Trevor Daykin

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Profile

I have one year of engineering industry experience with electromechanical systems, mechanical design, and root cause analysis for biomedical and manufacturing applications. With those skills, I have created user-facing parts for large CAD assemblies with technical drawings, in-house testing applications, and jigs. I believe in hands-on investigations, lab testing, and fast-paced environments.

Education

4th Year UBC Engineering Physics, BASc **Sept. 2021 — Present**

University of British Columbia

- Engineering Physics is the bridge between Engineering and Science combining advanced concepts in math and physics while putting them to practical use in team-based projects.
- Key Courses: Instrumentation design, material science, machine shop.

Technical Skills

Prototyping Tools: SolidWorks, 3D printing, laser cutting, soldering, Arduino, STM32, KiCad, FPGAs.
Programming: Python, Linux, R, Matlab, C++.
Libraries/Frameworks: Onnx, PyTorch, OpenCV, ROS, NumPy, Pandas, PySide6.

Technical Experience

Instrumentation Engineer Co-op **May 2024 — Dec. 2024**

Cytiva

- Identified and solved a short-circuiting risk through root cause analysis, designing a machined aluminum part to improve device safety working with engineering teams and project managers.
- Developed an RFID reading tool to quickly diagnose 100% of RFID tagged products using an Arduino and custom software in C++.
- Designed and prototyped user-facing parts for large biomedical device CAD assemblies with technical drawings.

MEA Process Engineer Co-op, Advanced Manufacturing **Jan. 2023 — April 2023**

Ballard Power Systems

- Hands-on experience operating Liquid Injection Molding machines including troubleshooting and optimization of molding parameters through data collection and analysis.
- Decreased production times by 75% through a combination of rapid prototyping 3D printed jigs and updates to vision system routines.

Technical Projects

“Image Collector” plugin for Obsidian | *Open Source, TypeScript, JavaScript, CSS*

- Created an official plugin for a note-taking app called Obsidian with over 2K+ downloads, it automatically extracts and organizes images from markdown files.
- Actively engaged in user feedback and led 4 different version releases.

Autonomous Driving Robot Competition: 2nd Place | *Rapid prototyping, microcontrollers*

- Created the entire chassis, ensuring all sensors, circuits, and mechanical components function as intended, through rapid prototyping with 3D printers and laser cutters.
- Implemented and tuned a PID algorithm in C++ so the robot can follow tape smoothly through custom-made tape sensors controlled by an STM-32 Blue Pill.