

Tristan Laidlow

Robotics Researcher

I am a research fellow in the Dyson Robotics Lab with Prof. Andrew Davison at Imperial College London.

My current research interests are in developing algorithms that enable robots to understand and interact with their environment. To this end, my research focuses on dense 3D reconstruction with geometric priors, efficient scene segmentation using neural fields, and learning robust object manipulation policies.

CONTACT

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Website t.laidlow.github.io

LinkedIn linkedin.com/in/tristan-laidlow

Google Scholar scholar.google.com/citations?user=bmOi48IAAAAJ

EXPERIENCE

Dyson Research Fellow Oct. 2019 – Present	Dyson Robotics Lab Imperial College London, UK Supervisor: Prof. Andrew Davison Lead research projects developing state-of-the-art vision algorithms for robotic applications.
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Graduate Teaching Assistant Jan. 2016 – Apr. 2021	C333: Robotics Imperial College London, UK Assisted students in implementing filter-based navigation algorithms for mobile robotics.
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Research Assistant Apr. 2013 – Aug. 2015	Dynamic Systems Lab University of Toronto Institute for Aerospace Studies, Canada Established the foundations for a new aerial robotics research testbed and implemented a stabilizing controller for an aerial robotic platform using vision-based localization.
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Research Assistant Apr. 2012 – Aug. 2012	Technologies for Aging Gracefully Lab University of Toronto, Canada Developed a user interface for the Accessible, Large-Print, Listening and Talking (ALLT) e-Book Project for people with low vision or mobility impairments.
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Strategic Information Analyst Jan. 2009 – Aug. 2011	Interior Health Authority Kelowna, British Columbia, Canada Developed solutions for smoothing the use of hospital resources, reducing surgical cancellations, and lowering patient wait times by examining scheduling practices, analyzing patient data, and creating simulation models.
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EDUCATION

2015 - 2019	Doctor of Philosophy (Computer Science) Imperial College London, UK Thesis: <i>Robust Multimodal Dense SLAM</i> Supervisor: Dr. Stefan Leutenegger
2011 – 2015	Bachelor of Applied Science (Engineering Science) Major: Aerospace Engineering, Minor: Robotics & Mechatronics University of Toronto, Canada Thesis: <i>Real-Time Motion Generation for Aerial Vehicles in Response to Musical Signals</i> Supervisor: Prof. Angela Schoellig
2007 – 2008	Master of Science (Management Science) Queen's University, Canada Thesis: <i>An Adaptive Algorithm for the Optimal Order Quantity in the Non-Stationary Newsvendor Problem with Censored Demand</i> Supervisor: Prof. Jeffrey McGill
2002 – 2007	Bachelor of Science (Economics) University of Victoria, Canada Thesis: <i>Using a Discrete-Event Simulation to Examine Emergency Department Congestion at Royal Inland Hospital</i> Supervisor: Prof. Joseph Schaafsma

SKILLS

Programming	Python, C++, CUDA
Deep Learning	PyTorch, TensorFlow