

Education

- Aug 2022 – Present **University of Pennsylvania**
Doctoral Program (Ph.D.) in Computer and Information Science
- Aug 2015 – Jun 2019 **National University of Singapore**
Bachelor of Engineering (Honours) in Electrical Engineering
- B.Eng. Dissertation – Dynamic Object Tracking and Classification Using a Multi-Camera System
 - NUS Overseas Colleges – Silicon Valley Entrepreneurship programme involving a year-long internship at a start-up in San Francisco and classes in the MS&E programme at Stanford University
- Jan 2018 – Jun 2018 **Stanford University**
Management Science & Engineering (Non-Degree)

Work

- Jul 2019 – Present **DSO National Laboratories** | Research Engineer
- Robotics Autonomy Lab, supervised by Dr. Lionel Heng
 - Worked on vision-, LiDAR- and radar-based perception and localisation algorithms for field robots – sensor calibration, 3D vision, scene understanding, autonomy in adverse weather, object detection and tracking
 - Contributed to [Project AutoVision](#) in collaboration with the Computer Vision and Geometry Lab of ETH Zurich
 - Developed a portable stereo vision kit for vision-based autonomy which was eventually transited to a project with industry partners
- Jan 2018 – Dec 2018 **Carbon Robotics** | Engineering Intern
- Contributed to the development of a robotic arm system for machine-tending tasks
 - Worked on critical electrical, embedded, software systems
 - Supported the delivery of critical milestones including deployment and testing on-site on the assembly line
 - Designed and integrated the elbow LED board including PCB design and firmware for interfacing with motor driver boards
- Jun 2017 – Dec 2017 **DSO National Laboratories** | Research Intern
- Reverse Engineering Embedded Systems: Disassembly, tracing and modification of microcontroller firmware
 - Motion Planning for Unmanned Vehicles: Unconstrained non-linear optimisation of polynomial-based trajectories
 - Ultra-Wideband Communication for Tracking and Localisation: Localisation through trilateration of multiple ultra-wideband sensors with an Extended Kalman Filter
 - Range Image-based Segmentation of LiDAR Data
- Dec 2016 – Jan 2017 **TinyMOS** | Engineering Intern
- Dec 2016 – Jan 2017 **Memento Health** | UNFRAMED Accelerator for social challenges
- Jan 2013 – Dec 2014 **Singapore Armed Forces** | Chief Instructor, Infantry Basic Military Training Centre

Awards

- 2022 **Soloman M. Swaab Fellowship**
Awarded in recognition of outstanding academic accomplishments and research potential
- 2021 **DSO Postgraduate Scholarship**
Awarded a fellowship to pursue a PhD to explore my research interests

Professional Services

- 2021 **Paper Reviewing**
International Conference on Robotics and Automation (ICRA) 2021