

2026 Second International Conference on Emerging Computational Intelligence (ICECI 2026)

**Aligarh, UP, India
4-5 April 2026**

IEEE Catalog Number:
ISBN:

CFP262BZ-POD
979-8-3195-3338-8



Copyright © 2026, 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:	CFP262BZ-POD
ISBN (Print-On-Demand):	979-8-3195-3338-8
ISBN (Online):	979-8-3195-3337-1

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

XAI-RMNet: A Novel Explainable Hybrid CNN Transfer Learning Model for Multi-Class Brain Tumor Classification	1
<i>Savir Ali, Shaharyar Alam Ansari, Mohammad Zaid Nadeem, Shahnwaz Afzal, Mohd Zain Khan Md Zeyauddin</i>	
VoltSense: A Cloud-Native Smart Switch with AI-Powered Anomaly Detection for Enhanced Home Safety and Energy Management	7
<i>Avyukt Soni, Ahmad Ilya, Saad Ahmad, Ziya Ali</i>	
Long-Horizon Forecasting for Sensor Systems: an Experimental Study Using Linear and Transformer-Based Models	13
<i>Muneer Khan, Mohd Sakib, Tamanna Siddiqui, Shantanu Awasthi</i>	
Towards Intelligent Intrusion Detection: Leveraging Machine Learning for Adaptive Threat Response	19
<i>Nishu Sethi, Parul Hooda, Anshu Malhotra</i>	
An IoT-Based Multi-Sensor Soil Health Monitoring System with LLM-Assisted Decision Support for Precision Agriculture	24
<i>Raj Singh, Achintya Singhal, Vandana Sethi</i>	
A Hybrid Image Encryption Scheme with Wavelet Transform and Chaotic Permutation For Enhanced Security	30
<i>Ahwar Khan, Malik Fuad Wali Khan</i>	
AI Based Farmer Query Support And Advisory System	37
<i>Anant Tiwari, Ayush Tripathi, Bhumi Bhardwaj, Prachi Pundhir</i>	
AI-Based Early Prediction of Stress and Mental Health Issues Using Wearable Sensor Data	43
<i>Aaditya Bisht, Kumud Saxena, Sana Anjum</i>	
SkillSprint: AI-Powered Interview Practice and Analysis Hub	49
<i>Devbrat Singh, Deep Kumar, Ambuj Pandey, Subrat Tripathi, Amrish Dubey</i>	
Retina Diseases Identification With OCT Images Using Transfer Learning	55
<i>Asha Joseph, K Rajakumari</i>	
Analysing Consumer Behaviour for Brand Loyalty Prediction in E-Commerce Marketing Using Artificial Intelligence	60
<i>Roshan Kumar Shiva, Geetha Manoharan</i>	
Not all that is Fluent is Factual: Investigating Hallucinations of Large Language Models in Academic Writing	66
<i>Humam Khan, Md Tabrez Nafis, Shahab Saquib Sohail, Aqeel Khalique, Rehan Hasan Khan</i>	
Unified Multi-Modal Smart Parking Ecosystem	72
<i>Totti Shaik Taufic Aksa, Divya Sri Moparthi, Mitesh Paliwal, Srinivasa Rao Vankdoth</i>	
Traditional to Transformer TabPFN for ASD Detection	77
<i>Mohammad Munzir, Mohammad Shadab Khan, Prabha Kumaresan, Lee Fong Yee, Shahid Kamal</i>	

A Computational Framework for Intelligent Team Formation Using Semantic Embeddings and Multi-Criteria Optimization	82
<i>N Kirubakaran, G Senthil Kumar, M Ezhil Srikanth, Balaraman Sundarambal, V Vigneshwaran Vishali Muralidharan</i>	
MineBot: AI-Powered Mining Laws and Regulations Chatbot	88
<i>N Kirubakaran, Balaraman Sundarambal, R Jashvarthini, J Meenakshi N, Suresh Subramanian Rajaram Pichamuthu</i>	
Understanding the Adoption of Generative Artificial Intelligence (GenAI) in Saudi Arabia: A Technology Acceptance Model (TAM) Approach	94
<i>Farah Ali Albishri, Amal Hamed Alharbi, Syed Hamid Hasan</i>	
A Blockchain Integrated Hierarchical Attention Graph Model for Cybersecurity and Digital Forensic Investigation	101
<i>Amani Aljehani, Syed Hamid Hasan, Usman Ali Khan</i>	
A Comprehensive Survey of Optimization Techniques for Task Offloading in Mobile Edge Computing	107
<i>Sandeep Gupta, Kuldeep Narayan Tripathi</i>	
Detection of PTSD using Machine Learning by utilizing Sleep and Psychopathological Features	113
<i>Kiran Pandey, Prashant Gupta, Shallu Sharma, Gautam Singh, Himanshu Pandey, Bireshwar Mazumadar</i>	
Technological Integration in Qur'anic Education: Interface Design, Linguistic Accessibility, and User Behaviour	119
<i>Adeeba Taj</i>	
Secure and Resilient Medical Payload Delivery in Disaster Zones Using Drone-to-Drone Communication and Centralized Coordination	125
<i>Salman Ali, Ankur Kumar, Mansoor Alam</i>	
Knee Osteoarthritis Severity Grading Using Optimized Deep Learning and LLM-Driven Intelligent AI on Computationally Limited Systems	131
<i>Dayam Nadeem, Neha, Safdar Mustafa, Adnan Alvi, Mohd Hussain</i>	
DeepFoodNet: A Hybrid VGG-Driven Framework for Robust Multi-Class Food Recognition Using Transfer Learning and Custom Convolutional Networks	137
<i>Sampurna Roy, Tanupriya Choudhury, S Christalin Nelson, Minakshi</i>	
FreshNet 360: A Hybrid Clustering-Deep Learning Framework for Multi-Stage Food Freshness Grading Using Image-Based Quality Signatures	143
<i>Sampurna Roy, Tanupriya Choudhury, S Christalin Nelson, Minakshi</i>	
An Efficient Web-Based Image Encryption Framework Using Reduced-Round ChaCha20 with Additional AES S-Box Nonlinearity	149
<i>Arif Khan, Siddhartha Sankar Biswas, Bhavya Alankar, Harleen Kaur</i>	
IoT-Enabled Smart Emergency Medical Relief System	155
<i>Mohd Tarique Khan, K.V. Shiny, Mohammed Abdul Wajeed</i>	
Gesture Recognition App for Sign Language Translation Into Voice	161
<i>N Kirubakaran, G Senthil Kumar, S Jayashri, B Vidhiyaashri, Balaraman Sundarambal, C Selvaganeshan</i>	
Quantum-Inspired Optimization for Robust MANET Routing Protocols	166
<i>K Subhashini, Kamini Sharma, Aashima Bansal, Jatinder Kaur, Ankit Chamoli, Vipin Kumar Chaudhary</i>	

Hybrid ANN based surrogates for Vapor Liquid Equilibrium Prediction of the Ethanol-Water System	172
<i>Mohd Anas Adnan, Rameez Ahmad Aftab</i>	
Forecasting Key Financial Factors: A Study of Sun Pharmaceutical Industries Limited	178
<i>Akhilesh Kumar, Mahfooz Alam, Rajeev Sharma, Dantu Charvi</i>	
An Analytical Framework for Workforce Planning and Customer Experience Using Predictive Models in Human Resources	184
<i>Vikram Deshmukh, Geetha Manoharan</i>	
Enhanced ECC—AESGCM Based StegoCryptographic Model for Secure Medical Data Transmission in IoT-Healthcare Systems	190
<i>Md Ozaif, Mahfooz Alam, Fayeza Zobair</i>	
Streamlining Colorectal Cancer Classification using Synergistic SVM-InceptionV3 Approach	196
<i>Artatrana Biswapranna Dash, Sachikanta Dash, Sasmita Padhy, Rabinarayan Panda, A Murali Krishna Naween Kumar</i>	
Early Atrial Fibrillation Diagnosis from Raw ECG Using a Conv1D–BiLSTM–Attention Deep Learning Framework	202
<i>Areeba Atiq, Sarfaraz Masood</i>	
Gesture-Driven Virtual Mouse for Human Computer Interaction	207
<i>Syed Mohammad Haris, Syed Mohd Arham, Samta Rani</i>	
Hybrid Quantum-Classical Neural Networks: Bridging Deep Learning and Quantum Computing for Image Classification	212
<i>Aditya Kumar Jha, Rahul Bhandari, Raman Chadha</i>	
TransLator AI-Powered Speech Translation and Lip-Aligned Video Regeneration System	218
<i>N Kirubakaran, G Senthil Kumar, A Sachin, A Vishnu Kanth, Balaraman Sundarambal, C Selaganesan</i>	
Assessing Privacy Risks in Android Applications Using ML and Explainable AI Techniques	224
<i>Abeeha Hasan, Sehba Masood</i>	
Mathematical Transform Based Set Partition Hyperspectral Image Compression Algorithms: A Comparative Review	231
<i>Osama Saleem, Shrish Bajpai, Divya Sharma, Naimur Rahman Kidwai</i>	
A Multiagent Deep Reinforcement Learning Framework for Dynamic and Heterogeneous Vehicular Edge Computing Environment	236
<i>Puneet Kansal, Manoj Kumar, Om Prakash Verma</i>	
CFD-Based Bioheat Modeling Approach for Steady-State Thermal Analysis of Arterial Tissues	242
<i>Shazmani, Anju Saini, Deepika Saini, Kalpana Chauhan</i>	
Hacking Frameworks for Security Operation Centers Using Artificial Intelligence Approaches	248
<i>Ahmed Khalaf Zager Alsaedi, Riyam Ibrahim Abdulwahid</i>	
Controllable Text Editing in Medical Images Using Diffusion Models: A Qualitative Study on Dataset Expansion	254
<i>Shallu Sharma, Bireshwar Dass Mazumdar, Prashant K. Gupta, Vanshika Chauhan, Saurabh Gupta</i>	
Federated Learning: A Novel Framework for Parkinson’s Disease Detection	260
<i>Kausar Ali, Maaz Shamim, Mohd Adnan, Aditya Narendra</i>	

3D Improve Zero Memory Set Partitioned Embedded BloCK Coding Algorithm for Hyperspectral Image	266
<i>Purushottam Lal Nagar, Shrish Bajpai, Naimur Rahman Kidwai</i>	
A Comprehensive Review of Data-Driven Pulmonary Disease Prediction Using Machine Learning and Deep Learning	271
<i>Manbir Kaur, Parul Datta, Shonak Bansal</i>	
Selective Frame Processing for Real-time Marine Acoustic Monitoring using Progressive Multi-Stage MFCC Computation	277
<i>N Kirubakaran, D Mohana Priya, K Sivasakthi, V Anitha, G Senthil Kumar, Vishali Muralidharan</i>	
Vantum AI: Lightweight Core Enterprise Grade Impact	283
<i>N Kirubakaran, G Senthil Kumar, S Yathish, S Rishi Kumar, Balaraman Sundarambal, C Selaganesan</i>	
An IoT-Enabled Deterministic Computational Model for Real-Time Water Quality Assessment of the River Ganges	289
<i>Yugansh Sachdeva, Achintya Singhal, Manoj Kumar Singh, Vimal Dungdung</i>	
Gender Bias in Spoken Language Translation : A Review	295
<i>Jamaluddin, Chandresh Kumar Maurya</i>	
TRIDENT: A Secure and Robust Framework for Cloud Data Geolocation Under Byzantine Landmark Attacks	301
<i>Haider Ali, Megha Gupta, Mohd Izhar, Pinki Nayak</i>	
QSec-Trace: Hybrid Quantum Classical Integrity Verification and Provenance for Cloud Logs	307
<i>Shaik Khaja Mohiddin, Shaik Sharmila, Vijaya Chandra Jadala, Sultan Ahmad, Sultan Ahmad</i>	
Hybrid Metaheuristic-Q-Learning Framework for Robust Feature Selection in Cyber Intrusion Detection Systems	314
<i>Mohammad Zayeem, Maria Lapina</i>	
Explainable AI in Rare Cancers: Lessons from Neuroendocrine Tumors for Disease Modeling	320
<i>Nowsheena, Shaima Qureshi</i>	
Prediction of Crop Yield Using AI Approach	326
<i>Megavath Aravind Kumar, Swarup Nandi</i>	
A Lightweight IoT Intrusion Detection Framework with Hybrid HHO And WOA Optimization	332
<i>Mohd Zain Khan, Mohd Mustaqeem, Takreem Fatima Khan, Shahnwaz Afzal, Savir Ali, Md Zeyauddin</i>	
Empirical Evaluation of Self and Cross-Model Verification for LLM Hallucination Detection in Cybersecurity	338
<i>Mohd Adnan, Kausar Ali, Maaz Shamim, Nawaz Sarwar</i>	
Predicting Space Debris Collisions Using Random Forest Algorithm and Orbital Dynamics Mechanism	344
<i>G Senthil Kumar, S Varadha Rajan, N Arokia Martin, N Kirubakaran, Balaraman Sundarambal, S Sandhya</i>	
Reinforcement Learning-Enhanced Black-winged Kite Algorithm for Cloud Workflow Scheduling	350
<i>Mohammad Qasim, Md. Saquib Jawed, Raza Abbas Haidri</i>	
Genetic Algorithm Based Lung Nodule Segmentation and Vision Transformer Driven Classification for Lung Cancer Detection	356
<i>Takreem Fatima Khan, Hamna Jameel, Ghazala Sultan, Md Shamsul Haq Ansari</i>	

Efficient Fine-Tuning of Large Language Models for Mathematical Reasoning: A Low-Resource Approach using LoRA and Quantization	362
<i>Abhay Aditya, Priya Pandey, Bhavya Garg, Amit Kumar Himanshu, Simran, Keshav Bhardwaj</i>	
An Experimental Study of Soft Computing Techniques for Physiological Pattern Detection	368
<i>Maaz Shamim, Kausar Ali, Mohd Adna, Athar Yawar Hashmi</i>	
AI-Based Detection of Telemarketing Call Intent and Fraud Using Short-Duration Audio Analysis	374
<i>Irfan Alam, Jalaluddin Khan, Aizan Zafar, Javed Khan Sheikh, Mohamed Yasin Noor Mohamed Sameer Choudhary</i>	
Multi-class Financial Anomaly Detection with Explainable Tree Ensembles	380
<i>Ravi Sharma, Saksham Jain, Sagar Attri</i>	
A Theoretical Framework for Pivot-Based Multilingual AI Response Generation in Indian Languages	386
<i>Tuba Rahman, Mohd Haziq</i>	
FakeXE: An Explainable Fake News Detection Using Roberta and LIME	392
<i>Chhabi Begal, Tejas V. Kalal, Rizwan Alam, Amit Kumar Singh, Pawan Dheeraj Manghnani, Md Zeyauddin</i>	