

Connor Floyd

UBC Engineering Physics

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Education

3rd Year Engineering Physics

University of British Columbia, Vancouver, Canada
UBC Trek Excellence Scholarship

GPA 89.6%

Expected graduation: May 2028

Skill Sets

Mechanical: **Mill, Lathe, CNC**, Waterjet cutter, 3D printing, Laser cutter, MIG welding

Software: **SolidWorks**, Fusion 360, **C++**, MATLAB, Python, Java, JavaScript, G-Code, MS Office Suite

Electrical: **PCB Design**, Circuit Design/Analysis, Soldering, ESP32, Raspberry Pi, Oscilloscope

Technical Experience

Mechanical Engineering Co-op

January 2025 - April 2025

Corvus Energy – Prototyping Team

- Designed battery system parts and assemblies in **SolidWorks**, producing manufacturing drawings and documentation for iteration and handoff
- Manufactured and assembled prototype parts** and battery subassemblies using CNC machines and shop tools
- Programmed and operated a **Tormach CNC mill** using conversational machining and 3D toolpaths
- Executed **battery system tests** on thermal runaway, vibrations, adhesives, and environmental sealing
- Wrote **formal documentation** including design documents, risk analyses, test plans, test journals, and reports
- Owned work from ideation to finalized prototypes, **completing 15+ projects** over a 4-month term
- Completed tasks with minimal supervision and coordinated with other engineers

Engineering Design Team Co-Captain

September 2023 - Present

UBC ThunderBikes

- Led a team of **55+ members** and oversaw the mechanical and aerodynamic sub-teams
- Provided technical guidance during design and manufacturing, focusing on the **battery pack** and **high-voltage safety**
- Designed and fabricated parts for UBC's first electric race motorcycle, including a **tubular subframe**, battery casings, and high-voltage electronics mounts for a **400A, 110V system**
- Produced CAD models and drawings in **SolidWorks**, emphasizing ease of manufacturing and assembly
- Performed **finite element analyses** and hand calculations to ensure the safety and robustness of designs

Autonomous Pet Rescue Robot

May 2025 - August 2025

ENPH 253 Robotics Competition

- Led mechanical design** for a 4-person team developing an autonomous robot to locate and transport stuffed animals
- Rapidly tested and iterated during the **6-week competition**, completing 4+ iterations per subsystem
- Created a full **SolidWorks** assembly of the robot, designing subsystems including the chassis, drivetrain, robotic arms, and pickup mechanism
- Designed dual arm pickup system, utilizing a central driveshaft to maintain arm synchronization
- Fabricated components using laser cutting, **machining**, **3D printing**, and hand-tools

Smart USB Hub

Summer 2024

Personal Project

- Developed a voice-controlled USB hub for lights, integrating cloud services and **embedded hardware control**
- Designed and soldered a **custom BJT-based switching board** to control USB outputs with microcontroller GPIO
- Set up a Raspberry Pi server with Google Assistant cloud communication and MQTT messaging to route commands to the **ESP32 microcontroller**
- Modeled and 3D printed an enclosure with heat-set inserts and internal component mounting features