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
- **Software**   **SolidWorks**, Fusion 360, Java, JavaScript, C, C++, MATLAB, Python, 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 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 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 tests. 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

- Oversee the mechanical and aerodynamic sub-teams as Co-Captain, providing technical support throughout the design and manufacturing process
- 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 design for manufacturability and assembly (weldability, jigging, accessibility of components)
- Performed finite element analyses and hand calculations to validate 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
- 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
- Rapidly tested and iterated on the robot's design in 1–2-week design cycles, completing 4+ iterations per subsystem

Smart USB Hub   Summer 2024
Personal Project

- Developed and built a voice-controlled USB hub 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