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 Intern
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