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Mieczyslaw Lech Owoc ·
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Editors


Computational Intelligence in Data Science


7th IFIP TC 12 International Conference, ICCIDS 2024
Chennai, India, February 21–23, 2024
Revised Selected Papers, Part I

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Preface

The International Conference on Computational Intelligence in Data Science (ICCIDS) is an annual conference organized by the Department of Computer Science and Engineering, Sri Sivasubramaniya Nadar College of Engineering. The seventh edition of the conference, ICCIDS 2024, took place during February 21–23, 2024. The International Federation for Information Processing (IFIP) has been the organizing body and technical co-sponsor for ICCIDS for the past four years.

ICCIDS 2024 offered a platform for researchers, scientists, engineers, and academics from across the globe to network and exchange their most recent, unique research experiences along with the latest advancements and trends in Artificial Intelligence (AI). The conference theme included major areas of AI application, such as computer vision, natural language processing, speech processing, and integration with IoT and cyber security. The event drew both foreign and national authors who showcased their technical skills through written contributions and presentations.

The conference received 341 submitted papers, of which 21% were accepted for presentation after a double-blind review process in which each submission received 2 or 3 reviews.

The first day of the conference commenced with an inauguration ceremony with the release of the souvenir of ICCIDS 2024. It was followed by two keynote talks. The first talk was on *Localization and Clustering in Wireless Sensor Networks*, by *Saroja P. Kanchi*, *Kettering University, USA*. The second talk was delivered on *Impact of Fakes on Sustainable Development Actions - Trusted Knowledge as Counteraction* by *Mieczysław Lech Owoc*, *Wrocław University of Economics & Business, Poland*. Presentations of the accepted papers were organized as five tracks as follows:

1. Applications of AI/ML in NLP
2. Applications of AI/ML in Image Processing
3. Application of AI/ML in KDM, Cloud Computing and Security
4. Data Analytics
5. Applications of ML

There were four parallel tracks, namely 1, 2, 3, & 4, with 6 paper presentations respectively coordinated by the session coordinators with evaluation by the session chairs.

On the second day of the conference, there were two keynote talks, one hands-on session followed by paper presentations. The first keynote talk was on *Self-Supervised Learning: An Efficient Technique to Process Unlabeled Image Data* by *Mayuri Mehta* from *Sarvajani College of Engineering & Technology, India*. The second talk was on *Gen-AI and the Next Wave of Democratization of IT* by *Kausikram Krishnasayee*, *Kissflow, India*. There was a Hands-On Session on *AI and XAI-based Use Cases in Healthcare using Python* by *Mayuri Mehta* from *Sarvajani College of Engineering & Technology, India*. There were two sessions for parallel tracks 2 and 3 with 12 paper

presentations each coordinated by the session coordinators with evaluation by the session chairs.

On the third day of the conference, there were two keynote talks followed by paper presentations. The first keynote talk was delivered by *Arun Raj Kumar P.* of *NIT Calicut* on *Securing Tomorrow: Unveiling the Synergy of Computational Intelligence and Data Science in Network Security*. The second talk was on *Cloud-Edge Cooperation: A Win-Win Partnership* by *Zakaria Maamar*, *University of Doha for Science and Technology, Qatar*. There were four tracks, 1, 2, 4, and 5, with 8, 8, 7, and 8 paper presentations respectively coordinated by the session coordinators with evaluation by the session chairs.

We acknowledge the invaluable assistance of the program and technical committee members. A complete list of track chairs and track PC members can be found in the next pages. Most reviewers provided detailed and constructive comments which were valuable for the authors to continue improving their papers, even if the submissions were not selected for the conference.

Given the high-quality work done by authors, reviewers, and track chairs, we are confident that the ICCIDS 2024 proceedings capture the current state of the art of research in the field of AI and knowledge management and will have significant impact on the research community in the longer term.

February 2024

Mieczyslaw Lech Owoc
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Contents – Part I

Applications of AI/ML in Natural Language Processing

Analyzing the Computational Efficiency of LLM Models for NLP Tweet Classification During Emergency-Crisis	3
<i>Sabarish Raja Ramesh Raja, M. S. Antony Vigil, Muthukumar Pattaiah, and B. Sudarson</i>	
Drug Sentiment Analysis: A Comprehensive Study Using Regression Models and Natural Language Processing	16
<i>S. Pradeep and V. UmaRani</i>	
Chat Bot in Banking Sector Using Machine Learning and Natural Language Processing	29
<i>S. P. Chokkalingam, Pasumarti Vamsi Krishna, V. Harshath, Chavva Bala Kuswanth Reddy, and Yenumula Siva Sandeep</i>	
Lecter - A Large Language Model Chatbot for Cognitive Behavioral Therapy	41
<i>R. Sham Sundhar, T. Shivavardhini, C. A. Daphine Desona Clemency, and M. S. Roobini</i>	
Evaluating the Language Translation Accuracy of GPT-3.5 Using Prompt Engineering	54
<i>T. S. Ajai Krishna, R. Akshaya, Ansh Bomb, K. Balamurugan, J. Angel Arul Jothi, and V. Mary Anita Rajam</i>	
Multi-camera Enhanced Real-Time Content-Aware Vehicle Detection	68
<i>Mohamed Mafaz, I. Karthiga, and S. Sharon Priya</i>	
COOL: Classification of Online Offensive Language Using Machine Learning and Deep Learning	87
<i>Manjari Bhamidi, Manvitha Nandyala, Ragapriya Dayalan, N. Karthik, and V. Vani</i>	
Improved Evaluator for Subjective Answers Using Natural Language Processing	98
<i>A. Yasin Sharif and N. V. Ravindhar</i>	

Self-harm Detection from Texts: A Comparative Study Utilizing BERT, Machine Learning, and Deep Learning Approaches	110
<i>Rajalakshmi Sivanaiah, Sushmithaa Pandian, S. Subhankar, Samyuktaa Sivakumar, R. Rohan, and S. Angel Deborah</i>	
Neuro-Evolution-Based Language Model for Text Generation.	124
<i>C. Bagavathi and Abhijith C. Prakash</i>	
Offensive Language Detection on Telugu Language	144
<i>Kakollu Pavan Kalyan, Valiveti Naveen, V. Vani, and N. Karthik</i>	
User Story Based Automated Test Case Generation Using NLP	156
<i>Arunkumar Chinmaswamy, B. A. Sabarish, and R. Deepak Menan</i>	
Anticipating Future College Admission Cutoffs: An Innovative Predictive Model Incorporating Student Reviews and Historical Admissions Cutoff Data Using Machine Learning	167
<i>Chikkam Girish, Tata Umesh, N. Karthik, and V. Vani</i>	
Sentiment Analysis for Stock Prediction Using Mass Media Sources	179
<i>Kunal Kishor Billade, Jeel Patel, N. Karthik, and V. Vani</i>	
Applications of AI/ML in Image Processing	
CADFRA: Coronary Artery Disease Feature Reduction with Autoencoder for Optimistic and Effective Classification	193
<i>Kerenalli Sudarshana, Vamsidhar Yendapalli, L. Kamala, Thanveer Habeeb Sardar, and Zameer Ahmed Adhoni</i>	
Machine Learning Based Alzheimer's Disease Detection: A Comprehensive Approach.	209
<i>A. Periya Nayaki, A. K. Vidyabharathi, S. Krishnaveni, and M. S. Thanabal</i>	
Supervised Learning of Procedures from Tutorial Videos	226
<i>S. Arunima, Amlan Sengupta, Aparna Krishnan, D. Venkata Vara Prasad, and Lokeswari Y. Venkataramana</i>	
De-noising of Low Dose CT Liver Images Using Improved Discrete Wavelet Transform	237
<i>H. Heartlin Maria, R. Kayalvizhi, I. Keren Evangeline, T. George Princess, T. Rashmika Mangalya, and J. Shakthi Prakash</i>	

A-Eye Tracker: Human Eye Defect Tracker and Analyzing Software.	248
<i>B. Swathishri and R. Swetha</i>	
Design and Analysis of Structural Health Monitoring System for the Diagnosis of Morphological Deformities of Bolted Structures.	266
<i>G. Prakash, Dhineshkumar Krishnan, and G. Ramya</i>	
Empowering Medical Image Analysis: Unveiling Anomalies Through GANs and BiGAN's Models.	279
<i>Vatsal Kumar Sharma, Aryan Jakhar, Aaroh Vats, and Gurwinder Singh</i>	
Pneumonia Detection Using Chest X-Rays: A Comprehensive Review.	292
<i>Sangapu Sreenivasa Chakravarthi, Shaik Nagoor Meeravali, Mohammad Aazmi Irfan, S. Sountharajan, and E. Suganya</i>	
Realistic Avatar Control Through Video-Driven Animation for Augmented Reality.	306
<i>A. Gokul Nath and K. Suresh Kumar</i>	
CNN-Based Skin Lesion Classification for Melanoma Detection.	315
<i>P. Havirbhavi and K. Ashwini</i>	
Self-annotated Labelling and Training Data for Traffic Video Object Detection Using Machine Learning Techniques.	334
<i>V. Rahul Chiranjeevi, Maanesh M. Swamy, M. K. Krishna Prasath, and P. Kumar</i>	
A Comparative Analysis on Various Machine Learning Methods for GAN Based Video Anomaly Detection.	345
<i>Rahul Chiranjeevi, C. Hirthik Shyam, K. Kaushiik, and P. Kumar</i>	
D3CNet: Integrating Cascade Networks for Enhanced Driver Fatigue Monitoring.	357
<i>J. Preethi, V. Rahul Chiranjeevi, K. Surya, and S. Santhosh Kumar</i>	
Automated Indigenous Plant Recognition and Medicinal Value Extraction System.	368
<i>S. Sendhilkumar, G. S. Mahalakshmi, A. Swaminathan, and K. Sai Anirudh</i>	
An Ensemble of Deep Transfer Learning Frameworks for Automatic Tuberculosis Detection in Chest X-Ray Images.	381
<i>J. Rajeswari, J. Raja, N. Ramya, and S. Jayashri</i>	

SVM-Based Skin Cancer Diagnosis for Malignant and Benign Tumor Distinction 396
 G. Tanusha and K. Ashwini

Driver’s Distraction Detection via Hybrid CNN-LSTM 412
 R. Hemashree and M. Vijay Anand

Leaf Disease Detection Using ResNet Deep Neural Network 424
 B. Suriya Prakash and N. Velmurugan

An Exploration of Object Detection and Vehicular Communication for Autonomous Vehicles 435
 A. Padmavathi and Dheeraj Reddy Pullela

Music Recommendation System Based on Facial Expression using CNN 450
 R. Roshika, Anjana Girish, N. Karthik, and V. Vani

Author Index 463

Contents – Part II

Applications of AI/ML in KDM, Cloud Computing & Security

Healthify App Using Blockchain with Cloud	3
<i>S. Ponmani, M. Sushil Mane, and A. Vinita Piola</i>	
A Systematic Review of Various Deep Learning Techniques for Network Intrusion Detection System.	17
<i>A. N. Sasikumar and Sheeba S. Lilly</i>	
Intrusion Detection System Trends: An Overview of Current Advances in IoV & Communication Networks	36
<i>Sangapu Sreenivasa Chakravarthi, Rishabh Rajput, S. Sountharajan, and E. Suganya</i>	
Automation Xtreme - A Web Automation AI Tool	51
<i>R. Abishek and M. Vijay Anand</i>	
Defending the Digital Frontier: URL-Based Phishing Detection Extension	65
<i>P. Vamsi, U. Muthaiah, and C. H. Roshan Vardhan</i>	
Guarding the Digital Frontier: A Logistic Regression Approach to Malware Detection	77
<i>M. R. Archana Jenis, K. Shankar, and K. Srinivasa Seshadri</i>	
Hybrid Efficient IDS Against Adversarial Attacks in IoT Networks.	92
<i>Eman Aljbour and Qasem Abu Al-Haija</i>	

Data Analytics

Real-Time Soil Moisture Sensing Using Arduino for Automated Plant Irrigation System.	107
<i>R. Vijayalakshmi, R. Deepalakshmi, T. S. Madhavan, and G. Siva Balasubramanian</i>	
Campus Placement and Salary Prediction: Leveraging Machine Learning for Enhanced Employability	123
<i>Jayashree, R. Raahul, R. Roahith, and Shanmathi Ganesan</i>	

Exploring Corrosion Detection: Deep Learning and Ensemble Approaches Analysis.	136
<i>A. Akshara, P. Chitra, and S. Sahana</i>	
Comic Generation Using AI—A Review	156
<i>Jayaganeshan Thanga Kumar, Harinath Babu, and N. Srinivasan</i>	
Residential Price Analysis Using Machine Learning	167
<i>R. John Joseph and M. Vijay Anand</i>	
AI-Driven Interviewer: Enhancing Interview Experience Through Conversational AI.	180
<i>S. Sumathi, D. Kevin Harris, and A. K. Jeyanth</i>	
Human Abnormal Activity Detection Using CNN and LSTM.	197
<i>B. Induja and V. Loganathan</i>	
Campus Drive Portal on Career Advancement for College Students.	210
<i>S. Nandhini, P. Praganya, V. Karthick, and V. Ariyamala</i>	
Deception Detection Using Random Forest and KNN	224
<i>S. Tilak Chander, S. Devi, A. G. Harshavardhan, and S. Darun Sanjay</i>	
Analyzing Meteorological Data for Curated Music Selection	234
<i>S. Sakthi Murugeswari and E. Sujatha</i>	
Remote and Centralized Billing System Using Cloud Computing	241
<i>J. Gold Beulah Patturose, R. Priscilla, S. Aravind Shankar, and S. M. Hariram</i>	
Information Extraction Using RPA and Generative AI from Unstructured Documents: A Case of Invoices	250
<i>S. Sowjanya and V. Vijaya Chamundeeswari</i>	
Harnessing Machine Learning-Based Classification Techniques to Optimize Crop and Fertilizer Recommendations	265
<i>Sachin Kumar, U. Muthaiah, and Ram Vinod Roy</i>	
Cyberbullying Predictive Analysis on Twitter(X) Data with Multi-model Supervised Technique	276
<i>Vijaya Vardhan Manepalli, Srikar Meka, S. Supriya, M. Sreekrishna, and G. S. Gopika</i>	

Heart Attack Prediction Using Big Data Analytics.	288
<i>A. Akalya and V. Swedha</i>	
Bloom's Taxonomy Based Question Analysis for Personalized Learning	296
<i>J. Jeslin Shanthamalar, Dinesh Sheelam, Shiva Raj Bodla, V. Gowri Manohari, and R. S. Nancy Noella</i>	
Snowfall Forecasting with Enhanced Accuracy: Leveraging Multi-Class SVM for Meteorological Predictions	312
<i>M. Ranjith Kumar, V. Sudeesh Kumar, G. K. Tharun Kaarthik, Veda Chatiyode, Janani Srinivasan Anusha, and P. Revathi</i>	
Crop Irrigation Advisory System Using Federated Logistic Regression	329
<i>Deepthi Gardas and R. Karthi</i>	
Supply Chain Management Using Optimization and Machine Learning Techniques.	342
<i>Honey Pandey, N. Neelima, and K. V. Nagaraja</i>	
Cricket Forecast: Unraveling Future Matches' Outcomes	353
<i>Vemula Vivek Siddharth, Pulukuri Shalem Vikranth, N. Karthik, and V. Vani</i>	
Deep Learning Ensemble for Diabetes Prediction: Integrating LSTM, DCNN, and SMOTE for Enhanced Risk Assessment.	365
<i>Ayyakkannu Selvaraj, V. Satheesh kumar, Dilip Bhudhwant, Sharvari Tamane, and Chhaya S. Khandelwal</i>	
Optimizing Hyperspectral Image Classification Through Swin Transformer Integration and CNN Feature Extraction.	374
<i>Sushil Kumar Janardan and Rekh Ram Janghel</i>	
Efficient Task Allocation with Mentorship Mapping in Crowd Sourcing Platforms	387
<i>Sindhu Sahithi Gelam, Sai Naga Manikanta Thota, Sai Anushree Voleti, Lekshmi S. Nair, and Durga Manikanta Naga Surya Teja Tummala</i>	
Applications of ML	
Designing an Enhanced Swarm-Based Optimization Algorithm for High Utility Itemsets Mining	405
<i>Yogesh Juyal, Sonal Sharma, Harish Dutt Sharma, Parminder Singh, Sanjay Mishra, and Saurabh Dhyani</i>	

Bus Route Tracking System 421
*R. Rubesh Muthuvel, B. Nithish Sankar, P. Kasirajan,
and S. Dheenathayalan*

**Sentiment Analysis of Various Ride Sharing Applications Reviews:
A Comparative Analysis Between Deep Learning and Machine Learning
Algorithms 434**
*Md. Saymon Ahammad, Sadia Akter Sinthia, Md. Muaj Chowdhury,
Nur-A-All Asif, and Md. Nurul AfsarIkram*

Quantum-DL Integration for Precise Remote Sensing Image Classification 449
*Harshad Duchal, Selvin Salve, Alfiya Tamboli, Atharva Gosavi,
and Pradip Ghorpade*

**Review on Biomedical Informatics Through the Versatility of Generative
Adversarial Networks 461**
Vishvesh Mukesh, Hrithik Joshi, Sparsh Saraf, and Gurwinder Singh

**Machine Learning Powered Nutritional Guidance System Using
Personalized Nutritional and Digital Health Record 475**
P. Shevanie Shupreeya, M. Suseendra, and S. Shanthini

**Predicting Hospital Length of Stay Using Light Gradient Boosting Machine
Regression 487**
M. Suchithra, Kumar Shashwat, and Mohammed Shoaib Khan

Electroencephalogram Based Stress Detection Using Machine Learning 499
*Hemlata Ohal, Abhishek Tiwari, Kiran Satote, Sakshi Zagade,
Vaishnavi Tule, and Ajinkya Garad*

Author Index 515