big Data Modeling.....	1083
<i>Zhang Wentong, Husin Jazri, David Asirvatham, Steve Teoh</i>	
IIUMeMall: A Digital Marketplace for Campus.....	1088
<i>Hasan Al Mamun, Ahmad Hakimi Ahmad Rasidi, Noor Azura Zakaria, Wafa Haussain Nasser Fadaaq, Taniza Tajuddin, Zeldi Suryady</i>	
Enhancing Business Process Management (BPM) Sustainability in the Agriculture Sector Through Precision Agriculture, IoT, and UAV Technologies.....	1094
<i>Muhammad Asyraf Bin Rodzoan, Asadullah Shah</i>	
Implementation of an Integrated Electronic Control System for a Typical MicroGrid .....	1097
<i>Sabir Ali Kalhor, Asif Raza, Ainaz Jamshidi, Lala Rukh, Asif A. Rahimoon, Salman Ahmed</i>	
The Conceptual Framework of Knowledge of Large Scale and Incomplete Graphs of Skyline Queries Optimization Using Machine Learning.....	1103
<i>Ubair Noor, Raini Hassan, Dini Oktarina Dwi Handayani</i>	
Fused Deep-Features for Automatic Classification of Chest Radiographs into Normal/Covid-19 .....	1109
<i>Vickram A S, Bhavani Sowndharya B</i>	
Factors and Challenges Impacting the Adoption of Artificial Intelligence Tools in Graphic Design.....	1114
<i>Fatima Balfaqih, Mohammed Balfaqih</i>	
Optimal Distributed Generation Placement in Radial Distribution System Using Particle Swarm Optimization.....	1120
<i>Muhammad Shahab, Abdul Wahab Usman Ullah, Muhammad Shehzad, Syed Bilal Shah, M. Kamran Joyo, Sheraz Khan</i>	
Hybrid Search Relation Attribute Graph with Langchain and Pinecone Vector Database .....	1127
<i>Ijibadejo Oluwasegun William</i>	
Machine Learning-Based Automated Threat Detection Network Security in Healthcare .....	1134
<i>Dharti Patel, Savitri Bevinakoppa</i>	
E-Nurse with Zigbee-Based Communication.....	1140
<i>Gayda Marie B. Angeles, Alliyz Kharmelle D. Arevalo, Jawaher Al Hoori, Beda T. Aleta, Lina S. Calucag</i>	
Comparative Study of the Effects of Generating the Network Datasets Using Multiple Geographical Information System Softwares .....	1145
<i>Vidhya Lakshmi Sivakumar, Anand Raju</i>	
Simulation and Mapping of Leaf Area Index (LAI) Using Hyperspectral, Multiangular PROBA/CHRIS Data .....	1151
<i>Vidhya Lakshmi Sivakumar, Jayapreethi Manoharan, A. S. Vickram</i>	
Performance Analysis on a Four Level Interleaved SEPIC Converter Used for Renewable Based Battery Charging Applications .....	1159
<i>Minu Theresa Mathew, Zeyad Mohammed Ismail</i>	
Comparative Analysis of Object Detection and Recognition in Low Light Image Techniques .....	1165
<i>Fatima Basim Jasim, Ali Retha Hasoon Khayeat</i>	
Analysis of a Micro-Electrothermal Bimorph Actuator.....	1172
<i>Abdelazizs Mohammed, Alaadin Tirab, Musaab Zarog</i>	

Majority Vote for Electroencephalography (EEG)-Based Migraine Classification.....	1176
<i>Ayat Yaqoob Yousif, Akeel Alsakaa</i>	
Energy Consumption Optimization in Smart Factories Using IoT and Reinforcement Learning .....	1182
<i>Virendra Kumar Verma, Indhumathi R, Savita Verma, Zahraa Aqeel Adel Jassim, G. Deepika, B. Satish Kumar</i>	
Comparing ML Algorithms: A Comprehensive Evaluation of Intrusion, Anomaly, and DoS Attack Detection Systems .....	1190
<i>Basheer Riskhan, Malika Amiri, Habiba Arifa, Afrah Hamed Ali Noor Mohammed, S M Asiful Islam Saky, Nadiah Arsat</i>	
Securing IoT Devices in Smart Homes Using ML-Based Anomaly Detection .....	1200
<i>Guhan K, Sharmiladevi B, Susan Mukhallad Naser, B. Suresh Kumar, Sasi Bhusan Padhi, Dhiraj Kapila</i>	
Characterization of Passive Circuit Element Using Resonant Circuit Technique for Wireless Communication Applications .....	1208
<i>Abdulwahab Deji, Burkan Hawash, Bashir E. Musa, Abdulquddus Ikhazuagbe Deji, Sheroz Khan</i>	
Multi-Category Bone Fracture Detection Based on Deep Learning in X-Ray Imaging Using YOLOv8s .....	1214
<i>Salma Ali Alqazzaz, Ansam Abd Alrasool Ali Al-Obaidi, Zeyad Al-Ibadi, Ali Retha Hasoon Khayeat</i>	
Impact of Datamining Clustering Methods on Decision Support System - Concerning Customer Segmentation .....	1218
<i>Rama Krishna Reddy, Padigepati Moulali, N. Bhargava, Asokan Durai, R. K. Ravi Kiran, E. S. Chithra</i>	
AI Enabled Smart Glass for Visually Impaired Individuals to Detect Surrounding Objects and Track Geographical Location .....	1223
<i>M O Pallavi, Anushree Raj, Channabasava, M. Seethamahalakshmi, Sreenivas Thandava</i>	
Enhancing Healthcare Outcomes Through Big Data and Statistical Models Synergy .....	1228
<i>Gul Muhammad Scoomro, Said Krayem, Bronislav Chramcov, Roman Jasek, Zaira Hassan Amur, Ismail Noordin</i>	
Secure Content-Based Medical Image Retrieval Using Hybrid Optimized Deep Learning and Revised Genetic Rice Optimization Algorithm .....	1238
<i>S. Ramya, V. Sumalatha</i>	
Clone Attack Detection Based on Novel Lightweight Security Approach Using Bio-Medical Data Protection Scheme for Remote Healthcare Management .....	1246
<i>Ali Ali Saber Mohammed, Sarah Kadhim Mohsin, Maki Mahdi Abdulhasan, Eay Fahidhil, Laith H. Alzubaidi</i>	
Energy Conservation Framework for Smart Cities for Optimal Energy Efficiency and Sustainability .....	1252
<i>Mustafa Al-Tahee, Angham Khalid Hussain, Abdulelah Hameed Yaseen, Sadiq Nabeel Sadiq, Ahmed Rasol Hasson, Mustafa Zuhaer Nayef Al-Dabagh</i>	
Research on Passive Energy-Saving Buildings in China Based on Artificial Intelligence Technology .....	1258
<i>Ahmed Read Al-Tameemi, Noora Hani Sherif, Mohammed Abdulamer Mohammed, Abadalsalam Taha Hussain Ali, Haider Sharif, Yaser M. Abid</i>	

Remote Healthcare Monitoring Based on Fuzzy-Assisted Machine Learning Framework with Fog-Computing System .....	1264
<i>Mohammed Abdul Jaleel Maktoof, Sabah Mohammed Jameel, Mohammed I. Habelalmateen, Haider Sharif, Jamal K. Abbas, Abdul Hussein</i>	
Augmented and Virtual Reality Services Supported by 6G for Improving Smart Cities.....	1270
<i>Hasan Harith Jameel Mahdi, Laith Fouad, Faris Hassan Taha Hussain, Abed Jawad Kadhim, Mohammed Abdulamer Mohammed, Nashwan Adnan Othman</i>	
Smart City Environmental Monitoring Based on Internet of Things.....	1276
<i>Mohammed Abdulamer Mohammed, Ahmed Hussian, Mohammed Abed Jawad, Nabaab Rabea Wasmii Zaydan, Sami Hameed Ali, Sehab Shehab</i>	
Enhanced Deep Learning Based Network Security Defense in Database Security Service with Big Data Analysis.....	1282
<i>Ragheed Hussam, Sami Hameed Ali, Ramy Riad Al-Fatlawy, Laith S. Ismail, Israa Abed Jawad, Mustafa Musa</i>	
Enhancing Security Threat Management in Smart Grids Through Machine Learning-Enabled Supervised Anomaly Detection .....	1288
<i>Mustafa Nazar Dawood, Noor Kaylan Hamid, Ahmed Rasol Hasson, Eay Fahidhil, Maki Mahdi Abdulhasan, Laith H. Alzubaidi</i>	
Big Data Science and Analytics-Based Persuasive Evidence-Synthesis Framework for Sustainable Policymaking in Eco-City Development .....	1294
<i>Munqith Saleem, Haider Khalil Easa, Mustafa Musa, Hayder Mahmood Salman, Ali Ihsan Alanssari, Massila Kamalrudin</i>	
Analysis of Network Traffic Based on Novel Host Security Defense System with Intelligent Network Traffic Monitoring .....	1300
<i>Abed Jawad Kadhim, Laith Fouad, Mohammed Hasan Ali, Hasan Harith Jameel Mahdi, Faris Hassan Taha Hussain, Mohammed Abdulamer Mohammed</i>	
Internet of Things Based Effective Control and Management Methods for Project.....	1307
<i>Taha Raad Al-Shaikhli, Ahmed Hussian, Ramy Riad Al-Fatlawy, Sura Rahim Alatba, Salah Farhan A Sharif, Mohammed Abdulamer Mohammed</i>	
A Framework Using IoT-Enabled Machine Learning Techniques for Predicting Major Injuries and Medical Sports Rehabilitation .....	1313
<i>Mohammed Abed Jawad, Sarah Ali Abdulkareem, Sabah Mohammed Jameel, Waleed Hameed, Ahmed Rasol Hasson, Nadhema Ahmed Jaff</i>	
Deep Neural Network and Zero Trust Principles for Intelligent Drone Management .....	1319
<i>Saad Qasim Abbas, Faris Hassan Taha Hussain, Ahmed Rasol Hasson, Waleed Hameed, Israa Abed Jawad, Ahmed Sudani</i>	
Artificial Intelligence and Computer Vision Based Technique for Effective Facial Recognition System .....	1325
<i>Noor Kaylan Hamid, Ansam Mohammed Abed, Ahmed Hussian, Jamal K. Abbas, Sehab Shehab, Azad Salh Nader</i>	
6G-Assisted Internet of Things Security Using Artificial Intelligence.....	1331
<i>Nashwan Adnan Othman, Sarah Kadhim Mohsin, Ali Ihsan Alanssari, Eay Fahidhil, Salim Yahya Kasim Khalil, Abdul Hussein</i>	

Methods for Securing IoT Devices Using Machine Learning and Deep Learning: An Evaluation.....	1337
<i>Ahmed Hussian, Noor Kaylan Hamid, Saif O. Husain, Ansam Mohammed Abed, Ahmed Read Al-Tameemi, Mohammed Hasan Ali</i>	
Optimized Image Regeneration for Old Damaged Reel Picture Using Novel Support Vector Machine Algorithm Compared with K-Nearest Neighbors .....	1343
<i>A. K. Narendra Reddy, B. T. Geetha, Bushra Hamid</i>	
Enhancing Gram-Based Fuzzy Keyword Search in Encrypted Data Using XGBoost Comparison to SVM for Increased Accuracy .....	1348
<i>Kusuluru Harshitha, S. Mahaboob Basha, Bushra Hamid</i>	
Improving Accuracy in Predicting Comment Toxicity in Threads Applications: A Comparison of Bidirectional Encoder Representations from Transformers and Gated Recurrent Units .....	1355
<i>Anirudh R, S Radhika, Farkhanda Qamar</i>	
Tuning the Accuracy in the Price Prediction of Cryptocurrency Using Long Short Term Memory in Comparison with XG Boost .....	1361
<i>Bantupalli Rohit, Kalimuddin Mondal, Abdul Basit</i>	
Optimized Resource Allocation for Energy Efficiency in Cognitive Radio Networks: A Comparison of Particle Swarm Optimization and Whale Optimization .....	1368
<i>P Aswini, Kalimuddin Mondal, Wasi Haider</i>	
Enhancing the Restoration of Old Damaged Reel Images Using a Novel Long Short-Term Memory Algorithm Compared to Generative Adversarial Networks for Improved Accuracy.....	1375
<i>A. K. Narendra Reddy, B. T. Geetha, Muhammad Fahad Zia</i>	
Comparing Return Loss of Conventional Microstrip Patch Antenna with the Square Shaped Defective Ground Microstrip Patch Antenna for Wireless Communications .....	1381
<i>Balamurugan Dp, P. Dasss, Najm Us Sama</i>	
Improving Accuracy in Fingerprint Attribute Classification Using Convolutional Neural Network Compared to Resnet50 Algorithm .....	1386
<i>Sohini Kamal. G, Ramesh Shanmugam, Najm Us Sama</i>	
Comparative Analysis on Diet Prediction of Diabetes Person Using Recurrent Neural Network Over Decision Tree with Improved Accuracy .....	1392
<i>Chirumamilla Srikanth, J. Joselin Jeya Sheela, Menwa Alshammeri</i>	
Production of Special Effects for Film and Television Using Modern Technology: A Statistical Machine Learning Perspective an Improved CNN Compared with Random Forest Classifier with Improved Accuracy .....	1397
<i>N. Naga Charan Kumar, M. Prakash, Ghadah Naif Alwakid</i>	
Reduction of Drag Coefficient in Moving Vehicles Using Novel Diffuser Slices Compared with Vortex Generators Based on Reynolds Number .....	1402
<i>Vadla Adarsh, B. T. Geetha, Ghadah Naif Alwakid</i>	
Improved Feature Extraction and Object Detection Accuracy with the Novel DenseNet Algorithm Compared to the SqueezeNet Algorithm in Remote Sensing Images.....	1408
<i>Praveen Kumar G., Bharatha Devi N., Ghadah Naif Alwakid</i>	
A Robust Deep Learning Method for Predicting Brain Strokes Using the Innovative Densenet Algorithm in Comparison to Long Short-Term Memory (LSTM) .....	1415
<i>K Ramya Chowdary, S. John Justin Thangaraj, Kamil Iqbal</i>	

Total Electricity Load Evaluation for the Kingdom of Saudi Arabia with the Inclusion of Electric Vehicles .....	1422
<i>Sikandar Abdul Qadir, Amjad Ali, Muhammad Shahid, Md. Tasbirul Islam</i>	
A Real Time Malfeasance Prediction for Multivariate Spatio-Temporal Data Using Novel Geospatial Algorithm Compared with Reinforcement Learning Algorithm.....	1427
<i>P. Rajyalakshmi, K. Logu, Vivekananth Padmanabhan</i>	
Multivariate Malfeasance Prediction in Spatio-Temporal Data Using a Novel Geospatial Algorithm: A Comparison of Accuracy with Anomaly Detection Algorithms.....	1433
<i>P. Rajyalakshmi, K. Logu, Kamil Iqbal</i>	
Improving the Image Quality Using Generative Adversarial Network in Comparison with Support Vector Machine.....	1437
<i>Gadamsetty Snehanakitha, Kalimuddin Mondal, Ravi Samikannu</i>	
Enhanced Climate Modeling for Accurate Long-Term Climate Predictions Using Deep Learning .....	1442
<i>Anupama Prasanth</i>	
Balancing Exploration and Exploitation in Chatbot Training Using Reinforcement Learning Algorithms.....	1448
<i>Kajal Nusratullah, Nusratullah Khan</i>	
Unconstrained User Authentication on Smart Phones Through Ocular Images Using FHOG and SVM .....	1451
<i>J. A. Unar, Asadullah Shah, Abdul Wahid Memon, Iftikhar Ahmed Koondhar, Suriani Sulaiman, Ahsiah Ismail, Amina Shaikh</i>	
A Biometric Based User Authentication Scheme to Safeguard Smart Phones from Impostors.....	1455
<i>J. A. Unar, Asadullah Shah, Abdul Wahid Memon, Iftikhar Ahmed Koondhar, Suriani Sulaiman, Ahsiah Ismail, Amina Shaikh</i>	
The Darkweb Paradox: The Duality of Anonymity and Its Impact on Cybercrime .....	1460
<i>Bristy Ajit Kumar Ghosh, Abdul Khader Jilani, Joy Winston James</i>	
Interference Mitigation Signal Shaping Techniques in Cognitive Radios .....	1471
<i>Atif Elahi, Abdulmajeed M. Alenezi, Noor Maricar, Elfadil Adam, Abbas Hassan Abbas Atya, Muhammad Islam, Adnan Elahi Khan Khalil, Sheroz Khan</i>	
Economic Forecasting of New Zealand with Electronic Card Transaction Data Using Machine Learning Models.....	1475
<i>Tehmina Zafar, Seyed Ebrahim Hosseini, Shahbaz Pervez Chattha</i>	
Exploratory Electronic Signal Processing with Scipy and C-Spline .....	1481
<i>Ijibadejo Oluwasegun William</i>	
A Deep Learning Approach for System Identification of an Electric Oven Using Long Short-Term Memory Recurrent Neural Network.....	1488
<i>Ali Husain Altaif, Zied Ben Hazem, Nivine Güler</i>	
Blockchain-Based Secure and Low Latency Health Record Exchange .....	1494
<i>Meryem Abouali, Kartikeya Sharma, Muath A. Obaidat, Tarek Saawdawi</i>	
Assessment of Wireless Passive Water Quality Catchment Monitoring Systems's Repeatability for Potential of Hydrogen and Water Speed.....	1500
<i>Muhamad Abdul Hasib Ali, Mohammad Fadhil Abas, Norhafidzah Mohd Saad, Suliana Ab Ghani, Norazila Jaalam, Nurul Najiha Mohd Radzi</i>	

RISE Controller Design to Regulate Output Voltage of Switched Buck Power Converters.....	1505
<i>Noaman M Noaman, Suha S. Husain, Hasanain M. Jasim, Abdulkareem Sh. M. Al-Obaidi, Mohammed Majid Msallam, Husham M. Ahmed, Amjad J. Humaidi</i>	
RISE Controller Design for Tail-Sitter VTOL Aircraft.....	1510
<i>Noaman M Noaman, Suha S. Husain, Hasanain M. Jasim, Ahmed R. Aiel, Mohammed Majid Msallam, Husham M. Ahmed, Amjad J. Humaidi</i>	
Cybersecurity in Location-Based Services: Threats, Impacts, and Mitigation Strategies .....	1516
<i>Hani Al-Balasmeh</i>	
Blockchain-Enabled Cybersecurity and Data Privacy Solutions for Smart Cities .....	1524
<i>Hani Al-Balasmeh</i>	
Enhancing Data Privacy in Vehicular Cloud Networks: Leveraging Differential Privacy and Homomorphic Encryption .....	1533
<i>Hani Al-Balasmeh</i>	
Implementing Privacy-Preserving Authentication and Geo-Indistinguishability in Vehicular Cloud Networks .....	1541
<i>Hani Al-Balasmeh</i>	
Machine Learning-Based Leukemia Classification Using Gene Expression for Accurate Diagnosis.....	1551
<i>Amena Mahmoud, Kazim Raza Talpur, Shilpa Saini, Bandeh Ali Talpur, Asadullah Shah, John Zaki</i>	
IoT Based Secure Data Sharing for Precision Agriculture with Optimal Clustering and Hybrid Encryption Algorithm.....	1557
<i>Nagendra Reddy Palugula, Savitri Bevinakoppa</i>	
Energy Efficient Internet of Things Based Routing Algorithm .....	1563
<i>Sireesha Avula, Savitri Bevinakoppa</i>	
Formulation of Modified Artificial Bee Colony (RABC) Optimization Algorithm to Minimize Economic Load Dispatch .....	1569
<i>Camillea Carol Micheal Dass, Noorazliza Sulaiman, Ravindran Nadarajan</i>	
Diversity Measure for Concept Drift Detection in Data Streams .....	1574
<i>Osama Mahdi, Savitri Bevinakoppa, Sarabjot Singh</i>	
Multi-Criteria Analysis of Concept Drift Detection Algorithms: A Decision-Making Approach.....	1583
<i>Osama Mahdi, Savitri Bevinakoppa, Sarabjot Singh</i>	
A Comparative Study of PID, LQG, and MPC Controllers for Temperature Control in Solder Reflow Ovens.....	1590
<i>Ali Husain Altaif, Zied Ben Hazem, Nivine Güler</i>	
Optimized Obstacle Detection on Edge Devices.....	1598
<i>Fakher Naseem, Mario Döller, Johannes Larcher</i>	
Classification of Healthy and Diseased Plant Leaves Using Deep Learning Model .....	1602
<i>Ramneet Kaur, Mudita Uppal, Deepali Gupta, Kazim Raza Talpur, Asadullah Shah, Shilpa Saini</i>	
Performance Analysis of Simulated Annealing on the 0-1 Knapsack Problem.....	1608
<i>Saja Murtadha Hashim, Emrullah Sonuç, Kürsat Mustafa Karaoglan</i>	

A Techno-Economic Analysis of Renewable Energy Community with Pv Integration in Southern Italy..... 1613  
*Shoaib Ahmed, Amjad Ali, Antonio D'Angola*

Innovative IoT Solutions: A Comprehensive Study of the MATTER Standard in Smart Home Integration ..... 1619  
*Intikhab Alam, Binh Thanh Dang, Shahbaz Pervez*

**Author Index**