# Cole Fuerth – Embedded Linux & Al

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# **EXPERIENCE**

Stealth Startup

January 2025 - Present

Marina Del Rey, CA

Software Engineer

- Embedded linux on ARM, RTOS, Small robots, Cool stuff, Under NDA.
- C++, Rust, Bash, NixOS, U-Boot, BMS, PubSub architecture, automated testing, system design, etc.

### **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 Al-powered SOC estimation systems using Python and TensorFlow, allowing for accurate soc predictions within 2% error margin from consumer parts and messy field data.
- Designed and assembled the test fixtures for thermal and soc prediction, allowing for automated testing and validation of battery management algorithms.

**Smyth Innovations** 

November 2021 - July 2022

Embedded Electronics Engineer

Chatham, ON

• Developed a custom ECU for an <u>RD400</u> 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 and for fun. Repeated iterations of breaking and improving the design.
- Custom electronics, enclosures, wiring, and battery packs. Runs on VESC firmware.

# **Electric Motorcycle**

- Programmed and assembled an electric dirt-bike for my engineering capstone.
- Assembled using an **Arduino Mega** for control with **C++**, a touchscreen display, custom aluminum panels, isolated inputs and outputs, and **all-custom power distribution and analog sensing**, mounted on a stripped dirtbike frame.

# **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 both 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