



4th International Conference on Advanced Research in Computing

ICARC 2024

"Smart and Innovative Trends in Next Generation Computing Technologies"

PROGRAMME BOOK

21st & 22nd February 2024
Faculty of Computing
Sabaragamuwa University of Sri Lanka



ICARC – 2024

“Smart and Innovative Trends in Next Generation Computing Technologies”

4TH INTERNATIONAL CONFERENCE ON
ADVANCED RESEARCH IN COMPUTING



21ST – 22ND FEBRUARY 2024
FACULTY OF COMPUTING, SABARAGAMUWA UNIVERSITY OF SRI LANKA,
BELIHULOYA, SRI LANKA

Conference Programme at a Glance

	Day 01	Day 02
	21 st February, 2024	22 nd February, 2024
08.00 – 08.30	Breakfast	Breakfast
08.30 – 09.00		Forum Discussion Unveiling the Future of Computing Research
09.00 – 09.30	Technical Session 01 Artificial Intelligence and Machine Learning-I Human-Computer Interaction Digital Transformation and Industry 4.0 Text Analytics and Natural Language Processing-I	
09.30 – 10.00		
10.00 – 10.30		
10.30 – 11.00		
11.00 – 11.30		
11.30 – 12.00		
12.00 – 01.00	Lunch	Lunch
01.00 – 02.00		Technical Session 03 Artificial Intelligence and Machine Learning-III Text Analytics and Natural Language Processing-III Computer Vision and Image Processing Open
02.00 – 02.30	Welcome Tea	
02.30 – 04.00	Inauguration	
04.00 – 04.30		Tea
04.30 – 05.00		
05.00 – 06.00		
06.00 onwards	Dinner	

Plenary Speech Schedule

	Plenary Speaker	Moderator	Date and Time
Plenary Talk 01	Dr. Lochandaka Ranatunga, University of Moratuwa	Prof. BTGS Kumara, Sabaragamuwa University of Sri Lanka	21st February 2024 09.00 am – 09.20 am
Plenary Talk 02	Dr. Ravihansa Rajapakse, Swinburne University of Technology, Sydney	Mr. HMKT Gunawardhana, Sabaragamuwa University of Sri Lanka	21st February 2024 09.00 am – 09.20 am
Plenary Talk 03	Mrs. Kaumudi Gunatilaka, Innovo Technology Solutions	Dr. Sugeeswari Lekamge, Sabaragamuwa University of Sri Lanka	21st February 2024 09.00 am – 09.20 am
Plenary Talk 04	Dr. Supunmali Ahangama, University of Moratuwa	Dr. Hiruni Rupasinghe, Sabaragamuwa University of Sri Lanka	21st February 2024 09.00 am – 09.20 am
Plenary Talk 05	Dr. Anuradha Jayakody, Sri Lanka Institute of Information Technology	Mr. P Vigneshwaran, Sabaragamuwa University of Sri Lanka	22nd February 2023 10.00 am – 10.20 am
Plenary Talk 06	Dr. Dasuni Nawinna, Sri Lanka Institute of Information Technology	Ms. Nirubika Ravikumar, Sabaragamuwa University of Sri Lanka	22nd February 2023 10.00 am – 10.20 am
Plenary Talk 07	Dr. KPPS Pathirana, Uva Wellassa University	Dr. UAP Ishanka, Sabaragamuwa University of Sri Lanka	22nd February 2023 02.00 pm – 02.20 am
Plenary Talk 08	Dr. Samiru Gayan, University of Moratuwa	Ms. PMAK Wijeratne, Sabaragamuwa University of Sri Lanka	22nd February 2023 02.00 pm – 02.20 am

Workshops and Tutorials Schedule

Date	Title and Resource persons	Description
22 nd January 2024	<p>Title: Blockchain based Secure Framework for Supply Chain Management</p> <p>Speaker: Windhya Rankothge, Canadian Institute for Cyber Security (CIC), Faculty of Computer Science, University of New Brunswick, Canada</p>	<p>A supply chain consists of several independent stakeholders such as raw material producers, product assemblers, wholesalers, retailer merchants, and transportation companies who actively participate in the process, from manufacturing a product to delivering it to the end user. With the globalized, decentralized, and digitalized modern supply chains, cyber threats targeting data, networks, and software have become a serious concern as they exploit the vulnerabilities of platforms, software, and digital services related to the supply chain. Different strategies have been proposed to secure the supply chain while emphasizing decentralization, traceability, and transparency. Blockchain technology has been the cornerstone of most of the recommended security methods. In this workshop, participants will understand cybersecurity challenges faced by modern supply chains, and how blockchain can be used to implement a secure framework for supply chain management.</p>
February 2024	<p>Title: Teaching AI in Schools – Way to Succeed</p> <p>Speaker: Chathura Rajapakse, Department of Industrial Management, Faculty of Science, University of Kelaniya, Sri Lanka</p>	<p>The Government of Sri Lanka has decided to include Artificial Intelligence to the school curriculum from 2024. Even though this decision is justifiable in the given circumstances, there are so many challenges to the teachers to deliver the specified content effectively. This workshop is expected to enhance their self-efficacy in teaching AI at the secondary and upper secondary level.</p>
8 th February 2024	<p>Title: Elevating Literature Reviews through Dynamic Data Retrieval from Publication Databases using Python</p> <p>Speaker: Janaka Wijekoon, VIT, Australia and Keio, Japan. Rashini Liyanarachchi, UNSW, Australia.</p>	<p>This Tutorial is designed to introduce and deepen the understanding of dynamic data retrieval techniques for literature reviews. It will cover the usage of Python programming to automate and streamline the process of extracting relevant information from various academic and research publication databases specifically Google Scholar and Pubmed. Participants will engage in hands-on sessions, and interactive discussions to apply the learned skills in real-world scenarios.</p>

15 th February 2024	Title: Machine Learning for Wireless Communications Speaker: Janaka Wijekoon, Sampath Perera, Department of Electronic and Telecommunication Engineering	Artificial intelligence (AI) and machine learning (ML) stand out as some of the most pivotal technologies today. Notably, deep learning has spearheaded numerous breakthroughs across diverse domains, including computer vision, natural language processing, and speech recognition. Therefore, it is a natural question to ask: what role will AI/ML play in the domain of wireless communications? This tutorial tries to shed some light on this question by introducing fundamental concepts of deep learning and illustrating their applications to wireless communications.
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Technical Sessions

Day 21st February 2024

Venue Venue 01

Time 09.00 am - 11.00 am

Session	Artificial Intelligence and Machine Learning-I	
Session Chair	Prof. Prasad M. Jayaweera, University of Sri Jayawardenapura Dr. Lochandaka Ranatunga, University of Moratuwa	
Panel Members	Prof. (Mrs.) N.V. Chandrasekara, University of Kelaniya Dr. Nalaka Lankasena, University of Sri Jayewardenepura	
Rapporteur	Prof. BTGS Kumara, Sabaragamuwa University of Sri Lanka	
Session Coordinator	Ms. S Adeeba	
09.00 am – 09.05 am	Introduction of the Chair	
09.05 am – 09.25 am	Plenary Speech by the Chair	
Time	Paper ID	Paper Title and Authors
09.25 am - 09.40 am	12	A Machine Learning Approach for Determination of Gender of Sri Lankan People by Using the Dental Arch Dimensions <i>K.M.L.K Mahanayake, L.S. Nawarathna, A.K.S. Arambawatta and R.G.A.P Abeyundara</i>
09.40 am - 09.55 am	28	Interpretable Cervical Cell Classification: A Comparative Analysis <i>Nishaanthini Gnanavel, Prathushan Inparaj, Niruthikka Sritharan, Dulani Meedeniya and Pratheepan Yogarajah</i>
09.55 am - 10.10 am	30	Explainable AI for Early Lung Cancer Detection: A Path to Confidence <i>N.H. Wedisinghe and T.G.I. Fernando</i>
10.10 am - 10.25 am	70	A Systematic Literature Review of XAI-based Approaches on Brain Disease Detection using Brain MRI Images <i>Savin Madapatha and Pumudu Fernando</i>
10.25 am - 10.40 am	74	Deep Learning-Based Ensemble Model for Predicting the Lifestyle Status of a Person <i>T.D.M. Perera, R.A.H.M. Rupasingha and B.T.G.S. Kumara</i>
10.40 am - 10.50 am	QA Session	
10.50 am - 11.00 am	Summing up by the Chair	

Day 21st February 2024

Venue Venue 02

Time 09.00 am - 11.00 am

Session	Human-Computer Interaction	
Session Chair	Dr. Ravihansa Rajapakse, Swinburne University of Technology, Sydney	
Panel Members	Dr. Chameera De Silva, University of Colombo, School of Computing Ms. Nethmini Weerawarna, Faculty of Technology, University of Colombo	
Rapporteur	Mr. HMKT Gunawardhana, Sabaragamuwa University of Sri Lanka	
Session Coordinator	Mrs. Kumudu Wijerathna	
09.00 am – 09.05 am	Introduction of the Chair	
09.05 am – 09.25 am	Plenary Speech by the Chair	
Time	Paper ID	Paper Title and Authors
09.25 am - 09.40 am	42	User Experience in Mobile Banking Applications in Sri Lanka: A Systematic Literature Review <i>A.N. Jayasinghe, A.S. Withanaarachchi</i>
09.40 am - 09.55 am	64	A Survey on Image Captioning using Object Detection and NLP <i>V. De Silva, T.G.D.K. Sumanathilaka</i>
09.55 am - 10.05 am	QA Session	
10.05 am - 10.15 am	Summing up by the Chair	

Day 21st February 2024

Venue Venue 03

Time 09.00 am - 11.00 am

Session	Digital Transformation and Industry 4.0	
Session Chair	Mrs. Kaumudi Gunatilaka, Innovo Technology Solutions	
Panel Members	Dr. Samantha Wickramasinghe, School of Computing, Manager – Quality Assurance, ESOFT Metro Campus Ms. Chinthani Sugandhika, Nanyang Technological University, Singapore	
Rapporteur	Dr. Sugeeswari Lekamge, Sabaragamuwa University of Sri Lanka	
Session Coordinator	Mrs. JDU Indumini	
09.00 am – 09.40 am	Introduction of the Chair	
09.40 am – 09.55 am	Plenary Speech by the Chair	
Time	Paper ID	Paper Title and Authors
09.25 am - 09.40 am	39	Behavioral Changes based Trust Computation in Multi-Agent Predictive Maintenance Applications <i>U.S. Premarathne and S. Rajasingham</i>
09.40 am - 09.55 am	52	Understanding the Context of Self-Regulated Learning in the Virtual Learning Environment among Non-STEM Students <i>M.S.F. Fayaza and S. Ahangama</i>
09.55 am - 10.10 am	66	An analysis of the use of Health Information Systems in Public Healthcare in Sri Lanka using the Technology Acceptance Model <i>T. Senthilrajah and S. Ahangama</i>
10.10 am - 10.25 am	73	Strategizing Inventory Write-Off Process in Sri Lankan Apparel Sector: A Systematic Literature Review <i>T.E. Senanayake, T.V. Mahanama, and J. Prasadika</i>
10.25 am - 10.40 am	164	Examining the Impact of Social media, Government Policies, and Green Marketing Strategies on Consumer Purchase Decisions: A Case Study of the Food and Beverage Industry in Sri Lanka, <i>R. Inparaj and A. Withanaarachchi</i>
10.40 am - 10.55 am	174	Critical Success Factors of Digital Transformation : A Systematic Literature Review <i>S.M.P.P. Senarathna and R. Wickramarachchi</i>
10.55 am - 11.05 am	QA Session	
11.05 am - 11.15 am	Summing up by the Chair	

Day 21st February 2024

Venue Venue 04

Time 09.00 am - 11.00 am

Session	Text Analytics and Natural Language Processing-I	
Session Chair	Dr. Supunmali Ahangama, University of Moratuwa	
Panel Members	Dr. Thilina Thanthriwatta, University of Moratuwa Dr. Nuwan Kodagoda, Sri Lanka Institute of Information Technology (SLIIT)	
Rapporteur	Dr. Hiruni Rupasinghe, Sabaragamuwa University of Sri Lanka	
Session Coordinator	Ms. PBSN Ariyathilake	
09.00 am – 09.05 am	Introduction of the Chair	
09.05 am – 09.25 am	Plenary Speech by the Chair	
Time	Paper ID	Paper Title and Authors
09.25 am - 09.40 am	18	Sentiment Analysis of Tweets on the Russia-Ukraine War. <i>N. Pathinayake, L. Kulatilake, C. Hettiarachchi, S. Yapa and S. Ahangama</i>
09.40 am - 09.55 am	29	Lip Synchronization Model For Sinhala Language Using Machine Learning. <i>P.D.C. Ranaweera, R. Weerasinghe and D.M.R. Dinalankara</i>
09.55 am - 10.10 am	46	Hate Speech Detection for Transliterated English and Sinhala Code-Mixed Data. <i>M. Muthuthanthri and R.I. Smith</i>
10.10 am - 10.25 am	53	Exploratory Analysis of the Black Lives Matter Movement's Visibility on You Tube <i>A.C. Nanayakkara</i>
10.25 am - 10.40 am	63	Hybrid Approaches to Emotion Recognition: A Comprehensive Survey of Audio-Textual Methods and Their Application. <i>S.H. Wewelwala and T.G.D.K. Sumanathilaka</i>
10.40 am - 10.50 am	QA Session	
10.50 am - 11.00 am	Summing up by the Chair	

Day 22nd February 2024

Venue Venue 01

Time 10.00 am - 12.00 pm

Session	Artificial Intelligence and Machine Learning-II	
Session Chair	Prof. Kapila Rathnayake, Sabaragamuwa University of Sri Lanka	
Panel Members	Prof. Pradeep Abeygunawardhana, Sri Lanka Institute of Information Technology (SLIIT) Dr. Menaka Ranasinghe, The Open University of Sri Lanka Dr. Samantha Wickramasinghe, School of Computing, Manager – Quality Assurance, ESOF Metro Campus	
Rapporteur	Mr. GACA Herath, Sabaragamuwa University of Sri Lanka	
Session Coordinator	Ms. Rukshika Premathilaka	
Introduction of the Chair		
Time	Paper ID	Paper Title and Authors
10.00 am - 10.15 am	87	CNN-Based Deep Learning Approach for Prioritization of Bug Reports <i>P.G.S.M. Dharmakeerthi, R.A.H.M. Rupasingha and B.T.G.S. Kumara</i>
10.15 am - 10.30 am	88	Recommending third-party libraries and frameworks using Topic Modeling in software projects <i>Amila Sandaruwan and Dharshana Kasthurirathna</i>
10.30 am - 10.45 am	104	Personalized Treatment Approaches for Social Phobia: An ML-Based Decision Support System <i>Dilini Jayasiri, Dinesh Asanka, Isuri Udara and Thilini Jayasiri</i>
10.45 am - 11.00 am	105	Regression Model Selection for Life Expectancy Prediction: A Comparative Analysis of Imputation Techniques <i>Nilesh Bhaskarrao Bahadure, Ramdas Khomane, Deep Raut, Yogesh Chendake, Sidheswar Routray and D. P. Mishra</i>
11.00 am - 11.15 am	115	Utilization of Various Optimization Algorithms in Neural Network Models for Forecasting Exchange Rates <i>B.R.P.M. Basnayake and N.V. Chandrasekara</i>
11.15 am - 11.30 am	121	Machine Learning-Driven Sri Lankan Stock Market Prediction: Harnessing Economic Indicators and Sentiment Analysis <i>S. Dinushan and M. Carmel Wijegunasekara</i>
11.30 am - 11.45 am	126	Classifying Team Players in Software Industry based on Personality Traits: An Expert-Guided Machine Learning Approach <i>T.D.A.S. Priyadarshani, Kuhaneswaran Banujan and B.T.G.S. Kumara</i>
11.45 am - 12.00 noon	QA Session	
12.00 pm - 12.10 pm	Summing up by the Chair	

Day 22nd February 2024

Venue Venue 02

Time 10.00 am - 12.00 pm

Session	Computer Networks and Internet of Things	
Session Chair	Dr. Anuradha Jayakody, Sri Lanka Institute of Information Technology	
Panel Members	Dr. Sanika Wijayasekara, Sri Lanka Institute of Information Technology (SLIIT) Dr. Asanka P. Sayakkara, University of Colombo School of Computing (UCSC), Sri Lanka.	
Rapporteur	Mr. HMKT Gunawardhana, Sabaragamuwa University of Sri Lanka	
Session Coordinator	Ms. S Adeeba	
10.00 am – 10.05 am	Introduction of the Chair	
10.05 am – 10.25 am	Plenary Speech by the Chair	
Time	Paper ID	Paper Title and Authors
10.25 am - 10.40 am	125	Blockchain and Smart Contract Based Approach to Mitigate Software Piracy <i>M.D.M. Shamalka, Kuhaneswaran Banujan, B.T.G.S. Kumara</i>
10.40 am - 10.55 am	149	Dynamic Spectrum Fusion: An Adaptive Learning Approach for Hybrid NOMA/OMA in Evolving Wireless Networks <i>Geethaka Shyamal Perera, Dimantha Yomal Senanayake, Vishaka Basnayake and Dushantha Nalin.K. Jayakody</i>
10.55 am - 11.10 am	160	Wireless Sensor Network-Based Smart Irrigation System using IoT and Data Fusion <i>M.T.U.D. Mallikarathne, W.P.M. Perera, G.A.H.K.M Gamlath, W.V.A. Udayanga, H.T. Gamage and S.A.D.H.P. Maheepala</i>
11.10 am - 11.20 am	QA Session	
11.20 am - 11.30 am	Summing up by the Chair	

Day 22nd February 2023

Venue Venue 03

Time 10.00 am - 12.00 pm

Session	Knowledge Management and Software Engineering	
Session Chair	Dr. Dasuni Nawinna, Sri Lanka Institute of Information Technology	
Panel Members	Dr. Jayalath Ekanayake, Uva Wellassa University Ms. Asanthika Imbulpitiya, Otago Polytechnic Auckland International Campus	
Rapporteur	Ms. Nirubika Ravikumar, Sabaragamuwa University of Sri Lanka	
Session Coordinator	Mrs. Kumudu Wijerathna	
10.00 am – 10.05 am	Introduction of the Chair	
10.05 am – 10.25 am	Plenary Speech by the Chair	
Time	Paper ID	Paper Title and Authors
10.25 am - 10.40 am	71	Factors Affecting the Effectiveness of Generative Artificial Intelligence Apps on University Students' Programming Language Learning in Sri Lanka: A Systematic Literature Review <i>K.G.D.K. Perera, J. Wijayanayake, J. Prasadika</i>
10.40 am - 10.55 am	77	DevOps Adoption in Software Development Organizations: A Systematic Literature Review <i>M.A.W. Karunaratne, W.M.J.I. Wijayanayake, A.P.K.J. Prasadika</i>
10.55 am - 11.10 am	93	Frameworks and Models for Blockchain Technology in Organic Supply Chain: A Systematic Literature Review <i>L.A.M.N.U. Bandara, W.M.J.I. Wijayanayake, D.M.P.G.C.K.B. Karunaratna</i>
11.10 am - 11.25 am	97	Determinants of intention to use project management information system by agile project teams in the information technology industry in Sri Lanka: An extension of the classic technology acceptance model. <i>V. Ranasinghe, S. Jayasinghe, P. Peiris</i>
11.25 am - 11.40 am	99	Performance Evaluation of Clustering Algorithms for Enhancing Test Case Prioritization in Regression Testing <i>S.P Puviskar, W.V.S.K. Wasalthilaka and B.T.G.S Kumara</i>
11.40 am - 11.55 am	169	Knowledge Management Process and Innovation Capabilities in the Software Engineering Sector in Sri Lanka <i>S. Wickramasinghe, K.C.M Thilakarathne, Sunesh Hettiarachchi</i>
11.55 am - 12.10 pm	177	Challenges affecting the successful adoption of DevOps practices: A systematic literature review <i>J.M.A.A.Nayanajith and R.Wickramarachchi</i>
12.10 pm - 12.20 pm	QA Session	
12.20 pm - 12.30 pm	Summing up by the Chair	

Day 22nd February 2024

Venue Venue 04

Time 10.00 am - 12.00 pm

Session	Text Analytics and Natural Language Processing-II	
Session Chair	Prof. Ruwan Gopura, University of Moratuwa	
Panel Members	Dr. P.L.M. Prabhani, University of Sri Jayawardenepura Mr. Pumudu A Fernando, Informatics Institute of Technology Mr. Dinesh Asanka, University of Kelaniya Sri Lanka	
Rapporteur	Mrs. Lohara Chathumini, Sabaragamuwa University of Sri Lanka	
Session Coordinator	Mr. S. Nimishan, Centre for Computer Studies	
Introduction of the Chair		
Time	Paper ID	Paper Title and Authors
10.00 am - 10.15 am	67	Exploring Computational Linguistics Techniques for Enhanced Outing Planning A Comprehensive Review. <i>F. Muthaliff and T.G.D.K. Sumanathilaka</i>
10.15 am - 10.30 am	76	Sinhala Document Clustering Using Named Entity Recognition Technique. <i>T. D. C. Peiris and P. P. G. Dinesh Asanka</i>
10.30 am - 10.45 am	89	Sinhala-English Code-Mixed Language Dataset with Sentiment Annotation. <i>D. K. Uthpala and S. Thirukumaran</i>
10.45 am - 11.00 am	91	Swa-Bhasha Dataset: Romanized Sinhala to Sinhala Adhoc Transliteration Corpus. <i>T.G.D.K. Sumanathilaka, N. Micallef and R. Weerasinghe</i>
11.00 am - 11.15 am	100	Unmasking Fake News with Emotional Cues: A Comparative Study of Sentiment Reasoning Models. <i>V. Abishethvarman, B. Kuhaneswaran, N. Ravikumar and B.T.G.S. Kumara</i>
11.15 am - 11.30 am	102	Using Machine Learning to Identify and Categorize Personally Identifiable Information and Payment Card Industry Data in Textual Content. <i>M.L. Arambawela and A.C. Aponso</i>
11.30 am - 11.45 am	120	Analyzing User's Sentiments Using Twitter Data on the Usage of ChatGPT. <i>T.E. Kumarawadu and R.A.H.M. Rupasingha</i>
11.45 am - 12.00 noon	QA Session	
12.00 pm - 12.10 pm	Summing up by the Chair	

Day 22nd February 2023

Venue Venue 01

Time 02.00 pm - 04.00 pm

Session	Artificial Intelligence and Machine Learning-III	
Session Chair	Prof. Roshan Ragel, University of Peradeniya	
Panel Members	Prof. Siyamalan Manivannan, University of Jaffna Ms. Abarnah Kirupananda, Informatics Institute of Technology	
Rapporteur	Mrs. S. Wasalthilake, Sabaragamuwa University of Sri Lanka	
Session Coordinator	Ms. Rukshika Premathilaka	
Introduction of the Chair		
Time	Paper ID	Paper Title and Authors
02.00 pm - 02.15 pm	133	Enhancing Customer Segmentation Using Large Language Models (LLMs) and Deterministic, Independent-of-Corpus Embeddings (DICE) <i>M.N.S. Tissera, P.P.G.D. Asanka and R.A.C.P. Rajapakse</i>
02.15 pm - 02.30 pm	134	Few-Shot Lung Cancer Classification Using Prototypical Networks <i>Nimesha Hansani Amarasinghe and Thanuja D. Ambegoda</i>
02.30 pm - 02.45 pm	138	Explainable Hybrid CNN Swin-Transformer Network for Tuberculosis Diagnosis in Chest X-rays of Sri Lankan Patients <i>Tuvensha Jegatheeswaran, Logiraj Kumaralingam, Selvendra Selvarajah and Nagulan Ratnarajah</i>
02.45 pm - 03.00 pm	163	Ensemble Approach for Early Prediction of Malnutrition Level of Children: A Case study on Children Under Five Years Old <i>H.M.C. Nirmani and U.P. Kudagamage</i>
03.00 pm - 03.15 pm	172	Artificial Intelligence Model to Suggest Sewing Operations through Sketch Analysis <i>A.V.A.P. Wijesinghe, R.A.C.P. Rajapakse and P.P.G.D. Asanka</i>
03.15 pm - 03.30 pm	185	Impact of the Price of Petroleum on the Price of Food Items in Sri Lanka <i>D.G.S.P. Samarasinghe, G.K. Subasinghe, G.P.N.M. Pathirana and N.V. Chandrasekara</i>
03.30 pm - 03.45 pm	192	Simple and Compound Leaf Taxonomy Embedded Machine Learning Approach for Ayurveda Plants Recognition <i>Udari Kodippillige, L. Ranathunga and Nishan Shyamika</i>
03.45 pm – 03.55 pm	QA Session	
03.55 pm – 04.10 pm	Summing up by the Chair	

Day 22nd February 2024

Venue Venue 02

Time 02.00 pm - 04.00 pm

Session	Computer Vision and Image Processing	
Session Chair	Dr. KPPS Pathirana, Uva Wellassa University	
Panel Members	Dr. Anusha Jayasiri, University of Visual and Performing Arts Dr. Ravimal Bandara, University of Sri Jayawardenepura	
Rapporteur	Dr. UAP Ishanka, Sabaragamuwa University of Sri Lanka	
Session Coordinator	Ms. Niroshi Alwis	
02.00 pm – 02.05 pm	Introduction of the Chair	
02.05 pm – 02.25 pm	Plenary Speech by the Chair	
Time	Paper ID	Paper Title and Authors
02.25 pm - 02.40 pm	44	MangoDB - A TJC Mango Dataset for Deep-Learning-Based on Classification and Detection in Precision Agriculture <i>Suravi Sasadara Jayaweera, Ahangama Vithanage Piyumikaline, Diwadilage Dimuthi Tharaka, Wisura Pandula Pallewatta, Thilina Halloluwa, M.I.E. Wickramasinghe, K.A.K.T. Karunanayake, S.S.P Mathara Arachchi</i>
02.40 pm - 02.55 pm	54	Individual Leopard Identification using Black Spot Patterns <i>V.N. Mahaliyanaarachchi, R.D.A.V. Randeniya, G.H.R. Dheerathne, S.J.M.D.P. Samarakoon</i>
02.55 pm - 03.10 pm	57	Sinhala Character Identification using Orientation and Support Vector Machine <i>K.D. Thamarasee, R.M.D.B. Surendra</i>
03.10 pm - 03.25 pm	156	Detection and Classification of Knee Osteoarthritis using Convolutional Neural Network <i>M. Janotheepan, M. Yanusha, S.D.H.S. Wickramarathna, K. Subahary, S. Bavathaaranie, K. Thanusan</i>
03.25 pm - 03.40 pm	159	Motion Deblurring through Autoencoder-based Image Restoration <i>A.P. Munasinghe and K.G.L. Chathumini</i>
03.40 pm – 03.50 pm	QA Session	
03.50 pm – 04.00 pm	Summing up by the Chair	

Day 22nd February 2024

Venue Venue 03

Time 02.00 pm - 04.00 pm

Session	Open	
Session Chair	Dr. Samiru Gayan, University of Moratuwa	
Panel Members	Dr. P.L.M Prabhani, University of Sri Jayewardenepura Dr. Sampath Edirisinghe, University of Sri Jayewardenepura	
Rapporteur	Ms. PMAK Wijeratne, Sabaragamuwa University of Sri Lanka	
Session Coordinator	Mrs. JDU Indumini	
02.00 pm – 02.05 pm	Introduction of the Chair	
02.05 pm – 02.25 pm	Plenary Speech by the Chair	
Time	Paper ID	Paper Title and Authors
02.25 pm - 02.40 pm	61	The Impact of Teleworking on Sri Lankan University Internship Programs : Systematic Review of Literature <i>Dinuka Abeygunawardhana, Janaka Wijayanayake, and Jinendri Prasadika</i>
02.40 pm - 02.55 pm	148	Air Quality Monitoring in Industry 5.0 using Edge Computing <i>Sithara Bandara, Dinath Minsilu, Migara Karunaratne and Sampath Edirisinghe</i>
02.55 pm - 03.10 pm	165	Real-time Non-Intrusive Load Monitoring System for Residential Appliance Identification <i>Nimantha Madhushan, Rasanjalee Rathnayake, Dhanushika Darshani, Uditha Wijewardhana and Nishan Dharmaweera</i>
03.10 pm – 03.20 pm	QA Session	
03.20 pm – 03.30 pm	Summing up by the Chair	

Day 22nd February 2024

Venue Venue 04

Time 02.00 pm - 04.00 pm

Session	Text Analytics and Natural Language Processing-III	
Session Chair	Prof. Lasith Gunawardena, University of Sri Jayawardenapura	
Panel Members	Dr. Chathura Rajapakshe, University of Kelaniya Ms. Sashika Kumarasinghe, University of Moratuwa	
Rapporteur	Ms. Upeksha Kudagama, Sabaragamuwa University of Sri Lanka	
Session Coordinator	Ms. S. Adeeba	
Introduction of the Chair		
Time	Paper ID	Paper Title and Authors
02.00 pm - 02.15 pm	129	YouTubeVideo Categorization Based on Closed Captions. <i>H.U. Senevirathne, B.T.G.S. Kumara and B. Kuhaneswaran</i>
02.15 pm - 02.30 pm	131	Movie Recommendation System based on Ratings and Critique. <i>K. Mahesha, B.T.G.S. Kumara and K. Banujan</i>
02.30 pm - 02.45 pm	132	Factors Influencing Mobile App User Experience: An Analysis of Education App User Reviews. <i>N. Arambepola, L. Munasinghe and N. Warnajith</i>
02.45 pm - 03.00 pm	139	Identify the Current Demanded Knowledge, Skills, and Abilities in IT through Analysis of Job Advertisements in Sri Lanka: A Framework Using Natural Language Processing Techniques. <i>K.C.M.Gangodawila and P.P.G. D. Asanka</i>
03.00 pm - 03.15 pm	155	Sentiment Analysis for YouTube Cooking Recipes Videos using User Comments <i>M. Janotheepan, T. Rajeetha, S.D.H.S. Wickramarathna, H.A.F. Sanas, A.K.L.M. Farhath and M.J.A. Amas</i>
03.15 pm - 03.30 pm	182	Swa Bhasha 2.0: Addressing Ambiguities in Romanized Sinhala to Native Sinhala Transliteration using Neural Machine Translation. <i>S. Dharmasiri and T.G.D.K. Sumanathilaka</i>
03.30 pm – 03.35 pm	QA Session	
03.35 pm – 03.45 pm	Summing up by the Chair	

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