Steven Brown

Engineering Physics Co-op Student

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Skills

Programing:	Java, C/C++, Python, MATLAB, Qt GUI Design, Bash Scripts
Electrical:	Altium, Oscilloscope, Analog & Digital Circuits, Soldering
Mechanical:	SolidWorks, Servomotor & Ultrasonic Sensor use, Prototyping, Hand Tools

Education

The University of British Columbia   **Sept 2019 – May 2024 (expected)**

- Engineering Physics, BASc
- Cumulative GPA: 3.90 / 4.00
- Deans Honour List & Trek Excellence Scholarship Recipient   **Sept 2019 – Current**

Work Experience

Embedded Software Engineer Co-op – NZ Technologies, Vancouver   **Jan – Apr 2021**

- Developed embedded C++ applications for deployment on Windows & embedded Linux.
- Developed interactive GUIs using Qt, while managing software testing, stable build releases, and version control.
- Worked collaboratively in a team with experienced software engineers to diagnose, analyze and solve a variety of product performance issues.

Advanced Logger Project – NZ Technologies Co-op, Vancouver   **Jan – Feb 2021**

- Implemented a data logging system in C++ for different embedded touchless elevator devices.
- Kept track of sensed actions, errors, and sensor data, which was stored in a daily report and sent out automatically by email through bash scripts.
- Report included a version of the data in excel format where it could be further analyzed.
- Tracked the intension of the user and how the elevator device reacted. Looked at weather the reaction was correct or whether the user intended a different response.

Technical Projects – More projects available on website at top of this resume

Machine Learning Car Simulation – UBC, Vancouver   **Sept – Dec 2021**

- Developed an autonomous car that drives through a simulated environment, obeying traffic laws, and returns license plates and associated parking ID using machine learning and computer vision.
- Linux based ROS Melodic/Gazebo was used as a simulation ground for the robot.
- Google Colab was used to access python libraries such as OpenCV for computer vision and Tensorflow to design and train neural networks.

Image Tracker – UBC, Vancouver   **Sept – Oct 2021**

- Implemented a homography based image tracker with GUI using SIFT (Scale-invariant feature transform) and PyQt.
- Given a template image of an object, the application highlights the object in a live web camera stream while moving.
- Tested multiple image object pairs with rotation and translation of the object and resulted with 98% accuracy.

Interests

- Avid weightlifter & runner with combined training up to 5 times per week.
- Played senior basketball and continue to play in a men's league once per week.