Cole Fuerth – Embedded Software & AI

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SKILLS

Languages : Python, C/C++, Makefile, Java, Rust, Bash

Tools : OpenWRT, NumPy, Pandas, Keras, SKLearn, Docker, PCB Fabrication, Battery Management Systems, Git, 3D Printing, Regex, Embedded Systems, Serial/I2C/UART/CAN, Linux

EXPERIENCE

Stealth Startup August 2023 – Present

Junior Software Engineer Marina Del Rey, CA

- Developed a configuration daemon for a custom Linux distribution that manages the system's configuration files and services.
- Assembly and testing of small electronics and batteries for a prototype device.

Satcom Direct Avionics August 2023 – January 2025

Embedded Linux Software Developer Ottawa, ON

- Primarily worked on OpenWRT-based modems and routers that used the U-Boot bootloader; included I2C drivers and firmware upgrades. Products range across ARM, ARM64 and x86 architectures.
- Created automation tools for rapid software testing using QEMU to emulate proprietary hardware.

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 / Longboards

- Programmed and assembled an electric dirt-bike 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 frame.
- Motorcycle was later stripped of cells to build from-scratch electric longboards, with custom 3d printed electronics enclosures, batteries and mounting hardware.

EDUCATION

University of Windsor September 2020 - April 2023

BSc[H] Computer Science with Artificial Intelligence Specialization | Minor in Mathematics 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 Windsor, ON