Stephen Wayne

Experience

Hashicorp - HCP Vault Radar | Senior Software Engineer/Acting Engineering Lead | Oct 2023 - Present

- Designed/implementing agent architecture to connect customer infrastructure scanning to HCP
- Designed/implemented architecture to incrementally scan resources
- Designed/implemented solution to identify and copy unmanaged secrets to Vault

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Hashicorp - HCP Vault Insights | Senior Software Engineer/Engineering Lead | May 2022 - Oct 2023

- Designed/implemented SaaS offering to provide business value from Vault Audit Logs
- Leading engineering, mentored and hired other members of the team
- Designed broad architecture for the product, and implemented mission critical systems
- Leading product discovery efforts for the next phase as the key engineer
- Implemented probabilistic data structures to aggregate user activity with low resource requirements
- Designed/implemented relational data model to track/alert on various KPIs
- Developed cohesive testing infrastructure for team to build unit and integration tests for services
- Built the above with Golang, Kafka, Amazon Aurora (Postgres), DynamoDB, Grafana Loki, AWS
- Working closely with Product, Design, Leadership to set broad engineering direction

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Hashicorp - Vault Core | Software Engineer II | August 2020 - May 2022

- Designed/implemented SaaS product offering as proof of concept for future business
- Designed/implemented Namespace API Lock for secure multi-tenancy
- Designed/implemented expiration manager overhaul, significantly reducing sev1 incidents
- Implemented activity log to track usage data and overhaul customer billing experience
- Played a significant role in technical interviewing - hired much of the current team

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Sling TV | Staff Golang Software Engineer | October 2019 - August 2020

- Built system to populate Google Knowledge with Sling catalog, increasing daily user engagement
- Developed standalone Go tool to clean stale data in Cassandra across multiple environments
- Developed multi-stage Docker builds to reduce deployable image size (30x reduction)
- Contributed to multiple scalable microservices in Go
- Improved CI/CD pipeline for multiple microservices

Josh.ai | Software Engineer III | April 2017 - October 2019

- Developed a cross-platform date and timezone library
- Designed software architectures for multiple complex, widely-used internal technologies
- Developed REST API for Josh Micro device interaction
- Built various internal tools in Golang and Python
- Built support for multiple complex device integrations
- Built machine learning predictive platform based on user interaction and contextual data
- Designed hardware for embedded Linux platform (Josh Micro)

SEELab, UCSD | Graduate Researcher | 2016-17

- Engineered frequency-hopping algorithms for robust wireless communication in noisy settings
- Created drone-based distributed network, with emergency responders as a primary use case
- Developed distributed drone system to detect anomalous chemical signatures
- Developed real-time data visualization tools

First RF | Embedded Systems/RF Intern | Summer 2016

- Designed, built, tested and analyzed novel X-Band radar
- Built internal signal processing algorithms and testing software

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NASA Jet Propulsion Laboratory | Engineering Intern | Summer 2013-14

- Developed models and architecture for small satellite communication in deep space
- Designed experiment to characterize Martian atmosphere by Doppler-tracking balloon-borne probes
- Analyzed multipath signals from GRAIL spacecraft for lunar surface characterization

Projects

showCal | Easily add TV showtimes to your Google Calendar

- React.js front end - OAuth2, showtime data display, calendar add options (in progress)
- Golang backend - implement REST API for React.js client (in progress)
- Hosted on AWS (in progress)
- Work towards full CI/CD (in progress)

Guided Parafoil System | A novel small-payload delivery system for planetary orbiters

- Sponsored and mentored by NASA Ames Research Center
- Presented the project at the IPPW research conference in Cologne, Germany
- Team lead, designed electrical systems architecture, built embedded software
- Developed control and data acquisition software for Teensy 3.1

Contact

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Education

M.S. Electrical/Computer Engineering
UC San Diego | 3.8 GPA
CS Research Lab

B.S. Electrical/Computer Engineering
Univ. of Idaho | 4.0 GPA
Summa Cum Laude

Skills

Languages/Frameworks

Golang
C++ 14
C# 3.0
Python 2/3
Matlab

Other Technologies

Docker
CI
Unit/integration testing
Automation
Git/Jira
Amazon Aurora (Postgres)
DynamoDB
Cassandra
SQLite/MySQL
Linux/Unix
Kubernetes (learning)
AWS S3 (novice)

Relevant Courses

Probabalistic Learning
Machine Learning
Data Structures/Algorithms
Distributed Control Networks
Computational Simulation
Digital Logic
Calculus I/II/III
Differential Equations
Linear Algebra
Digital Signal Processing
Embedded Security
RF Circuit Design
Low Power Circuit Design
Advanced Electromagnetics
Antenna Theory/Design