

2024 International Conference on Intelligent Systems and Advanced Applications (ICISAA 2024)

**Pune, India
25-26 October 2024**

Pages 1-500



**IEEE Catalog Number: CFP24VJ2-POD
ISBN: 979-8-3315-3995-5**

**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:	CFP24VJ2-POD
ISBN (Print-On-Demand):	979-8-3315-3995-5
ISBN (Online):	979-8-3315-3994-8

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
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

Artificial Intelligence Based Smart Print on Demand (POD).....	1
<i>Pooja Garai, Sakshi Gholap, Nikunj Gaikwad, Atharva Chavan, Janhavi Sagvekar, Atharva Mane, Suvarna Bhise</i>	
Gesture Palette: A Virtual Painting Website	6
<i>Sejal Mali, Akanksha Arsekar, Siddhi Yadav, Siddhant Bodake, Uma Gurav</i>	
Optimizing Stock Market Predictions a Comprehensive Framework Utilizing LSTM, Gradient Descent, Auto-Correlation, and Weighted Moving Average.....	12
<i>Ujwala Salunke, Lalit Kumar Wadhwa, Prashant Patel, Deepak Chaudhari, Gaurav Suryawanshi, Tanmay Koparkar, Shubham Patil</i>	
Delta Firmware Update Strategy for Automotive Electronic Control Unit	17
<i>Akshay Chaturvedi, Pushkraj Gaikwad</i>	
Hand Gesture-Based Security and Authentication System.....	21
<i>Kalpesh Porwal, Krushna Pulate, Akanksha Waghmare, Pratik Mamdapure, Rutuja A. Kulkarni</i>	
Depression Level Detection Using AI	27
<i>Mithra Venkatesan, Sheetal Pawar, Priyanka Thorat</i>	
Blockchain-Based Supply Chain Tracking System	32
<i>Vilas Rathod, Atharva Deshmukh, Rudolph Smith, Swara Shah, Jai Umadi</i>	
Optimization of Metal Shelf Bracket: Enhancing Efficiency, Sustainability, and Performance.....	39
<i>Lokesh Khedekar, Raghav Chandratre, Omkar Chincholkar, Yash Chougale, Tanishq Chunamuri, Swapnil Dabhade</i>	
Real-Time Environmental Monitoring in Smart Agriculture Using TinyML and Machine Learning	43
<i>Sanjivani Kulkarni, Shilpa Bhudhwale</i>	
Resume Analyzer Using Natural Language Processing (NLP)	49
<i>Sarika Pabalkar, Prashant Patel, Ramila Choudhary, Vanshika Panoach, Sahil Yadav, Harsh Ghogale</i>	
Beyond Words: Multi-Modal Chat Summarization Using Text with Emoji and GIF Emotion Analysis	55
<i>Sanjana V Herur, M Shalini, A J Bhuvan, Vanshika Jain, P Preethi</i>	
An Efficient Approach for Text-To-Speech Conversion Using Personalised Custom Voices	61
<i>Kavya Chauhan, Chinmai Pore, Derek D'Souza, Pallavi U. Nehete, Megha A. Dhotay, Mrunal Aware</i>	
MEDIPREDICT: Heart and Cataract Disease Prediction Using SVM and CNN.....	69
<i>Ujwala Salunke, Prashant Patel, Lalit Kumar Wadhwa, Anurag Gaikwad, Shubham Jadhav, Prithviraj Gaikwad, Sarthak Balghare</i>	
DCBLCCG NET: A Fusion Approach for Enhanced Pepper Leaf Disease Identification with Hybrid Deep Learning	74
<i>Shaik Salma Asiya Begum, Hussainbi Shaik, Hussain Syed</i>	

Improving the Quality of Diabetic Data with Large Language Model-Driven Cleaning Techniques	82
<i>Divya Biradar, Rahul Dattangire, Ruchika Vaidya, Nagasuryashivani Inti</i>	
Real Time Monitoring of Hydroponic System Using IoT	88
<i>Vrushali Waghmare, Prerna Rakte, Meghana Gadalkar, Sakshi Bhaleghare, Dipti Sakhare, Mahesh Goudar</i>	
Smart Traffic Management System	94
<i>Rayala Sateesh, Manoj Kumar, P Venu, Varun Shanagapati</i>	
ARCHIGENIUS - VR MAZE Solving Using A* Algorithm	98
<i>Digambar Jadhav, Sakshi Mahajan, Tushar Bari, Swapnil Bagdane, Devashish Bhor, Bharti Sahu</i>	
Geospatial Data-Based Predictive Modelling of Landslide Events in Raigad District.....	103
<i>Sonali Chandrashekhar Patil, Anushka Dixit, Sanika Atkare, Esha Dabhade</i>	
Revealing Secrets: Alphabetic Innovation in OTP Systems	109
<i>Sonali Chandrashekhar Patil, Lalit Kumar Wadhwa, P. B. Patel, Parth Tagadpallewar, Nayan Pagare, Neha Raut</i>	
Cognitive Data Underwriting	114
<i>Sonali Chandrashekhar Patil, Sudeep Das, Vaishnavi Patil, Atharva Patil, Shubham Yadav</i>	
Machine Learning-Driven Prediction of Thermal Conductivity in Fe Alloys	120
<i>Ganesh D Sathe, Jayesh Jadhav, Manoj Kadam, Anagha M. Pathak, Sandesh R. Jadkar, Vishal Bhalla</i>	
A Hybrid Portable Solar, Wind Energy Source for Military Deployment	126
<i>Haripriya H. Kulkarni, Prashant Patel, Lalit Kumar Wadhwa, Vidula Jape, Amruta. Kulkarni, Suyash Jadhav</i>	
Monitoring the Battery Health in Electric Vehicles Through IOT.....	132
<i>Vidula Jape, Manasi Deore, Haripriya Kulkarni, Shalaka Chaphekar, Prashant Patel, Suyash Jadhav</i>	
Pregnancy Mode Detection Predictive Model for Enhanced Maternal Healthcare	137
<i>Krutika Jagtap, Mrunal Badshah, Snehal Pradhan, Rasika Kulkarni, Smita Bhanap</i>	
An IoT-Based Stress Level Detection System for Emergency Medical Attention Personnel.....	142
<i>Simran Toolkar, Aryan Kampali, Siddhesh Bhagwat, Khushbu Katre, Jitendra Tahalyani</i>	
Design and Optimization of Suspended RF Stripline Low Pass Filter for Communication Network.....	146
<i>Jitendra Tahalyani, Khushbu Katre, Vishaka Gorad, Akshit Khare, Shivani Kumari, Rajesh Bulbule</i>	
Enhancing Real Time Communication for Hearing Impaired: A CNN-Based Audio-To-Captions System.....	151
<i>Nikil Kumar Buddala, Krishna Kishore Buddi, Satyanarayana Chowdary Battula, Rohith Immadiseti, Satish Anamalamudi, Shiva Shankar Mutupuri</i>	
Advanced Approaches to Vehicle Detection Through Deep Learning a Scholarly Investigation.....	157
<i>R Kiranmai, R Deeptha, K. Purnachand</i>	
MedoDoc – Disease Prediction & Doctor Suggestor Website Using Machine Learning.....	163
<i>Saraswati Jadhav, Bhushan Bachewar, Shreya Barsude, Aayush Gadiya, Harsh Badgandi</i>	

Li-Fi Based Deepwater Communication Using ATMega328	169
<i>Vishakha Jadhav, Vaishnavi Desai, Yash Rathi, Ojas Asthtankar</i>	
Towards Sustainable E-Waste Management: A Computer Vision and Machine Learning Approach for Identification and Valuation	172
<i>Pradyumna Joshi, Pratik Bagul, Anagha Deshpande</i>	
Comparative Analysis of Machine Learning Models for Prediction of Air Quality Index	178
<i>Snehal Lawande, Vidhya N Gavali, Indrayani Sutar, Reshma Nehe</i>	
Denosing of Speech Signal Using Deep Learning	183
<i>Priyanka Wani, Sudhanshu Uttarwar, Abhijeet Dada Mote, M. N. Chandan, Vandana Katarwar</i>	
Smart Lift Technology for Compact Buildings	186
<i>M. Kavitha, D. Susitra, V. Meenakshi, A. Santhi Mary Antony, M. Pushpavalli, V. R. Pooja</i>	
BLDC Motor-Based Mixer Development	191
<i>Rutuja Warbhe, Ganesh Patil, Anshu Sharma, Vilas Bugade, Nilesh Ugemug</i>	
AI-Driven Energy Management System for Industrial and Commercial Facilities to Enhance Energy Optimization	196
<i>M. Pushpavalli, Mohd Noman, Shubham Kumar, Satya Praksh, W. Abitha Memala, C. Bhuvaneshwari, P. Sivagami</i>	
From Farm to Fork: Advanced Analysis, Visualization, and Imputation of CO2 Emissions in Food Production	202
<i>Dhrsaj Kaushal, Khushbu Trivedi, Susanta Das</i>	
A Review on Nanobots for Cancer Treatment	208
<i>Shreya Ramesh, C. Bhuvaneshwari, K. Sasikumar, M. Pushpavalli, W. Abitha Memala</i>	
Quantum Computing and Cryptography: Addressing Emerging Threats	213
<i>Archisha Yadav, Rupali Gangarde</i>	
Optimizing Handwritten Character Recognition Systems: Neural Networks Vs. Statistical Methods.....	218
<i>Vikash K. Agrawal, Srinivasa Rao Bogireddy, Lalit N. Patil, Mahesh Sonekar, Yashraj M. Patil, Vikas Singh Panwar</i>	
IoT-Based Enhanced Battery Safety and Management System in EV's.....	227
<i>Anshu Sharma, Rajashree Bhokare, Rutuja Warbhe</i>	
Secure-JobChain: Revolutionizing Job Recruitment with Blockchain Technology	233
<i>S. Pavithra, S. Geethanjali, B. Vidya, S. Suria, B. S. Rahul, R Kishore</i>	
Security System for Bikes Using GPS and GSM	239
<i>Rutuja Warbhe, Anshu Sharma, Ganesh Patil</i>	
Meta-Heuristic Approaches to NP-Hard Resource Allocation in Civil Engineering: DE Vs GA.....	243
<i>Rashmi Benni, G K Akshata, C T Neelamma</i>	
Improving Power Quality in Distribution Networks: Performance Analysis by Utilization of Shunt APF.....	250
<i>Ganesh Patil, Rutuja Warbhe, Ekta Mishra, Jha Anjalikumar Lalmohan</i>	
Enhancing Power System Stability Using Swarm Intelligence Algorithms	254
<i>Anshu Sharma, Rutuja Warbhe</i>	

Advanced Predictive Modeling of Military PTSD: SCA-Guided LSTM Analysis	260
<i>Megha Sawangikar, Chinmaya Dash, S. Surekha, Veera Ankalu Vuyyuru, Pkp Gaitry Chopra, R Saravanakumar</i>	
Enhancing User Experience in Human-Computer Interaction Through Advanced Deep Learning Techniques for Personalized and Adaptive Interfaces	266
<i>S. Kavitha, C. S. Nithya, Hanumantha Rao Battu, Shamim Ahmad Khan, Manikandan Rengarajan, B. Anitha Vijayalakshmi</i>	
Early Health Risk Screening	271
<i>Vijaykumar Rayappa Bhanuse, Om Ulhas Gotmare, Gayatri Sunil Relekar, Rakesh Gangadhar Dhindore, Piyush Vishwas Kumbhakern</i>	
Performance Evaluation of Ant Colony Optimization and Firefly Algorithm for the Traveling Salesman Problem: A Comprehensive Study	274
<i>Rashmi Benni, Uma M Hiremath</i>	
Exploring Full Adder Design Using SAT-Based Approach	281
<i>S. Nivithan, A. Abhishek, M. Sundar Prakash Balaji, P. Thanapal, V. Joseph Michael Jerard, P. Ganesan, V. Elamaran</i>	
Adaptive Neuro-Fuzzy Inference Systems for Cognitive Sensor Communication in Smart Cities.....	287
<i>Rahul Pradhan, Ch. Prathiba, Timur Kholmukhamedov, B. N. Patil, S. Suma Christal Mary, I Infant Raj</i>	
Automatic Voice Recognition System	292
<i>Priyanka Wani, Aniket Chaudhari, Abhijeet Dada Mote, Ekta Mishra, Ganesh H. Patil</i>	
Drive Dash: Vehicle Crash Insights Reporting System	296
<i>Sreenivas Reddy Sagili, Thomas B Kinsman</i>	
Electric Vehicle Retro-Fitment Kit for Two-Wheeler to Contribute to the Sustainable Development	302
<i>Anagha Soman, Haripriya H. Kulkarni, Manisha Dudhedia, Vidula Jape, Pranita Chavan, Suyash Jadhav</i>	
Enhancing Cardiovascular Risk Prediction with an Ensembled Model Approach	307
<i>Phanindra Cherukuri, Devarakonda Uma, Pranamita Nanda, Dinesh Valluru, S. Kaliappan, Siva Kumar Pathuri, Krishna Priya Burra</i>	
Using Nature-Inspired Optimization Algorithms and Machine Learning to Optimize Hadoop Resource Scheduling	313
<i>Satish Muppidi, Balajee Maram, Aravapalli Rama Satish, B. Manivannan</i>	
BLDC Motor Trapezoidal Regulation Using Hall Effect Sensor	321
<i>Hansa Bhatiya, Dushyant Patil, Shriram Makune, Swaraj Kadam, Vishal Mahajan, Harshal Vaidya</i>	
RESNET-50 Based Pest Identification in Plants	327
<i>Nisha Negi, Sandeep Kumar Singh, Amit Agarwal</i>	
Towards Precision Medicine: Nature-Inspired Optimization Algorithms for Personalized Cholesterol Disease Prediction.....	333
<i>Parul Datta, Balajee Maram, Meesala Sravani, Smritilekha Das</i>	
Predictive Models of Cholesterol Levels Through Protein Expression Patterns	338
<i>Balajee Maram, Gotte Vasavi, V Vasudha Rani, B. Ramesh, M Narendra Nadh Reddy, Sasibhushana Rao Pappu</i>	

Real-Time Medical IoT for Continuous Glucose Monitoring	343
<i>Akanksha Goel, Poi Tamrakar, Mily Lal, Manisha Bhende, Minal Wani, Saurabh Saoji</i>	
Secure Protocol with Mutual Authentication for Telecare Medical Information System Using ECC for IOT Enabled WBAN Devices	351
<i>Ss Anushaa, S Naundhini, Dharminder Chaudhary</i>	
A Hybrid CNN- GRU Approach with Transfer Learning for Advanced Waste Classification in Support of Environmental Sustainability.....	358
<i>Nalla Siva Kumar, Tripti Sahu, Mohammed Saleh Al Ansari, Shamim Ahmad Khan, J. P. Swagatha, I Infant Raj</i>	
Utilizing Deep Neural Networks for Portfolio Optimization in Financial Markets.....	364
<i>Shubh Karan Singh, Tripti Sharma, Kathari Santosh, Karthik Reddy, J. P. Swagatha, R Saravanakumar</i>	
Optimizing EV Charging Station and Capacitor Placement for Energy Loss Reduction in Distribution Networks Using GWO	369
<i>B Vinod Kumar, M A Aneesa Farhan</i>	
Electric Vehicle Energy Consumption Modeling and Range Estimation Using Different Topographical Drive Cycles	375
<i>Sachin Chavan, Saket Yeolekar, Netra Lokhande</i>	
Real-Time Driver Drowsiness Detection System Using Vision Transformer for Accurate Eye State Analysis	381
<i>Fariya Osmani, Pawan Wawage</i>	
Droplet Spreading Prediction of the Textured Surfaces: A Machine Learning Approach	386
<i>Ganesh Sahadeo Meshram, Suman Chakraborty, Partha Pratim Chakrabarti</i>	
An Efficient Video Authentication Method Based on Least Significant Bit Replacement	391
<i>Mukesh Pondekar, Shrinivas P. Deshpande, Nilesh Shelke</i>	
Deep Learning Models for Hedging Strategies in Derivative Markets	397
<i>Ritesh Khatwani, Pritesh Shah, Ravi Sekhar, Harshavardhan Reddy Penubadi, Pradip Kumar Mitra, Lalit Shrotriya, Sayantan Das</i>	
AHP and Fuzzy AHP Multi-Criteria Decision Making Process: A Brief Study of Laptop Selection	404
<i>Om Shankar, Faizan Mirza, Ritesh Khatwani, Pradip Kumar Mitra, Pritesh Shah, Ravi Sekhar</i>	
Human Activity Recognition and Classification Systems Using YOLOv9.....	410
<i>Shreyas Pagare, Rakesh Kumar</i>	
Machine Learning for Adaptive Curriculum Development: Implementing Optimized Light Gradient Boosting in Global Education.....	418
<i>Preeti Singh, Shagun Chahal, Monika Tushir, P N V Syamala Rao M, Sunil Kadyan, S Muthuperumal</i>	
Preferential Voting System: An Extensive Study of Global and Indian Practices Suggesting Intelligent System Design.....	424
<i>Prapti D. Deshmukh, S. Shaikh Adiba</i>	

Evaluating the Effectiveness of Random Forest Versus Decision Tree Algorithms in Predictive Analytics for Enhancing Sustainable Development Strategies in Real Estate, Infrastructure, and Construction: A Machine Learning Perspective	431
<i>Deepali Mayur Gala, Bhakti Pawar, Gayathri Band, Arvind Dalal, Arnab Chakraborty, Utpala Das, Bhaskar V. Patil</i>	
Development of IOT Based Battery Management System for EV	437
<i>Sachin P Jadhav, Aabid C Mulla, Sachin G Argade, Swapnil S Jadhav, Dushyant Patil, Harshal Dattatray Vaidya</i>	
Integrating Ensemble Machine Learning with Technical Indicators for Superior FX Volatility Prediction	443
<i>Bhaskar V. Patil, Pushpesh, Amit Kumar, Neha Yadav, Bhakti Pawar, Bhavesh P. Joshi, Deepali M. Gala</i>	
Unveiling the Salary Landscape: Predicting Compensation for Software Engineers.....	449
<i>Jayashree Bagade, Abhishek Khatal, Tanishq Kawoor, Rupali Rathod</i>	
Crop Detection and Weed Removal Agriculture Robot.....	455
<i>Digambar P. Patil, Digvijay B. Kanase, Seema S. Patil, Deepak B. Patil, Himmat Singh Purohit, Nupoor Mhatre</i>	
Machine Learning-Based Sensor Synchronization for Enhanced Spatial Awareness in Assistive Technologies.....	461
<i>Iftekar Patel, Makarand Kulkarni, Ninad Mehendale</i>	
IoT-Based Safety Monitoring and Alerting System for Coal Mines.....	467
<i>Rajashree Bhokare, Anshu Sharma, Pankaj Kumar, Akanksha Tayade, Dipali Wani, Rupali Chaudhari</i>	
Revolutionizing Marketing Through Artificial Intelligence: An Analytical Compendium of Case Studies	472
<i>Shrishi Agarwal, Shipra Agarwal, Varsha Mittal, Anuradha</i>	
Energy Management Using Smart Inverter	479
<i>Digvijay B Kanase, Sachin P Jadhav, Dushyant P Patil, Shashikant Prasad, Swaraj Kadam, Digambar P. Patil</i>	
Car Recommendation System	484
<i>Sahil Pawar, Ajinkya Pawar, Parth Pawar, Jayashri Bagade</i>	
Performance Investigation of Asymmetric Consequents in a Fuzzy Logic Controller for a Nonlinear Flow Loop	490
<i>Dhruv Khurana, Puneet Mishra, Manmahendra Singh Daksh</i>	
Semantic Search of Educational Texts.....	496
<i>Shrey Choudhary, Hemant Kumar Jaiswal, Akul S. Rajeevan, Partho Dipankar Mukherjee, Shilpa Hudnurkar</i>	
Capacitor-Based Cell Balancing: A Comprehensive Review	501
<i>Debayan Bhaumik, Jagatjit Barik</i>	
NCERT Curriculum Assistant: A Chatbot for Tenth Board Students.....	506
<i>Shubham Mojidra, Atharva Karekar, Vaishnavi Kothari, Sahil Limaye</i>	
Advanced Optimization Techniques for Effective Text Summarization.....	512
<i>Yogita P. Narwadkar, Anant M. Bagade</i>	

IoT-Based Smart Signal System for Traffic Density Management and Emergency Vehicle Priority	520
<i>T Kanimozhi, Gongal Reddy V. Kishore Reddy, N. Rahul Kumar</i>	
Enhanced Convolutional Neural Network for Sign Character Recognition with Mixed Pooling and Mish Activation Function	525
<i>Hritajit Sur, Gourab Mandal, Koushik Das, Apurba Nandia, Avik Kumar Das, Arijeet Ghosh</i>	
Comprehensive Analysis of Rolling Resistance Coefficients on Various Road Conditions and Their Effect on Electric Vehicle Performance.....	531
<i>Sumedh Nivrutti Pise, Aditya Lalit Jagtap, Saket Yeolekar, Netra Lokhande</i>	
Enhancing Large Language Models with Google Knowledge Integration for Rapid Response in Healthcare Emergencies	537
<i>Suparna Das, Kamil Reza Khondakar, HIRAK MAZUMDAR</i>	
BoneScanAI: Advanced Machine Learning for Precision Bone Fracture Diagnosis.....	541
<i>Yashu, Amanveer Singh</i>	
Emotion in Pixels: Refining Expression Recognition with Hybrid Deep Learning	547
<i>Yashu, Amanveer Singh</i>	
EyeSmart a Deep Learning and Random Forest Approach for Multi-Disease Retinal Analysis	552
<i>Yashu, Amanveer Singh</i>	
Unmanned Ground Vehicle: Design and Development Approaches	558
<i>Niyaj Shikalgar, Yashraj Patil, Atharv Karale, Mayuresh Patil, Vineeth Thadi, Ritesh Bankar</i>	
Integrating Weighted Averaging and Boosting in Ensemble Models for Improved Flood Forecasting.....	563
<i>Deelip Patil, Kamal Alaskar</i>	
Vitamin Deficiency Detection Using Image Processing Through Dermatological Symptoms	569
<i>Sagar Janokar, Nimish Somani, Purvi Solanki, Samiksha Solanke, Aditya Solunke, Ishan Soman</i>	
Deep Learning Methods for Fertilizer Forecasting: Review of State of the Art.....	575
<i>Bhagwan Dinkar Thorat, Sunita A. Jahirabadkar</i>	
Automated Semantic Segmentation and Diagnosis of Coconut Tree Infection Using Drone Imagery and Machine Learning Approach for Smart Agriculture	581
<i>M Vasumathy, J. Jude Moses Anto Devakanth, Mythili Thirugnanam, R. Roselinkiruba, R. Hamsaveni, R. Nandhini</i>	
Social Work Alert	587
<i>Kalpesh Joshi, Isha Sahasrabuddhe, Kshitij Sahane, Raj Bapat, Aditya Sahane, Riddhi Sadavarte</i>	
Analysis of Facial and Acoustic Features for Driver Drowsiness Detection.....	593
<i>Deepali Y Loni</i>	
Numerical Analysis to Investigate the Influence of Various HTLs on $MA_{0.9}Cs_{0.1}Pb(I_{0.6}Br_{0.4})_3$ Based Perovskite Solar Cells.....	600
<i>Shikha Marwaha</i>	
Search Engine Based Recommendation Engine Using Hybrid Model.....	606
<i>Sangita S. Modi, Sujata R. Shahabade</i>	

Deep Learning Analysis for Detection of Morphological Features of HR & DR.....	610
<i>Arti Utikar, Milind Bongulwar, C. Y. Patil</i>	
Automatic Liquid Level Control of Two Tank System Using PLC	614
<i>Deepa S. Bhandare, V. S. Jape, H. H. Kulkarni, S. M. Mahajan, Parth Sable, Yash Pawar</i>	
Beyond Faces: A Conceptual Framework for Responsible Use of Deepfake Algorithm in Advertising	620
<i>Asmita Kamble, Chetan Chaudhari</i>	
HiAt-Net: A Novel Three-Layered Encoder-Decoder with Hierarchical Attention for Classifying Cervical Cancer with Cytology Images.....	626
<i>Rakesh Kumar Mahendran, Parthasarathy Ramadass, M. Kiruthiga Devi, R Sanmugasundaram, Usharani Thirunavukkarasu, A. Peter Soosai Anandaraj</i>	
Hardware Implementation of Intrusion Detection System for Blackhole Attack Detection.....	636
<i>Ashwini V. Jatti, V. J. K. Kishor Sonti</i>	
Analysis of Techniques for Cotton Crop Disease Detection & Monitoring	640
<i>Prajakta S. Gupta, A. V. Zade</i>	
Phytosomes: The Inventive and Futuristic Technology for Boosting the Bioavailability of Botanicals and Nutraceuticals Through Artificial Intelligence.....	644
<i>Mamta Joshi, Amrita Pargaien, Sunita Waila Tiwari, Garima Chand, Neha Joshi, Heena</i>	
Artificial Intelligence Based System and Method for Data Augmentation in Biomedical Computer Vision Tasks.....	649
<i>Jothiraj Selvaraj, Snehalatha Umapathy</i>	
Optimizing Efficiency and Extending Battery Life in Electric Vehicles: A Comprehensive Analysis of System Components and Design Strategies	655
<i>Swaraj Kadam, Trupti Dhanadhya, Dushyant Patil, Shashikant Prasad, Digvijay Kanase</i>	
Deep Learning-Based Style Transfer of Multimodal Medical Images for Enhanced Surgical Planning.....	661
<i>Rp Nirush, U Vishnu Kanna, Jothiraj Selvaraj, Snehalatha Umapathy</i>	
Disease Prediction with Ayurvedic Remedies Suggestion and Hospital Recommendation Using ML and DL.....	666
<i>Swapnil K. Shinde, Amar Buchade, Parikshit Mahalle, Prashant Raut, Archana Dirgule, Prashant Mandale</i>	
Assessing the Vulnerability of Machine Learning Models to Cyber Attacks and Developing Mitigation Strategies	672
<i>Abdul Sajid Mohammed, Shubham Jha, Ayisha Tabbassum, Vaibhav Malik</i>	
Harmful News Detection Using BERT Model Through Sentimental Analysis	677
<i>R R Sornalakshmi, Murugan Ramu, K. Raghuv eer, Veera Ankalu Vuyyuru, D. Venkateswarlu, A. Balakumar</i>	
A Comprehensive Framework for Evaluating Cyber-Physical Threats in Energy Internet	682
<i>Pooja Sahu, A. Jeraldine Viji, Vandana Roy, Lipika Roy, Devolla Manogna, Somil Vasal</i>	
Enhancing the Security of Industrial Cyber-Physical Systems Using AI Algorithms	689
<i>Amarjeet Kumar Ghosh, Hari Prasad Bhupathi, L Bhagyalakshmi, Hitha Poddar, T. Gandhi, Juhi Jain</i>	

Evolutionary Algorithms for Deep Learning in Secure Network Environments.....	695
<i>Banothu Seva, Ratnesh Jain, Neha Khare, Hussain Ahmed Choudhury, M Ayyappa Chakravarthi, Nitin Tomer</i>	
Pushing the Limits of Machine Translation with GPT-4 and Marian NMT in Multilingual Communication	702
<i>Sourabh Jain, Mohd. Sadim, Hemant Amhia, N. Krishna Kumar, Shibanjali Choudhury, P. V. Rajlakshmi</i>	
The Frontier of Geospatial AI Deep Learning Applications in Data Mining and Spatial Analysis	709
<i>Ajit Kumar Mishra, Vikash Verma, R. Manivannan, N. Krishna Kumar, Mudunuru Srividya, Sanskriti Sharma</i>	
Machine Learning Algorithms for Automated Synthesis of Biocompatible Nanomaterials.....	715
<i>M Ayyappa Chakravarthi, Sonu Sharma, Amit Sahu, Tanuja Murthy, Arulananth T S, Smriti Jain</i>	
Securing IoT Networks in Healthcare for Enhanced Privacy in Wearable Patient Monitoring Devices.....	721
<i>Vibha Tiwari, Nitin Jharbade, Prashant Chourasiya, B. Supraja, Priyanka Sujit Wani, Rashmi Maurya</i>	
Unleashing the Potential of Women in Leadership Roles Within the Evolving Landscape of Machine Learning and Technology	727
<i>Madhuri Tiwari, Neeraj Giri, Sanjay Kumar Suman, Amit Kumar Chandanan, Subhashini Peneti, Shibanjali Choudhury</i>	
IoT Based Effective Wearable Healthcare Monitoring System for Remote Areas	733
<i>Shweta Tiwari, Nishi Jain, Nirmala Devi, B. Supraja, N. Thulasi Chitra, Aditi Sharma</i>	
Empowering Spoken English Assessment: Advanced Deep Learning Techniques for Automated Evaluation.....	739
<i>K. Chandrasekhar, Sana Sarwar, Purnachandra Rao Alapati, K S Punithasree, Punit Pathak, B Kiran Bala</i>	
Exploring the Intersection of Technology and Education: Artificial Intelligence in Language Learning and Communication	745
<i>Rahul Pradhan, Shamim Ahmad Khan, Anslin Jegu, P. Kavitha, Revati Ramrao Rautrao, M Ponni Valavan</i>	
Exploring Neural Network Models for Pronunciation Improvement in English Language Teaching: A Pedagogical Perspective	751
<i>Yaisna Rajkumari, Anslin Jegu, Dr Gulnaz Fatma, M. Mythili, Veera Ankalu Vuyyuru, A. Balakumar</i>	
Cultural Perspectives on Transformational Leadership and Organizational Commitment: A Study of US Financial Sector.....	757
<i>Indrajit Goswami, Richa Mehta, Pravin D Sawant, Narinder Kumar Bhasin, Kathari Santosh, M Ponni Valavan</i>	
Deep Learning-Based Wheat Stripe Rust Disease Recognition Using Mask RCNN.....	763
<i>Jatin Sharma, Deepak Kumar, Raman Verma</i>	
Advanced Leaf Blight Detection in Maize Using YOLACT Deep Learning and Histogram Equalization.....	768
<i>Naman Nayak, Deepak Kumar, Abhiraj Malhotra</i>	

A CNN-Based Approach for Early Detection of Breast Cancer Using Infrared Imaging.....	773
<i>Naman Nayak, Deepak Kumar, Abhiraj Malhotra</i>	
Enhancing Gait Recognition with a CNN-RF Approach: Focus on Single and Double Support Phases.....	777
<i>Urvashi, Deepak Kumar, Raman Verma</i>	
Culinary Curator: An AI-Powered Recipe Assistant.....	783
<i>Ved Naik, Khushi Tejwani, Aanya Lari, Ishani Saha</i>	
Detection of Parking Space and Counter Using Computer Vision	790
<i>Abhay Gupta, P. Bhavish Reddy, S. Sri Lakshmi Prasanna, R Radha</i>	
Enhancing Toxic Comment Classification: A Deep Learning Approach with Pre-Trained Language Models.....	796
<i>Khushi Tejwani, Ved Naik, Aanya Lari, Dhruvin Jhaveri</i>	
Enhancing Workplace Efficiency with the Implementation of the Internet of Things to Advance Human Resource Management Practices	802
<i>Reetika Dagar, Vijeyata, Rashi Srivastav, Mohd Aarif, Ankur Lohiya, S Muthuperumal</i>	
Enhancing Fraud Detection in Online E-Commerce Transactions Through Deep Learning Auto Encoder Model	808
<i>K. Raghuvveer, Taviti Naidu Gongada, Divya Nimma, Mohd Aarif, Keerthi Samudrala, B Kiran Bala</i>	
AAF-SCM: An Authenticated Framework for Supply Chain Management.....	814
<i>Prince Roy, Rajneesh Kumar, Md Neaz Morshed</i>	
A Comparative Study of HEV Motors Drive System.....	818
<i>Gangappa K. Ingalgi, Neha Zope, Shashank Gawade, Manisha Shitole, Sateesh Patil, Ariz Faridi</i>	
Power Applicator to Focus and Confine Radio Frequency (RF) Signal for Parallel Plates Blood Bag Tube SealingUnit.....	826
<i>Prashant B. Patel, HariPriya Kulkarni, Lalit R. Chaudhari, Shilpa Hudnurkar, Anup Vibhute, Om Satwadhar</i>	
Hand –Eye Coordination Equipment.....	830
<i>Vivek S. Rane, Arun D. Limgaokar, Priyanka S. Wani, Sharvari Hinge, Kalpesh Sonawane, Purva Dighore</i>	
A Robust Multimodal ISL Translation Framework	834
<i>V G Darshanaa, T Raghuvveera</i>	
Mitigating Denial of Service Attacks Through Machine Learning-Based Intrusion Detection	840
<i>Mohammed Ashraf Hussian, Sv Vasantha, Sowmya Ala, Uma Mageswari R, Keerthi Pendam, Swetha Rame</i>	
Discovery of Novel Antifungal Agents from Polygonatum Odoratum Targeting 14-Alpha Demethylase Enzyme for the Treatment of Black Fungus (Mucormycosis)	845
<i>Aqsa Begum, Ameen, Sanjay Shrinivas Nagar, R S Upendra, R Karthik</i>	
Adaptive Neuro-Fuzzy Inference System for Cognitive Load Assessment in Brain Machine Interfaces	850
<i>M. Siva Mala, Mohd Mushtaq Karche, Arfanda Anugrah Siregar, Mohammed Saleh Al Ansari, Vuda Sreenivasa Rao, I Infant Raj</i>	

A Study to Assess Level of Malnutrition Among Under Five Children Attending OPD of Selected Hospital	855
<i>Ms Sucheta Yangad, Pratiksha Naikare, Khurshid Jamadar, Milind Jadhav, Datta Lokhare, Pallavi Dahije, Deepa Suryawanshi, Sujata Gaikwad</i>	
Modernizing Finance, HR: AI, IoT, and Cloud Solutions for Enhancing Efficiency and Employee Satisfaction	859
<i>S. Vijayakanthan, J. Navenanesakumari, S. Uma, R. S. Lekshmi, A Sathish, S. Avinash</i>	
Strategic Human Resource Management Innovations in Finance and Marketing with ML	865
<i>R. Muzhumathi, S. Vijayakanthan, L. Rajeshkumar, R. S. Lekshmi, S. Chandrasekaran, R. Selvameena</i>	
Innovative System for Environmental Monitoring with Connected Sensors and Data Analysis for Chemical Pollutants.....	871
<i>A Suganya, Mahesh A. Suryawanshi, Manisha V. Bagal, Ruchira Rawat, S. Kaliappan, G. Manikandan</i>	
The Development and Impact of an Intelligent Scheduling System for Educational Institutions	877
<i>Parth Yogesh Kulkarni, Varun Sandeep Kulkarni</i>	
Integrating Site Reliability Engineering Principles with DevSecOps for Enhanced Security Posture	882
<i>Ayisha Tabbassum, Vaibhav Malik, Jaspal Singh, Neha Surendranath</i>	
Leveraging Deep Learning Techniques for Objective and Subjective Assessment of English Language Proficiency	888
<i>J Naga Madhuri, Divya Nimma, M. Mythili, Punit Pathak, Veera Ankalu Vuyyuru, M. Karthik</i>	
Design, Development and Testing of Linear Motion Test Bench for the Assessment of Psycho-Motor Control.....	894
<i>Arun D. Limgaokar, Vivek S. Rane, Harshvardhan Patil, Ganesh A. Sawandkar, Aditi D Barde</i>	
Revolutionizing Cognitive Rehabilitation with Transcranial Direct Current Stimulation: A Novel Perspectives in Type 2 Diabetes Mellitus	902
<i>Abha Khisty, Tushar J. Palekar</i>	
Design and Implementation of Mini Railgun	906
<i>Vishakha Rohit Mahamulkar, Shital S. Jadhav, Deepali V. Wagh, Chetana S Kelkar, Ekta Mishra, Ganesh H. Patil</i>	
Machine Learning Assisted Analysis of Fingernail Impression Techniques for the Detection of Metabolic Diseases.....	914
<i>Dhanashree Bomle, Rutuja Naik, Atharva Shinde, Vaidehi Patel, Kratika Khunteta, Sachin C Sarode, Nilesh Kumar Sharma</i>	
Roses Plant Disease Detection Using DenseNet121 Model.....	920
<i>Lalit R. Chaudhari, Abhishek V. Tidke, Pooja S. Gupta, Prashant Patel, Shipla Hudnurkar</i>	
Development & Validation of Respiratory Muscle Strength Measurement System.....	925
<i>Arun D. Sonar Limgaokar, M. Vijaykumar, Sudhanshu S. Baraskar, Renuka D. Sonnekar, Ruchita Kotak, Arya Pakare</i>	
Refining PI/PID Controller Design with Stability Margins: A Survey on Simplicity and Flexibility	930
<i>Anand Kumar, Priya Kumari</i>	

Federated Learning for Privacy-Preserving Data Mining.....	936
<i>Dattatray Raghunath Kale, Tushar S Mane, Amar Buchade, Prashant B Patel, Lalit Kumar Wadhwa, Rajendra G. Pawar</i>	
IOT Based Monitoring and Rapid Controlling Circuit Breaker	942
<i>Pankaj Kumar, Rajashree Bhokare</i>	
Machine Learning Based Wild-Animal Detection Near Roads Using IoT Sensor and Optimization	947
<i>S. Simonthomas, K. Rohith, K. Shantha Shalini</i>	
Implementing Genetic Algorithms for Curriculum Scheduling and Optimization in Higher Education.....	954
<i>Roger D. Capua, A. Pio Albina, Tushar Dhar Shukla, Sheena Marie Villegas Toledo, Marvin Mayormente, S Muthuperumal</i>	
Innovative Design for Lower Limb Rehabilitation: Design a Smart Knee and Ankle CPM Device.....	960
<i>Asha Wilson, Fridolin Joe Joseph, Ittiavirah K Sabu, P Careena</i>	
Enhanced Equirectangular Projection Images with Nonlinear Stretching	966
<i>Manisha Mane, Anand Bhaskar</i>	
Novel Lightweight Encryption Scheme Based on Transformation Matrix and ChaCha20 Algorithm for Secure Snap Transmission	970
<i>V Sellam, M Ranjith Kumar, V Sudeesh Kumar, S Mahendira Kumar, G K Tharun Kaarthik</i>	
Wireless Traffic Light Control Using Hand-Held Remote Device in Peak Hours.....	976
<i>Shashikant Prasad, Shrirang Jadhav, Narayan Giri, Prathmesh Darade, Paras Chawade</i>	
PLC-SCADA Based Online Monitoring and Conditioning of Laboratory	982
<i>Shashikant Prasad, Swaraj Kadam, Trupti Dhanadhya, Digvijay Kanase, Sachin Jadhav</i>	
Combining Artificial Intelligence with Nanoscale Energy Systems to Achieve Highly Efficient Energy Harvesting and Utilization	990
<i>Biresh Kumar, Sanyam Anand, Nikhil Singh, Rahul Singh, Pallab Banerjee, Abhay Gyan P. Kujur</i>	
Bank Loan Prediction System by Using Machine Learning.....	997
<i>Aishwarya Andhale, Om Bansode, Rohan Chavan, Jayashri Bagade</i>	
Underwater Wireless Communication Network by Magnetic Field Using Sparse Sensing	1002
<i>Shankar D. Chavan, Digvijay B Kanase, Sachin P Jadhav, Sudhanshu Uttarwar, Shashikant Prasad, Anand Kumar</i>	
Predicting Diabetic Retinopathy with Machine Learning: Disentangling the Diabetes-Ocular Health Complex	1007
<i>B V Baiju, Diti Jain, Dev Ankur Mehta, Shailza Thakur, Astha Raghvendra Jha</i>	
Evasion Attack Against CNN-Adaboost Electricity Theft Detection in Smart Grid	1012
<i>Santosh Nirmal, Pramod Patil</i>	
Innovative Wearable EEG Solution for Stress Assessment and Control	1018
<i>Aviral Patel, Prerna Zagade, Shravan Ambudkar, Aboli Jadhav, Bhavna Ambudkar</i>	
A Comprehensive Approach to Stock Price Prediction Using Dual LSTM Models.....	1024
<i>Aviral Patel, Vaishnawi Choudhary, A Shravan, Bhavna Ambudkar</i>	

Author Index