OLIVE HAVEN

SHE/THEY

ABOUT

Wife 👰 , Dog Mom 🐶 , Queer Geeky Hacker 🤓 , Senior SRE and Software Engineer 👩🏻‍💻 . I'm always looking out for my team and to nurture healthy work lives. A job's only as good as the people you work with 😊

I'm currently looking for full-time remote work as an SRE at companies with at least 100 employees, a preexisting SRE team, and great engineering culture!

WORK EXPERIENCE

Legalzoom **Remote**
September 2022 – Present

Senior System Reliability Engineer

Member of a small 3-person SRE team supporting a growth-oriented ~250-person engineering organization. Responsibilities included: Extensive management of AWS resources, developer and DevOps engineer support, mentoring and training, TLS certificate pipeline, GitHub Enterprise management, Kubernetes server management and app deployment with ArgoCD, Vault secret storage, CI/CD pipelines (including GitHub Actions and AWS CodePipeline), legacy Akamai CDN management and migration to AWS CloudFront for dozens of origins and custom behaviors, Apigee API Management, and onprem IIS server management.

Armorblox **Remote**
https://armorblox.com
March 2021 – July 2022

Senior System Reliability Engineer

While initially onboarding as a Product / Platform engineer for this email security startup, I ran into several (rather normal) startup issues including immature engineering culture, burgeoning technical debt, code rot, and poor production reliability. I was able to help plug these holes by creating documentation and implementing engineering and development best practices. This work on improving developer experience led to discussing production reliability shortcomings with the CTO and engineering managers.
Following this proven positive impact, I was able to get C-level buy-in to create a dedicated Systems Reliability Team. As a founding member of this team, I helped hire and train Junior, Senior, and Principal engineers. My main goal was

to get each member up to speed, able to progress as individual engineers, and to support the broader engineering org goals and milestones. With this fledgling SRE team, I worked to prioritize the following engineering goals:

1. Automation of manual tasks in the production environment (as well as development and staging), primarily leveraging Stackstorm workflow/runbook automation services
2. Improved development workflow and maturing engineering culture with Bitbucket Pipelines and Jenkins CI/CD and improvements to in-house development environment Kubernetes / Helm management
3. Monitoring of application and infrastructure services with Prometheus and Grafana
4. Oncall rotation with actionable metrics & dashboards, detailed runbooks, and incident response procedures to improve detection of and response time to incidents in production systems
5. Infrastructure as Code (IaC) defining environments, clusters, services with reproducible Terraform, Helm, and ArgoCD code managed in understandable and testable Git repositories
6. Catch-all DevOps support for developers, QA engineers, and Customer Support staff who need help understanding, interacting with, fixing issues, as well as identifying common problems and developing solutions to prevent future recurrence

New Context **Remote**
https://newcontext.com
March 2020 – March 2021

Senior Security Consultant

I was hired as a remote security consultant contracting with large enterprise clients to do security analysis of infrastructure.
While there, I created Go microservices leveraging GCP, AWS, Kubernetes, and Postgres APIs to do internal service discovery and track sensitive data flow throughout organizational infrastructure. The results of this analysis were stored in an extensible neo4j graph database and surfaced as security and business metric queries and dashboards.

Atlassian **Mountain View, CA**
https://atlassian.com
February 2017 – February 2018

Senior Trust Engineer

I worked as a Senior Software Engineer building distributed microservices in Go for internal Identity APIs. This involved interacting with various Product, Platform, and SRE teams across Atlassian to support their specific use cases of a overarching Atlassian product and user Identity.
My main task was building a distributed, high reliability, low latency authorization store from scratch as the backend authorization provider for all modern Go microservices (with legacy support for custom authorization architectures already in place in Jira and Confluence). Much of this work was on low-level performance tuning of queries to shared Cassandra and Redis databases.
I gained a lot of monitoring and performance tuning skills by working with Atlassian's amazing embedded SRE team to:

1. Implement custom metric gathering with Prometheus
2. Create performance & reliability monitoring dashboards in Honeycomb
3. Act as first line Oncall and service specific alerting and operations runbooks
4. Create automated CI/CD testing and full microservice load testing across staging environments
5. Have full ownership of the services release management, including GitOps for environment management and hotfixes

Salesforce **San Francisco, CA**
https://salesforce.com
June 2016 – December 2016

Distributed Systems/Security Engineer

I created a Public Key Infrastructure for internal services including HSM-backed CA with CFSSL and Puppet managed internal service public key credential generation.

Cloudflare **San Francisco, CA**
https://cloudflare.com
September 2014 – March 2016

Cryptographic Systems Engineer

I improved global web cryptographic standards and implementations. I helped provide fast and secure TLS for free to millions of sites by implementing low level extensions to standard nginx to allow dynamic TLS cert and key lookup from a global distributed cache.
I also improved many open source PKI and generic infosec infrastructure software in OpenSSL, Go, and CFSSL toolkit.
I implemented "Keyless SSL" software in Go allowing use of proxied TLS keys from otherwise untrusted edge servers so that TLS wouldn't need to be shipped to untrusted datacenters or hostile jurisdictions.
During my time here, I learned a great deal about the modern TLS ecosystem on the internet, including spending many hours on code archaeology of various server and client codebases or testing closed source implementations to diagnose and fix / workaround protocol bugs as they came up in the wild.

Google Summer of Code **Stanford, CA**
https://ooni.org
June 2014 – July 2014

Tor Project Student Developer

I worked on packaging ooni-probe (part of the Open Observatory of Network Interference) for easy access and use in locations where ISPs or Governments are blocking Tor. I learned a great deal about the obfuscation (and detection) techniques used in the wild to hide (and identify) encrypted communications.

Amazon **Seattle, WA**
https://aws.amazon.com
October 2013 – December 2013

Software Development Engineering Intern

As an engineer on the AWS S3 team, I built a service to detect hotspots in the S3 cloud storage system trie data structure for targeted repair to keep S3 lookups performant.

Mozilla, OWASP **Mountain View, CA**

https://www.zaproxy.org
July 2013 – September 2013

Security Tools Intern

While working as a software engineering intern with the Mozilla Security Tools team, I worked on the OWASP ZAP webapp penetration testing tool and added SPDY (later HTTP 2) support by rewriting the internal network stack using the Netty framework.

VMware **Palo Alto, CA**
https://vmware.com/
March 2013 – June 2013

Security Intern

I added Secure Boot support to virtual UEFI firmware across all VMware products by implementing OpenSSL-based public key authentication in virtual storage devices.

Facebook **Menlo Park, CA**
https://engineering.fb.com
January 2013 – April 2013

Security Infrastructure Intern

I worked on the Security Infrastructure team to detect Android malware on end-user devices and track spread through the social Graph API.

Stanford CURIS **Stanford, CA**
https://undergradresearch.stanford.edu
June 2012 – September 2012

Cryptography Researcher

Using C++ and NTL, I designed and implemented a highly optimized Lattice-based Fully Homomorphic (FHE) cryptosystem based on a custom polynomial ring translation of [Brakerski12] resulting in a paper and poster.

CONTACT

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GitHub

0xhaven

LinkedIn
0xhaven

EDUCATION

2010 2014

Stanford University

BS

Computer Science, Mathematics Minor

Courses

- CS 355: Advanced Topics in Cryptography
- CS 343: Advanced Topics in Compilers
- CS 243: Program Analysis and Optimizations
- CS 240: Advanced Topics in Operating Systems
- CS 140: Operating Systems & Systems Programming
- CS 244: Advanced Topics in Networking
- CS 242: Programming Languages
- CS 161: Design and Analysis of Algorithms
- Math 121: Galois Theory
- Phil 152: Computability and Logic
- Phil 154: Modal Logic
- Math 161: Set Theory
- Math 171: Fundamental Concepts of Analysis

2008 2010

Gatton Academy of Mathematics and Science

High School

Mathematics and Computer Science

Courses

- CS 443: Data Structures
- Math 473: Graph Theory
- Math 450: Complex Analysis

Math 435: Partial Differential Equations

Math 307: Linear Algebra

Math 310: Discrete Mathematics

SKILLS

System Reliability Engineering (SRE)

Software Engineering

Systems Programming

Microservices

Automation

Service Monitoring

Debugging

Software Archaeology

Infrastructure as code (IaC)

GitOps

Network Security

Cryptography

Authentication (AuthN)

Authorization (AuthZ)

Identity & Access Management (IAM)

Go (Programming Language)

Kubernetes

Google Cloud Platform (GCP)

Amazon Web Services (AWS)

Stackstorm

Terraform

ArgoCD

Grafana

Helm Charts

Prometheus