



## Education

**University of British Columbia**

*Sept 2016 – Apr 2022 (Expected), Vancouver BC*

**Engineering Physics & Computer Science, Bachelor of Applied Science**

GPA: 80%

- **Coursework:** Software Engineering (94%), Data Structures & Algorithms (82%), Machine Learning Competition (93%), Robot Competition (82%), Science One (enriched 1<sup>st</sup> year science; 87%), Relational Databases (In Progress)
- **Involvements:** Orbit (Satellite Design Team) Software Developer, Math & Physics TA, Orientation Leader

## Work Experience

**Coursera – (Incoming) Software Engineer Intern**

*Sept - Dec 2021, Toronto ON*

**Later – Software Engineer Intern**

*May - Aug 2021, Vancouver BC*

**Intel – Software Engineer Intern**

*May - Dec 2020, Vancouver BC*

- Developed a scalable telemetry query application, organizing over 5 million data entries, using **SQLite** to query a relational database, **Python** and **Flask** for the backend, and **JavaScript**, **HTML**, and **CSS** for the frontend.
- Took initiative to optimize, automate, and add to Intel's **Python** workflows, libraries, documentation, and APIs.
- Awarded over \$200 via the Intel Recognition Program for quality, completeness, and detail of work.

**TRIUMF – Beta-Decay Researcher & Software Developer Intern**

*Jan - Apr 2019, Vancouver BC*

- Increased camera's frame rate by over 300%, using the camera's software development kit and **C++** to implement dynamic memory allocation and multithreading – crucial for capturing the quickly decaying atoms.
- Corrected errors, inconsistencies, and contradictions missed by the research team for over 6 years.
- Authored a work term report now published on TRIUMF's website and included in TRIUMF's publication library.

## Technical Projects

**3D-O (Web Application) – In Progress** (Personal Project)

*Winter 2021*

- Mission: to combat COVID19 by sharing my creative, lifelong hobby, 3d-origami, to promote social distancing.
- 3D project-modelling interface via Three.js; Paint-by-pixel interface via React, MobX State Tree.

**Daily Dash (Mobile Application) – 1<sup>st</sup> / 28 Teams** (Course Project, Team of 4)

*Fall 2020*

- Mission: to empower users across all walks of life to achieve their life goals via regular, repeated efforts.
- Dynamic forms via React Native, MobX State Tree; Push notifications, user authentication via Google Firebase.

**Machine Learning Robot Competition – 4<sup>th</sup> / 20 Teams** (Course Project, Partnership)

*Fall 2019*

- Mission: to program a simulated robot for a Robot Operating System machine learning competition.
- Autonomous navigation via OpenCV, reinforcement learning, and image processing tools in Python.
- Convolutional neural network, implemented with Keras, identifies alphanumeric characters with 99% accuracy.

**Robot Competition – Top 3 / 16 Teams, Time Trials** (Course Project, Team of 4)

*Summer 2019*

- Mission: To prototype and build a tape-following, stone-collecting robot for a student competition.
- Accurate PID control algorithm and C++ state machine enable autonomous navigation and functionality.

## Achievements

**Dean's Honour List** (80%+ GPA, 27+ credits), **1<sup>st</sup> Place** UBC 2020 Software Engineering Competition (28 teams, 100+ participants), **4<sup>th</sup> Place** Machine Learning Competition (20 teams), **Honourable Mention** nwHacks 2021 (Western Canada's Largest Hackathon; 197 teams, 776 participants), **Intel Recognition Program** (\$200+)

## Technical Skills

**Languages:** Python, JavaScript, TypeScript, C, C++, Java, React.js, React Native, HTML, CSS, SQL, LaTeX, Bash

**Technologies:** Git, Linux, MongoDB, Node.js, Express.js, MobX, SQLite, MySQL, OpenCV, Keras, Three.js, Android