BRIAN CHEN

Student & Aspiring Software Engineer

brianchen.chen@mail.utoronto.ca | +1 (778)-681-4322 | Vancouver, BC & Toronto, ON Canada | chenbrian.ca
brianchen28914 | ihasdapie

EXPERIENCE

Software Developer

BC Parks Foundation

July 2020 – September 2021 | Vancouver, BC

- Worked with team to build 'DiscoverParks' platform and data collection/visualization solution for parks in British Columbia with **Django**, **PostgreSQL**, and **VueJS**; currently in private beta
- Designed, implemented, and maintained site backend, internal content management interface, and early-stage frontend experiences.

Teaching Assistant - ESC180, ESC190

Division of Engineering Science - UofT

September 2021 - Present | Toronto, ON

- Assisted labs & course review for introductory `python` & `c` classes
- Held office hours and produced review content to aid students
- Consistently achieved perfect student evaluations.

Research Assistant

Intelligent Sensory Microsystems Lab (Funded by ESROP-UofT)

May 2021 – Present | 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 story busyness 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

B.A.Sc in Engineering Science

University of Toronto

2020 – 2025 | Toronto, ON

Planned major in Computer Engineering with Machine Intelligence minor. cGPA 3.82, Dean's List.

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 | FPGA

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