

2025 13th International Conference on Intelligent Systems and Embedded Design (ISED 2025)

**Raipur, India
17-19 December 2025**

Pages 1–518

IEEE Catalog Number: CFP25SZ6-POD
ISBN: 979-8-3315-6727-9



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:	CFP25SZ6-POD
ISBN (Print-On-Demand):	979-8-3315-6727-9
ISBN (Online):	979-8-3315-6726-2

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

A Federated Learning Framework for Multi-Parameter Optimization in Edge Computing	1
<i>Rajesh Soma, Subham Kumar Sahoo, Fahad Amin, Sambit Kumar Mishra</i>	
Detecting Fraud on the Ethereum Blockchain Using the XGBoost Algorithm	7
<i>Shaik Jeelani Basha, Pragya, Shreya Majumdar, Ayushi Prasad, Prachi Mehta, Zeesha Mishra</i>	
Next-Gen Sports Analytics: Enhancing Player Performance Evaluation with Hybrid RNN-LSTM Models	13
<i>Jasmini Kumari, Likhith Badiga, Sambit Kumar Mishra, Sugyan Kumar Mishra, Sushmita Kumari</i>	
An Alzheimer Stage Detection Method Using Deep Learning based Features from MRI Images	19
<i>Nandini Das, Brijesh Raj Swain, Ayushi Gautam, Aleena Swetapadma</i>	
IoT-enabled Waterlogging Prediction using a YOLO-based Deep Learning Model	25
<i>Saurin Parikh, Manav Patel, Sarthak Methaniya, Gaurang Raval, Sharada Valiveti, Vrajesh Kumar Chawra</i>	
MelanomaNet: A Deep Residual Learning Approach for Multi-Class Melanoma Classification	32
<i>Anjishnu Saw, Minakhi Rout, Rabindra Barik, Lipika Mohanty</i>	
A Dual-Stage Summarization Framework for Research Papers Using Extractive Filtering and Abstractive Generation	39
<i>Akhila Sahithi Ch, Vundekode Rashmita, Dasari Sai Naga Haritha, Narayanam Sai Sahithi, Anil Carie Ch</i>	
Autoencoder and Surrogate-Assisted PSO with Latent-Focused Search and Global Guidance	46
<i>Susheel Kumar Joshi, Rohit Kumar</i>	
Quantum Tunneling-inspired Salp Swarm Algorithm (QT-SSA) for resilient coalition of point clouds	52
<i>Umang Kumar Agrawal, Nibedan Panda</i>	
Exploring Attention Modules in Vision Transformers to Enhance Automated and Interpretable Skin Cancer Diagnosis	58
<i>Shri Venkatakrishnan, P S Nithyeshwaran, Syed Fareed, H Muhilan, Arti Anuragi</i>	
A Comprehensive Framework for Web Application Penetration Testing: Leveraging Automated and Manual Methods for Enhanced Security	66
<i>Pranav Bhawsar, Surender Singh</i>	
An Explainable and Optimal Deep Transfer Learning Approach for Forest Fire Detection Using Grad-CAM Visualizations	72
<i>Sameer Mansoori, Aishwarya Pitchumani, Nila Sangamitra Arul, S Vignesh, Arti Anuragi</i>	
Neuromorphic Image Processing for Enhancing Simulated Prosthetic Vision	80
<i>Binitha Sara Mathew, K.M. Subhash, P.N. Pournami</i>	
MalRevRule: An Automated Framework for Hybrid Malware Analysis, Signature and Firewall Rule Generation	86
<i>Pranav Bhawsar, Shubhankar Mishra, Deepak Kumar Chakrabarty</i>	
High-Level Synthesis of AlexNet CNN based model for Brain Tumor Diagnosis through FPGA Deployment Using Vitis HLS	93
<i>Sayantana Dutt, Indrajit Chakrabarti</i>	

Quantum Annealed Geometric Mean Optimization for Calibrated Optimization of KAN	100
<i>Ayush Mishra, Nibedan Panda</i>	
Homomorphic Logistic Regression for Secure Blood Pressure Abnormality Detection	107
<i>Swaraj Singh Pal, Jaseem K, Maroti Deshmukh, Sneha Chauhan</i>	
Harnessing Climate Insights with Machine Learning for Early Tomato Disease Forecasting	113
<i>Prachi Mehta, Kalpana Jain, Zeesha Mishra, Bibhudendra Acharya</i>	
ECG Arrhythmia Detection using SVM Classifier on FPGA	118
<i>Rahul Gonawala, Priyank Prajapati, Anand Darji, Abhilash Mandloi</i>	
Model Context Protocol (MCP): A Lightweight, Modular Framework for Tool-Augmented LLM Agents	124
<i>Nisharg Nargund, Anil Kumar Swain, Naliniprava Behera</i>	
Enhanced Wild Animal Intrusion Detection using Faster R-CNN with Debiasing Technique	130
<i>A Pranav Mukundan, S Sairam Krithik, R R Santhosh Kumar, S. Bhuvaneswari</i>	
AutoPilot-K8s: An Autonomous Reinforcement Learning Framework for Self-Optimizing Kubernetes Clusters	137
<i>Radhakrishnan Krishna Kripa</i>	
AutoShard: Intelligent Multi-Tenant Sharding and Privacy-Aware Resource Allocation for Serverless Architectures on AWS	143
<i>Radhakrishnan Krishna Kripa</i>	
A Hybrid Predictive Framework for Career Path Recommendation using Ensemble Learning and Fuzzy-Logic Based Plausibility Assessment	148
<i>Ashirvad Samanta, K. Nikhil, Rama Ranjan Panda, Soumyajit Mohanty, Swayam Patnaik</i>	
SMART-MI: Scalable Machine Learning Approach for Risk Tracking in Myocardial Infarction Prediction	155
<i>Abhishek Shrivastava, Santosh Kumar, Nenavath Srinivas Naik</i>	
Autonomous Hexapod Robot Development for Search, Rescue, and Surveillance Operations	162
<i>Sumaanyu Nayak, Yogita Hambir, Shibam Ghosh, Shreyash Agarwal, Subhi Jain</i>	
A Deep Multi-Modal Attention Network for Predicting User Engagement with Contextual Ads on Social Media Platforms	168
<i>Anusha Musunuri</i>	
HEART: Hybrid Energy-Aware Resilient Trust Evaluation Model for Healthcare-IoT	175
<i>Pramit Kumar Samant, Vinay Pathak, Waqar Ahmad</i>	
Explainable AI for Classifying Human Leg Movement Patterns in Load-Carrying Scenarios	182
<i>D. Nithyakalyani, T. Venkatesh, V.S. Balaji, M. Harini, K. Adalarasu</i>	
Automated Detection of Diabetic Macular Edema Using Deep Learning on Fundus Images	189
<i>Pratham Shrivastav, Satvik Bajpai, Som Sekhar Parida, Ved Jadhav, S Ushasukhanya</i>	
<i>T Y J Naga Malleswari</i>	
Design and Implementation of a 32-bit RISC-V Pipelined Processor by using Verilog for IoT	196
<i>Suman Kumari, Ashutosh Gupta, Kaushiki, Piyush Kumar Singh, Pooja Kumari, Pragyan Parimita Padhan</i>	
<i>Prashant Pranav, Vineet Kumar, Vijay Nath</i>	

Design and Implementation of a Small-Scale Batch Mixing System using RISC-V Architecture	202
<i>Angira Mukherjee, Debjit Kar, Pragyan Parimita Padhan, Vineet Kumar, Nutan Lata, Prashant Pranav</i>	
<i>Apurva Smita, Nikhat Anjum, Priyanshu Kumar, Aditya Sankar Sengupta, Pooja Kumari, Vijay Nath</i>	
Design and Implementation of A DSP-Enhanced RISC-V Pipelined Processor Using Verilog HDL	208
<i>Aditya Goswami, Kumar Rishi, Vineet Kumar, Nikhat Anjum, Pragyan Parimita Padhan, Prashant Pranav</i>	
<i>Pooja Kumari, Pratyush Pranjali, Vijay Nath</i>	
Visual and Linguistic Fusion: Building Effective Image Caption Generator	214
<i>Chetana Thaokar, Pratibha Kokardekar, Aniket Tiwari</i>	
SideSec: Detecting and Mitigating Microarchitectural Side-Channel Attacks in Cloud VMs via Entropy	
Monitoring and Dynamic VM Reallocation	221
<i>Taslimmirza Altafhusen Mansur</i>	
RiskNet: Graph Neural Networks for Predictive Cyber Risk Propagation Across Interdependent Digital	
Assets in Enterprises	227
<i>Taslimmirza Altafhusen Mansur</i>	
A Game-Theoretic Incentive Mechanism for Blockchain-based Semi-Asynchronous Federated Learning	234
<i>Rekhasree Manthi, Rakesh Tripathi, Tirath Prasad Sahu, Bala Prakasa Rao Killi</i>	
A Decentralized Framework for Inter-Domain Authentication Using Blockchain	241
<i>Poonam Yerpude, Preeti Chandrakar</i>	
Android Malware Detection Framework using Attention-driven Fusion technique and InceptionNet	
Transfer Learning Model	248
<i>Vishakha Shukla, Govind P. Gupta</i>	
Deep Learning Architecture for Classification of Kidney Histopathology Images	254
<i>Syed Tazmeerul Hasnain, Pragyan Parimita Padhan, Prashant Pranav, Vineet Kumar, Pooja Kumari</i>	
<i>Vijay Nath</i>	
Risk-Aware Restaurant Profiling via Aspect-Based Sentiment Analysis and Temporal Trend Detection	260
<i>S Nithish Kumar, Lalithamani N</i>	
Smart Automated Irrigation System with Pest Control & IoT Monitoring	268
<i>Yuvraj Ware, Devata Anekar, Sampada Yanpallewar, Yash Agrawal, Yash Lulla, Riya Wankhede</i>	
<i>Yash Mantri</i>	
Real-Time Detection of DNS Spoofing Attacks using LSTM-Based Neural Networks	275
<i>Kalyan Sudarsan, AmrithKrishna Vignesh, Rm Bhavadharini</i>	
Explainable Deep Learning Framework for Child Autism Detection via EEG and Facial Features with	
Confidence-Based Decision-Level Fusion	281
<i>Sapthak Mohajon Turjya, Joyeta Mondal Kotha, Tusher Bhakta, Rahul Biswas, Md Shahriar Hosan Parvez</i>	
<i>Shovro Nandi</i>	
LightDiff-Shadow: A Lightweight Global Guided Diffusion Model for Real-Time Shadow Removal	287
<i>Stutee Mohanty, Rajiv Senapati</i>	
A Lightweight Embedded Intelligent Threat Detection System Using TSANet on Android Platforms	293
<i>Jagannath Malode, Manish Sabnis, Varun Gani, Ananya Banahatti, Prema T. Akkasaligar, Ryan Dias</i>	

Smart Healthcare Evolution: Deep Learning Meets Cyber-Physical Systems in Brain CT Image Interpretation	299
<i>Lalit Kumar Behera, Sujata Chakravarty, Tumbanath Samantara</i>	
A Lightweight CNN Framework for Multi-Class Cassava Leaf Disease Detection	305
<i>Devashish Ghate, Shrey Chamoli, Sneha Chauhan</i>	
Diagnosis of Leaf Disease using Jaya Optimized Convolutional Neural Networks	311
<i>Shantilata Palei, Puspanjali Mohapatra, Bhabatosh Mahanta</i>	
Hybrid SVM-Naive Bayes Ensemble with LIME and SHAP for Transparent Air Quality and Health Risk Prediction	316
<i>A.M Mukilan, K Abirami, K Keerthishree, M Srivani, V Vanitha</i>	
Brain Tumor Classification with Deep Neural Networks: Benchmarking ResNet++ Against DenseNet121	323
<i>Dharodiya Aksh Ashvinbhai, Rahul Dixit, Tanmoy Hazra</i>	
FinAssist: An AI-Powered Financial Management Platform with Hybrid Recommendation System	329
<i>M Amit, R Julian Aaron, M Srivani, V Vanitha</i>	
Depthwise Separable Convolution architectures for 3D Object Recognition *	336
<i>Lalitha Swamy Thayumanavar, Sukumar Nandi, Bunil Kumar Balabantaray</i>	
Age-Stratified Tea Leaf Quality Grading Using Residual Squeeze-and-Excitation Attention Networks (RSEAN) With Data Augmentation	340
<i>Rajat Amat, Mourina Ghosh, Pulak Mondal</i>	
YOLOv8s-AeroLite: A Lightweight and Aerial-Optimized Detector for UAV-Based Object Detection on the VisDrone Dataset	346
<i>Manjit Jaiswal, Kapil Kumar Nagwanshi, Amit Kumar Chandanan</i>	
CU8B-I: A Unique 8-bit CPU Architecture with Reduced Fetch Cycle and Upward Compatibility with 8080/8085	352
<i>Snehil Sanyal, Shrish Verma, Arman Sahu, Hetram, Niti Jain, Pradhyumn Dwivedi</i>	
Design and Implementation of a Lightweight Platform Independent Ring Oscillator PUF for IoT Applications	357
<i>Surajit Dutta, Bibhash Sen, Toshiyapang Ozk, Mahabub Hasan Mahalat</i>	
Hybrid MAC Protocol with Integrated Multi-Layered Security for Resource-Constrained UAV Swarm Communications	363
<i>Dhrumil Bhatt, Siddharth Penumatsa, Vidushi Kumar</i>	
AvioDepth: An Ultra-Lightweight Sequential Attention Framework for Real-Time Monocular Depth Estimation in UAVs	369
<i>Rinkesh Patel, Kaustubh Kapil, Meet Amin, Anand D. Darji, Pinalkumar J. Engineer</i>	
Encoder-Based Transformer Architecture for Hardware Trojan Detection Based on Power Side Channel Analysis	375
<i>Surajit Dutta, Bibhash Sen, Anindan Mondal</i>	
Hardware-Enabled Root of Trust for Enhanced Security in Embedded Systems	381
<i>Siddharth Patel, Rohit Singh</i>	

A Novel Dynamic Model Switching Approach for Deep Learning on Edge Devices with Performance Evaluation	387
<i>Aatman Shah, Dedipya Konidena, Satyam Srivastava, Shalini Nehra, Suraj Kumar Mukhiya</i>	
DeepMarineSegNet: A Multi-Scale Attention-Enhanced Network for Underwater Semantic Segmentation	393
<i>Rajat Amat, Mourina Ghosh, Amitava Nag, Robin Pathak</i>	
Solar-Powered Wearable Device for Real-Time Health Monitoring with Integrated SOS and GPS Tracking	399
<i>Roselin Thoms Gc, Sambit Kumar Mishra</i>	
A Multivariate Parallel LSTM based Model for Bond Credit Rating Prediction	406
<i>Rohit Ahuja, Santosh Singh Rathore</i>	
Graphical Digital Models for Green (Paperless) Analysis of Hardware Engineering Lab Experiments to reduce Carbon Emissions	412
<i>Dumpa Naveen, Maddineni Jahnavi, Akula Devasri, D Venkat Sai, M V Pankaj Lahari</i>	
Qancient: A Low-Depth Quantum Dataset	419
<i>Ashish Arya, Mukesh Mann, Vinay Pathak</i>	
Driver Drowsiness Detection with Smart IoT Enabled Edge-Cloud Computing	426
<i>G Kadirvelu, V. Parthipan</i>	
Early Glaucoma Screening Using YOLO and Deep Features from Fundus Images	433
<i>Lavanya Singh, Divyanshi Singh, Nirbhay Kumar Tagore, Y N Singh</i>	
Intelligent Smishing Detection Technique Towards Security of E-commerce Applications	439
<i>Vipin Kumar, Kakali Chatterjee</i>	
Dynamic Response Optimization of a 6-DOF Robotic Manipulator Using PID-Controlled Lead Compensation	446
<i>K Akshan, Kb Dharshanaa, S Abhinav, M Ganesan</i>	
TermiTeach: Natural Language Command Line Interface Tutoring Via Generative AI Simulations	453
<i>Vibhutesh Kumar Singh</i>	
Chronic Kidney Disease Prognosis Using Various Machine Learning Based Classifiers	459
<i>Astik Kumar Pradhan, Jitendra Kumar Rout, Arvind Kumar Pandey, Akash Kumar Bhagat, Divya Paikaray</i>	
A Systematic Comparison of Machine Learning Regressors for PM2.5 Concentration Forecasting: An AutoML-Driven Approach	465
<i>Ravi Shanker Pathak, Vinay Pathak, Amit Rai</i>	
Enhancing Credit Risk Assessment with Sentiment Analysis and Feature Engineering	472
<i>Sharanya Baidya, Raktim Kundu, Aaratrika Bhattacharya, Krishna Chakravarty, Jagannath Singh</i>	
AutoBudget: A Reinforcement Learning Framework for Adaptive Enterprise Budget Planning	479
<i>Vikramraj Kumar Thiyagarajan, Deepan Vishal Thulasi Vel</i>	
GeoSense: Symbolic Regression based Localization Without Global Positioning System	485
<i>P Ranjan, G Tejeswar, R Vidhyashankar, V Pritick, Prakash Venugopal</i>	

Prediction of the Breast Cancer in Histopathology Images using JAYA-Optimized Deep Network	493
<i>K V L Bhavya, Figlu Mohanty, K Pranathi, Ch. Harika, Suvendu Rup</i>	
Wavelet-enhanced Convolutional neural network integrated with the Kolmogorov-Arnold Network (WCKAN) for Hyperspectral Imagery	501
<i>Ashish Kumar, Rahul Dev Garg</i>	
Hypothyroid Disease Prediction Using Machine Learning	507
<i>Shakeer Shaik, D C Bindushree</i>	
Design and Development of an Innovative AI and IoT enabled patient specific programmable pollution measurement and real time alert system	513
<i>Sudip Dogra, Adwitiyo Bera, Subhadip Ghanta, Didipsha Guha, Anurima Chakraborty</i>	
HybridNet: A High-Accuracy Attention-Based Lightweight CNN for UAV-Based Aerial Disaster Image Classification	519
<i>Subhrajee Ganguly, Ningthoujam Johnny Singh</i>	
Early detection in lung cancer degenerative predictive imaging based on classification by machine learning algorithms	527
<i>Divya Paikaray, Danish Ali Khan, Ashok Kumar Mehta</i>	
Development of Solar-Powered Pesticide Spray Vehicle with Remote Control Operation	533
<i>Nangsel Dorji, Phurpa Wangdi, Khandu Wangchuk, Pasang Dem, Kazuhiro Muramatsu</i>	
EfficientNetB3 Adapted Hybrid UNet with Attention Guided Decoding for Urban Scene Segmentation	540
<i>Ayushi Joddha, Shah Manasvi, Swayam Kalburgi, Himani Trivedi</i>	
Enhancing IoT-Cloud Performance with P4-Driven Edge Gateways: Emulation on the GÉANT Network	547
<i>Nitin Shukla, Neeraj Jain, Dharendra Kumar Shukla, Shabir Ali, Akhilesh Kumar</i>	
Enhancing Transfer-Learning with Unsupervised Clustering for Diabetic Retinopathy	553
<i>Dibyasundar Das, Shreeya Swagatika Sahoo</i>	
Odia News Headlines Classification using Convolutional Neural Network	559
<i>Deepak Kumar Jena, Lalatendu Muduli</i>	
Hybrid Ag-Al Grating based D-Shaped Optical Fiber Surface Plasmon Resonance Sensor	567
<i>Bijayananda Patnaik, Hansa Jha, Sudhanshu Lenka</i>	
Advanced Cryptographic Solutions for Enhanced Cloud Security, Auditing, and Key Management in 6G Smart Cities	571
<i>Vikas Dubey, Abhishek Shukla</i>	
Enhanced CNN-based DoS Attack detection in WSN and IoT using SMOTE for class imbalance handling	575
<i>Ingudam Gomita, Takhellambam Sonamani Singh, Hanjabam Saratchandra Sharma</i>	
Field-Validated IoT Framework for Weather-Driven Onion Thrip Prediction and Advisory	581
<i>Tabassum Shaikh, Manas Sewatkar, Ashlesha Gaikwad, Ashwini Gajarushi, Suresh Gawande</i> <i>Maryam Shojaei Baghini, Rajbabu Velmurugan</i>	

Explainable AI Techniques on CBCT Image Quality Improvement model for Breast Cancer Surgery Patients	587
<i>Papia Banerjee, Kasturi Barik, Rajashree Nayak</i>	
Soil Quality Analysis and Yield Prediction Using Remote Sensing and Machine Learning	595
<i>Dheerendra Pratap Singh, Kamlesh Mani</i>	
Understanding the Role of Hemispheric Asymmetry as a Framework Towards AI-Human Interface: A Neurocognitive Experimental Study	602
<i>Tulika Ghosh, Shahsikanta Tarai, Moksha Singh</i>	
High Sensitive Capacitive Position Sensor Design Using Comsol Multiphysics	606
<i>Bijayananda Patnaik, Sowmya Latha Manda, D Deepak Reddy, Sunil Kumar Dash</i>	
GeetaVani: A Retrieval-Augmented LLM Framework for Contextual Dialogue from the Bhagavad Geeta	612
<i>Nutakki Namratha, Sai Sarat Spuran Naidu, Kshira Sagar Sahoo, Manthan Singla Bhavana V S S S R Praneeth</i>	
AI-Driven Ensemble Intrusion Detection System for Secure IoT Networks	620
<i>Priyanka Vashistha, Syed Zeeshan Hussain</i>	
Leveraging Explainable AI based Classifiers for Localizing Road Damage with Drone Imagery	628
<i>Krishna Sameer, Jashmin Swain, Siba K. Udgata</i>	
A Multi-Layered Security Framework for NIFTI Images Using CNN Feature Extraction, Arnold Scrambling and DWT Watermarking	634
<i>Aradhana Soni, Amit Kumar Dewangan, Ankit Kumar</i>	
Improved HSI Classification via Hybrid Spatial-Spectral Deep Features and Kernel ELM	640
<i>Suchismita Behera, Partha Pratim Sarangi, Bhabani Shankar Prasad Mishra, Sayak Hatui</i>	
Hybrid CLAHE-EfficientNet U-Net for Mammogram-Based Breast Cancer Detection	648
<i>Bhawna Singroul, Anil Kumar Soni</i>	
Automated and Remote-Controlled Smart Whiteboard Cleaner	655
<i>Prem Kala Kharka, Tashi Dorji, Sherab Lotey, Khenrab Tshultrim Gyeltshen, Kazuhiro Muramatsu</i>	
Depth Embedding Based 3D Image Steganography	662
<i>H Rohitha Aiswarya Dora, K Dinesh, K Pranay Deep, P Sai Durga Vara Prasad, Usha Kumari Shuvendu Rana</i>	
Performance Analysis of Traditional and Deep Learning Models for Agricultural Yield Estimation	669
<i>Khush Aghera K, Ruchi Patel, Megha Mudholkar, Pankaj Mudholkar</i>	
Performance Evaluation and Comparison of YOLOv8, MobileNet-SSD, and MTCNN for Face Detection in Smart Attendance System	675
<i>Arvinder Singh Dhoul, Burhanuddin Saiffee, Ruchi Patel, Santosh Vishwakarma, Ritu Ahluwalia</i>	
Enhancing Accuracy in Heart Disease Prediction Using GAN	682
<i>Abhinav Verma, Nikita Singh, Dharmender Singh Kushwaha</i>	
Brain Tumor Classification using Hybrid Deep-Wavelet Feature Fusion with Probabilistic PCA-based Feature Reduction	686
<i>Akash Pandey, Suwendu Rup, Sudhakar Pandey</i>	

A Multi Stage Framework for Efficient Deep Neural Network Compression on Edge Devices	693
<i>Satish Kumar Dubey, Naeem Ahmad</i>	
Intelligent IIoT-driven Machine Fault Diagnosis and Lifespan Forecasting: Advancing Predictive Maintenance in Industry	698
<i>Abhishek Shrivastava, Kavita Jaiswal, Aneesha Tiwari</i>	
Dual-Domain Learning for Gender Classification from Ear Images using Vision Transformers and Frequency-Aware CNNs	704
<i>Sanjita Phijam, Aryan Kumar Singh, Deep Saikia, Md Shohan Mia, Debbrota Paul Chowdhury</i>	
Unsupervised Deep Learning for Multi-Modality Tumor Detection Using Generative Adversarial Networks	711
<i>Shaswatik Giri, Ankita Khorai, Widhika Shah, Saurabh Bilgaiyan, Chiranjib Parida</i>	
Explainable AI for Preclinical Risk Detection of Bile Duct Cancer Using Multi-Omics, Microbiome Data and Clinical Biomarkers	717
<i>Amit Singh, Aditya Kumar, Akhilesh KumarGupta, Saurabh Bilgaiyan, Chiranjib Parida</i>	
EdgeHive: Federated Learning on IoT Clusters in Unreliable Networks	723
<i>Rashmi Gupta</i>	
DataVault: Secure On-Field IoT Data Logging using Blockchain and IPFS	729
<i>Rashmi Gupta</i>	
Emotion and Cognitive Stress Radar (ECSR): An Integrated Multimodal Architecture with Adaptive Fusion for Robust Affective Computing	735
<i>Aniruddha Ghosh, Saurabh Bilgaiyan, Swarnava Dutta, Chiranjib Parida</i>	
A Novel Machine Learning-Based Framework for UAV Detection under Interference to Enhance Safety and Security	741
<i>Jyotiranjana Rout, Nimisha Mohanty, Banaja Manjari Das, Anil Kumar Parhi</i>	
Compliance-by-Design for IoT Cloud Platforms: A Reference Architecture and Case Study	749
<i>Kunal Khanvilkar</i>	
Multi-Disease Detection Using Deep Learning	755
<i>Om Sahu, Arya Singh, Deo Prakash</i>	
Deep Learning for LiDAR Vegetation Segmentation with Bayesian Hyperparameter Optimization	761
<i>Rakesh Sahu, Dheerendra Pratap Singh, Mukund Pratap Singh</i>	
Scalable Vehicle Toll Model using Second Layer Blockchain	768
<i>Sujit Sangram Sahoo, Akash Kumar, Pravas Ranjan Bal, Vijay K. Chaurasiya</i>	
Enhancing Contextual Retrieval and Generation of Text through RAG and Knowledge Graph with Custom Cosine Similarity	776
<i>Sanjib Kumar Raul, Kvtkn Prashanth, Nidhi Vadodariya, T. Ramakrishnudu</i>	
A Brief Survey of Persistence Approaches in Real World Malwares	784
<i>Bhavesh Gilhare, Vikas Sihag, Gaurav Dave</i>	
Agribot: Smart Farming Robot with RFID Navigation for Selective Pesticide Spraying	790
<i>Haritha Mittapally, Likith Bommera, Shushruth Sai Reddy Karna, Gireeshma Nunsavathu, Rohit Karvanga</i>	

Comparative Machine Learning Approaches to Permafrost Probability Mapping in the Western Himalaya's Jhelum Basin	797
<i>Rohit Kumar Singh, Sunil Kumar, Rakesh Sahu</i>	
Deep Learning-Based Optimization and Processing of Speech Features for Parkinson's Disease Detection	803
<i>Sambit Satpathy, Vikas Poonia, Ujjal Kumar Das, Dharendra Kumar Shukla, Nitin Shukla, Manoj Kataria</i>	
Privacy-Preserving Federated Transfer Learning for Secure Cross-Domain Knowledge Sharing in Healthcare	806
<i>Murali Ponaganti, P Rohini</i>	
Application of ChatGPT in Today's Medical System	813
<i>Madhu Lata Nirmal, Gaurav Kumar, Sambit Satpathy</i>	
Evaluation of YOLOv11 and CNN Approaches for Lung Cancer Detection in CT Scan Data	817
<i>Dhananjay Kumar Sharma, Manoj Kumar Pal, Dharendra Kumar Shukla, Sanjay Srivastava, Gaurav Narain Singh, Param Goel, Vijay Kumar Dwivedi</i>	
Cybersecurity in IoT Networks: Machine Learning Approaches for Threat Detection	824
<i>Suchitra, Dharendra Kumar Shukla, Sambit Satpathy, Snehlata, Vijay Kumar Dwivedi</i>	
Real-Time Face Surveillance: Challenges, Opportunities, and Future Directions	830
<i>Shashwat, Suchitra Dutta, Dharendra Kumar Shukla, Vijay Kumar Dwivedi, Sambit Satpathy</i>	
Secure and Intelligent Healthcare: Evaluating Blockchain with AI for Chronic Disease Prediction	836
<i>Dharendra Kumar Shukla, Arvind Dagur, Shabir Ali, Sambit Satpathy, Akhilesh Kosta</i>	
Artificial Intelligence Integrated Microsoft Power Apps for Streamlining Small-Scale Businesses	840
<i>Jyothsna Radha Salla, Pamula Udayaraju</i>	
Adaptive and Predictive Routing in SDN Using Q-Learning and Neural Networks	848
<i>Nitin Shukla, Ratish Srivastava, Dharendra Kumar Shukla, Sambit Satpathy</i>	
Multi-Attribute AI-based Storytelling Framework with IoT Deployment for Real-Time Narration: A Parameter-Efficient Approach	854
<i>Sankalp Nayak, Samriddhi Sharma, Aradhana Behura, Prabhu Prasad Dev, Jitendra Kumar Rout, Madhukrishna Priyadarsini</i>	
The Blockchain Deployment Deficit in AI-Enabled Healthcare Frameworks	862
<i>Dharendra Kumar Shukla, Manoj Kataria, Sambit Satpathy, Vikas Poonia</i>	
Leveraging Graph Databases for Real-Time Spam Detection on Social Media	865
<i>Sakshi Srivastava, Dharendra Kumar Shukla</i>	
Malware Detection using Stacked Machine Learning Model	872
<i>Brijendra Pratap Singh, Dharendra Kumar Shukla, Rajnish Chaturvedi, Sambit Satpathy</i>	
Secure Comparative Evaluation of Alzheimer MRI Classification Models Using Blockchain	877
<i>Abdhisuta Dash, Fahad Amin, Subham Kumar Sahoo, Sambit Kumar Mishra</i>	
Zig-RAPM: A Cost Effective Zigbee-driven Realtime Remote Air Pollution Monitoring System in Industrial Belt, an Experimental Approach with Field Survey	884
<i>Sufyan Nadeem, Sunam Jana, Tahrir Fatma, Sneha Chowdhury, Zainab Fatima, Suman Paul</i>	

Self-Healing Autonomic IoT Security: A Multiclass Ensemble-Based Intrusion Detection System	890
<i>Swati Das, Suwendu Chandan Nayak</i>	
LLMCache: Layer-Wise Caching Strategies for Accelerated Reuse in Transformer Inference	896
<i>Harsh Vardhan Bansal</i>	
Explainable Ensemble Machine Learning Approach for severity prediction of Hemophilia A	902
<i>Vikalp Kumar Singh, Maheshwari Prasad Singh, Ashutosh Mani</i>	
Scalable, Fault-Tolerant Quantum Algorithms for Cryptanalysis-Resistant Communications	908
<i>Ankith Konda</i>	
Hybrid Quantum-Classical Agentic AI for Resource-Efficient Optimization of National Power Grids	916
<i>Ankith Konda</i>	
DYOLO: Deformable based YOLOV7 for polyp detection	922
<i>Shreerudra Pratik, Rahil Agarwal, Debaraj Rana, Bunil Kumar Balabantaray</i>	
HEMNet: A Hardware-Efficient MobileNet for Gastrointestinal Pathological Findings Classification	928
<i>Debaraj Rana, Shreerudra Pratik, Bunil Kumar Balabantaray, Om Prakash Sahu, Rangababu Peesapati</i>	
Training PSNN using Improved GA for Enhanced Closing Price Prediction of Natural Gas and Crude Oil	934
<i>Sudersan Behera, Sukhavasi Hemasri, Yerraginnela Shravani, Sreenivas Madupu, Sasikumar A N M. Ramesh</i>	
Machine Learning-Based Detection of DDoS Attacks: An Evaluation of SVM and Random Forest Approaches	940
<i>Pranav Bhawsar, Abhinav Kumar, Sunny Kumar, Vikas Gupta, Rahul Rana, Prachi Mehta, Zeesha Mishra</i>	
ParaMind: Parallelized Adaptive Memory Integration for Long-Context Large Language Models	947
<i>Sandesh Basrur</i>	
Transferable Agentic AI for Accelerating Quantum Algorithm Discovery: Meta-Learning and AutoML for Parameterized Quantum Circuits	953
<i>Satyanarayana Burugupalli</i>	
Explainable, Verifiable Agentic AI with Provably Reduced Failure Modes Using Quantum Verification Subroutines	959
<i>Satyanarayana Burugupalli</i>	
PayGuard: An Event-Driven, Policy-Graph-Guided AI Pipeline for Real-Time Payroll Risk Detection and Conformal Remediation	965
<i>Raghuveer Yerneni</i>	
AegisFin: Zero-Trust Confidential AI for Hybrid-Cloud Financial Systems	971
<i>Raghuveer Yerneni</i>	
RAG-Augmented Payroll Intelligence Stack: A Zero-Trust, Policy-Verified Architecture for Compliant and Explainable Payroll Automation	976
<i>Raghuveer Yerneni</i>	
Enterprise Memory Architecture for Agentic AI (EMA ₂): A Policy-Aware, Provenance-First, Multi-Tier Memory Stack for Long-Horizon Agents	981
<i>Raghuveer Yerneni</i>	

Agentic Ads: A Multi-Agent AI Framework for Privacy-Safe and Explainable Ad Decisioning	987
<i>Chaitanya Kumar Seri</i>	
SightLine: Identity-Free In-Store Attention Measurement via Geometry-Aware Gaze Proxies	993
<i>Chaitanya Kumar Seri</i>	
ChunkWise LoRA: Adaptive Sequence Partitioning for Memory-Efficient Low-Rank Adaptation and Accelerated LLM Inference	999
<i>Ketan Thakkar, Maitreyi Chatterjee, Ramasubramanian Balasubramanian, Achyuthan Jootoo</i>	
<i>Rajendra Ugrani</i>	
Edge AI Acceleration on Ultra96 SoC: Rapid Model-to-FPGA Hardware Mapping Using NNgen	1004
<i>Swati, Harshkumar Parmar, Pinalkumar Engineer</i>	
SirpurDigital: A Real-Time Digital Twin Framework for Predictive Heritage Monitoring and Intelligent Cultural Preservation	1010
<i>Vinay Pathak, Shubham Sharma, Prafull Goswami, Manu Vardhan, Kartikye Prasad</i>	
Depression Detection Using Stacking Ensemble with Pronoun-Based Linguistic Features	1016
<i>Prashant Kashyap, Jitendra Kumar Rout</i>	
Intelligent Route Optimization Using Ant Colony Algorithm in Dynamic Networks	1021
<i>Tejanshu Bhandari, Kumar Ashutosh, Abhishek Tanwar, Kumar Shahil, Shaswati Patra, Dipti Das</i>	
A Meta Learning Based Stacked Ensemble Model (MetaCervX) for Enhanced Cervical Cancer Prediction	1027
<i>Chandani Bhagchandani, Tripti Swarnkar</i>	
Intelligent Home Automation System with Weather Forecasting and Alert Integration	1034
<i>Harsh Agarwal, Syed Muhammad Rizvi, Siddhesh Bijwe, Souvik Konar, M Safa</i>	