



OLIVE HAVEN

SHE/THEY

ABOUT

Wife 🧑, Dog Mom 🐶, Queer Geeky Hacker 🧑, Senior SRE and Software Engineer 🧑. Always looking out for my team and to nurture healthy work lives. A job's only as good as the people you work with 😊
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

Armorblox
<https://armorblox.com>
March 2021 – July 2022

Sunnyvale, CA

Senior System Reliability Engineer

Initially hired as a Product/Platform engineer for this email security startup, I saw the normal startup gaps in engineering culture and production reliability and worked with the CTO and engineering managers to help plug these by creating documentation and engineering standards. This discussions led into the creation of a dedicated Systems Reliability team where as founding member I helped hire and train Junior, Senior, and Principal engineers. My main goal was to get each member of this small team up to speed, able to progress as individual engineers, and to support the broader engineering org.

On this small but agile SRE team, I was able to prioritize the following engineering goals:

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

New Context
<https://newcontext.com>
March 2020 – March 2021

San Francisco, CA

Senior Engineer

Remote security consultant contracting with large enterprise clients to do security analysis of infrastructure.

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 extensible neo4j graph database and surfaced as security and business metric queries and dashboards.

Atlassian
<https://atlassian.com>
February 2017 – February 2018

Mountain View, CA

Senior Trust 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 meant to bean 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 perfomance 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:

- Implement custom metric gathering with Prometheus.
- Create performance & reliability monitoring dashboards in Honeycomb.
- Set up service specific alerting, oncall rotation, and runbooks.
- Create automated CI/CD testing and full microservice load testing across staging environments.
- Full ownership of the services release management, including GitOps for environment management and hotfixes

Salesforce
<https://salesforce.com>
June 2016 – December 2016

San Francisco, CA

Distributed Systems/Security Engineer

Created a Public Key Infrastructure for internal services including HSM-backed CA with CFSSL and puppet managed end service public key credential generation.

Cloudflare
<https://cloudflare.com>
September 2014 – March 2016

San Francisco, CA

Cryptographic Systems Engineer

Improved global web cryptographic standards and implementations. 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.

Improved many open source PKI and generic infosec infrastructure software in OpenSSL, Go, and CFSSL toolkit.

Created "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.

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
<https://ooni.org>
June 2014 – July 2014

Stanford, CA

Tor Project Student Developer

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. Learned a great deal about the obfuscation (and detection) techniques used in the wild to hide (and identify) encrypted communications.

Amazon
<https://aws.amazon.com>
October 2013 – December 2013

Seattle, WA

Software Development Engineering Intern

Built robust service for distributed hotspot detection in Amazon Web Services S3 cloud storage system

Mozilla Corporation
<https://www.zaproxy.org>
July 2013 – September 2013

Mountain View, CA

Software Engineering Intern

Added SPDY support to OWASP ZAP webapp penetration testing tool by rewriting network stack using the Netty framework.

VMware
<https://vmware.com/>
March 2013 – June 2013

Palo Alto, CA

Security Intern

Added Secure Boot to virtual UEFI firmware across all VMware products by implementing public key based authentication in virtual storage device

Facebook
<https://engineering.fb.com>
January 2013 – April 2013

Menlo Park, CA

Security Infrastructure Intern

Worked on mobile security, including prevention, detection, and removal of Android malware

Stanford CURIS
<https://undergradresearch.stanford.edu>
June 2012 – September 2012

Stanford, CA

Cryptography Researcher

Designed and implemented, using C++ and NTL, a highly optimized Lattice-based Fully Homomorphic cryptosystem based on a polynomial ring translation of [Brakerski12] resulting in a paper and poster.

CONTACT

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GitHub
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LinkedIn
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Twitter
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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