Surendra Jammishetti

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Education

University of California, Santa Cruz Santa Cruz, CA

Bachelor's of Science, Computer Engineering, concentration: Systems Programming *June 2023 — June 2026*

- Cumulative GPA: 3.9/4.0 | Dean's List
- Relevant Coursework: Data Structures and Algorithms, Principles of Computer Systems, Parallel and Concurrent Programming, Computer Architecture, Discrete Math, Linear Algebra

Work Experience

Operating Systems Security Researcher Sep. 2024 — Present

UCSC: Center for Research in Systems and Storage | *Rust, Qemu, Kernel Programming* *Santa Cruz, CA*

- Responsible for implementing the security primitives for a novel research operating system
- Working with Professor Owen Arden to integrate Decentralized Information Flow Control into the OS kernel
- Reading papers in the field to design core security primitives with high efficiency

Lead Software Engineer Mar. 2024 — Sep. 2024

ConnectifyAI | *Go, Python, Typescript, PostgreSQL, Docker* *Santa Cruz, CA*

- Led a team of 10 Undergrads and masters students, making important decisions such as deciding the tech stack, and managing the Gitlab Repository
- Created a performant REST API for our services using Go and PostgreSQL.
- Learned Docker and GitLab Runner to automate backend deployments
- Worked with Professor Razvan Marinescu to research viable, performant methods to chain multiple AI/ML models

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
- Used existing kernel frameworks, such as eBPF and XDP to implement project specifications
- Lead the charge in migrating legacy C codebase to Rust for improved developer experience and reliability
- Set up a custom GitHub Actions runner to facilitate the building and testing of embedded networking software

Extracurricular Activities

MITRE eCTF 2025 | *Rust, Docker, OpenOCD, Embedded Programming, GDB, Cryptography* Jan 2025 — April 2025

- Learned embedded communication protocol, UART, to facilitate communication between host and microcontroller.
- Used GDB with OpenOCD to debug faults during the development process.
- Employed docker to create build scripts to improve developer tooling for the team.
- Implemented a custom DPRF scheme to ensure secure broadcast streaming with subscriptions.

Projects

Hermes | *Rust, gRPC, Docker, AWS Nitro Enclaves* github.com/Suri312006/Hermes

- Implementation of a meta-data private, traffic analysis-resistant messaging protocol.
- Expands upon the original work by supporting multiple devices per user.
- Deployable to TEE's (Trusted Execution Environments) trivially.
- Project for graduate level research class, report available here

Skills

- **Programming Languages**: Rust, Go, C/C++, Protobuf, Type/Javascript, Python, SQL (Postgres, Sqlite)
- **Developer Tools**: Git, Nix, Helix, Docker
- **Technologies**: gRPC, REST-API, AWS (EC2)