

2025 2nd International Conference on Integration of Computational Intelligent System (ICICIS 2025)

**Lohegaon, India
9-12 September 2025
Pages 1–588**

IEEE Catalog Number: CFP25DI6-POD
ISBN: 979-8-3315-3737-1



Copyright © 2025, IEEE

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:	CFP25DI6-POD
ISBN (Print-On-Demand):	979-8-3315-3737-1
ISBN (Online):	979-8-3315-3736-4

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

TABLE OF CONTENTS

Diabetic Retinopathy Detection: An Approach Using Different CNN Architectures	1
<i>Ajay Sharma, Praveen Kumar Tyagi, Vijay Kumar Trivedi, Ramraj Dangi</i>	
Advances in Unsupervised Relation Extraction for Big Data Analytics	5
<i>Ashwini Chandrakumaran</i>	
Agriassist - Smart Agriculture Chatbot	10
<i>Sheetal S. Patil, Gauri R. Rao, Avinash M. Pawar, Suresh Kumar Ray, Arpit Raj, Vedang Sherpura</i>	
<i>Aniket Sharma, Harsh Vardhan</i>	
Decoding Public Reactions to Tax Policy Reforms Using BERT-Based Sentiment Analysis	16
<i>Gauri R. Rao, Sheetal S. Patil, Avinash M. Pawar, Supriya Suresh Ray, Ritesh Bharat Thange</i>	
<i>Atharva Kumar Yadav, Manas Naveen Agnihotri</i>	
“CardioTrackGuard”: A Review on Machine Learning-Based Smart Wearable System for Cardiac Arrest Monitoring	21
<i>Shweta Dhumal, Dipali Patil, Nakul Firodiya, Gauri Talokar, Vaishnavi Salunkhe, G.S. Mate</i>	
Aerovigilance: A Comprehensive System for Unauthorized Drone Detection	26
<i>Mukta Jamage, Babita Jane, Yashwant Babasaheb Deshmukh, Amar Mahadev Swami</i>	
<i>Prathamesh Vijay Nandane, Amey Prashant Sarode</i>	
Smart Water Quality Index Monitoring System	31
<i>Manoj Mota, Sandip Chougule, Prachi Pathak</i>	
HQSI: Hybrid Quantum Swarm Intelligence – A Case Study of Online Certificate Status Protocol Request Flow Prediction	37
<i>Abel C. H. Chen</i>	
An Intelligent Mouse Control Interface Using Multimodal Interaction	43
<i>Asmita Ahirrao, Swati Shinde, Bal Virdee, Ashish Khanna</i>	
Temperature Control for an Agricultural Dryer System Using Hybrid Fuzzy Logic - PI	48
<i>Van Du Phan, Van Chuong Le, The Anh Mai, Sy Phuong Ho, Dinh Cong Le, Van Anh Ho</i>	
Smart Classroom Management Software for Enhanced Learning Environments	52
<i>Shivam Firodiya, Swaroop Saikar, Akshay Dhuke, Vishwajeet Rupnawar</i>	
Smart Summarization of Terms & Conditions: Making Legal Jargon User-Friendly	58
<i>Pankaj Chingunde, Nihar Ranjan, Piyush Wattamwar, Pradhumna Sawalkar, Pranit Kadam, Pravin Bhoyar</i>	
MedFuse: Integrating Clinical Notes and Medical Imaging for Accurate Diagnosis	64
<i>Maheshwary Narkhede, R.T. Umbare, Jaydeep Ninawe, Deven Patel, Shreyas Mahajan, Priya Karemore</i>	
Neuro-Evolutionary Framework for Task Offloading in Blockchain-Edge Computing Systems: Integrating Neural Networks and Evolutionary Algorithms	68
<i>Rama Krishna Mani Kanta Yalla, Thirusubramanian Ganesan, Mohanarangan Veerappermal</i>	
<i>Akhil Raj Gaius Yallamelli, Vijaykumar Mamidala, Hidam Rameshwar Singh</i>	
Optimizing Web Scraping for Enhancing Efficiency with NLP and Machine Learning	74
<i>Shahid Metkari, Atharv Gaikwad, Yash More, Jayesh Sarwade, Sakshi Devi, Umakant Tupe</i>	

AI-Based Surgical Training Simulator with Cloud Accessibility for Medical Education	78
<i>Ruturaj More, Nihar Ranjan, Ashwini Kale, Jitesh Bagale, Yash Koltharkar, Rohit Bakshi</i>	
Solar Panel Defect Detection Using a Hybrid Transfer Learning Model Based on Efficientnetb7 and Swin Transformer	83
<i>Devansh D. Rajani, Dhruvin D. Marakna, Manan J. Patel, Om prakash Suthar</i>	
Smart Rail Maintenance: AI-Driven Acoustic Wave Monitoring for Defect Detection and Wear Prognostics	89
<i>Manali Lamture, Tejaswini Koparde, Jetkumar Gaikwad, Akash Shikhare, Nilesh Pinjarkar</i>	
The Application of Neural Networks and Artificial Intelligence in Dental Plaque Detection: A Review of Current Findings	94
<i>Satyam Upase, Ladusingh Rajpurohit</i>	
A Comparative Study and Implementation of Key Derivation Functions Standardized by NIST and IEEE	98
<i>Abel C. H. Chen</i>	
AI Powered Emotion Recognition in Non-Invasive DHD/OCD Therapy	103
<i>Dinesh Raja P, Vigneshwaran S, Rajasingam N, Maheswari S</i>	
GraphRAG Data Analysis Model for Personalized Data for Individuals and Institutions	108
<i>Karan Vishnulal Suthar, Suyash Madhu Mulik, Pushpi Rani</i>	
‘DAANSETU’ a Machine Learning-Based Platform for Enhancing NGO-Donor Interactions	113
<i>Lalit Patil, Dipali Himmatrao Patil, Pankaj Hadole, Siddhi Pokale, Swaraj Deshpande, Archana Jadhav</i>	
Design and Analysis of Active Suspension Systems for Automotive Vehicles Using PID and Root Locus Controller	118
<i>R. Dhanasekar, K. Kumaresan, T. Rajavenkatesan, Sudhir Kumar V, S. P. Gowtham, Vaishnavi M</i>	
Deepfake Video Detection Using Deep Learning	124
<i>Meenakshi Thalor, Mohammed Munawwar Rangila, Mehul Pawar, Priyamvada Parihar, Yash Kharat</i>	
An AI-Integrated Approach to Nano-Based Drug Delivery Systems: Advances in Targeting and Smart Nano-Carriers	129
<i>Jupinder Kaur, Harleen Kaur, Ravinder Kumar, Jujhaar Singh Aidhen, Kunal Kulkarni, Pratibha Mahajan Habib M. Pathan</i>	
Comparative Evaluation of Open-Source Large Language Models: LLaMA2 vs Mistral	136
<i>Shagufta Md. S. Sheikh, Diya Kubal, Chaitanya Thakre</i>	
AgriBot: A Hexapod-Based Autonomous Robot for Precision Agriculture and Sustainable Farming	142
<i>Suhas Bhise, Sarthak Sujitkumar Deshmukh, Atharv Chougule, Shreyas Dambalkar, Harshavardhan Desai</i>	
Classifying Segments to Be Translated or Transliterated	147
<i>Aditya Shah, Atharva Date, Maheshwar Bhosale, Samarth Mali, G. V. Kale</i>	
Copy-Move Forgery Detection: A Theoretical Study of Block-Based Feature Extraction Methods	153
<i>Deependra Kumar Shukla, Suhel Ahmad Khan, Abhishek Bansal, Pawan Singh</i>	
Facial Expression-Driven Music Recommendation Using Convolutional Neural Networks and Gradio Interface Integration	159
<i>Sai Srikar Devasani, D Rajeshwari, Manzoor Mohammad, M.A. Jabbar, Burra. Vijaya Babu, MD Reshma</i>	

Educational Challenges of Visually Impaired Students and Their Teachers: A Study	165
<i>Madhav A. Kankhar, C Namrata Mahender</i>	
Design of a Reinforcement Learning Control Approach for Inverted Pendulum System	170
<i>Van Du Phan, Thai Son Dang, Dinh Tu Duong, Hung Cuong Ta, Van Nam Dinh</i>	
Development of a Price-Effective Drowsiness Alert Gadget for Cars with Superior Threat Manage and Coincidence Prevention Skills	175
<i>Aakash Parbhane, Yash Khandagale, Kavita Kushwaha</i>	
Obtaining 3D Point Clouds from Low-Maintenance Cameras: A Systematic Review	179
<i>Dhritiman Mukherjee, Parul Gandhi</i>	
A Review of FSLSM Implementation on Cloud for Personalized E-Learning: Models, Challenges and Practices	187
<i>Saroj Kumar, Parul Gandhi</i>	
Mitigating Denial of Service in IEEE 802.11 Through Computational Puzzle	193
<i>Sandip Y. Bobade, Aoudumber Londhe, Ganesh Shivaji Pise, Bhagwati Galande</i>	
Automation of Machine Learning Model in Dynamic Production Environment	199
<i>Neelam Jain</i>	
Countering Covert Timing Channels with Active Warden Delay Normalization Technique	204
<i>Vrushali U. Uttarwar, Dhananjay M. Dakhane</i>	
NLP-Driven Plagiarism Detection: A Smarter Approach	210
<i>Aditya Narsale, Suyog Nannaware, Vishwajeet Patil, Rohan Sapkale, Ratna Patil</i>	
Molecular Docking-Based Identification of Potential ADAM10-Targeting Drugs for Alzheimer's Disease	215
<i>Ambika Singh, Pravir Kumar</i>	
Discovery of Novel PINK1 Activators: Virtual Screening of Niclosamide-Like Compounds for Potential Parkinson's Disease Therapy	220
<i>Preeti, Pravir Kumar</i>	
Towards Reliable Skin Cancer Screening: A Multi-Model Deep Learning Approach on Dermoscopic Images	225
<i>Aakanksha Bhagure, Aarushi Bose, Sayali Tawade, Anvi Borse, Suvarna Bhat</i>	
Skin Cancer Classification using Advanced Deep Learning Techniques	231
<i>Arpita Bambharoliya, Krishna Satani, Sricheta Parui, Anjali Diwan</i>	
“Palmprint”: A Review of Deep Learning Approaches for Dermatoglyphics and Cognitive Personality Insights	236
<i>Mohit Lohar, Dipali Patil, Sandesh Pawar, Pavan Temghare, Prashant Walke, Archana Jadhav</i>	
Generative AI in Predictive Healthcare: Enhancing Early Diabetes Detection	241
<i>Piyush Yadav, Gaurav Baghel, Prince Goyal, Shobha Tyagi, Pronika Chawla, Swetta Kukreja</i>	
Advancing Last Meal Delivery: Developing a Reliable and Efficient YOLO Algorithm for Autonomous Food Delivery Drones	247
<i>P. A. Vikhar, Abhishek Kalaskar, Kanhaiya Patil, Siddhant Shinde</i>	

An Ensemble Approach to Stock Price Prediction: LSTM and Random Forest Integration	252
<i>Md Ashifuddin Mondal, Ritwika Mukherjee, Pranta Saha, Arijit Mondal, Pratik Dutta, Ayan Chel</i>	
Crop Prediction Using Machine Learning	257
<i>B. Kumari, Aakash, A. Diwan</i>	
Eco Predict: AI-Based Air Quality Insights	262
<i>Bomma Ramakrishna, Rachapothu Venkata Manikanta, Muntha Raju, Raghunadh Pasunuri K. Pushpa Latha, Lakshmanarao Talapakula, Lakshmi Prasanna Byrapuneni, S Suman</i>	
Automated Detection of Kashmiri Apple Leaf Diseases Using EfficientNetB3 Deep Learning Model	267
<i>Atul Jindal, Amandeep Singh, Ankit Bansal, Monica Gupta, Nitika Verma, Pratham Kaushik</i>	
Blood Cell Classification for Cancer Detection Using EfficientNetB3	273
<i>Prabhjot Kaur, Amandeep Singh Kalra, Abhishek Bhattacharjee, Khushboo, Richa Brar, Pratham Kaushik</i>	
Classification of Citrus Leaf Diseases Using DenseNet169: A Deep Learning Approach	278
<i>Abhishek Bhattacharjee, Tejinder Pal Singh Brar, Monica Gupta, Pratham Kaushik</i>	
Automated Fish Disease Classification Using DenseNet121: A Deep Learning Approach for Aquaculture Management	283
<i>Abhishek Bhattacharjee, Tejinder Pal Singh Brar, Monica Gupta, Pratham Kaushik</i>	
Smart Detection of Pumpkin Leaf Diseases Using MobileNetV3: A Step Toward Healthier Crops	289
<i>Richa Brar, Richa Chandel, Amandeep Kaur, Monika Sharma, Mani Goyal, Pratham Kaushik</i>	
Whitefly and Cotton Leaf Curl Disease (CLCUD) Detection in Cotton Plants Using Deep Learning	295
<i>Piyush Rajaram Sahani, Viraj Vijay Wadke, Suvith Sunil Shetty</i>	
Design of Smart Door Receptionist with Smart Lock Integration Using Raspberry Pi	301
<i>Amrit Singh, Ratanaraj Chakraborty, Sneha Saha, Shruti, Kumar Aditya, Pravin Kumar Samanta</i>	
A Comprehensive Review of Remote Laboratories in Engineering Education: Evolution, Challenges, and Future Directions	307
<i>Niket Amoda, Lochan Jolly, Arpit Rawankar</i>	
Integrating Sentiment Analysis and Technical Indicators for Stock Price Prediction Using Machine Learning Techniques	313
<i>Vijay Kumar Vishwakarma, Narayan Pandurang Bhosale</i>	
Fingerprint-Based Blood Group Prediction Using Machine Learning	319
<i>Madhav J. Salunkhe, Amitkumar J. Chinchwade, Rajendra P. Ghorapade, Pravin B. Chavan Dipak S. Raskar, Kumarsagar M. Dange</i>	
Face Recognition Based Attendance System Using Machine Learning and Euclidean Distance	323
<i>Soham Garud, Abhilash Jadhav, Sachin Jadhav, Omkar Doiphode, Mitrakshi Patil</i>	
Ai Powered Sentiment Insights From Tweets Using Mahasbert Embedding With the Bilstm Architecture	328
<i>Sanika Dhumal, Khushboo Attarde, Sumeer Mehta, Gitanjali Shinde, Grishma Bobhate, Vivek Patil</i>	
Enhancing the Field of Aquamatrix Smart Farming	337
<i>Amrita Ruperee, Richakumari Patel, Vishal Sahani, Sankalp Chaudhari, Tejas Palkade</i>	

Mumbai Lens: A Chatbot for Monument Recognition and Historical Exploration	343
<i>Shubhada Labde, Nisha Vanjari</i>	
ShipSense: Live Shipment Monitoring and Alerting via Mobile-Integrated IoT System	347
<i>Vaishali Mangrulkar, Aditi Kurhekar, Aditya Umesh, Anushka Poddar, Sharvari Kulkarni</i>	
Diversity-Preserved Constrained Multi-Objective Power Flow Optimization Using a Hybrid Improved MOABC-NSGA-II Metaheuristic Algorithm	352
<i>Abhishek Bajirao Katkar, Himmat Tukaram Jadhav</i>	
Design and Implementation of an Autonomous Navigation Robot Using Ros and a Multi-Sensor Platform for Educational Applications	359
<i>Duong Dinh Tu, Ho Sy Phuong, Le Van Chuong, Dinh Van Nam, Phan Van Du, Le Ngoc Phuoc</i>	
Robustness of Text Classification Systems Against Adversarial Attacks	364
<i>Yuvraj Jadhav, Shravani Ghorpade, Aditya Darak, Tanay Shahane, Omkaresh Kulkarni, Yogesh Deshpande</i>	
Optimized Binary Number Theoretic Transform for Fast Polynomial Multiplication in Post-Quantum Cryptography	373
<i>Anupama Arjun Pandit, Arun Mishra</i>	
Deep Learning in Healthcare	378
<i>Aman Kumar, Abhisekh Tewary, Aditya Raj, Shruti, Pravin Kumar Samanta</i>	
Understanding Stakeholder Perspectives on Online Education: A Data-Driven Approach	383
<i>Chesta Malkani, Neetu Mittal, Subhranil Som</i>	
Hybrid Cooling Strategies Using Electrohydrodynamic Pumping for Compact Semiconductor Modules	387
<i>Yazhini S, Srihar B M, Yoganathan K, Vinoth P, Surya K</i>	
SmartFare: Dynamic Pricing System	394
<i>Revelle Akshara, Vydyula Venkata Sai Dutt, Tadepally Sudheeksha, Madduri N. V. Gayathri Sri Madugula Ganesh Mahesh</i>	
Predictive Maintenance of Industrial Equipment Failure Using Random Forest Algorithm	401
<i>Poonam J. Pati, Pankaj H. Zope, Manisha K. Bhole</i>	
Simulation and Optimization of Hvac Systems Using Machine Learning	407
<i>Manisha Kishor Bhole, Pankaj Hiranman Zope, Punam J. Patil</i>	
Time Series Analysis of Inter-Beat Intervals: Arima Forecasting and Hybrid CNN-KNN Approach	412
<i>Aryani Gangadhara, Santosh Borde</i>	
DriveAware: Intelligent Driver Monitoring and Secure Access Framework for Accident Prevention and Vehicle Safety	419
<i>Yazhini S, Ajai P, Arun Kumar S, Dharish R, Diya P</i>	
Smart LPG Monitoring and Safety System Using IoT for Real-Time Refill and Leak Detection	426
<i>Yazhini S, Suthiksha V N, Tarunika S P, Sriram V, Yavanapriya R, Subiksha K P</i>	
Facial Landmark-Based Face Shape Classification: A Lightweight Approach for Real-Time Applications	434
<i>Asmit Dash, Vidhi Bhanushali, Titiksha Bhavsar, Vedant Hundare, Dhanashree Toradmalle</i>	

A Hybrid Approach for Driver Drowsiness Detection Using IoT	441
<i>Abhishek Khonde, Mustaqeem Sayyed, Dinesh Barode, Seema Kawathekar</i>	
A Deep Learning Approach to Identifying Deepfakes with Hybrid Models	448
<i>Nisha Wankhade, Somesh Sharma, Divyansh Katakwar, Yash Kedar, Palash Gourshettiwar</i>	
Smart Dog Health Tracker: An IoT and Machine Learning-Based Remote Monitoring System With Emotional Design Integration	454
<i>Ashwini Sengar, Yashashree Sonawane, Prajwal Nivangune, Omkar Toradmal, Suhasini Deshmukh Prathamesh Sonwalkar</i>	
A Comprehensive Review of Underwater Data Centers: Challenges, Technologies, and Future Directions	460
<i>Alka B Suryawanshi, Santosh Borde, Navnath Kale, Sonali Rangdale</i>	
Development of a Marathi Paraphrasing System Using POS Tagging and Synonym-Based Techniques	466
<i>Sheetal R. Dehare, Aarti P. Raut, C. Namrata Mahender</i>	
Behavioral Analysis on Social Media for Depression Prediction Using Transformer-Driven Framework and Deep Learning Models	473
<i>Grishma Bobhate, Pawan Bhaladhare</i>	
Automated X-Ray Image Stitching for Enhanced Medical Diagnostics and Visualization	479
<i>Kapil Mundada, Shivam Dapkekar, Shambhavi Deshpande, Raghav Deshpande, Sweetie Deshmane</i>	
A Web Application for Real-Time Beach Safety and Suitability Assessment	485
<i>Amruta More, Mansi Pathak, Mrunalini Pachpute, Kasim Lohar, Anurag Pawar</i>	
Boom Bam Bots - An Interactive Motion Controlled Robotic Boxing System Utilizing YOLO Pose Detection	492
<i>Amruta More, Raunak Jha, Vedant Achari, Sneha Shirshad, Didhiti Sonawane</i>	
IoT-Based Intravenous Fluid Monitoring and Alerting System for Automated Healthcare Management	496
<i>Amruta More, Prachi Bhagat, Pranali Zagade, Abhijit Wagh, Suhani Kad</i>	
Enhancing Early Detection of Cataracts and Retinal Disorders Using Machine Learning and Convolutional Neural Networks	500
<i>Sourav Kumar, Gaurav Ganguly, Himangshu Chowdhury, Himanish Chowdhury</i>	
AgriShield: Protecting Crops with Smart Pest Control Technology Developed Using YOLOv11	506
<i>Minal Yadavrao Barhate, Varun Vilas Pame, Gargi Sitaram Padate, Varad Vilas Pame Dev Tulsidas Padhariya, Arham Paresh Pagariya, Viraj Sandeep Pabale</i>	
A Patch Antenna with a Comb Shaped Slot for Wireless Applications	511
<i>Naveen Kumar G, Noorulla Feroz R, Allin Joe D, Sudipta Banerjee, Ranjeet Vasant Bidwe</i>	
Aspect Based Sentiment Analysis of Marathi Language in Education Domain Using Machine Learning	517
<i>Simran N. Maniyar, Sonali B. Kulkarni, Gaju S. Chavan</i>	
Secure Framework for Privacy and Risk Mitigation in IoT-Enabled Health Insurance	522
<i>Jagvinder Singh, Arvinder Singh, Kanika Manchanda, Amarpreet Kaur, Kulbir Kaur, Ravneet Sethi</i>	
Real-Time Fraud Detection in Online Transactions Using Machine Learning Techniques	528
<i>Nikita Motwani, Rancel Rana, Sailee Jadhav, Yash Karia, Suresh B. Pathare</i>	

Voltage Sensing Based Open Switch Fault Detection in Five Level Modified CHB Multilevel Inverter	533
<i>Sushant Y. Suryawanshi, Gopinath S.</i>	
Solar Powered Automatic Farming Sling with an Inbuilt Irrigation System	538
<i>Minal Barhate, Pranjal D. Nagmule, Naaz K. Tadavi, Pranav V. Nagur, Parth D. Nakti</i> <i>Shreya A. Nalawade, Sanskar M. Nalegaonkar</i>	
Reinforcement Learning-Based Adaptive Tile Size Selection for Matrix Multiplication Optimization on CUDA	543
<i>Eeshan Bablani, Chahat Verma, Shatabdi Basu</i>	
Enhanced Epileptic Seizure Detection Using Boosting-Based Models	549
<i>Revelle Akshara, Akhila Nukam, Puvvada Harmila, Ponugoti Siri, Aleshwaram Vamshidhar</i>	
Evaluating Sequential Deep Learning Networks for Next Word Prediction: A Focus on LSTM and RNN	556
<i>Gundam Ritesh Reddy, Babita Tiwari, Monika Dandotiya, Lav Upadhyay</i>	
Deep Learning-Based System for Multilabel Detection of Dragon Fruit Leaf Diseases	561
<i>Sonal B. Nikam, Sudhir B. Lande, Vinay J. Nagalkar, G.C. Wakchaure</i>	
Cryptocurrency Market & Hesitance in Adoption of Cryptocurrency: A Review	568
<i>Ujwala Salunke, Aansh Mattoo, Himanshu Pandita, Himanshu Kandpal, Neha Sonkusare</i>	
Multisense Vending Machine with Inclusive Multimodal Interaction and Digital Payments	572
<i>Biju Balakrishnan, Prathamesh Salunkhe, Shraddha Satpute, Chinmayee Patil, Sakshi Phanse</i>	
Adblockers vs. Digital Advertising: Implications for Marketers and Publishers	576
<i>Sanjay Kumar Aggarwal, Jagvinder Singh</i>	
Venom Alert: Innovation in Venom Detection Using Image Processing and AI	583
<i>Bhagyashri R. Wankar, Sonali M. Sonavane, Komal R. Jadhav, Atharva Palaskar, Sejal Wankhede</i> <i>Vishakha Kshatriya, Chaitanya Jakate, Sagar Satish Gaikwad</i>	
MindPop: An AI-Driven Gamified Learning Platform for Children with ADHD	589
<i>Shivani Shashidhar, Shilpi Biswal, Tanvi Sontakke, Soumili Biswas, Sudipta Banerjee, A.P. Rajan</i>	
Information Extraction on Bio, Sports, Healthcare-sports Domain with NER and Classification	597
<i>Manisha Mali, Kirti Wanjale, Sanyukta Deshmukh, Kaustubh Chaudhari, Atharv Chaudhari</i>	
Intelligent Traffic Signal Control System	603
<i>Omkar Lonkar, Arnav Sohani, Ishan Gaikwad, Samiksha Roy, Prof. Vaibhav Sawalkar, Sachin Jagadale</i>	
Beyond Closing Prices: Improving Stock Price Prediction Models Using External Variables	609
<i>Daruri Kaustubh, Gigil James, Sanil Mishra, Amit Praseed</i>	
Fine-Tuned Large Language Models for Equitable and Accurate Document Analysis in Recruitment	614
<i>Neha Pandey, CRS Kumar</i>	
Design and Comparative Analysis of Deep Learning Fusion Strategies for Detecting Deepfakes	620
<i>Pawan Jagannath Aru, Pratik Ishwardas Kolhe, Jaykumar Ashok Lokhande, Soma Niloy Ghosh</i>	
A Resilient Federated Learning Framework for Privacy-Preserving Smart Cities	626
<i>Arvinder Singh, Pardeep Kaur, Kanika Manchanda, Jagvinder Singh, Anika Garag</i>	
Accelerating Neural Convergence via Quantum-Classical Hybrid Feature Embedding	635
<i>Rachana Soni, Navneet Pratap Singh, Neelam Choudhary</i>	

Intelligent Traffic Surveillance: A Vision-Based System for Detecting Traffic Rule Violations	640
<i>Harsh Samant, Kush Doshi, Rishabh Shah, Shreevardhan Bhosale, Dashrath Kale</i>	
Stability of Gut Microbiome Profiles: Effects of Storage Conditions and Preservation	645
<i>Neha Bokey, Sachin Harle, Jancy Joy</i>	
SkinAI – A Deep Learning Based Web Application for Multi-Class Skin Cancer Detection	652
<i>Kirti Wanjale, Ravi Gorli, Gajanan Arsalwad, Bharat R. Devhare, Vikas B. Maral, Arya Wanjale</i>	
Analyzing the Effectiveness of Onshore Outsourcing for Operational Excellence in Navi Mumbai IT Firms	657
<i>Vinod Kuskar</i>	
Quantum-Resistant Blockchain Framework for Data Anonymization in IoT-Based Smart Agriculture	663
<i>Baidyanath Ram, Vikash Kumar Singh</i>	
Explainable Deep Learning Framework for Real-Time Threat Hunting and Anomaly Attribution in Enterprise Networks	669
<i>Mahesh Reddy Konatham, Devi Prasad Guda, Keshav Kaushik, Writuraj Sarma, Rashmi Sharma Mukesh Soni</i>	
Edge Computing and Deep Learning for Real-Time Anomaly Detection in Optical Systems	675
<i>Dilip I Sangotra, Awwad Ahmed Mohammed, Chappapu Lavanya, Sivamalar Ramagathan S.T. Gopukumar, I Infant Raj</i>	
Real-Time Hybrid CNN-LSTM Network for Intelligent Defect Detection and Classification in Smart Manufacturing	680
<i>Raynukaazhakarsamy, Deepti Patnaik, Pushpalatha M, Sajiv G, Pradnya A. Vikhar, B Kiran Bala</i>	
Advancing Data Security with Network Coding Approaches Incorporating Hybrid-Key-Based Authentication Method	685
<i>Joel Osei-Asiamah, Bobonazarov Abdurasul, V. Selvi, S.Suma Christal Mary, Sajiv G, M. Karthik</i>	
AI-Driven Tuberculosis Detection in Chest Radiographs	691
<i>Abhay Bhatnagar, Sanjay Kumar Singh, Divyanshu Yadav, Pranshu Saxena</i>	
Detection and Classification of Mental Stress for Prognosis of Anxiety Levels	697
<i>Ayush Karnawat, Dhruv Dhabalia, Havi Agarwal, Shreyash Raykar, Pratibha Mahajan</i>	
A Novel Approach to Identification and Detection of Power Theft in a Real-Time Power System Network for Sustainable Development of Power Grid	703
<i>Suparna Pal, Alok Kumar Shrivastav, Maitrayee Chakrabarty, Sudipta Banerjee, Himadri Sekhar Das Heranmoy Maity</i>	
Air Quality Index Monitoring System Using Arduino Nano (IoT)	710
<i>Karuna Sitaram Kirwale, Narayan Nagorao Kulkarni, Sandip Krishna Kotkar, Muhammed Hasin P Prabhav Mishra</i>	
Evaluation of Tilt Angle Estimation Techniques in Single-Axis Solar Trackers	714
<i>Harsh Kapadia, Ansh Ruparel, Kabir Jain, Himanshu Patel</i>	
Comparative Analysis of Deep Learning Models for Employee Attrition Prediction with Explainable AI	720
<i>Sayali Sagar, Rajesh Dhumal, Vidya Kumbhar, T. P. Singh</i>	

Ensemble Cnn-Based Cotton Disease Detection and Pest Recommendation System for Indian Agriculture	725
<i>Rajkumar Patil, Vivek S. Deshpande, Nilesh P. Sable, Parikshit N. Mahalle</i>	
Crime Investigation Tracker with Suspect Prediction	731
<i>Amol Kadam, Devdatta Mokashi, Priti P Yadav, Kiran Bibhishan Naikwadi, Sagar Baburao Patil Vinayak N Patil</i>	
Towards Sustainable Farming: An Intelligent Plant Disease Detection System Using Machine Learning	738
<i>Amol Kadam, Amol Suryawanshi, Sumati Jagdale, Shankar N Kadam, Sana M Bagban, Jyoti P Kharade</i>	
An Empirical Study on Heart and Liver Disease Prediction Using Supervised Learning Algorithms	744
<i>Amol Kadam, Devdatta Mokashi, Dhanashree V. Patil, Mohan Mali, Vaibhav Pawar, Pramod A. Kharade</i>	
Cyber Physical Systems in Industry 4.0 Integrating Ai and Optimization Models for Smart Manufacturing	751
<i>Rahul Pradhan, S.Suma Christal Mary, G. Indra Navaroj, Anup Ranade, Sajiv G, M.K.Mohamed Faizal</i>	
Bridging Words and Vision: A Deep Learning Approach to Text-To-Image Generation	757
<i>Oleh Kihichak, Meerah Karunanithi, Rand Kouatly, Waqas Ali Khan, Loubna Ali, Ahmed Hassan</i>	
Predictive Modelling for Chronic Kidney Disease	763
<i>Nishal Nivya Rodrigues, Waqas Ali Khan, Rand Kouatly, Meerah Karunanithi, Loubna Ali, Ahmed Hassan</i>	
Handwritten Text to Typed Text Conversion: Deep Learning Approach	769
<i>Taha Al-Hadhary, Waqas Ali Khan, Rand Kouatly, Ahmed Hassan, Loubna Ali, Meerah Karunanithi</i>	
IoT-Based Transformer Health Monitoring System Using Sensors and Microcontrollers	775
<i>Devashree Kale, Sudipta Banerjee, Dipali Dakhole</i>	
Enhancing Stock Forecasting Accuracy Through LSTM-Based Recurrent Models	779
<i>Eduardo Miguel Bennaton, Mohamed Nazih Baroudi, Waqas Ali Khan, Rand Kouatly, Meerah Karunanithi Ahmed Hassan</i>	
Development of a Cost-Effective IoT-Based System for Real-Time Monitoring and Management of Carbon Monoxide and Methane Levels	785
<i>Aarya Balwadkar, Abdulelah Alolofi, Ali Altam, Sudipta Banerjee</i>	
Compiler Design 5.0: Enabling Intelligent Edge Computing in the Era of Industry 5.0 at Qualcomm	789
<i>Rashmi Ashtagi, Ranjeet Vasant Bidwe, Ruchita Kamble, Soham Joshi, Priten Jaiswal, Varad Jumbad</i>	
Alzheimer Disease Detection Using CNN	797
<i>Anand Magar, Kabir Khake, Jay Paunikar, Arya Kale, Sahil Kakad</i>	
FrugalSOT - Frugal Search Over the Models	803
<i>Pradheep P, Yuvanesh S, Harish KB, Keerthan Saai Reddy S, Joshva Devadas T, Naveenkumar J Hemalatha K</i>	
Quantum-Inspired Genetic Algorithms for Secure and Scalable Cloud-Based Decision Support Systems	809
<i>Mithun DSouza, Rahul Pradhan, Chamandeep Kaur, S.Suma Christal Mary, Jyothi Preshiya Ponni Valavan M</i>	
Non-Invasive Diagnosis of Huntington's Disease Through EEG Signal Interpretation and Deep Learning	815
<i>Madhumithra V S, Sanjeevi Sharma S, Sivarama Krishna M, Ramesh Munirathinam</i>	

Latency-Aware Deep Reinforcement Learning Framework for Real-Time Decision-Making in High-Frequency Trading Systems	820
<i>S.V.S.P.P. Jaya Sankar Krishna, Lanka Renuka, S. Kowsalya, T Thirunavukkarasu, Sajiv G, Dhaaraani R</i>	
Unsupervised Machine Learning for Climate Surveillance: Comparative Temperature Anomaly Detection in Northwestern Bangladesh	826
<i>Hasan Ahamed Alif, Md. Jisan Mashrafi, Urmi Haldar, Sebatat Selim, Ahsan Ullah, Md Mohibur Rahman</i>	
Continuous Multimodal Biometric Authentication using Face and Iris with Periodic Validation	832
<i>Manasi Sadhankar, Ashish Sasankar</i>	
Implementation of Linear Programming Problem for Agricultural Development: A Study of Jalna District	840
<i>Bhagyashri S. Netke, Swati S. Desai</i>	
Facial Recognition to Multi-Omics: Next-Generation Diagnostic Strategies for Rare Genetic Disorders	843
<i>Anchal Negi, Jai Gopal Sharma</i>	
Towards Robust IoT Security: An ML and DL-Based Threat Detection Framework	848
<i>Sachin Shankarao Ajmire, Aniket Wankhade, Karuna Vivekanand Agarkar, Shailesh Thakare Kanak Kishor Shahale</i>	
A Comprehensive Survey of Underwater Image Enhancement: Trends in Physics-Based, Visual Prior, Data-Driven, and Hybrid Approaches	852
<i>Srushti Gunthe, Latika Pinjarkar, Sumit Chakravarty</i>	
A Survey on AI Powered Predictions, Human Activity Recognition for Sports and Fitness	859
<i>Pradeep Nazerath, Darshan C M, Suveer S R, Dhanush, Yajnesh Poojary</i>	
Image Data Acquisition and Preprocessing for CNN-Based Ocean Wave Level Prediction on Ships	865
<i>Thach Nguyen Dinh, Hung Nguyen Van, Tuan Dinh Anh</i>	
Enhancing Learning System Using Automatic Question Generation and Classification	871
<i>Sanah Sayyed, Bharat Abhimanyu Shelke, C Namrata Mahender</i>	
Enhancing Real-Time Financial Advisory Using Retrieval Augmented Generation (Rag) and Intelligent Agents	875
<i>Mithra Venkatesan, Sheetal Pawar, Nilakshi Rajule, Radhika Menon, Anju Kulkarni</i>	
Leveraging Large Language Models for Medication Named Entity Recognition and Text Expansion in Multilingual Clinical Data	879
<i>Kiran Preet Bedi, Prabjot Singh</i>	
Optimizing Urban Public Transportation Through AI-Based Bus Tracking and QR Code Ticketing	887
<i>Rithik A, Prabhu Shankar B, Govindharaj I, Dinesh Kumar K, Vadhana Kumar M, David R</i>	
Smart Public Toilet with Solar Power for Sustainable and Energy-Efficient Operation	893
<i>K Ramalakshmi, B Mohan, P Vigneshwaran, S Arun Kumar, L Jeyabalaji, A Kishore Kumar</i>	
Smart Waste Management System Using Autonomous Line Following Robot	898
<i>K Ramalakshmi, B Mohan, P Vigneshwaran, M Suresh, K Subramani, R Venkatesh</i>	
eSavior: An AI-Driven Framework for Sustainable E-Waste Management	903
<i>Aditya Shrivastav, Sunil Sankathala, Kashvi Chaturvedi, Atharva Saraf, Krutika Patre, Susanta Das Ayushi Godiya, Khushbu Trivedi</i>	

IoT-Based System for Air and Noise Pollution Surveillance in Industrial Zones	911
<i>S Mahalakshmi, B Mohan, Sunil Kumar Suman, M Chairman, Sunil Kumar Sahu, S P Santhoshkumar C K Nithya</i>	
Efficient Cleaning Robot: A Solar-Powered and Bluetooth-Enabled Sensor System	916
<i>L Krishna Kumari, D Karthick, K Ramalakshmi, Ann Rufus A, G Theivanathan, B Mohan, S Mahalakshmi</i>	
Dual Authentication Arduino-Based Door Lock System with Light Detection and Keypad Authentication	922
<i>Mohan B, Mahalakshmi S, Vigneshwaran P, CH CH V B Vasanth, J Relin Francis Raj, Sundaravadivel P</i>	
Eco-Friendly Biopolymers Shaping Sustainable Food Packaging	928
<i>T Saranya, P Shanmuga Priya, B Mohan, K Dhanees Surya Jenifer, J Relin Francis Raj R Santhana Krishnan, S Mahalakshmi</i>	
Pregnant Women's Health Monitoring Using Machine Learning	934
<i>V Srilekha, B Mohan, S Mahalakshmi, Sunil Kumar Sahu, M Rajalakshmi, K Padmapriya</i>	
A Context-Aware Gray Box Framework for Hybrid Mobile Application Testing	940
<i>Peeyush Pareek, Mahipal Singh Deora</i>	
Frameworks and Approaches for Secure and Scalable Cloud Data Migration	945
<i>Priyanka Nalawade, Prashant Kumbharkar</i>	
Advancements in Hybrid Deep Learning for Stroke Classification: A Comprehensive Review of Genetic Algorithms and Bilstm Networks	953
<i>Balasaheb S. Waidande, Sanjeev J. Wagh</i>	
EEG-Powered Brain-Computer Interface for 3D Hand Gesture Control	957
<i>Ketaki Dabade, Lavanya Singh, Saurabh Advani, Manav Chandak, Abhishek Chunawale</i>	
Air-Guard: Smart Air Pollution Monitoring with MOS Sensors & ESP32	963
<i>Mahendra Sawane, Sagar Sakhare, Kiran Shevate, Hrushikesh Khillari</i>	
BinBot: Revolutionizing Waste Management with Robotic Automation	966
<i>Apurva Chatole, Vaibhav Tiwari, Harshit Nashine, Mayur Dhangar, Vishal Shirsat, Shweta Patel</i>	
Temporal Text Mining for Social Media Streams: A Hybrid Model Combining Transformers and Graph Neural Networks	974
<i>Ramesh Babu Pittala, Gudepu Sai Krishna, Vijaykumar S, Mara Raja Reddy, Vishnu Nuggu Kodala Sai Krishna, Nithish Kumar N, Rajam Mahesh</i>	
Bias-Aware Text Mining: A Novel Framework for Fair and Transparent Language Models	980
<i>Ramesh Babu Pittala, K Sudheer Reddy, Nibanapudi Supriya, Kancham Vandhana Panthangi Naga Laxman, Panthangi Naga Ramu, Srihari Babu Gole</i>	
Protecting Deep Learning Channel Estimation in Wireless Networks with Defensive Distillation Against Adversarial Attacks	986
<i>Niteesha Sharma, Sowjanya Yerramaneni, T Asha Latha, Ramesh Babu Pittala, Gudepu Sai Krishna Bema Rajeshwari, G. Abhishna, G. Akhil</i>	
Self-Adaptive Defect Prediction in Software Systems Using Deep and Reinforcement Learning	991
<i>N. Nagalakshmi, G. L. Anand Babu, J. Durga Rani, Hari Priya G S, R. Srividya, S. Vineel Krishna</i>	

Protecting Deep Learning Channel Estimation in Wireless Networks with Defensive Distillation Against Adversarial Attacks	998
<i>Sowjanya Yerramaneni, Niteesha Sharma, T Asha Latha, Ramesh Babu Pittala, Gudepu Sai Krishna Ch. Karthik Bharadhwaj, Gandla Mahesh, Dunpalle Basi Reddy</i>	
Enhancing Financial Decision-Making Loan Approval Prediction Using Machine Learning	1004
<i>Niteesha Sharma, Sowjanya Yerramaneni, Ramesh Babu Pittala, T Asha Latha, G. L. Anand Babu N. Nagalakshmi, Y. Lakshman Naidu, M. Venkata Nagireddy</i>	
Fine-Tuning Faster R-CNN with Weighted ABC for Precision Detection of Grape Leaf Diseases	1010
<i>K. Balaji, T. Sivaprakash, R. Malathi, Govindharaj I, Prabhu Shankar B, Dinesh Kumar K</i>	
YOLOv5-Driven Depth-Aware Obstacle Detection Framework for Visually Impaired Mobility Support	1017
<i>V. Saroja, A. Muthukumaravel</i>	
A Systematic Literature Review of Artificial Intelligence in the Healthcare Sector: Benefits, Challenges, Methodologies, and Functionalities	1022
<i>Sonia Daniel Rangari, Sheetal Barde, Sumit Rane, Nikita Yadav</i>	
Smart Hospitals: Integrating IoT, Automation, and AI to Redefine Patient Care – an Indian Perspective	1030
<i>Sheetal Barde, Sonia Daniel Rangari, Sumit Rane, Apoorva Kulkarni, Prachi Awasthi, Nikita Yadav</i>	
Quantum Machine Learning for Breast Cancer Detection: A Comparison with Classical Machine Learning Techniques	1037
<i>Pranav Joshi, Amit Saxena</i>	
Non-Invasive Diabetes Assessment Using AI: A Machine Learning Approach to Analysing Physiological and Optical Biomarkers	1041
<i>Parth Jedhe, Saumya Bhardwaj, Aniruddha Upadhyaya, Nikita Yadav</i>	
Combating Preventable Blindness in India: Using Rapid Assessment Techniques for Targeted Interventions and Holistic Prevention Strategies	1047
<i>Aniruddha Upadhyaya, Saumya Bhardwaj, Parth Jedhe, Nikita Yadav</i>	
Validation of Analytical Results of Geopolymer Concrete and Conventional Concrete Pavement Using ANSYS	1053
<i>Smita Patil, Deepa Joshi, Radhika Menon, R. K. Jain</i>	
Multi-Campus Energy Load Balancing Using Federated Learning	1059
<i>Nilakshee Rajule, Mithra Venkatesan, Radhika Menon, Sheetal Pawar</i>	
A Comparative Study of Self-Healing Strategies in Smart Concrete Using AHP and FAHP Techniques	1065
<i>Aboli Ravikar, Rohan Sawant, Deepa A. Joshi, Radhika Menon, Pramod Patil, R. K. Jain</i>	
Bridging Inference and Intelligence: Integrating Biostatistics and Machine Learning for Interpretable Biomedical Discovery	1069
<i>Aarti Kumari, Sandeep Kulkarni</i>	
Advancing Maternal Healthcare: The Role of AI and Medical Technology in Antenatal Care	1072
<i>Lija Prince, Jasneet Kaur, Sheela Upendra</i>	
Artificial Intelligence in Community Healthcare: A Pre-Post Study on Knowledge Improvement and Adoption Barriers	1076
<i>Prachi Jadhav, Sheela Upendra, Jasneet Kaur</i>	

Faculty Retention in Private Universities of Pune: a Factor Analysis	1081
<i>Sandesh M. Bansode, Vijay Kulkarni</i>	
Innovative Technologies for Green Banking: Integrating Sustainability into Financial Services through AI, IoT, and Blockchain	1085
<i>Namita Rajput, Baljeet Kaur</i>	
Blockchain and AI Integration for Transparent ESG (Environmental, Social, Governance) Reporting in Corporate Finance	1091
<i>Namita Rajput, Kamna Chopra, Sonia Lohia, Krishan Kumar</i>	
Resilience Under Pressure: Do ESG-Compliant Firms Outperform During Crises? Evidence from Seven Systemic Shocks in the Indian Market (2015–2024)	1096
<i>Alok Mohan Sherry, Namita Rajput</i>	
Benchmarking Transformer Models for Fine-Grained Assamese Hate Speech Detection in Social Media	1102
<i>Basab Nath, Krishna Kant Pandey, Hilal Ahmad Shah</i>	
Smart Yoga: Deep Learning-Based Framework for Yoga Pose Recognition and Real-Time Correction	1111
<i>Dipika Birari, Anjali Hudedamani, Kavita Arakeri, Trupti Najan</i>	
Intelligent Data Modelling and Predictive Statistical Evaluation of Postpartum Nutrition and Herbal Product Preferences: Evidence From a Pan-India Multi-Regional Survey	1117
<i>Mahak Bhandari, Mohammed Shabab, Kavita Madipalli, Prasanna Bhalerao, Nawneet Kumar Kurrey</i>	
Screening and Identification of Potent Antimicrobial Compounds from the Rhizosphere	1128
<i>Jyoti Srivastava, Nawneet Kumar Kurrey, Shankar Khade, Shweta Ukey, Muthu Sankar Aathi Mohammed Shabab</i>	
AI-Based Solutions for Improving Radiation Dose Distribution in Oncology	1131
<i>Mario Antony, Monali Gulhane, Pooja Dhawane, Nitin Rakesh, Pratik Sarda, Nilesh P. Sable</i>	
Adaptive AI Systems for Personalized Cancer Treatment Plans	1137
<i>Selvapandian, Monali Gulhane, Shweta Jain, Nitin Rakesh, Vishal Salve, Nilesh P. Sable</i>	
AI-Powered Cancer Immunotherapy Optimization Models	1143
<i>Kumar Nilesh, Monali Gulhane, Diksha Gabhane, Nitin Rakesh, P. A. Deshkar, Nilesh P. Sable</i>	
Intelligent Framework for Predictive Maintenance in Hydraulic System Condition Monitoring	1149
<i>Snehal Patil, Nilesh P. Sable, Parikshit N. Mahalle</i>	
Artificial Intelligence for Home-Based Wound Monitoring in India: A Scoping Review	1155
<i>Amey Khande, Gururaj Udapi, Namrata Devulkar, Pradnya Bhore, Pramila Shinde Neeraj Kumar Swarnkar</i>	
Harnessing Artificial Intelligence for Strategic Management: Transforming Decision-Making, Agility, and Competitive Advantage	1159
<i>Vijay Kulkarni</i>	
AI-Powered Decision Support System for Sepsis Management in ICU Nursing	1164
<i>Mangesh Jabade, Husain Nadaf, Jasneet Kaur, Sheela Upendra, Ranjit Kumar</i>	
Effectiveness of AI-Enhanced Nursing Assessment in Critical Care: A Randomized Controlled Trial	1169
<i>Sonopant Joshi, Husain Nadaf, Mangesh Jabade, Jasneet Kaur, Sheela Upendra, Ranjit Kumar</i>	

AI Metaverse in Healthcare: Opportunities, Challenges, and Future Directions	1175
<i>Vaishali Gaikwad, Reena Chavan, Shubhangi Gaikwad, Chidanand Patil</i>	