Sam Stelfox
Staff Software Engineer

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Seasoned software engineer with over 15 years of diverse experience, excelling in security, data analysis, building scalable systems and bringing academic projects to production. Proven track record in automation, systems architecture, embedded systems and leading innovative projects in dynamic environments.

Passionate about mentoring and fostering team culture while driving technical excellence both in leadership and as an individual contributor.

SKILLS

Languages: Rust, Ruby, Python, Golang, TypeScript, C
Systems & Platforms: Linux, Embedded Devices, AWS, GCP, Cloudflare, Kubernetes
Technologies: PostgreSQL, Arrow, Kafka, Redis, InfluxDB, Terraform
Specialties: Systems Architecture, Network & Data Security, Open Source Tooling, Data Analysis, Machine Learning, Mentorship, Team Leadership, Project Management, Strategic Planning, Policy Development & Compliance

EXPERIENCE

Banyan Computing, Hybrid – New York, NY

Staff Software Engineer – MAY 2023 – PRESENT
- Designed and implemented an end-to-end encrypted, petabyte scale, distributed storage platform
- Designed and implemented a custom end-to-end journaled and distributed-first filesystem
- Led a team of engineers, balancing mentorship and individual contributions to meet and exceed and KPI and business driven goals
- Instrumental in implementing organizational policies and providing strategic business guidance, leveraging my expertise in startup growth
- Primarily worked with Rust, and TypeScript

Minim Inc, Remote

Staff Software Engineer – APRIL 2018 – MAY 2023
- Developed a worldwide distributed anycast DNS system integrating adaptive threat detection (classical machine learning) using Rust, C, and Python
- Designed, built, and trained custom machine learning based security anomaly detection system with automatic remediation method selection
- Optimized and migrated a monolithic architecture to microservice oriented Kubernetes deployment
- Spearheaded internal security processes, aligning with SOC2 compliance, and providing remediation for reported vulnerabilities
- Primarily worked with Ruby, Rust, and Javascript

PwnieExpress, Hybrid – Burlington, VT

Senior Software Engineer – FEBRUARY 2013 – APRIL 2018

- Architected and developed the PwnPulse cloud platform and various connected, and application specific embedded Linux security appliances
- Designed a wireless localization system and spearheaded the development of security-focused Linux distribution
- Managed stakeholder relations and represented the company at various security conferences, enhancing brand visibility and business development
- Built anomaly detection system based on traditional machine learning algorithms and dynamic vulnerability assessment based on genetic algorithms.
- Primarily worked with C, Ruby, Rust, Python, and Golang

Democracy for America – Burlington, VT

Software Engineer – JANUARY 2012 – FEBRUARY 2013
- Managed and upgraded a 250k+ line legacy Rails 2 codebase to Rails 4+
- Developed data analysis pipelines that normalized and aggregated disparate legacy databases, realtime data streams and modern APIs into useful tools for real time analysis and task distribution to people in the field

Vermont Technical College – Randolph, VT

Network and Systems Engineer – JANUARY 2007 – JANUARY 2012
- Managed and automated the management of a mixed Windows and Linux environment across 13 physical sites encompassing nearly 12k managed computers and 25k unmanaged BYO devices
- Planned and executed a zero-downtime migration of a physical data center and its contents
- Taught several courses on programming languages and system management as an associate faculty member

ADDITIONAL EXPERIENCE

DEFCON

Senior Staff – Speaker Operations – 2009 – PRESENT

As a senior staff member at DEFCON, the world's largest computer security conference, I serve as one of the two leads for the Speaker Operations team. I train, distribute, onboard, and lead a team of approximately 50 individuals responsible for managing speakers, and overseeing the operations of the conference.

AeroSpace Contracting

FEBRUARY 2021 – JULY 2023

Designed embedded, propulsion control, attitude monitoring, and network solutions for prototype satellite hardware. This was a series of one-off as needed projects for a couple of companies. Included simulation systems, RTOS, test harnesses, sensor fusion, command and control, and flight certification.

EDUCATION

Vermont Technical College

Bachelors Program for Software Engineering
AUGUST 2005 – JUNE 2009