

Robert Fuller

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Education

Bachelor of Science – Computer Science (Expected May 2026)

San Diego State University | San Diego, CA

Technical Skills

Operating Systems: OpenBSD, FreeBSD, Alma Linux, Ubuntu, Solaris, Proxmox, Alpine

Languages: Bash, Python, C++, Java, JavaScript, CUDA C++, SQL

Tools & Technologies: Docker, Git, GitHub Actions, GitHub API, SQLite

Virtualization & Networking: Proxmox Hypervisor, VM Configuration, IPv4/IPv6, DNS Administration

Frameworks: Flask, React, ROS2

Professional Experience

F1TENTH Autonomous Racing – Capstone Engineer | Aug 2025 – Present

- Operated under Agile/Scrum methodology across four 4-week sprints with weekly pushes, sprint reviews, and cross-functional coordination on a multi-person team.
- Developed and deployed a Pure Pursuit controller on physical hardware, achieving sustained speeds of 4 m/s; validated in simulation prior to deployment.
- Prototyped a YOLO-based perception pipeline integrated into a ROS2 stack for real-time opponent detection and rule-based overtaking activation.

Software Engineering Intern – Thirdsight.AI | Summer 2025

- Built a full-stack web application with a React frontend and Flask backend, enabling seamless data integration.
- Improved UI responsiveness through custom frontend controls in React and vanilla JavaScript.

GPU Scheduler Policy – Undergraduate Research | CSI Lab | Summer 2025

- Implemented a novel GPU partition scheduling policy on a Linux-based NVIDIA Jetson platform targeting real-time execution variance reduction across concurrent compute kernels.
- Analyzed 20+ academic papers and recreated baseline scheduling policies in CUDA C++ for empirical comparison.

Projects

Small Business Infrastructure – System Administration Course | Fall 2025

- Deployed a multi-VM environment using Proxmox, configuring guest/host relationships across OpenBSD, Ubuntu, and Solaris instances.
- Administered a production-grade mail server, SSL certificate exporter, and self-hosted password vault across isolated VMs.
- Managed IPv4/IPv6 networking and DNS across all hosted services; maintained security through access controls and certificate management.

CTRL Code Jam – DevOps Lead | CS Leadership Club | Feb 2026 – Present

- Leading a team of four building a fully CI/CD-driven competition grading pipeline using GitHub Actions and GitHub Classroom, replacing a traditional web backend.
- Authored multi-language grading scripts in Bash (Python, Java, C++) with timeout enforcement, compilation error handling, and standardized exit codes.
- Architected a staged competition system with automated team advancement triggered by CI/CD pass/fail results via the GitHub API.

Distributed Systems & Cloud Infrastructure – Cloud Computing Course | Spring 2026

- Built a horizontally scaling web infrastructure using Docker, a Flask load balancer, and an autoscaler with configurable latency thresholds.
- Implemented quorum-based strong consistency and gossip-based eventual consistency from scratch, analyzing CAP theorem tradeoffs.

