Parallel Technical Sessions

Session – D1S1T1 (Communication), Day 1, Thursday 17th October 2024, 14:30-16:00
Room: DS 0802

Paper ID	Title
80	Machine Learning-Enhanced Cross-Tier Security and Anomaly Detection in Wireless Body Area Networks
179	A deep reinforcement learning based wireless sensor charging using UAV in WSN scenario
184	User Clustering-based Redundant Handover Mitigation in Ultra-dense Cellular Networks
45	Securing Connected Vehicles: An Evaluation Framework for CAN bus-enabled In-vehicle Communications
82	Programming with AI: Evaluating ChatGPT, Gemini, AlphaCode, and GitHub Copilot for Programmers
177	Tomato stem scar detection using C3Ghost-based improved YOLOv5 model

Session – D1S1T2 (Computing), Day 1, Thursday 17th October 2024, 14:30-16:00
Room: DS 0803

Paper ID	Title
178	Uncovering Hidden Realities of Child Labor Abuse in Egyptian Workplaces with Machine Learning and Explainable AI
252	WLD-InceptionV3: AI and Computer Vision-Based Urban Waterlogging Detection Using a Modified InceptionV3 Model
267	Advance Step to Protect Agriculture: A Deep Dive into Enhancing Food Security Through EfficientNet-B0 and XAI in Plant Disease Classification
363	Comprehensive Review of Post-Vaccination Side Effects in COVID-19 Vaccines: Incidence and Severity
366	Analyzing Bangla Drama and TV Series Reviews Using Stacking Method
388	A Novel Weighted Ensemble Strategy Using Transfer Learning for Enhanced Cervical Cancer Classification

Session – D1S1T3 (Cryptography, Security and Privacy), Day 1, Thursday 17th October 2024, 14:30-16:00
Room: DS 0804

Paper ID	Title
81	AI and RBAC Enhanced Security System for Hospitals in Bangladesh
119	A Real-Time Framework for Secure Storage of Surveillance Video Data in Cloud Environment
238	The Resilience of Digital Bangladesh: A Case Study on Web Vulnerabilities in the Private Sector of Bangladesh
255	Redefining Boundaries of Fair Use and Copyright Policy in Bangladesh: in Some Perspectives of ICT Contents along with a Comprehensive Study
410	EmAc: An authentication method using Email and user activity

Session – D1S1T4 (Human Computer Interaction), Day 1, Thursday 17th October 2024, 14:30-16:00
Room: DS 0805

Paper ID	Title
30	Applied Instructional Design in Programee to Enhance Students E-learning Experience
31	Optimization of Touch Interface Design by Analyzing Error Probability and Their Correlation with Fingertip and Object Dimensions
49	A Comprehensive Study on Interaction Fidelity and Carry-over Effects in Virtual Reality Environment
157	Efficient Self-Attention and Co-Attention within the Modified Graph Matching Attention Network for Visual Question Answering
274	BridgingWorlds: Enhancing Low-Resources Sign Language Recognition and Seamless BdSL-to-Bengali Conversion with Sequential LSTM Innovation
280	BAUST Lipi: A BdSL Dataset with Deep Learning Based Bangla Sign Language Recognition
294	BengaliBot: Bridging Language Barriers with AI-driven Conversations

Session – D1S1T5 (Intelligent Systems), Day 1, Thursday 17th October 2024, 14:30-16:00
Room: DS 0806

Paper ID	Title
14	Towards Interpretable Emotion Classification in Bangla: A Hybrid Deep Learning Approach with Explainable AI
303	BanglaBERT-GCN Ensemble: Advancing Health Misinformation Classification Using Graph Based Method
348	A Time-Varying Grey Wolf Optimizer
349	Machine Learning for Predictive Database Caching Strategies: A state-of-the-art review
360	Sleep Apnea Detection through HRV and SPO2 Analysis of Single-Lead ECG Signals Using Machine Learning Algorithms
369	Leveraging Transformer Models for Accurate Detection of Obstructive Sleep Apnea from Single-Lead ECG Signals
389	Elevating Neurological Diagnosis: Unleashing Transfer Learning and Single Channel-wise Attention for MRI Brain Tumor Classification using Hybrid CNN Model

Session – D1S1T6 (Machine Vision), Day 1, Thursday 17th October 2024, 14:30-16:00
Room: DS 0807

Paper ID	Title
78	A Deep Learning based Approach for Automated Defect Detection of Fabrics in Garment Production Line
126	Sugarcane Leaf Disease Detection: A Comparative Analysis Using Deep Learning
146	An Ensemble Deep Learning Approach to Detect Common Chicken Diseases from Fecal Matter Images
321	Deep Learning for Imbalanced Gastrointestinal Image Classification: A Comparative Study of Architectural Choices
351	A Machine Learning-Based Approach for Classifying Lemon and Orange Diseases
359	Hearing the Unheard: Statistical Examination of Public Attitudes, Awareness, and Acceptance of Sign Language Recognition in Dhaka

Session – D1S2T5 (Intelligent Systems), Day 1, Thursday 17th October 2024, 17:00-18:30
Room: DS 0802

Paper ID	Title
18	Explainable English Hate Speech Detection: A Custom BiLSTM Model with LIME for Multilabel Classification
24	Acoustic Analysis of Speech for Gender and Age Classification Using CNN and Machine Learning Techniques
35	Advanced CNN and Explainable AI Based Architecture for Interpretable Brain MRI Analysis
42	AI Integrated Entertaining and Monitoring System for Daily Care of Elders
53	Enhancing Accessibility with Real-Time Conversion of Text-to-Sign Language
71	Formalin Detection in Fish Using EfficientNet-B3 and VGG-16
406	NobleMeta: A Noble Technique to Predict Potato Crop Yields in Bangladesh

Session – D1S2T5 (Intelligent Systems), Day 1, Thursday 17th October 2024, 17:00-18:30
Room: DS 0803

Paper ID	Title
90	Cross-Cultural Analysis of Emotional Expression in a Multinational Speaker Dataset
97	Multi-Sense Attention Network (MSANet): Enhanced Human Activity Recognition Using Deep Learning Architectures with Self-Attention Mechanisms
99	Azure Health Bot based Support System for Personal Healthcare and Monitoring
106	Leveraging Gene Expression Data and Explainable Machine Learning for Enhanced Early Detection of Type 2 Diabetes
107	Advancements in Handwritten Bangla Text Generation using Generative Adversarial Networks: A Focus on Complete Text Recovery
108	Utilizing Kidney Ontology for Data-Driven Exploration of Potential Biomarkers in Kidney Diseases: Introducing the Kidney Diseases Biomarker Ontology (KDBO)

Session – D1S2T9 (Technology Trends), Day 1, Thursday 17th October 2024, 17:00-18:30
Room: DS 0804

Paper ID	Title
43	RoboServe: Design and Implementation of a Robotic Agent for Serving Food at Restaurants
92	AnoSegNet: Anomaly Detection and Segmentation Using Convolutional Neural Networks with Variational Autoencoders for Enhancing Industrial Quality Control
101	Exploring Data Warehousing Capabilities of NoSQL Systems for Big Data Analytics
117	Event Detection and Trust Verification using Blockchain
141	Concurrency Control in Distributed Database System: Solution of the Anomalies & Challenges
382	Blockchain Solution in Dhaka Metro Rail (DMR) for online Ticketing System: Bangladesh Perspective
396	BDIMS: A Blockchain Based Digital Identity Management System with Zero Knowledge Proof

Session – D1S2T6 (Machine Vision), Day 1, Thursday 17th October 2024, 17:00-18:30
Room: DS 0805

Paper ID	Title
149	Generating Skin Lesion Hair Mask Pattern using Modified Pro-Gan
158	Skin Cancer Detection: Leveraging Hybrid Deep Learning Models and Traditional Machine Learning Classifiers
173	Deep Learning based Fashion Style Analysis and Recommendation System
216	Efficient Disease and Pests Detection in Cotton Leaves Using NASBiT with Enhanced XAI Visualization
296	A New Approach for Brain Stroke Detection and Classification using Multi-layered Deep Neural Network
400	Prediction of IMDb Rating in Netflix Shows Using Machine Learning Algorithms

Session – D1S2T7 (Smart Computing Systems), Day 1, Thursday 17th October 2024, 17:00-18:30
Room: DS 0806

Paper ID	Title
11	Priv-Fuzzy: A Cutting-Edge Privacy-Preserving Data Publishing Model Based on Fuzzy Logic
36	Generating Scale-Free Caterpillar and Series-Parallel Networks
148	Rokkha: Enabling Offline Emergency Location Sharing via SMS
169	Empowering Democracy: Unveiling the Brilliance of Blockchain Technology in Smart and Safe E-Voting Systems
282	Light Canvas: An IoT-Based Interactive Virtual Drawing System for Enhancing Educational Engagement
293	IoT Enabled Smart Egg-incubator with Remote Monitoring and Control System
365	Optimizing Big Data Pattern Search: Advanced String Manipulation Techniques in C++
394	Integrating IoT-Based Smart Irrigation Systems to Optimize Crop Yield andWater Management for Sustainable Agriculture

Session – D1S2T8 (Software Engineering), Day 1, Thursday 17th October 2024, 17:00-18:30
Room: DS 0807

Paper ID	Title
59	Enhancement of Mutation-Based Fuzzing Methods
102	Evaluating Code Clone Detection and Management: A Comprehensive Comparison among different Techniques and Tools along with some Effective Future Directions
110	An Analytical Approach to Evaluating the Usability of E-Government Websites in Bangladesh
298	Hybrid Test Case Prioritization Techniques for Agile-DevOps Integration
317	A Comprehensive Study to Assist Decision-Makers In Determining Software Design Between Four UML Diagrams

Session – D2S3T2 (Computing), Day 2, Friday 18th October 2024, 11:15-12:45 Room: DS 0802	
Paper ID	**Title**
51	Text Summarization Driven by Question Answering Technique
98	MIC: Medical Image Classification Using Chest X-ray (COVID-19 & Pneumonia) Dataset with the Help of CNN and Customized CNN
171	Panic Attack Frequency Detection Using Machine Learning Algorithm
264	Automated Paddy Disease Detection: A Deep Learning Approach
265	Enhancing Research Collaboration: A Text-Based Framework Using NLP for Optimal Partner Selection
284	MultiArchFusionV16Ensemble: A Novel Neural Network Based Ensemble Model for Enhanced Cervical Cancer Detection

Session – D2S3T3 (Cryptography, Security and Privacy), Day 2, Friday 18th October 2024, 11:15-12:45 Room: DS 0803	
Paper ID	**Title**
64	Enhancing Intrusion Detection: A Robust Ensemble Learning Approach with Explainable AI and Strategic Fused Voting-Stacking Mechanism
199	Network-Shield: Exploring the Efficacy of GRU Model in Intrusion Detection Using CIC-IDS 2018 Dataset
231	Proposing a framework to prevent Denial of Service attacks on IoT Devices
271	PanAdapt Protocol: Improving Energy Efficiency and Collision Management in Wireless Networks
368	Blockchain Technology Is Revolutionizing the Pharmaceutical Industry's Drug Supply Chain Management

Session – D2S3T5 (Intelligent Systems), Day 2, Friday 18th October 2024, 11:15-12:45 Room: DS 0804	
Paper ID	**Title**
113	A Comparative Study of ParsBERT and mBERT in Emotion Recognition for Dari-Farsi Text with Explainable AI
114	DeepUNet24: A Deep Learning Model for Lane Segmentation in Autonomous Vehicles Navigation
115	Improve the Sentiment of Bengali Language Texts with Stopword Removal
124	Deep Learning Based IoT Device Categorization Using Network Traffic Analysis
129	Suggesting Bangla Words using Masked Language Model
151	Enhanced Classification of Anxiety, Depression, and Stress Levels: A Comparative Analysis of DASS21 Questionnaire Data Augmentation and Classification Algorithms

Session – D2S3T6 (Machine Vision), Day 2, Friday 18th October 2024, 11:15-12:45 Room: DS 0805	
Paper ID	Title
21	BDFreshFish: A Comprehensive Image Dataset of Bangladeshi Freshwater Fishes to Develop AI-driven Solutions for Autonomous Fisheries Management
91	Optimizing Magnetic Resonance Imaging Analysis for Brain Tumors: A Lightweight Neural Network Approach
206	Enhancing Poultry Disease Classification Using Fecal Image: A Fusion Approach
371	A Grad-CAM And Deep Learning Based Image Classification for Skin Diseases
372	Enhancing Parkinson's Disease Classification Using LSTM Networks and Attention Mechanisms
383	SeizureFed: Federated Learning for Pediatric Seizure Detection through EEG Using E-ResNet

Session – D2S3T6 (Machine Vision), Day 2, Friday 18th October 2024, 11:15-12:45 Room: DS 0806	
Paper ID	Title
120	STM32-Based Obstacle Avoiding Line Follower Robot
164	Towards Dry Fruit and Nut Sorting Automation: A Comparative Analysis of YOLO Models for Object Detection
172	BN-HW-DSNd: A Dataset of Handwritten Bengali Words for Text Recognition
301	Deep Learning Based Real Time Bengali Multi Vehicle Number Plate Detection
338	Balancing Accuracy and Efficiency: A Comparative Study of YOLOv8 and YOLOv9 for Brain Tumor Diagnosis

Session – D2S3T6 (Machine Vision), Day 2, Friday 18th October 2024, 11:15-12:45 Room: DS 0807	
Paper ID	Title
122	A Lightweight Deep Learning Architecture for Efficient Multimodal Medical Image Segmentation Using Attention Mechanism
128	Advancing Glioma Segmentation: A Robust 3D Residual Attention U-Net Framework for Multimodal MRI Images
138	BCTD: An Optimised CNN-based Deep Neural Network for Primary Stage Breast Cancer Detection and Classification
281	Bias in Deep Learning Skin Cancer Detection: Parallel Residual Convolution Network Classification and Racial Bias Quantification
381	Potato Diseases detection using Inception-BiT with Explainable AI

Session – D2S4T5 (Intelligent Systems), Day 2, Friday 18th October 2024, 15:30-17:00
Room: DS 0802

Paper ID	Title
152	Advancing Individual Well-being: Fatigue Detection Enhancement using Deep Learning Models
167	Unveiling Persian Market Dynamics: A Comprehensive Analysis of Consumer Demand Using NLP Techniques with Explainable Artificial Intelligence
181	Advancements in Machine Learning for Adaptive Intrusion Detection: A Comprehensive Review
208	Predicting Heart Disease Risk with Lifestyle Factors: Uncovering Vital Predictors via Feature Selection and Machine Learning Techniques
217	PhraseNet: AI Driven Semantic Analysis for Keyphrase Generation on News Documents
235	Early Detection of Suicidal Ideation Using Bidirectional GRU and Language Models

Session – D2S4T5 (Intelligent Systems), Day 2, Friday 18th October 2024, 15:30-17:00
Room: DS 0803

Paper ID	Title
236	Mental Health Analysis: ML And Explainable AI Predict Depression Among Bangladeshi University Students
237	Exploring the Effectiveness of Large Language Models in Financial Question Answering
245	Self-Adaptive User Interface for Elderly Users: A Bayesian Network Approach
250	Bengali Handwritten Character Recognition Enhanced with Morphological Preprocessing and Attention Mechanism-based Convolutional Neural Network
254	Advancing Diabetes Prediction: A Comprehensive Study Integrating Deep Learning and Machine Learning Approaches
291	FuzzyGSSL: An Improved Graph-based Semi-Supervised Learning Through Fuzzy Label Propagation

Session – D2S4T6 (Machine Vision), Day 2, Friday 18th October 2024, 15:30-17:00
Room: DS 0804

Paper ID	Title
142	RAS-BengaliNet: An Explainable Lightweight Convolutional Neural Network for Handwritten Bangla Compound Characters Recognition
159	Rice Grain Classification and Automated Quality Control Using Deep Learning Approaches
204	An Ensemble Learning Approach for Food Recommendation on Generative Environment
226	Assessing Participants Engagement in Virtual Meetings by Using Facial Landmarks and Deep Learning
316	AI-assisted polyps detection to facilitate autonomous endoscopy examination

Session – D2S4T6 (Machine Vision), Day 2, Friday 18ᵗʰ October 2024, 15:30-17:00
Room: DS 0805

Paper ID	Title
48	Roadway Impairment Identification in Asphalt Road Using Yolov8
88	Multiscale Feature Fusion using Attention Mechanisms in Multiclass Skin Lesion Classification: A Comprehensive Study
194	Enhanced Brain Tumor Classification using Ensemble Fusion Method
244	An Analysis on Structural MRI Images for Better Alzheimer Disease Detection using Deep Neural Networks
258	Ensemble Deep Learning for Real-Time Textile Fabric Defect Detection and Classification Using YOLOv8 and CNNs
305	Improving Pre-Trained CNNs with CBAM and Skip Connections for Multi-Class Retinal Diseases Classification using OCT Images

Session – D2S4T9 (Technology Trends), Day 2, Friday 18ᵗʰ October 2024, 15:30-17:00
Room: DS 0806

Paper ID	Title
160	Bangla Speech Emotion Recognition Based on Audio Features Using CNN and LSTM
161	Denoising autoencoder-based soft K-medoid clustering for single-cell RNA sequence data
163	Lightweight CNN Approach for Multiclass Alzheimer Stage Classification from MRI Scans
230	IoT-enabled Stability Chamber for the Pharmaceutical Industry
270	Blockchain Utilization in Agro-Business of Bangladesh
304	Artificial Intelligence Adoption Intention among HR Professionals in Bangladesh

Session – D2S4T9 (Technology Trends), Day 2, Friday 18ᵗʰ October 2024, 15:30-17:00
Room: DS 0807

Paper ID	Title
77	From Theory to Reality: Tracing the Milestones of Quantum Information Systems
310	Generative AI for Programming Education: Can ChatGPT Facilitate the Acquisition of Fundamental Programming Skills for Novices?
331	Evi-Block: A secure evidence management system built with Hyperledger Fabric
352	Ensemble Learning Based Ventilator-Associated Pneumonia Prediction Within 24 Hour
353	Improving Big Data Visualization and Association Rule Mining through Splunk Database Gap Analysis
374	Optimized Malaria Identification through Custom Deep Learning Model
390	A Comprehensive Analysis of Blockchain-Based Voting Systems: Enhancing Transparency and Security