Cole Fuerth – Embedded Linux & AI

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EXPERIENCE

Stealth Startup January 2025 – Present
Software Engineer Marina Del Rey, CA

- Develop embedded Linux systems on ARM architecture for autonomous robotics applications, implementing real-time control algorithms and sensor fusion pipelines.
- Design and implement distributed systems using PubSub architecture with **C++** and **Rust**, focusing on low-latency communication and fault-tolerant system design.

Satcom Direct Avionics August 2023 – January 2025
Embedded Linux Software Developer Ottawa, ON

- Streamlined over-the-air firmware updates using **OpenWRT** and **U-Boot**.
- Developed **QEMU**-based hardware emulation tools with **Python** and **C++**, allowing for rapid testing and validation of avionics software without the need for expensive hardware.

BMSLabs Windsor Jan. 2022 – Apr. 2023
Battery Management System Firmware Engineer Windsor, ON

- Built AI-powered SOC estimation systems using **Python** and **TensorFlow**, achieving 2% error margin accuracy that enabled $500K+ in cost savings by using consumer-grade components instead of precision hardware.
- Designed and assembled automated test fixtures for thermal and SOC validation, enabling continuous validation of battery management algorithms.

Smyth Innovations November 2021 – July 2022
Embedded Electronics Engineer Chatham, ON

- Developed a custom ECU for an RD400 motorcycle using **EasyEDA** for board design, and **C++** for software development. Custom wiring and PCB assembly done by hand. I was the only engineer on this project.

PROJECTS

Electric Long-boards

- Built electric longboards for city transportation with iterative design improvements through testing and refinement, achieving 40kph top speed and 35km range.
- Designed custom electronics with VESC firmware integration, hand-assembled battery packs using 21700 lithium cells, and fabricated waterproof enclosures for urban durability.

Electric Motorcycle

- Designed and built a fully electric dirt-bike conversion for engineering capstone, overcoming challenges in high-voltage safety, thermal management, and real-time control systems.
- Implemented custom control system using **Arduino Mega** and **C++**, featuring touchscreen HMI, isolated I/O modules, custom power distribution PCB, and precision analog sensing for battery monitoring and motor control.

EDUCATION

University of Windsor September 2020 - April 2023
BSc[H] Computer Science with AI Specialization | Minor in Mathematics | 3.9 GPA Windsor, ON

- Computer Science Teaching Assistant; Electrical Engineering Research Assistant; Tutored anything CS or EE related
- Won first place at CSGames 2023 for Emulators and WinHacks 2021 for Hardware.

St. Clair College September 2017 - April 2020
Electronics Engineering Technology, Associate Degree | 3.9 GPA Windsor, ON