



Conference Program

ICMI-2025

4th International Conference on Computing and
Machine Intelligence

Central Michigan University, USA

April 05-06, 2025



In-Person Sessions

All timing follows Eastern Daylight Time, (UTC-4)

Day-1: Venue: Courtyard Hotel

Saturday, April 05, 2025

	Venue Room: Gamma III	Venue Room: Gamma II
07:00 - 17:00	Registration	
08:00 - 08:05	Conference Opening	
08:05 - 08:50	Keynote: Zag Elsayed	
08:50 - 09:40	Women in Computing and Education	
09:40 - 10:00	Coffee Break	
10:00 - 12:00	In-Person Technical Session – 1 Session Chair: Nelly Elsayed	In-Person Technical Session – 2 Session Chair: Fahmi Khalifa
12:00 - 13:00	Lunch Break	
13:00 - 14:50	In-Person Technical Session – 3 Session Chair: Ajmery Sultana	In-Person Technical Session – 4 Session Chair: Samah Mansour
14:50 - 15:00	Coffee Break	
15:00 - 17:00	In-Person Technical Session – 5 Session Chair: Fahmi Khalifa	In-Person Technical Session – 6 Session Chair: Md Rafiul Kabir
17:30 - 19:00	Dinner Break	

DAY-1: Online Sessions

Saturday, April 05, 2025

	Link-1	Link-2	Link-3	Link-4
08:00 - 10:00	Online Session-1 Chair: Mohamed Shaban	Online Session-2 Chair: Hassan El Alami	Online Session-3 Chair: Waleed M. Ead	Online Session-4 Chair: TBA
10:00 - 12:00	Online Session-5 Chair: Ahmed Sherif	Online Session-6 Chair: Hassan El Alami	Online Session-7 Chair: Waleed M. Ead	Online Session-8 Chair: Kasem Khalil
12:00 – 12:30	Break			
12:30 – 14:30	Online Session-9 Chair: Ahmed Sherif	Online Session-10 Chair: TBA	Online Session-11 Chair: Waleed M. Ead	Online Session-12 Chair: Kasem Khalil

DAY-2: Online Sessions

Sunday, April 06, 2025

08:00 - 10:00	Online Session-13 Chair: M. Ajmal Khan	Online Session-14 Chair: Junaid Shuja	Online Session-15 Chair: Faezeh Soleimani	Online Session-16 Chair: Yasser Ismail
10:00 - 12:00	Online Session-17 Chair: M. Ajmal Khan	Online Session-18 Chair: Ganesh Kumar	Online Session-19 Chair: Faezeh Soleimani	Online Session-20 Chair: Waleed M. Ead
12:00 – 12:30	Break			
12:30 – 14:30	Online Short Video Presentation Sessions			

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7	Fuentes , Saul; Oyague , Jaime; Castillo-Sequera, José Luis; Wong, Lenis Model for Demand and Price Prediction of Agricultural Products in the Sacred Valley of Cusco Applying Machine Learning Algorithms
17	Stefa, Kristi; Alawneh, Shadi Design and Evaluation of a Dual Hardware Accelerator System Integrating GPU and FPGA Technologies
21	Benchari, Mahshid; Totaro, Michael Integrating U-Net with Lightweight CNNs for MRI Brain Cancer Detection: A Comparison Among MobileNetV2, Xception, and AlexNet
23	Ouyang, Larine A Noise-Resilient and Energy-Efficient AI Model for EEG-Based Emotion Recognition Induced by Multimedia Stimuli
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70	Baral, Gaurab; Zhou, Junxiu Exploring Movie Recommendation Systems: A Text Mining based Overview
90	Maillard, Stephane Improving Privacy and User Experience of Self-Regulated Learning using Local Large Language Models (LLMs)
95	Zurqani, Hamdi Estimating Above Ground Forest Biomass Using High-Resolution NAIP Imagery and Deep Learning
97	Chugh, Alisha ; Patel, Ayush ; Prajapati, Mehul ; Zaman, Ank ; ferdouse, lilatul Financial Fraud Detection Using PaySim and Machine Learning
99	Zheng, Yan; Chen, Qiang; Niu, Chenglei Tweedie Regression for Video Recommendation System
231	Naouali, Sami Transformer Networks for Morphological Analysis and Functional Status Classification of Blood Cells

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101	Xu, Jingqi XU Weight is all you need! short-term power load forecasting based on a novel adaptive feature selection method and XU Weight
108	Bainbridge, Kenneth; Beitello, Husam; Dogdu, Hakan; Abdel-Qader, Ikhlas Emotion Detection in Digital Classrooms Using ResNet and HOG Feature Extraction Techniques

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286	Abbas, Shahroz; Al-Hamadani, Filip; Sultana, Ajmery; Nasir, Mahreen; Garcia-Ruiz, Miguel; Lin, Wenjun Cost-Effective Predictive Modeling for Student Mental Health Using Readily-Available Data
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178	Baravkar, Siddhi; Song, Zheng; Czap, Natalia; Czap, Hans; Zhu, Qiang A Data Collection System for Assessing the Impact of Air Quality on Human Wellbeing
250	Mansour, Samah Exploring the Efficacy of Deep Learning Techniques for IoT Intrusion Detection: A Study of Customized Vision Transformers
252	Mansour, Samah A Secure One-to-Many Authentication Protocol for Industrial IoT (IIoT) Applications
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45	Aina, Joseph ; Emon, Md. Ismail Siddiqi ; Mbaye, Oumou ; Rahman, Ayah; Akinniyi, Oluwatunmise ; Mulla, Mohammed N. A. ; Meeker, Timothy ; Rahman, Md Mahmudur ; Saleh, Gehad; Khalifa, Fahmi Optimizing Breast Cancer Detection with Transformer Models and Canonical Correlation Analysis
85	Hoque, Mahmudul ; Hasan, Md Rakibul ; Emon, Md. Ismail Siddiqi; Oluwafemi, Ejiga Peter Ojonugwa ; Rahman, Md Mahmudur ; Khalifa, Fahmi Comparative Analysis of Fine-tuned Multimodal Models in Radiology Image Captioning
115	Oluwafemi, Ejiga Peter Ojonugwa ; Tunde, Bamidele Dayo ; Hoque, Mahmudul ; Briggs, Dapiriye ; Rahman, Md Mahmudur ; Khalifa, Fahmi Colonoscopy Image Synthesis: Transforming Medical Image Classification with Enhanced Quality and Computational Efficiency
190	Coelho, Claudionor Rethinking Software Design with Large Language Models Intelligent Interfaces
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294	Easwaran, Subbulakshmi; Shadaram, Mehdi Smart Resource Utilization in Elastic Optical Network using Generative AI

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308	Anish Giri, A S M Ahsanul Sarkar Akib, Abdul Hasib, Arkoprotik Acharya, Marjia Afifa Prithibi, An-Nafew, Rubaiyat H Rahman, Md Rifat Hossain, Hasin Israque Chowdhury Taha Design and Development of a Cost Effective and Modular CNC Plotter for Educational and Prototyping Applications
317	Alkhweldi, Marwan; Ammar, Ahmed; Hriba, Enass Connectivity in mmWave Cellular Networks with Energy Harvesting Relays and Correlated Blockages
08	Isaeva, Masuda; Salimov, Bektosh; Tangmatov, Bekzod Enhancing Financial Inclusion in Uzbekistan: A Machine Learning Approach to Predicting Car Loan Adoption Among Remittance Recipients

Program Details

Online Sessions

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3	Isik, Murat; Le, Dexter; Yunusoglu, Aybars; Dikmen, Ismail Can Neuromorphic Circuits with Spiking Astrocytes for Increased Energy Efficiency, Fault Tolerance, and Memory Capacitance
7	Fuentes , Saul; Oyague , Jaime; Castillo-Sequera, José Luis; Wong, Lenis Model for Demand and Price Prediction of Agricultural Products in the Sacred Valley of Cusco Applying Machine Learning Algorithms
12	MALARVIZHI KUMAR, PRIYAN; Korani, Wael; Singh, Madhusudan; Balasubramanian, Prabhu kavin Predictive analytic model for classifying the health state of fetal heart using ensemble model
16	Wulf, Bastian; Polke, Dominik; Ahle, Elmar Active Learning for Gaussian Processes Based on Global Sensitivity Analysis
19	Shaban, Mohamed A GRU-LSTM Network Bank for Efficient Detection of Freezing of Gait for Parkinson’s Disease Patients
22	Islam, Mohammed Nizamul; Islam, Md Tarekul; Dhali, Maruf A Classification and Prediction of Wafer Yield Using Gradient Boosting Algorithms: A focus on Lithography inline parameters
25	Nickfarjam, Ali; Dalilian, Masoome; zargari, seyed aman; Farzandipour, Mehrdad; hosseini, farahnaz; Xiao, Ting Comparison of Deep Learning Methods for Age Determination in Forensic Clients Aged 5-18 Years
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27	Li, Shengying Comparative Analysis of Ensemble Learning Models for Credit Scoring: Challenges, Improvements, and Explainability
28	Mehadjbia, Abdelhak; Slaoui-Hasnaoui, Fouad Deep Learning Based Solar Panel Structural and Electrical Damage Detection
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53	Alomari, Zakaria; Sharma, Ojasvi ; Sawarn, Shivam ; Shao, Yunlong; Makanju, Adetokunbo Large Language Models for NLP: An In-depth Comparative Examination
54	Uzun, Egemen; Erdem, Yusuf; İzdaş, Tolga; Sancak, Ömerhan; Zeer, Ahmed; İnce, Elif; Uz, Atahan; Shbib, Osama; Doğan, Eren; Kesgin, Himmet Toprak; Yuce, Muzaffer Kaan; Amasyalı, Mehmet Fatih Creating a Large Clean Web Corpus for Turkish
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110	Abu Tami, Mohammad; Elhenawy, Mohammed; Ashqar, Huthaifa HazardNet: A Small-Scale Vision Language Model for Real-Time Traffic Safety Detection at Edge Devices
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125	Saribas, Hasan; Dilbaz, Serdarcan STEC: See-Through Transformer-based Encoder for CTR Prediction
128	Cavlı, Batuhan; Çınarer, Gökalp YOLO Based Ship Detection in SAR Images: In-Depth Analysis on HRSID, RSDD and SSDD Datasets
129	Efat, Anwar Hossain; Hasan, S.M. Mahedy; Zibran, Minhaz F. GreekNet: Handwritten Greek Alphabet Recognition Using Explainable Parallel CNN with Attention Mechanisms
130	LIDASAN, JOHAIRA; Feliscuzo, Larmie; Sta. Romana, Cherry Lyn Digitalizing Maguindanaon Language Using Corpus-Based Approach and Statistical Machine Translation (SMT)
133	Mishra, Sourava; Kudela, Paweł Multi-task learning for forward prediction of dispersion diagrams in 2D acoustic metamaterials
136	Alam Samiha, Rahma ; Alom, Md Tasbirul; Hossain, Riad ; Islam, Rubaiyat; Sultana, Ajmery Leveraging Deep Learning Methods for Detecting Deepfake Speeches

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164	Xie, Terry Predicting Cardiovascular Disease Risk Through Machine Learning Analysis of Gut Microbiota Metabolite Flux Modeling with Flux-Balance Analysis
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183	Hao, Ellen; Zhang, Yichen; Ding, Xuyan Development of AI-Powered Oral Disease Detection Using YOLO Deep Learning Model
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215	Najjar, Ayat; Ashqar, Huthaifa; Hasasneh, Ahmad Predictive Maintenance of Urban Metro Vehicles: Classification of Failures Using Machine Learning
219	Li, Ella AI-Driven Analysis of Biomarkers Using Machine Learning for Alzheimer’s Research in Drosophila melanogaster
225	Zhou, Andrew A Novel Unified 3D nnU-Net Deep-Learning Model for Brain Tumor and Whole Brain Segmentation
226	Blomquist, Karson; Chatterjee, Prosenjit; Zaman, ANK A Deep Learning Approach to Vehicle-to-Vehicle Communication for Enhanced Road Safety
230	Efat, Anwar Hossain; Ahamed, A.S.M. Shakil; Ahmed, Md. Nazir; Afsar, D.M Arif Advanced Heart Disease Classification through Feature-Tuned Explainable Support Vector Machine with Hyperparameter Tuning and Cross-Validation
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271	Rahi, Abu A Hybrid Deep Learning Model for Accurate Chest X-Ray Disease Classification
273	AbdelRaouf, Hussien; Ibrahim, Mohamed Federated Unlearning: Techniques, Trends, and Future Directions
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DAY-2: Sunday, April 06, 2025

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281	Liu, Jayden A Multiscale Anchor-Free 3D CNN Integrated with Denoising for Early Lung Nodule Detection in Low Dose CT Images
285	Mohaidat, Tamador; Niloy, Samiul; Khan, Md Rahat Kader ; Sherif, Ahmed; Khalil, Kasem RF-Based UAV Detection and Classification Using ANN Models with FPGA Implementation
287	Vitales, Oswaldo; Aguilar, Ruth; Viguera, Javier Stereo Disparity Calculation Based on Superpixel Clustering for Assisted Driving
289	Bibers, Ismail; Abdalla, Mustafa Ensemble Feature Selection for Network Intrusion Detection Systems Using Explainable AI: A Frequency-Based Approach
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302	Ishak, Md; Alawad, Mohammed A Two-Stage Vision-Language Model for Image Captioning and Future Event Prediction
307	Wu, Emily Advancing Early Detection of Diabetic Retinopathy: A Novel Combo 4+1 Deep Learning Architecture with Classification by Regression

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