Engineering Co-op Program Faculty of Applied Science 2385 East Mall Vancouver, BC Canada V6T 1Z4

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#### IT

Electrical Equipment	Programming Languages	Software
<ul> <li>Oscilloscope</li> <li>Signal Generator</li> <li>Multimeter</li> <li>Soldering Iron</li> <li>Perfboard/breadboard</li> </ul>	<ul> <li>C</li> <li>Java</li> <li>JavaScript</li> <li>Python</li> <li>Qt/QML</li> <li>C#</li> <li>MATLAB</li> </ul>	<ul> <li>SOLIDWORKS</li> <li>Inventor</li> <li>EAGLE</li> <li>Git</li> <li>Linux (multiple distros)</li> </ul>

## Academic & Co-op Status

**Academic Program:** • Mechanical Engineering; 3 of 8 academic terms completed;

• Anticipated date of graduation: May, 2020

**Co-op Status** • Completed 0/5 Work terms; available for 4 or 8 beginning January, 2018

#### **Technical Projects**

#### **Custom 3D Printer**

December 2016 - Present

- Lead a team of 5 in building an i3 based 3D printer
- Designed custom mounting solutions to enable compatibility with readily available parts
- Added a servo actuated pen to the printhead, allowing for multicolor prints without swapping filaments

#### **Electric Locomotive Prototype**

January 2018

- Working with a group of 6 other students, worked through a formal engineering design process to build a scale train for class wide competition
- Implemented an optical encoder system to allow the train to be aware of its position along the track, allowing the full power output of the motors to be utilized on straightaways

### Offline Transit App

June 2017 - Present

- Wrote a Python script to scrape the Translink API for every bus stop and corresponding routes into an SQLite database
- Built an Android app using the database that shows the user nearby bus stops with buttons to query individual bus times

## **Automated Quoting Service Prototype**

October 2017 - Present

- Wrote a Python program that would automatically generate price quotes whenever a user submitted a job to UBC Rapid's printing service, reducing quote times from up to 48 hours down to 10 minutes.
- Leveraged multiple Google APIs to access Google Forms data.

#### **Student Teams**

## **UBC** Rapid

October 2016 - Present

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

# Hamilton Kumon (Richmond, BC)

September, 2015 - February, 2016

Tutor/Marker

- Created a personal system to mark students' worksheets in an efficient manner
- Taught children mathematics and English at various levels in a friendly way that encouraged self-growth

## **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.

# The University of British Columbia Bachelor of Applied Science – Mechanical Engineering

**Expected May 2021** 

- Billiards summer leagues
- Sports Ultimate Frisbee, snowboarding