

KAVISHA VIDANAPATHIRANA

[homepage](#) ◇ [scholar](#) ◇ [github](#) ◇ [linkedin](#)

vid.kavisha@gmail.com

Updated April 2024

EDUCATION

PhD. Electrical Engineering and Robotics (reading) *Jan 2020 - Sep 2024 (expected)*

Queensland University of Technology (QUT) in collaboration with CSIRO.

Thesis topic: *Geometric Constraints for 3D Data Association.*

BSc. Eng. (Hons.) Electronic and Telecommunication Engineering *Oct 2014 - Dec 2018*

University of Moratuwa, Sri Lanka

First Class

PROFESSIONAL EXPERIENCE

Research Intern

Jan 2024 - Present

The Australian Institute for Machine Learning (AIML)

- *Research on implicit neural representations for spatio-temporal signals.*

Research Intern

Oct 2022 - May 2023

The Australian Institute for Machine Learning (AIML)

- *Research on multi-object tracking and scene flow.*

Lecturer (Sessional)

Jul 2019 - Jan 2020

Department of Electronic & Telecommunication Engineering, University of Moratuwa

- *Lecturer: EN1802 Basic Electronics. - TA: EN4593 Autonomous Systems*

Instructor

Feb 2019 - Jul 2019

Department of Electronic & Telecommunication Engineering, University of Moratuwa

- *TA: EN4563 Robotics, EN2523 Robot Design and Competition, EN2090 Laboratory Practice - II*

Trainee Associate Electronics Engineer

Jun - Dec 2017

Zone24x7 Pvt. Ltd.

- *Research on path planning in retail store environments for an autonomous inventory tracking robot.*

AWARDS

- ICRA 2022 - 2nd place in the General Place Recognition Competition organized by AirLab, Carnegie Mellon University. [Invited talk.](#)
- High Distinction - Sri Lanka Mathematical Olympiad 2012

STANDARDIZED TESTS

- GRE General Test: VR: 160, QR: 168, AW: 5.0 (August 2019)
- IELTS Academic: 8.5 Overall, CEFR Level C2 (February 2024)

TECHNICAL SKILLS & COMPETENCIES

Programming

python, C++, Matlab

Libraries & tools

pytorch, tensorflow, ROS

Research Experience

3D Vision: *representation learning, scene flow, tracking, segmentation.*
Mobile robotics (hardware+software): *metric localization, path planning.*

PUBLICATION LIST

- **K. Vidanapathirana**, S. Ch'ng, X. Li, S. Lucey. 'Multi-Body Neural Scene Flow', *2024 International Conference on 3D Vision (3DV) (Oral - top 6.6%)*. [code](#)
- **K. Vidanapathirana**, P. Moghadam, S. Sridharan, C. Fookes. 'Spectral Geometric Verification: Re-Ranking Point Cloud Retrieval for Metric Localization', *2023 IEEE Robotics and Automation Letters (RA-L) + Selected for ICRA 2024 Oral presentation*. [code](#)
- J. Knights*, **K. Vidanapathirana***, M. Ramezani, P. Moghadam, S. Sridharan, C. Fookes. 'Wild-Places: A Large-Scale Dataset for Lidar Place Recognition in Unstructured Natural Environments', *2023 IEEE International Conference on Robotics and Automation (ICRA)*. *Equal contribution and joint first-author. [code](#)
- **K. Vidanapathirana**, M. Ramezani, P. Moghadam, S. Sridharan, C. Fookes. 'LoGG3D-Net: Locally Guided Global Descriptor Learning for 3D Place Recognition', *2022 IEEE International Conference on Robotics and Automation (ICRA) (Oral presentation - virtual)*. [code](#)
- **K. Vidanapathirana**, P. Moghadam, B. Harwood, M. Zhao, S. Sridharan, C. Fookes. 'Locus: LiDAR-based Place Recognition using Spatiotemporal Higher-Order Pooling', *2021 IEEE International Conference on Robotics and Automation (ICRA) (Oral presentation - virtual)*. [code](#)
- D. Ranasinghe, **K. Vidanapathirana**, T. Wickramarachchi, K. Katuwandeniya, P. Jayasekara, S. Ajisaka. 'Development of a Lightweight, Low-cost, Self-balancing Personal Mobility Vehicle for Autonomous Indoor Navigation', *In 2019 IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM) (Oral presentation)*. [code](#)

REVIEWER ACTIVITY

Journals	RA-L, Pattern Recognition, P&RS.
Conferences	[Robotics]: CoRL, ICRA, IROS. [Computer Vision]: ICCV, ECCV.

REFEREES

Simon Lucey	Professor, Uni. Adelaide. Director, AIML. <i>My internship supervisor.</i> simon.lucey@adelaide.edu.au
Sridha Sridharan	Professor, QUT. <i>My (principal) PhD supervisor.</i> s.sridharan@qut.edu.au
Peyman Moghadam	Principal Research Scientist, CSIRO. <i>My (external) PhD supervisor.</i> Peyman.Moghadam@data61.csiro.au