ORAL PRESENTATIONS

27th September 2024

COMPUTING

Technical Session I - Smart Applications for Rational Decision Making

Venue: LT 02, 3rd Floor, Faculty of Medicine

Chairperson	**Prof. Noel Fernando**
	Professor, Department of Information Systems Engineering, University of Colombo School of Computing, Sri Lanka
0830 – 0835 Hrs	Introduction of the Chair
0835 – 0840 Hrs	Preliminary Remarks by the Chair
0840 – 0855 Hrs	**Autoencoder Empowered EEG Data Classification: A Self-Supervised Learning Approach**
	AHMTC Bakmeedeniya, WBMSC Wijayakoon, UWHK Ukgoda
0855 – 0910 Hrs	**Prediction of Coronary Artery Disease Using Artificial Neural Network**
	GK Dhananjaya , JACA Perera , GRA Senarathne, JADI Priyashan , B Hettige
0910 – 0925 Hrs	**Harmonizing Business Process Re-Engineering, Industry 4.0 and Artificial Intelligence: Towards Sophisticated and Dynamic Business Processes**
	HT Gunasekara, SA Nanayakkara, and DHS Santhushni
0925 – 0940 Hrs	**An Ensemble Machine Learning Approach for Categorizing English Sentences Based on their Emotional Tone**
	DBY Perera, RAHM Rupasingha
0940 – 0955 Hrs	**Tense Identification in English Sentences Using an Ensemble Machine Learning Approach**
	IDTD Rathnayaka and RAHM Rupasingha
0955 – 1010 Hrs	**Ethical Landscape of Artificial Intelligence: A Review**
	HCT Gamage, PRD Wijesinghe

1010 – 1020 Hrs   Summing up by the Session Chair

1020 – 1030 Hrs   Refreshments

COMPUTING

Technical Session II - From Data to Design: The Impact of Advancements in AI for Innovation

Venue: LT2, 3rd Floor, Faculty of Medicine

Chairperson	**Dr. A.D. Dharmawansa** Senior Lecturer, Department of Industrial Management, Faculty of Applied Sciences, Wayamba University of Sri Lanka.
1030 – 1035 Hrs	Introduction of the Chair
1035 – 1040 Hrs	Preliminary Remarks by the Chair
1040 – 1055 Hrs	**Classification of Research Papers Based on Their Subject Field Using an Ensemble Machine Learning Approach** GKE Dilushika, RAHM Rupasingha
1055 – 1110 Hrs	**Detecting AI-generated and Human-written Documents Using an Ensemble Learning Approach** HMDT Herath, RAHM Rupasingha
1110 – 1125 Hrs	**A Comprehensive Review of Mobile Personal Assistant (Chatbot) for Depression Patients Using Emotion Recognition : A Large Language Model** AWTD Sarathchandra, BVKI Vidanage
1125 – 1140 Hrs	**TanzaNote: First Step Towards Classification and Notation Generation for Sri Lankan Traditional Instruments, Gataberaya and Flute** RDP Gamage, B Hettige
1140 –1155 Hrs	**Rail Track Surface Defects Detection Using CNN** RMLV Karunarathna, B Mayurathan
1155 –1210 Hrs	**Deep Learning for Early Skin Cancer Detection: A Convolutional Neural Network Approach** NDEA Perera, SMM Lakmali , KC Yakupitiya, BVKI Vidanage

1210 – 1220 Hrs   Summing up by the Session Chair

1220 – 1300 Hrs   Lunch

COMPUTING

Technical Session III - Harnessing AI for Revolutionizing Smart Solutions

Venue: LT2, 3ʳᵈ Floor, Faculty of Medicine

Chairpersons	**Dr. N. Pratheesh** Senior Lecturer, Department of Forestry and Environmental Science, Faculty of Applied Sciences, University of Sri Jayewardenepura.
1300 – 1305 Hrs	Introduction of the Chair
1305 – 1310 Hrs	Preliminary Remarks by the Chair
1310 – 1325 Hrs	**A Comparative Analysis of Dog Emotion Prediction Using Full-Body and Facial Images with Transfer Learning** DP Konaduwage, KD Sandaruwan
1325 – 1340 Hrs	**NutriMom: Image Processing Based Mobile Application for Empowering Pregnant Mothers in Sri Lanka with Health and Convenience** KAD De Alwis, DU Vidanagama
1340 – 1355 Hrs	**Artificial Intelligence-Powered Course Recommendation System for Private Education** HS Fernando, KC Yakupitiya
1355 – 1410 Hrs	**Multi-Agent Solution for Autonomous Home Automation** EMNMR Edirisinghe, HNM Fernando, B Hettige
1410 – 1425 Hrs	**Artificial Intelligence Based Mobile Application for Interior Design in Sri Lanka** DTN Dahanayake, WAAM Wanniarachchi
1425 – 1440 Hrs	**Navigating Future Careers: Design, Implementation, and Evaluation of an AI-driven Career Guidance System for IT Professionals in Sri Lanka** GN Induruwage, AMR Adithya, DU Vidanagama

1440 – 1450 Hrs   Summing up by the Session Chair

1450 – 1500 Hrs   Refreshments

COMPUTING

Technical Session IV - AI Powered Solutions for Tomorrow's Challenges

Venue: LT2, 3rd Floor, Faculty of Medicine

Chairpersons	**Dr. S. Ahangama** Senior Lecturer, Faculty of Information Technology, Department of Information Technology, University of Moratuwa.
1500 – 1505 Hrs	Introduction of the Chair
1505 – 1510 Hrs	Preliminary Remarks by the Chair
1510 – 1525 Hrs	**Optimizing Task Assignment for Teams of Robots Using Ant Colony Optimization** WGCPB Wattegama,K Galappaththi
1525 – 1540 Hrs	**Shifting Paradigms in Stakeholder Identification:** **Integrating Enhanced Use Case Tool with Automated Analysis** RMM Pradeep
1540 – 1555 Hrs	**Real-Time Monitoring of Gas Station Underground Fuel Tanks Using IoT Technology** KGJC Edirisinghe, ASM Amarasinghe, HANB Heelibathdeniya
1555 – 1610 Hrs	**Intelligent Gaming Robot: Robotic Solution for the Traditional Sri Lankan Board Game 'Nerenchi'** MKMGPA Jayasinghe, RGUI Meththananda, B Hettige
1610 – 1625 Hrs	**Enhancing Physical Rehabilitation through Gaming and Gaming NPCs: A Novel Approach** PSPC Silva , BVKI Vidanage
1625 – 1635 Hrs	Summing up by the Session Chair
1625 – 1700 Hrs	Refreshments

POSTER PRESENTATIONS

27th September 2024

COMPUTING

Venue: LT3, 3rd Floor, Faculty of Medicine

CinnamonCare: Digitizing Disease Detection and Treatment Recommendations for Cinnamon Plants using Image Processing and Machine Learning
SN Jayasinghe, SCM de Silva Sirisuriya

Adaptive Security Protocols for Wireless Mobile Ad Hoc Networks: Challenges and Innovations: A Review
A Gurusinghe, M Pathirana

Comparative Analysis of Food Recommendation Systems: Tailoring to Sri Lankan Cultural Events and Traditions
MPWSS Peiris, B Hettige

Optimizing Sri Lanka ayurvedic healthcare industry: A Technological Approach to Enhance Patient Care and management special references to Central Province in Sri Lanka
WHKG Hapugahakotuwa , RPS Kathriarachchi

Advanced Strategies for Dietary Recommendations in Liver Diseases: A Comprehensive Literature Review
AA Abeysekara, GAI Uwanthika, WMKS Ilmini, RNN Waidyarathna

Exploration of Technological Interventions for Borderline Personality Disorder
SABN Jayasundera, WMKS Ilmini, MKOK De Siva

Identification and Assessment of Key Performance Indicators in Sri Lankan Volleyball
HMDR Peiris, RMM Pradeep

Enhance Tea Quality and Market Stability with Advanced Technology: A Strategic Management Approach
RKKG Gunawardhana, RPS Kathriarachchi

Artificial Intelligence-Based Geospatial Framework to Simulate Landslide Susceptibility
J Gunaseela, T Kumara, M Karunanayake, C Abenayake, B Hettige

Sustainable Waste Management in Urban Areas: A Case Study in Ratmalana, Sri Lanka
NACJC Jayasinghe, HRWP Gunathilake

Using a Study Planner with Predictive Analytics: Exploring the Effects on Academic Performance and Time Management: A Systematic Review
TD Wijesinghe, DVDS Abeysinghe

A Comprehensive Review of Dynamic Pricing Strategies: Optimizing Market Competitiveness and Consumer Satisfaction for Sri Lankan Consumer Brands
UDAN Diwyanjalee, CIM Fonseka, DN Ranaweera, GAT Senadeera, WMKS Ilmini, KD Madhubhashani

Piloting Data-Driven Real Estate Decisions in Colombo: A Prototype Dashboard for Informed Stakeholder Engagement
HI Ranasinghe, DVDS Abeysinghe

A Review of Machine Learning Algorithms and Weather Forecasting Integration for Enhancing Flood Prediction in the Nilwala River Basin
HT Sewwandini, Pradeep Kalansooriya,DU Vidanagama

Enhancing On-Device Learning in IoT Systems Through Meta-Learning Techniques: A Comprehensive Review
GASSA Dissanayake

Data-Driven Optimization Strategies for Resource Allocation in Small Businesses
NCG Maddumarachchi, PRD Wijesinghe, ERC Sandamali

Attribute Selection and Verification for Effective Hockey Player Ranking in the Sri Lankan Context
HAYB Hettiarachchi, SMM Lakmali, RMM Pradeep

A Comprehensive Review of Automated ICD -10 Categorization Model: Methodologies, Challenges, and Future Directions
AHS Chinthika, DMKS Dissanayake, WNNA Madhubashitha, WMS Kaumal, ERC Sandamali

OptiLens AI: Enhancing Cataract Diagnosis and Personalized Eye Care through Artificial Intelligence
RPKL Ruwanpathirana, WAAM Wanniarachchi

Early Detection and Identification of Blister Blight Disease in Tea Plantations using Deep Learning and Real-Time Environmental Data
KKDSR Gunathilaka, B Hettige

AQUAFINA: Streamlining Collaboration, Meet Management, and Performance Prediction in Swimming
KDRM Munasinghe, MVT Kawya

Optimizing Human-AI Collaboration in Graphic Design: Opportunities, Challenges, and Future Directions
KDRM Munasinghe,WAAM Wanniarachchi

Leveraging Natural Language Processing (NLP) to Enhance Patient Feedback Analysis and Improve Shared Antenatal Care at University Hospital KDU, Sri Lanka
GPTR Thihansith, MKP Madushanka, WAAM Wanniarachchi, A Perera

Data Science Driven Solution to Predict Employee Attrition: A Systematic Review
PK Kosgahakumbura, YB Hettiarachchi, DR Peiris, RP Hewage, ST Hewaarchchi, KD Madhubhashani, SMM Lakmali, HRWP Gunathilake

The Role of Visual Elements (Color, Typography, and Layout) on User Trust in Online Payment Processes
BMUKS Ekanayake, WAAM Wanniarachchi

Optimizing Accident Severity Prediction: A Comparative Study of LSTM, CatBoost, and CNN Models with Feature Selection
Thayani Gathirvelou, Barathy Mayurathan