Vincent Sgherzi
sgherzivincent@gmail.com
https://vincents.dev
University of California, San Diego 2023

Systems software engineer focused on building correct, observable, and high-performance networked systems in Rust and C.

Experience

Sansay January 2022 - Present

Systems Software Engineer

- Led Rust adoption at the company by introducing Rust in greenfield projects and integrating Rust code into production C-based telecom session border controllers using Rust/C FFI layers.
- Implemented an in-memory SIP-based load-balancing system by blending existing C code with Rust components, increasing capacity by 30-50% by eliminating database lookups.
- Designed and implemented a fraud detection solution capable of real-time termination of calls based on suspicious traffic across multiple fully loaded session border controllers.
- Built a full-stack STIR/SHAKEN analysis system to parse identity header tokens and visualize attestation, certificate validation, and expiry information.
- Built a central solution for Sansay customers to purchase and provision products for instant deployment of Sansay systems.
- Led a cohort of interns in developing a local-first AI chatbot; later integrated into our product line to assist in product setup, configuration, and customer support.
- Created standardized Linux gold disk images, documentation procedures, and deployment scripts for production use.
- Conducted routine security reviews of production systems, identifying exposed ports, local privilege-escalation vulnerabilities, IDOR vulnerabilities, and unauthorized API access.

Cybersecurity and Infrastructure Security Agency January 2021 - May 2021

Analyst

- Performed open-source intelligence investigations on complex targets using off-the-shelf recon tools and presented findings in detailed reports.

Trilogy Education July 2020 - May 2021

Cybersecurity Teaching Assistant

- Graded lab assignments and homework related to penetration testing, Linux system administration, and basic network terminology.
- Assisted in content development for lecture slides, lab exercises, and basic programming.

Projects

Scorenado - Contract Backend Engineer

- Contracted to design and implement a high-performance Rust backend using Axum and Tokio to aggregate real-time NFL statistics to drive a fantasy football game loop.

Let There Be Light - Open Source

- Built a Windows desktop utility using Rust and egui to communicate with the Apple Studio Display over USB to change display brightness.

Technical Writing

Rust Errors Without Dependencies: Demonstrated how Rust programmers could write composable error without reaching for common libraries.

Rust Dependencies Scare Me: An analysis of how much code goes into a typical Rust web server with Tokio and Axum.

Go Is Not For Me: An evaluation of Go's tradeoffs in composability, safety, and expectations in the modern programming era.

Skills

Rust, C, Node.js, React
Linux, FreeBSD, DPDK, eBPF, Valgrind, bpftrace, heaptrack, NGINX, Docker, Wireshark, Nmap