

Dr. Dulanga Weerakoon

Email: dulanga.weerakoon@smart.mit.edu / dulangaw@mit.edu
Contact No.: +65 9081 1084
URL: dulangaweerakoon.com
LinkedIn: [dulangaweerakoon](https://www.linkedin.com/in/dulangaweerakoon)

CONTACT INFORMATION

Name: Weerakoon Mudiyanseelage Dulanga Kaveesha Weerakoon
Title: Dr.
Office mailing address: Singapore-MIT Alliance for Research and Technology (SMART) 1 CREATE Way, 09-03 CREATE Tower, 01-13 Enterprise Wing, Singapore 138602
Email: dulanga.weerakoon@smart.mit.edu / dulangaw@mit.edu
Contact number: +65 9081 1084
Current position: Postdoctoral Associate (Advisors: Prof. Sanjay Sarma & Prof. Archan Misra)

EMPLOYMENT HISTORY

Postdoctoral Associate June 2024-Present
SMART Research Centre, MIT
Advisors: Prof. Sanjay Sarma & Prof. Archan Misra

PhD Research Intern Jan 2023-Jan 2024
Institute of High Performance Computing, A*STAR, Singapore
Advisor: Dr. Vigneshwaran Subbaraju

Research Engineer July 2018-July 2019
Living Analytics Research Centre (LARC), Singapore Management University
Advisor: Prof. Archan Misra

R&D Engineer Feb 2018-June 2018
Synopsys, Sri Lanka

Research Assistant Aug 2016 - Jan 2017
LiveLabs, Singapore Management University
Advisor: Prof. Archan Misra

TEACHING EXPERIENCE

Senior Teaching Assistant Jan 2023-Apr 2023
Course Name: Mobile & Distributed Systems
School of Computing & Information Systems, Singapore Management University

Teaching Assistant Aug 2021-Nov 2021
Course Name: Information Systems & Innovation
School of Computing & Information Systems, Singapore Management University

Visiting Instructor Mar 2016-Apr 2016
University of Moratuwa, Sri Lanka

ACADEMIC QUALIFICA- TIONS

Ph.D. in Computer Science 2019-2024
Singapore Management University
Advisor: Prof. Archan Misra
Co-Advisor: Dr. Vigneshwaran Subbaraju
GPA: 3.90

B.Sc. Engineering Honours 2014-2018

University of Moratuwa, Sri Lanka
Major: Electronic & Telecommunication Engineering GPA: 3.61

RESEARCH INTERESTS Human-AI Collaborative Systems, Multi-Modal Sensing, Mobile and Pervasive Computing, Deep Learning in Embedded Systems

PUBLICATIONS **Weerakoon, D.**, Subbaraju, V., Lim, JH., and Misra, A., 2024. CAS: Fusing DNN Optimization Adaptive Sensing for Energy-Efficient Multi-Modal Inference. *IEEE Robotics and Automation Letters*. [Full Paper, To appear]

Weerakoon, D., Subbaraju, V., Lim, JH., and Misra, A., 2024, June. Poster: Towards Efficient Spatio-Temporal Video Grounding in Pervasive Mobile Devices. 222nd ACM International Conference on Mobile Systems, Applications, and Services (MobiSys 2024). [Poster paper]

Rathnayake, D., **Weerakoon, D.**, Radhakrishnan, M., Subbaraju, V., Hwang, I. and Misra, A., 2023, November. VGGlass - Demonstrating Visual Grounding and Localization Synergy with a LiDAR-enabled Smart-Glass. 21st ACM Conference on Embedded Networked Sensor Systems (SenSys 2023). [Demo paper]

Weerakoon, D., Subbaraju, V., Tran, T. and Misra, A., 2023, January. Demonstrating Multi-modal Human Instruction Comprehension with AR Smart Glass. 15th International Conference on COMMunication Systems NETworkS (COMSNETS 2023). [Demo paper]

Weerakoon, D., Subbaraju, V., Tran, T. and Misra, A., 2022, October. SoftSkip: Empowering Multi-Modal Dynamic Pruning for Single-Stage Referring Comprehension. In *Proceedings of the 30th ACM International Conference on Multimedia* (pp. 3608-3616). [Full paper]

Weerakoon, D., Subbaraju, V., Tran, T. and Misra, A., 2022. Cosm2ic: Optimizing real-time multi-modal instruction comprehension. *IEEE Robotics and Automation Letters*, 7(4), pp.10697-10704. [Full Paper]

Weerakoon, D., Subbaraju, V., Karumpulli, N., Tran, T., Xu, Q., Tan, U., Lim, JH., and Misra, A., 2020. Gesture Enhanced Comprehension of Ambiguous Human-to-Robot Instructions. In *Proceedings of the 2020 International Conference on Multimodal Interaction (ICMI '20)*. [Full paper]

Abdelzaher, T., Hao, Y., Jayarajah, K., Misra, A., Skarin, P., Yao, S., **Weerakoon, D.** and Árzén, K.E., 2020. Five challenges in cloud-enabled intelligence and control. *ACM Transactions on Internet Technology (TOIT)*, 20(1), pp.1-19. [Full paper]

Yao, S., Hao, Y., Zhao, Y., Piao, A., Shao, H., Liu, D., Liu, S., Hu, S., **Weerakoon, D.**, Jayarajah, K. and Misra, A., 2019, July. Eugene: Towards deep intelligence as a service. In *2019 IEEE 39th International Conference on Distributed Computing Systems (ICDCS)* (pp. 1630-1640). IEEE. [Full paper]

Weerakoon, D., Jayarajah, K., Tandriansyah, R. and Misra, A., 2019, July. Resilient Collaborative Intelligence for Adversarial IoT Environments. In *2019 22th International Conference on Information Fusion (FUSION)* (pp. 1-8). IEEE. [Full paper]

Misra, A., **WEERAKOON MUDIYANSELAGE, D.K.W.** and Jayarajah, K., 2019. The challenge of collaborative iot-based inferencing in adversarial settings. [Workshop paper]

Misra, A., Jayarajah, K., **Weerakoon, D.**, Tandriansyah, R., Yao, S. and Abdelzaker, T., 2019, May. Dependable machine intelligence at the tactical edge. In *Artificial Intelligence and Machine Learning for Multi-Domain Operations Applications* (Vol. 11006, p. 1100608). International Society for Optics and Photonics. [Full paper]

Jayarajah, K., Subbaraju, V., **Weerakoon, D.**, Misra, A. and Athaide, N., 2017, May. Discovering anomalous events from urban informatics data. In *Ground/Air Multisensor Interoperability, Integration, and Networking for Persistent ISR VIII* (Vol. 10190, p. 101900F). International Society for Optics and Photonics. [Full paper]

HONORS & AWARDS

Postgraduate Doctoral Fellowship in Computing

Offered to the exceptionally qualified students at SMU based on research outcomes

2nd place in Kaggle competition for Product Detection

Hosted by Shopee, Singapore

2nd place out of 646 teams

2nd place in Kaggle competition for Sentiment Analysis

Hosted by Shopee, Singapore

2nd place out of 317 teams

Dean's list in Semesters 6 & 8 of B.Sc. degree

Semester GPA: 4.00

Winner of Second Prize, Ideasinc startingUp 2016 Hackathon

Organized by Nanyang Technopreneurship Center, Nanyang Technological University, Singapore

SERVICES

TPC 2025 COMSNETS

TPC 2025 SysAI Workshop (Co-located with COMSNETS 2025)

TPC 2024 ICMLA

Reviewer Elsevier PMC

Reviewer 2024 IROS

Reviewer 2023 - 2024 ACM Multimedia

Reviewer 2023 - 2024 ICMLA

STUDENTS CO-MENTORED

Archit Mukherjee - B. Tech, Electornics and Telecommunication - VIT Chennai (2023-Present) - Visiting Research Student at SMU (2023-Present)

Atharv Mane - BE, Computer Science - Birla Institute of Technology and Science, Pilani- Goa Campus - Final year Thesis Project (2023-Present)

HongMeng Tan - Nanyang Polytechnic - Visiting Research Student at SMU (March 2019-May 2019)

EXTRA INTERESTS & AWARDS

Team member of SMU Table Tennis Team

Won 3rd place in Institute-Varsity-Polytechnic games (IVP 2024), Singapore.

Team member of SMU Table Tennis Team

Won 2nd place in Institute-Varsity-Polytechnic games (IVP 2023), Singapore.

Team member of University of Moratuwa Table Tennis Team

Recipient of extra-curricular colors awards