



EDUCATION

University of Toronto, Robotics Institute

Sept. 2019 - Present

Doctor of Philosophy (Ph.D), Department of Mechanical Engineering

Topic: *Deep Person Detection Robust to Intraclass Variations*

Areas: Machine Learning, Object Detection, Mobile Robotics

Supervisor: Goldie Nejat

University of Toronto, Engineering Science

Sept. 2014 - May 2019

Bachelor of Applied Science (BASc), Major in Robotics Engineering

Topic: Population-based Hyperparameter Optimization

Supervisor: Jimmy Ba

RESEARCH AND INDUSTRY EXPERIENCE

University of Toronto, Toronto Robotics and AI Laboratory

May 2019 - Sept. 2019

Researcher

- Developed controllers for autonomous drone tracking and landing, supervised by Prof. Steven Waslander

University of Toronto, Machine Learning Group

March 2018 - May 2019

Researcher

- Researched on distributed hyperparameter optimization, supervised by Prof. Jimmy Ba

Advanced Micro Devices (AMD)

May 2017 - Sept. 2018

Machine Learning Engineer

- Worked on the front end design flow for next generation CPU/GPU/APUs from RTL synthesis to netlist using industry standard EDA tools
- Developed machine learning solutions to EDA problems during place and route of chip design

University of Toronto, WIRLab

May 2018 - Sept. 2018

Researcher

- Developed state-of-the-art wireless-based robot localization using CSI (channel state information), supervised by Prof. Shahrokh Valaee

PUBLICATIONS

Referred Contributions:

Robots Autonomously Detecting People: A Multimodal Deep Contrastive Learning Method Robust to Intraclass Variations

A. Fung, B. Benhabib, and G. Nejat

Under Review at *IEEE Robotics and Automation Letters (RA-L)*, 2022

A Multi-Robot Person Search System for Finding Multiple Dynamic Users in Human-Centered Environments

S. Mohamed, A. Fung, and G. Nejat

Accepted at *IEEE Transactions on Cybernetics*, 2022

Robots Understanding Contextual Information in Human-Centered Environments using Weakly Supervised Mask Data Distillation

D. Dworakowski, A. Fung, G. Nejat

Accepted with Minor Revisions at *International Journal of Computer Vision*, 2022

Using Deep Learning to Find Victims in Unknown Cluttered Urban Search and Rescue Environments

A. Fung, L. Wang, K. Zhang, G. Nejat, B. Benhabib

Accepted at *Springer, Current Robotics Reports* 2020

AC/DCC : Accurate Calibration of Dynamic Camera Clusters for Visual SLAM

J. Rebello, A. Fung, S. Waslander

Accepted at *IEEE International Conference on Robotics and Automation*, 2020

Non-referred Contributions:

Jeeves, the Ethically Designed Interface

Angus Fung, Aaron Hao Tan, Michael Pham-Hung, Cristina Getson

Technical Report, Talk at *RO-MAN: Roboethics Competition*, 2021

Socially Assistive Service Robots at the Autonomous Systems and Biomechatronics Lab

Angus Fung, Aaron Hao Tan, Shane Saunderson

Poster at *University of Toronto Engineering Research Days*, 2021

Population-based Hyperparameter Optimization (Undergraduate Thesis)

Angus Fung, Jimmy Ba

Technical Report, Talk at *University of Toronto Engineering Science*, 2018

Development of an Autonomous Barrel Inspection Robot

Angus Fung, Ahmed Amanullah, Ali Aftabjahani

Technical Report, Talk at *University of Toronto Engineering Science*, 2016

TEACHING

MIE443: Mechatronics Systems: Design & Integration, Head TA (2020, 2021, 2022)

ROB501: Computer Vision for Robotics, TA (2022)

MENTORING

Grace Bae, Undergraduate Thesis Student (2022-2023)

Giro Ele, Undergraduate Thesis Student (2021-2022)

EXTRACURRICULAR

aUToronto, Self-driving Car Team, University of Toronto

Jan. 2020 - Jan. 2021

Software Engineer

- Improving model predictive controller in simulation and on the real car
- First prize winner of the Year 3 SAE Autodrive Challenge

UTRA, Autonomous Rover Team, University of Toronto

Sept. 2016 - May 2018

Software Lead

- Led the localization and mapping team. Developed filter-based SLAM on the autonomous rover

Musician

Organist, Corpus Christi Church

Sept. 2014 - Present

- Providing music and improvisation for weekly rehearsals, masses and seasonal concerts
- Leading the children's choir

Organ Scholar, Metropolitan United Church

Sept. 2013 - Sept. 2014

- Provided music for Sunday services, recitals, weddings, funerals, seasonal and orchestral concerts, supervised by Dr. Patricia Wright
- Rehearsal accompanist for the children and adult choir

Organist, St. Bartholomew's Anglican Church

Sept. 2012 - Aug. 2013

TV Organist, St. Basil's Catholic Parish

Sept. 2011 - Feb. 2012

SERVICE

Reviewer for ICRA 2020, IROS 2020, IROS 2022

RECOGNITION

RO-MAN Roboethics Competition 2021, 1st Prize (\$1,000)

University of Toronto MIE Fellowship 2019, 2020, 2021 (\$14,000)

Healthcare Robotics NSERC Fellowship 2019, 2020, 2021

Queen Elizabeth II Graduate Scholarship 2020 (\$15,000)

University of Toronto Scholars 2014 (Academic Excellence) (\$7,500)

Delta Tau Delta Awards Scholarships 2014 (\$3,000)

Dean's Honour List 2014, 2015, 2016, 2017, 2018

Associate of Royal Conservation of Music Diploma (ARCT) - Piano Performance, 2013

Associate of Royal Conservation of Music Diploma (ARCT) - Organ Performance, 2013