

# Connor Floyd

## UBC Engineering Physics

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### Education

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#### 3<sup>rd</sup> Year Engineering Physics

UBC Applied Sciences, Vancouver

GPA 89.0%

UBC Trek Excellence Scholarship

### Skill Sets

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- **Mechanical** Mill, Lathe, Water-jet cutter, CNC, 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

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#### Mechanical Engineering Co-op Student

January 2025 - April 2025

Corvus Energy – Prototyping Team

- Designed prototype parts for battery systems, involving extensive use of SolidWorks and thorough documentation
- Manufactured and assembled various prototype parts, assemblies, and battery systems. Displayed excellent mechanical aptitude and problem-solving skills
- Gained aptitude with a Tormac CNC mill and other CNC machines. Used conversational machining and 3D toolpaths
- Performed various battery system tests, including tests on thermal runaway, vibrations, adhesives, and environmental sealing. Requiring instrumentation, and writing test plans, risk analyses, test journals, and test reports.
- Was extremely self-directed; completed tasks with little to no supervision

#### 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
- Created CAD designs and drawings in SolidWorks, emphasizing design for manufacturability, such as jiggging, ease of welding, and ease of assembly
- Performed finite element analyses and hand calculations to ensure the safety and robustness of designs
- Now fulfil a more admin & project management focused role

#### ENPH 253 Robotics Competition

May 2025 – August 2025

- Built an autonomous robot to collect stuffed animals in a team of 4
- Performed all the mechanical design work and created a SolidWorks model of the entire robot
- Was primarily responsible for the fabrication of the robot, using a laser-cutter, lathe, 3D printers, and hand-tools
- 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 compatible USB hub to control 5V lights, utilizing an ESP32 microcontroller
- Designed and soldered a custom transistor-based circuit to control 5V outputs via a microcontroller
- CADed and 3D printed a device enclosure
- Integrated several different software systems. Set-up a Raspberry Pi server with cloud communication and a messaging protocol to the ESP32 microcontroller