Cole Fuerth – Embedded Software & AI

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SKILLS

Languages : Python, C/C++, Rust, Bash and Nix are all used almost daily
Dev environment : NixOS, Pop!_OS or Ubuntu depending on the use case, with my dot-files.

EXPERIENCE

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

- Embedded linux work. Making small robots. Small startup, so I do a lot of different things.
- C++, Rust, Bash, Nix, U-Boot, BMS, PubSub architecture, automated testing, system design, etc.

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

- I made over the air updates easier, and made hardware emulation tools for automated testing and development.
- Worked on OpenWRT/Linux-based modems and routers on Arm with U-Boot
- Embedded linux, U-Boot, OpenWRT, C++, Python, Bash, QEMU Emulation of custom hardware, etc.

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

- Developed a cloud-based database and AI-powered SOC-estimation tool for Battery Management Systems using Python, as well as a fork of the LibreBMS firmware to collect data over MQTT and test the estimation tool.
- Made a (separate) dynamic interface between **I2C/UART** on **Arduino** and **Python** over USB using JSON packets, allowing for real-time data collection and analysis for thesis projects.

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.

PROJECTS

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.

Electric Long-boards

- Needed transportation in cities, so I built some electric longboards.
- Custom electronics, enclosures, wiring, and battery packs. Runs on VESC firmware.

EDUCATION

University of Windsor September 2020 - April 2023
BSc[H] Computer Science with AI Specialization | Minor in Mathematics | 89% Major Average 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