Sean V. Cohan

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Summary

Systems-oriented Computer Science student with experience in embedded computing, operating systems, computer vision, and full-stack development. Strong foundation in algorithms, security, and distributed systems. Known for reliability, clear communication, and effective team leadership from managing a 10+ person staff. Seeking a software engineering internship to apply low-level systems knowledge and build production-quality software.

Education

Oregon State University — Corvallis, OR

- **B.S.** in Computer Science — Expected 2026
- **M.Eng.** in Computer Science — Expected 2027

Relevant coursework: Algorithms, Data Structures, Operating Systems I–II, Computer Networks, Security, Databases, Theory of Computation, Cryptography, Programming Languages, Computer Architecture

Technical Skills

Languages: Python, C, C++, C#, Java, JavaScript, TypeScript, SQL, Assembly, Lua
Backend & Systems: .NET / ASP.NET Core, Linux development, REST APIs, Docker, gdb/lldb, Valgrind
DevOps / Infra: Git, GitHub Actions, AWS, Nix flakes, reproducible build environments
Computer Vision & Embedded: OpenCV, real-time video metrics, Xilinx Kria FPGA
Web Development: React, Node.js, Next.js, Express

Projects

HAML Embedded Video Validity Pipeline — *Kria KV260 FPGA, OpenCV, Python*

Built real-time image-quality checks (blur, contrast, temporal continuity) for incoming video frames. Integrated preprocessing into an embedded ML pipeline to reject unusable frames before inference. Maintained reproducible development toolchains using Docker, Ubuntu 20.04, and Nix flakes.

JOS Operating System Labs — *C, x86, QEMU*

Implemented paging, memory allocators, user processes, system calls, and privilege transitions. Debugged kernel execution using breakpoints, backtraces, register inspection, and QEMU monitors.

Algorithms & Data Engineering Portfolio — *Python, NumPy, Pandas*

Implemented BFS/A*, MST algorithms, max-flow, and dynamic programming solvers. Developed benchmarking pipelines using CSV outputs and Matplotlib performance plots.

YouTube Performance Calendar Web App — *Flask, AWS, Docker*

Built a full-stack web app to aggregate and display live music performance and event data. Deployed a containerized backend to AWS with automated build and update workflows.

Professional Experience

Little T American Baker — Café Manager (2016–Present)

Lead a 10+ person team responsible for hiring, training, scheduling, and day-to-day operations, ensuring continuity and operational consistency during an ownership transition. Maintain clear communication, consistent standards, and smooth daily operations in a high-volume service environment. Developed strong coordination, conflict-resolution, and leadership skills directly transferable to engineering teams.