Connor Floyd
UBC Engineering Physics

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Education

3rd Year Engineering Physics GPA 89.6%
UBC Applied Sciences, Vancouver UBC Trek Excellence Scholarship

Skill Sets

- **Mechanical** Mill, Lathe, CNC, Water-jet cutter, 3D-printing, laser-cutter, MIG welding, woodworking
- **Software** SolidWorks, Fusion 360, Java, JavaScript, C, C++, MATLAB, Python, G-Code, MS Office Suite
- **Electrical** Soldering, PCB Design, ESP32, Raspberry Pi, Oscilloscope, Circuit Design/Analysis

Technical Experience

Mechanical Engineering Co-op (Prototyping) January 2025 - April 2025
Corvus Energy – Prototyping Team

- Designed prototype parts and assemblies for battery systems in SolidWorks, producing manufacturing drawings and documentation for iteration and handoff
- Manufactured and assembled prototype parts and battery subassemblies using shop tools and CNC machines. Became adept with a Tormach CNC mill using conversational machining and 3D toolpaths
- Performed battery system tests, including tests on thermal runaway, vibrations, adhesives, and environmental sealing. Required instrumentation and formal documentation (risk analyses, test plans, journals, and reports)
- Saw through tasks from ideation to finalized prototypes; completed tasks with minimal supervision and coordinated with other engineers

UBC ThunderBikes Co-Captain September 2023 - Present
Engineering Design Team

- 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 battery
- As Co-Captain, oversaw the mechanical and aerodynamics sub-teams. Provide technical support throughout the design and manufacturing process.
- Produced CAD models and drawings in SolidWorks, emphasizing design for manufacturability and assembly (weldability, jigging, accessibility of components)
- Performed finite element analyses and hand calculations to ensure the safety and robustness of designs

ENPH 253 Robotics Competition May 2025 – August 2025

- Built an autonomous robot to locate, collect, and transport stuffed animals in a team of 4
- Led mechanical design and created a full SolidWorks assembly of the robot
- Fabricated the majority of the robot using laser-cutting, machining, 3D printing, and hand-tools
- Designed sub-systems such as the chassis, drivetrain, robotic arm, and stuffed animal pickup mechanism
- Rapidly tested and iterated on the robot's design, working in 1–2-week design cycles

Smart USB Hub Summer 2024
Personal Project

- Designed and built a Google Assistant controlled USB hub to control 5V lights, utilizing an ESP32, Raspberry Pi server, and transistor switching circuit
- Designed and soldered a custom BJT-based switching board
- Integrated multiple software systems; Set-up a Raspberry Pi server with cloud communication and MQTT messaging to route commands to the ESP32 microcontroller