



Technical Skills

- **Languages:** Python, JavaScript, C, C++, Java, React, React Native, HTML, CSS, SQL,
- **Technologies:** Git, Linux, MongoDB, PostgreSQL, SQLite, OpenCV, Keras, Tensorflow, MobX, Node, Express

Work Experience

Intel Corporation – Software Engineering Intern

- Developed a telemetry query application; Used a **SQL**-based relational database, **Python** and **Flask** for the server, and **JavaScript**, **HTML**, and **CSS** for the frontend. Vancouver, BC, Canada
- Took initiative to optimize and contribute to Intel's **Python** workflows, libraries, and APIs. May – Dec 2020
- Awarded several times, for quality, completeness, and detail of work.

TRIUMF: Canada's Particle Accelerator – Beta-Decay Researcher

- Optimized data acquisition using camera's software development kit to process images. Vancouver, BC, Canada
- Increased camera's frame rate by over 300%, using **C++** to implement dynamic memory allocation and multithreading – crucial in capturing the quickly decaying atoms. Jan – Apr 2019
- Exposed and corrected errors and contradictions previously missed by the research team.

Education

University of British Columbia – Engineering Physics & Computer Science, BSc.

- **Coursework:** Software Engineering (94%), Data Structures & Algorithms (82%), ENPH Project I: Machine Learning Competition (93%), Intro to Instrument Design: Robot Competition (82%) Vancouver, BC, Canada
- **Involvements:** Orbit: Satellite Design Team, Physics & Math Teaching Assistant 2016 – 2022
- **GPA:** 80%

Achievements

- **Distinctions:** Dean's Honour List (80%+ GPA, 27+ credits), **1st Place** UBC 2020 Software Engineering Competition (28 teams, 100+ participants), **4th Place** Machine Learning Competition (20 teams), **Honourable Mention** nwHacks 2021 (197 teams, 776 participants), **Intel Recognition Program** (\$200+)
- **Programs:** Science One (70 students; enriched 1st year science; 87%), Engineering Physics (60 students)
- **Awards:** Shane Simpson Governor General Award, Distinction in University of Waterloo Math Contests

Technical Projects

- 🌀 **3D-O – Web Application – In Progress** (Personal Project) Winter 2021
 - Mission: to combat COVID19 by sharing my lifelong hobby, 3d-origami, promoting social distancing.
 - 3D project-modelling interface via Three.js; Paint-by-pixel interface via React, MobX State Tree.
- 🌀 **Bear Buddies – Web Application – Distinction / 197 Teams** (Hackathon, Team of 4) Winter 2021
 - Mission: to alleviate COVID19-related mental health struggles in kids and teens; to promote self-care.
 - Distinguished in nwHacks 2021 – Western Canada's largest hackathon with over 700 participants.
- 🌀 **Daily Dash – Mobile Application – 1st / 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, authentication, via Google Firebase.
- 🌀 **Machine Learning Robot Competition – 4th / 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, via Keras and TensorFlow, accurately identifies alphanumeric characters.
- 🌀 **Robot Competition – Top 3 / 15 Teams in 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.