Surendra Jammishetti

+1 (669) 223-6681 | Santa Cruz, CA | suri312006@gmail.com | www.suri.codes | Github | Linkedin

EDUCATION

University of California, Santa Cruz

Santa Cruz, CA

Bachelor's of Science, Computer Engineering, concentration: Systems Programming

June 2023 — June 2026

- Cumulative GPA: **3.91**/4.0 | Dean's List
- Relevant Coursework: Data Structures, OS, Networks, Cryptography, Parallel Programming

WORK EXPERIENCE

Operating Systems Security Researcher

Sep. 2024 — Present

UCSC: Center for Research in Systems and Storage | Rust, Qemu, Kernel Programming

Santa Cruz, CA

- Reduced OS build times by 90% (3h $\rightarrow 20$ m) by designing and deploying a caching system
- Implemented kernel-level security primitives (capabilities, memory isolation) for research OS.
- Working with Professor Owen Arden to integrate Decentralized Information Flow Control into the OS kernel.

Software Engineering Intern

June 2024 — Aug. 2024

LightLinks | Embedded Rust and C Programming, eBPF, XDP, Kernel Programming, Networking

Santa Cruz, CA

- Engineered a Multi-Device system to facilitate a light-based network protocol.
- $\bullet\,$ Used existing kernel frameworks, such as eBPF and XDP to implement project specifications.
- Migrated legacy C codebase from C to Rust, reducing memory safety issues and improving developer productivity.
- Set up a custom GitHub Actions runner to build and test embedded networking software.

Lead Software Engineer

Mar. 2024 — Sep. 2024

ConnectifyAI | Go, Python, Typescript, PostgreSQL, Docker

Santa Cruz, CA

- Managed a team of 10 engineers (undergrads and graduate students), coordinating sprints and code reviews.
- Designed a system to build and run HuggingFace model pipelines with a custom runner.
- Created a performant REST API for our service using Go and PostgreSQL.
- Learned Docker and GitLab Runners to automate backend deployments.

EXTRACURRICULAR ACTIVITIES

MITRE eCTF 2025 (16th out of 116) | Rust, Docker, OpenOCD, GDB, Cryptography

Jan 2025 — April 2025

- Implemented a communication protocol over UART; for use between the host and microcontroller.
- Used GDB with OpenOCD to debug faults during the development process.
- Created Devontainers and build scripts to improve developer tooling for the team.
- Implemented a custom cryptographic scheme (DPRF) to ensure secure broadcast streaming with subscriptions.

PROJECTS

Hermes | Rust, gRPC, Docker, AWS Nitro Enclaves

github.com/suri-codes/Hermes

- Implementation of <u>SPARTA</u> a state-of-the-art meta-data private, traffic analysis-resistant messaging protocol.
- Expanded the system to support multiple devices per user and validated the proof-of-concept using AWS Nitro Enclaves.
- Final project for graduate level research class, report available <u>here</u>.

TARS | Rust, Sqlite, HTTP, TUI

github.com/suri-codes/TARS

- Built a custom task-tracking and long-term planning system, which I use daily to manage coursework and projects.
- Developed a TUI interface backed by a Sqlite daemon to fetch tasks from various sources i.e. Canvas, Google Calendar.
- ullet Implemented using a client server architecture compounding to an approximately 8k LOC production-style codebase.

SKILLS

- Programming Languages: Rust, Go, C/C++, (Type/Java)script, Python, SQL (Postgres, Sqlite), Protobuf
- Developer Tools: Git, Nix, Linux/Unix, GDB, Devcontainers, Cargo
- Technologies: gRPC, TCP/IP, REST APIs, eBPF, QEMU, AWS (EC2, Nitro Enclaves), CI/CD (GitHub Actions, GitLab Runners)