Seth J. Morabito

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PROFILE

Accomplished, passionate, driven, and creative software engineer with extensive experience solving problems at every level of the development life cycle, from requirements analysis to deployment. Experience centers around systems programming, back end software for Internet applications, test driven development, tool development, and API design.

WORK EXPERIENCE

SENIOR SOFTWARE ENGINEER
Walt Disney Entertainment
July 2024 – Present

- Responsible for feature development on the Hulu, Disney+, and ESPN core media streaming library.

SOFTWARE ENGINEERING TECHNICAL LEADER
Cisco Systems
January 2023 – July 2024

- Responsible for feature development and operation of the Cisco DNS resolver fleet, made up of several hundred recursive DNS resolvers deployed on Debian Linux servers in Cisco datacenters world-wide, handling traffic peaking at over 1 trillion queries per day.
- Developed a configuration translation system in Go to deploy domain categorization rules across the DNS resolver fleet.

SENIOR SOFTWARE ENGINEER II
Akamai Technologies
November 2017 – March 2022

- Designed and built a Rust application that reused existing C++ libraries and handled consuming over 10,000 Apache Kafka messages per second, providing near real-time monitoring of our network's provisioned state.
- Engineered a Kafka Streams data aggregation and event detection system that allowed customers to message their subscribers about potential threats, and allowed the system to gracefully handle data center fail over.

SENIOR STAFF ENGINEER
Nominum, Inc. *(Acquired by Akamai Technologies)*
September 2013 – November 2017

- Built a customer reporting solution using Apache Kafka, HPE Vertica, and InfluxDB capable of sustained ingest of thousands of rows per second.
- Designed and built a RADIUS and DHCP IP Address change tracking system capable of handling over 20,000 IP Address changes per second.

SENIOR SOFTWARE ENGINEER
Glyde Corporation
December 2007 – July 2013

Innovative Consumer-to-Consumer marketplace.
- Designed and built a fraud detection and prevention system that reduced fraudulent activity by 80% and significantly increased customer satisfaction.
- Spearheaded integration of the Glyde Marketplace with PayPal (payment and withdrawal), and Twilio (SMS messaging).
- Implemented a cohort analysis system to analyze buying and selling patterns to improve business strategy decision making.

CORE SKILLS

Languages
Extensive professional experience with C, Rust, Go, Java, and Ruby. Other work and personal project experience with C++, Python, and JavaScript.

Technologies
Linux, Docker, Apache Kafka, GraphQL, PostgreSQL, InfluxDB, Vertica.

Fundamentals
Systems Programming, Network & Web, Kafka Stream Processing, Agile, Object Oriented Design, Test Driven Development, Continuous Delivery, Virtualization.

PERSONAL PROJECTS

AT&T 3B2/400 Computer Simulator
(https://loomcom.com/3b2/emulator)

The 3B2 was a small, multi-user UNIX computer introduced in 1984 by AT&T. It was the primary porting platform for UNIX System V Release 3, but has since faded into obscurity. I built a full system simulator to allow running unmodified UNIX SVR3 software for historical preservation. This project involved a tremendous amount of reverse engineering both hardware and software, as internals documentation was unavailable. Additionally, WE32100 assembler and disassemblers had to be written from scratch. It is released as part of the SIMH historical computer simulation framework.

SYMON 6502 System Emulator
(https://github.com/sethm/symon)

Symon is an 8-bit system emulator, including full emulation of the 6502 CPU, 6551 ACIA, 6522 PIA, 6525 CRT controller, RAM, and ROM. It is released under the MIT Open Source license.