

BRIAN CHEN

Student & Aspiring Software Engineer

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EXPERIENCE

Teaching Assistant - ESC180, ESC190

Division of Engineering Science - UofT

September 2021 - Present Toronto, ON

- Tutored and reinforced course material for first year engineering python/c programming class in individual and group settings
- Marked labs and assessments

Software Developer

BC Parks Foundation

July 2020 - September 2021 Vancouver, BC

- Worked in team environment to design & implement 'DiscoverParks' platform and data collection/visualization solution for parks in British Columbia with Django, PostgreSQL, and VueJS (currently in public alpha)

Research Assistant

Intelligent Sensory Microsystems Lab (Funded by ESROP-UofT)

May 2021 - September 2021 Toronto, ON

- Researching novel input encoding and gradient thresholding methods for optimizing memristor crossbar machine learning accelerators in-situ performance
- First author paper on the aforementioned research pending submission

PROJECTS

GrocerCheck Website

GrocerCheck Foundation

- Founded GrocerCheck Foundation, a **registered non-profit** centered around <https://grocercheck.ca>, a website that aggregates and visualizes grocery store business servicing >15,000 stores in 10 major cities
- Implemented scalable framework on **Django**, **PostgreSQL**, **AWS**, and custom **LivePopularTimes** scraping library
- Secured support, funding, grants, and partnerships valued at >\$200,000

Simulation & Testing Co-lead

aUToronto - UofT's Self Driving Car Team

Sept 2020 - Ongoing Toronto, ON

- Leading multidisciplinary team of 14 students across 4 project groups to develop superior automated tooling for autonomous vehicle development
- "**aUToTest**" automated simulation integration test framework for autonomous vehicles, with **python**, **matlab**, **simulink**, and **unreal engine**
- "**aUToNoise**" ML-augmented sensor noise modelling for improved Sim2Real transfer
- "**aUToViz**" test result visualization framework
- Jenkins/GitLab CI/CD integrations for aUToronto software stack
- Presented work at 2021 Vector Institute Mobility Symposium, 2021 UofT Robotics Institute AV workshop

Other

- "**butternut**", a chrome extension that detects AI-generated text. nwHacks bronze, KPMG Data Analysis & Groundswell Salesforce Award

EDUCATION

BASC. in Engineering Science

University of Toronto

2020 - 2025 Toronto, ON

Planned major in Computer Engineering with MI minor. cGPA 3.82

Langara College

Concurrent enrolment with studies at Eric Hamber Secondary

Eric Hamber Secondary

2015 - 2020 Vancouver, BC

PROGRAMMING LANGUAGES

Python c/c++ rust SQL bash
MATLAB Simulink assembly
verilog CSS HTML

TOOLS & LIBRARIES

Googling Django PyTorch Keras
Cloud computing Android Git
Docker PostgreSQL MongoDB
node Vue.js ROS/ROS2
UNIX tools LaTeX CAD

INTERESTS

FOSS Linux vim Reliability AI
Autonomous Vehicles Badminton

OTHER

- Badminton:** ClearOne Nationals Team, Eric Hamber Provincial Team Captain & Assistant Coach, 2018 Junior Nationals Finalist, UofT Badminton Club Exec
- Theatre:** Wrote and directed full-length show: 'To Bleach a Pigeon'. Oversaw actors, crew, set design, and creative process
- Awards:** Schulich Leadership Scholarship nominee, Bert & Greta Quartermaine Badminton Scholarship Recipient, BC District Scholarship & BC Achievement Scholarship Recipient, Canada Service Corps Student Service Grant, ESROP-UofT