



YILIN LIU  
Liuyilin.liu@yahoo.com

## SKILLS SUMMARY

- Completed 40 hour machine shop training course using drill press, lathes and mills
- Rapid Prototyping using laser cutters, water jet cutter and 3D printers
- Construction and debugging of circuit boards using soldering iron, digital multimeter and oscilloscope
- MATLAB, C++, Java, R, and Python

## TECHNICAL EXPERIENCES

### **National Research Council- Data Analytics Center**

**Feb. 2017-May 2017**

#### *Data Scientist Co-op*

- Tested social media web APIs for availability of data using R to provide recommendations for future research
- Exceeded deadlines by completing designated investigations within the first 2 month
- Expedited expectations by standardizing addresses and producing interactive density map for machine learning predictions on shipment addresses using JSON, Google Maps API and Overleaf
- Minimized manual data collection by writing R script to scrap weather website for updated weather conditions

## TECHNICAL PROJECTS

### **ENPH Robot Competition**

**Summer 2017**

#### *ENPH253: Introduction to Instrument Design*

- We built and raced an autonomous robot capable of navigation around an obstacle course, retrieve toy animals and delivery the toys using zip line.
- Won first place during competition among sixteen teams
- Designed and fabricated chassis assembly. Constructed four iterations using carboard and laser cutter.
- Used 3D printer and Laser Cutter to produce three iterations of claw design.
- Designed finite state machine for Arduino to coordinate robot motions. Used encoders and PID control for navigation.

### **UBC's Submarine Team (SUBC)**

**Sept. 2016-Present**

#### *Frame Sub-Team Co-Lead*

- Managed testing and design of aluminum internal frame to improve mechanical stability of mounting and resolve accessibility issues of the hull
- Implemented MATLAB code to generate propeller blade curves and airfoil profiles to simplify 3D design
- Will 3D print propellers for testing, analyze test results and construct propeller using carbon fiber composites
- Basic machining like drilling, tapping, filling and sanding to shape mounts and ensure correct mating

## EDUCATION

### **University of British Columbia**

**May. 2020**

#### **Bachelor of Applied Science, Engineering Physics**

- Dean's Honour List since first year till present
- Outstanding International Student Award, Trek Excellence Scholarship and Applied Science International Student Scholarship

## HOBBIES:

### **EWB Fairtrade volunteer and Venture Lead (UBC-Vancouver)**

**Sept. 2015-December 2017**

- Planned Fairtrade campus week and made over 500 student's day by giving pancakes, free goodies and cheerful encouragement on life

#### **Beginner Baker:**

- Banana bread for bake sale which sold out in the first 30 minutes, raising a net profit of 30 dollars for 15 slices of banana bread