



## Work Experience

### Intel Corporation

#### FPGA IP Software Engineering Intern

May 2021–Aug 2022

- Developed an MxN AXI4 interconnect FPGA IP using SystemVerilog for increasing concurrent read throughput
- Designed a protocol agnostic performance monitor FPGA IP
- Optimized RTL designs by reducing area consumption and improving timing for faster execution

### U of T Intelligent Sensory Microsystems Lab

#### Research Intern

May 2020–Aug 2020

- Developed new 3D computational imaging software to accurately detect and visualize nearby objects
- Applied classical computer vision and numerical computing techniques using Python, NumPy, and OpenCV

### National University of Singapore

#### Student Researcher

May 2019–Aug 2019

- Developed mathematical simulations for environmentally friendly air conditioners to greatly reduce energy expenditure in tropical climates

## Extracurriculars

### U of T aUToronto self-driving car team

#### Traffic Light Handling Subteam Lead

Jul 2022–Present

- Built a traffic light handling pipeline using multi-threaded C++ and ROS 2
- Designed pipeline to (a) synchronize camera detection streams; (b) match 2D detections with ground truth map data; and (c) perform traffic light state filtering to handle misdetections

#### Trajectory Motion Planning Developer

Aug 2021–Present

- Member of onsite team that won 1<sup>st</sup> place overall in the 2022 SAE Autodrive Challenge II Year 1 competition sponsored by General Motors
- Researching a thesis on “Practical and Optimal Velocity Generation for Smooth Trajectory Planning for Autonomous Vehicles”

## Personal Projects

### FluidStride Computer Vision Running Gait Analysis

[www.myfluidstride.com](http://www.myfluidstride.com)

Oct 2020–Apr 2021

- Creator and solo developer of computer vision software to analyze running form in 2D/3D
- Implemented various human pose estimation and running biomechanics papers in a Python prototype to accurately study running gait

## Awards

Hack The 6ix Best use of Google Cloud Prize	2020
U of T Engineering Science Research Opportunity Fellowship	2019, 2020
3 <sup>rd</sup> , UofT Engineering Competition Programming Challenge	2020
U of T Engineering Dean's Honours List	2018–2021
U of T Donald C. Leigh Memorial Scholarship	2018

## Education

### BASc | Engineering Science ECE

University of Toronto | 2018–Present

- 4<sup>th</sup> year
- cGPA: 3.73

## Skills

### Software Development

Languages

Python • C++ • Bash

Libraries and Frameworks

NumPy • Matplotlib • OpenCV •  
Tensorflow 2.0 • ROS 2 • GoogleTest

Mobile and Web Development

Android • Jekyll • HTML • CSS

Development Tools

Git • Vim • Tmux

### Hardware

FPGA Design

SystemVerilog • Quartus • VCS

Embedded Systems

Arduino • Raspberry Pi

### General

Languages

English • Chinese • French

Soft Skills

Adaptability • Time Management •  
Collaboration • Problem-solving

## Interests

Triathlon

Foreign languages

Travelling