
Computer Engineering Student

EDUCATION**University of British Columbia***September 2022 – May 2027**Bachelor of Applied Science in Computer Engineering*

WORK EXPERIENCE**Electrical Test Engineer Co-op | Kardium Inc.***January 2025 – August 2025*

Burnaby, B.C.

- Developed **formal test protocols** to address system specifications and failure modes.
- Worked with external testing agency to certify product to **IEC-60601** medical electrical device safety standards.
- Automated data collection on large sample sizes using **Python**, significantly increasing the reliability of the test.
- Designed a low noise amplifier **circuit** to accurately measure $\sim 50\mu\text{A}$ leakage currents.
- Documented test setups and results using **version control software**, ensuring traceability for audits.

Electrical Designer Co-op | Eddyfi Robotics*May 2024 – August 2024*

Nanaimo, B.C.

- Tested software products, identifying and resolving bugs to implement new features for **firmware** and **software** within an **Agile** development cycle, using **Git** to control revisions.
- Debugged complex system connectivity issues related to **noise and crosstalk** from high frequency ICs.
- Designed jigs and fixtures in **Altium** for testing tether, track, and camera modules for a robotic system.
- Updated drawings and wrote **documentation** in revision-controlled system (SOLIDWORKS ePDM).
- Executed engineering test plans for various new products, recording and reporting results to necessary parties.

Production Technician | Eddyfi Robotics*May 2023 – August 2023*

Nanaimo, B.C.

- Interpreted various engineering drawings to build complex **electrical and mechanical assemblies**.
- Created new iterations of **assembly processes**, improving production time on select products by up to **250%**.
- Applied **quality control** procedures to verify high quality products and customer satisfaction.

STUDENT DESIGN TEAM**Electrical lead | UBC Thunderbikes***September 2023 – Present*

- Built an electric racing motorcycle to race in the AHRMA Formula Lighting division.
- Programmed an **STM32** using **C** to control the bike's operating states.
- Designed a **DC-DC circuit** in **Altium** to power the cooling pump.
- Used STM32 HAL libraries to enable **CAN bus** communication from the control PCB to the BMS and dashboard.
- Spearheaded the development of a custom dashboard, leading team of 4 students, utilizing the **STM32's** LTDC peripheral and LVGL for **graphics** to display real-time metrics including RPM, voltage, and temperatures.
- Produced a complex wire harness to ensure safe, modular, and efficient system integration.

PROJECTS**F1TENTH Autonomous Car | UBC***September 2024 – December 2024*

- Utilized **C++** in **ROS2** to control a 1/10th scale F1 car with added **LiDAR** module.
- Executed reactive control methods such as **PID** wall following and automatic emergency braking
- Deployed graph-based **SLAM** and apply rigid body transforms to calculate and optimize racing lines
- Developed novel reactive algorithms for obstacle avoidance and racing without mapping

SKILLS**Hardware:** *PCB Assembly, Oscilloscopes, Soldering, Safety analyzer, HiPot tester, Defib tester, General electrical lab tools***Software/Technologies:** *Linux, Git, Altium, ROS2, LVGL, MATLAB, GDB debugger, Quartus Prime, Modelsim***Programming:** *C, C++, Java, Python, Bash, Go, System Verilog, ARM Assembly*