Trevor Daykin

604-655-1972 | trevorddaykin@gmail.com | linkedin.com/in/trevordaykin | tdaykin.github.io

Profile

Engineering Physics student focused on building at the intersection of hardware, software, and biology. I have 1 year of internship experience in electromechanical systems, mechanical design, and root cause analysis for biomedical and manufacturing applications. In these roles I created user-facing parts in SolidWorks, Python test scripts, and production jigs. I thrive on taking initiative and providing lasting contributions.

Education

Engineering Physics, BASc **Expected Graduation: April 2027**
University of British Columbia *Vancouver, Canada*

- Engineering Physics bridges Engineering and Science by combining advanced concepts in math and physics and applying them in team-based projects.
- Key Courses: Instrumentation design, machine learning applications, material science, machine shop.

Technical Skills

- **Prototyping Tools**: SolidWorks, 3D printing, soldering, Arduino, STM32, KiCad.
- **Programming**: Python, Linux, R, Matlab.
- **Libraries/Frameworks**: NumPy, Pandas, OpenCV, PySide6, ROS.

Technical Experience

Instrumentation Engineer Co-op **May 2024 – December 2024**
Cytiva *Vancouver, Canada*

- Identified and resolved a short-circuiting risk by redesigning parts based on root cause analysis, eliminating 100% of related field issues. Collaborated with multidisciplinary engineering teams and product managers.
- Developed a stall pressure jig for production testing of a microfluidic actuator designing assembly procedures, test scripts, and a GUI in Python for streamlined data analysis.
- Designed and prototyped customer facing parts for large biomedical device CAD assemblies with technical drawings and process documentation.

Process Engineer, Advanced Manufacturing Co-op **January 2023 – April 2023**
Ballard Power Systems *Burnaby, Canada*

- Hands-on operation of Liquid Injection Molding machines; troubleshooted and optimized material flow parameters for polymer-based fuel cell components using data collection and statistical analysis.
- Reduced production times by 75% by rapidly prototyping 3D-printed jigs and updating vision system routines in C++.

Technical Projects

"Image Collector" Plugin for Obsidian | *Open Source, TypeScript, JavaScript, CSS*

- Created an official plugin for the note-taking app Obsidian with over 2k downloads; automating the organization of images from markdown files.
- Actively engaged with user feedback and led four version releases, as documented on GitHub.

Autonomous Driving Robot Competition: 2nd Place | *CAD, Machine Shop, microcontrollers*

- Collaborated with a team of four to brainstorm, design, and manufacture an autonomous robot that raced competitors while passively picking up and avoiding objects.
- Built the entire chassis and ensured all sensors, circuits, and mechanical components functioned as intended. Used rapid prototyping with 3D printers and laser/waterjet cutters.
- Implemented and tuned a PID algorithm in C++ to enable smooth tape following using custom-made tape sensors controlled by an STM-32 Blue Pill.