

JASON FEVANG | RESUME

Software Engineer

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Summary

I'm a computer engineering graduate with seven years of experience in systems-level and embedded development working with C++20 and Python. My background includes building firmware to drive LEDs on FreeRTOS+ESP32 and baremetal STM8. I'm currently implementing data formats focused on memory safety, security, and performance at Safe Software.

Work Experience

C++ Software Developer - Safe Software

2022 - Current (3.5 years)

- Developed and maintained high-performance features for a cross-platform enterprise application using C++20, focusing on memory-efficient data processing and system reliability
- Collaborated within a mature SDLC involving code reviews, CI/CD pipelines, and close coordination with QA to maintain software quality
- Spearheaded an AI-augmented development workflow using agentic tools (Claude-Code, Copilot) and authored a suite of shell scripts to automate repetitive development tasks, increasing team velocity

Embedded Software Developer - Better Way Lighting

2019 - 2022 (3 years)

- Collaborated with hardware engineers, designers, and stakeholders to develop firmware with real-time constraints for LED panels, DMX decoders, smart bulbs and more used on film sets globally, including Avatar 2 and Riverdale
- Used hardware protocols such as SPI, I2C and UART to interface with sensors, displays,
- Performed board bring-up using oscilloscopes, logic analyzers, multimeters and soldering irons
- Implemented a dmx512 receiver and transmitter,
- Oversaw work terms for four software co-op students, running interviews, performance reviews, mentorship and project management, leadership,

Projects

Optimize GIS PointCloud Network Access - Safe Software

2023

- Built a high-performance C++ implementation of Cloud Optimized Point Cloud(copc.io), utilizing octree construction to spatially index datasets exceeding 1B+ points
- Optimized remote dataset retrieval with HTTP/FTP range requests and over-fetching, avoiding full-file downloads

LimeLite LED Panel Firmware - Better Way Lighting

2023

- Architected a

STM8 Decoder Firmware and Bootloader - Better Way Lighting

2022

- Reverse-engineered and wrote custom firmware in C for six varieties of DMX512 decoders, with over 1000 devices programmed
- Developed a custom bootloader and programmer (ESP32) to update decoders through the DMX input
- Automated all configuration, build, and flashing tooling using makefiles and python scripts for development with the COSMIC STM8 Toolchain

Education

BASc Computer Engineering - Simon Fraser University

2015 - 2019

- Bachelor of Applied Science, Computer Engineering (With Distinction), 3.92 GPA