THE UNIVERSITY OF BRITISH COLUMBIA

Engineering Co-op Program
Faculty of Applied Science
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Technical Skills

Tools

- Oscilloscope
- Signal Generator
- Multimeter
- Soldering Iron
- Perfboard/breadboard
- Arduino
- CircuitPython/MicroPython
- Jupyter

Programming Languages

- C/C++
- Python
- Dart/Flutter
- JavaScript/Node.js
- Java
- MATLAB
- Julia
- Qt/QML
- C#

Software

- SOLIDWORKS
- Inventor
- EAGLE
- Git
- Linux (multiple distros)
- Vim

Academic & Co-op Status

Academic Program:
- Mechanical Engineering; 4 of 8 academic terms completed;
- Anticipated date of graduation: May, 2020

Co-op Status
- Completed 1/5 Work terms; available for 4 or 8 beginning January, 2019

Co-op Work Experience

Precision Nanosystems — September, 2018 – December, 2018

Instrumentation Engineer Co-op

- Designed and built equipment to run experiments on microfluidics devices
- Wrote reports documenting the results of microfluidics experiments

Technical Projects

Low Waste Tangential Flow Filtration — November 2018 – December 2018

- Built a device similar to the KR2*i* TFF System
- Uses two syringe pumps connected directly to the filter instead of a peristaltic pump to reduce material lost due to tubing.
- Each syringe pump is capable of determining the volume of fluid contained within a syringe and allows for a user to specify a specific concentration ratio.

ASDS 2.x Sea-based Landing Pad Scale Prototype — January 2018

- Working with a group of 6 other students, worked through a formal engineering design process to build a boat capable of balancing and transporting model rockets
- Implemented a battery monitoring system to limit throttle based on power output, improving stability by preventing motor brownouts that would cause the boat to rock
- Wrote a class to remap controller inputs to a more intuitive control scheme allowing for greater control.

BM Bot **January 2018**

- Working with a group of 3 other friends, built a Discord bot using Node.js that would track user's League of Legends games
- Used the Riot Games API to detect when a user finished their game, and then would send messages to the user poking fun at them based on their performance

Student Teams

UBC Orbit - ADCS **September 2018 – Present**

- Orbit is building a cubesat for the Canadian Satellite Design Challenge
- The Attitude Determination and Control subteam is designing a system that will allow the cubesat to localize itself while in orbit and reorient itself as necessary

UBC Rapid **October 2016 – Present**

- Specializes in advancing rapid prototyping technologies, especially 3D printing
- Currently running cheapest 3D printing service on campus

Volunteer Work Experience

Richmond 19th **September, 2012 – Present**

Scout Leader

- Plan and run engaging programs every week for youth aged 8-10
- Teach survival and life skills at camping trips, fostering an appreciation for the outdoors

Education

The University of British Columbia **Expected May 2021**

Bachelor of Applied Science – Mechanical Engineering

Udemy **2018**

Certified Scratch Programmer

Activities and Interests

- Billiards – summer leagues
- Sports – Ultimate Frisbee, snowboarding