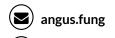
# Angus Fung



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angusfung



angus-fung



#### **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