# YILIN LIU 1 3rd Year Engineering Physics 2

## SKILLS SUMMARY

- 40 hour machine shop training course using drill press, lathes and mills
- Rapid Prototyping using laser cutters, water jet cutter and 3d printers to manufacture parts
- Using oscilloscope and multimeter to debug circuits
- Soldering to construct circuit boards
- MATLAB, C++, Java, R and Python

## TECHNICAL PROJECTS/ EXPERIENCES

#### **National Research Council**

Feb. 2017-May 2017

Data Analyst Intern 3

- Tested web APIs for availability of data pertaining to general population using R
- Performed preliminary data analysis for shipment prediction project using over leaf package and google API
- Used Markdown and git to document summaries and key findings 4

#### **ENPH 253: Course Name Summer Robot Course**

May 2017-Aug. 2017

- Designed and built a fully autonomous tape-following robot capable of navigating an obstacle course to retrieve toys from a tub and deliver the toys down a zipline in groups of 4 students
- Won 1st place during competition among 16 teams
- Implemented and designed both the hardware and software for chassis, retrieval system and zip line system 5

## **UBC Submarine Engineering Student Team (SUBC)**

Sept. 2016-Present

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 for easy CAD design
- Will 3D print propellers for testing, analyze test results and construct final propeller from carbon fiber
- Basic machining such as drilling, tapping, filling and sanding to shape mounts and ensure correct mating of components

## **HOBBIES:**

#### EWB Fairtrade volunteer and Venture Lead (UBC-Vancouver) Sep 2015-Present

 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
- Lemon loaf which was devoured by roommates in a span of 30 minutes
- Planning on expanding baking skills by making cookies, muffins, and ultimately a beautiful, fluffy soufflé

#### Rewriting Resume Content

### List of all projects

- Automnous claw from 1st year,
- Cardboard chair from 1<sup>st</sup> year
- CPEN 221 mini-projects: survival simulation, graphs and stuff
- Work Term experience at NS
- Robot Course
- Design Team
  - o Frame
  - o Propeller code
  - o Cading of Propellers
  - o Micellenous stuff

Skill Summary: