DAWSON HORVATH

I AM AN ENGINEERING PHYSICS STUDENT WITH UNBRIDLED CURIOSITY, A PASSION FOR FIGURING OUT HOW THINGS FUNCTION, AND FOR APPLYING MY DESIGN KNOWLEDGE AND HANDS ON EXPERIENCE TO SOLVE USER AND LARGE-SCALE PROBLEMS.

3 Oct 1999 | Horvath.dawson@gmail.com | 250-306-0343 | github.com/HorvathDawson | https://horvathdawson.github.io

EXPERIENCE

Fullstack Developer — Streamline Transportation Technology
April 2018 – September 2018 | Kamloops, British Columbia

- Developed a complete Node/AngularJS web application to maximize workflow by automating the strenuous manual procedures
- Augmented existing QA automation by finishing incomplete Protractor scripts and extending previous framework helper classes
- Collaborated with co-workers to solve issues encountered during technical projects

SRF Development Co-op Student — TRIUMF Particle Accelerator
January 2019 – May 2019 | Vancouver, British Columbia

- Headed the development of a UHV induction furnace used to dope niobium superconductors with gas compounds or bake out hydrides to improve the SRF cavities quench limit by a factor of 10 or more
- Developed a controller which read a 3-axis flux gate magnetometer probe using the data to control the current through a Helmholtz coil to minimize the ambient field
- Accelerated the process of removing, cleaning, and rebuilding cryostats in class 1000, 100, and 10 clean rooms

PROJECTS

Robot Design Competition — School Project
May 2019 – September 2019 | University of British Columbia

- Worked with a small team to engineer a fully autonomous robot.
- Implemented mechanical and electrical design to develop reliable instruments and robot kinematics.
- Minimized electrical noise by controlling the robot via purely serial communication (SPI) between all instruments.
- Followed a rigorous review processes with large engineering communication expectations.
- Competition details: https://projectlab.engphys.ubc.ca/enph-253-2019/

Simulated gazebo robot — School Project
March 2019 – August 2019 | University of British Columbia

- Simulated Autonomous robot in a gazebo environment, controlled using machine learning and computer vision techniques to complete a set of tasks.
- Competition details: https://projectlab.engphys.ubc.ca/enph-353-fall-2019/

DIY electric Skateboard — Personal Project
June 2018 | Thompson Rivers University, Kamloops

- Designed, built and prototyped an electronic skateboard capable of carrying an average human with the purpose of routinely commuting $20^{+} km$ a day at approximately $30^{+} km/h$.

DIY 3D Printer — Personal Project
June 2017 | Thompson Rivers University, Kamloops

- Developed and built a Prusa i3 3D printer clone from scratch for under 300 CAD by researching modern 3D printing technology to determine the best approach to minimize my cost of production.

EDUCATION

B.ASc. In Engineering Physics
University of British Columbia – Faculty of Applied Science
September 2018 – Present

Engineering Transfer Program
Thompson Rivers University – Faculty of Applied Science
September 2017 – May 2018

TECHNICAL SKILLS

- Development

Python | JAVA | C | MATLAB | Arduino | JavaScript | TensorFlow | Keras | OpenAI Gym | openCV | Linux | SQLite | HTML | CSS | Git

- Hands on Skills

Machining | Clean room experience | soldering | Hands on shop experience | Engine and small engine repair

- Hardware

AutoCad | Solid Works | Prototyping | Binary logical | Machine code | PID control | Circuit design/prototyping

- Design

Web design | Photo shop | LaTex

INTERESTS

Coffee
Rock climbing
Mountain biking
Mountaineering
Mechanical shop work
Coding
Biology
Cooking
Football
Rugby