

# Olive Haven

## SHE/HER

Wife 🧑 , Dog Mom 🐶 , Queer Geeky Hacker 🧑🔧 , Senior SRE and Software Engineer 🧑💻 .

In my roles as an experienced member of technical staff / tech lead, I have been dedicated to fostering empathy and encouraging teamwork, collaboration, and mentorship within my teams. In managing and resolving incidents with high customer impact, I strive to create a healthy and productive work environment by maintaining open lines of communication with stakeholders. I mentor team members in analytical problem-solving, emphasizing the application of the scientific method to research issues and conduct experiments for root cause analysis. By leveraging strong written and verbal communication skills and prioritizing customer feedback, I can drive continuous improvement, informed decision-making, and effective engineering roadmap planning. My extensive experience in roadmap planning, Agile, and Kanban helps ensure projects stay within scope and deliver exceptional customer service and engagement.

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## EXPERIENCE

### LegalZoom

Senior Site Reliability & DevOps Engineer

Aug 2022 - Present

Experienced technical staff member supporting a high growth ~350-member engineering org and helping to double an Engineering Services (SRE/DevOps/Platform) organization from ~10 to ~20 engineers supporting SaaS and B2B products. I started working as an SRE in 2022, then moved to support the expanding DevOps team throughout 2023

- Datacenter migration to AWS cloud infrastructure, resulting in significant cost savings and improved resource provisioning efficiency through infrastructure as code and AWS services.
- Migration to from Akamai CDN to AWS CloudFront, leveraging CDK infrastructure-as-code in TypeScript / JavaScript to provide a more performant, cost-effective, and engineer-friendly self-serve platform for CDN management.
- Supported expanding the SRE and DevOps teams in hiring 2 new DevOps engineers, 2 new Site Reliability Engineers, and and cross-training 4 former Datacenter Operations Engineers as AWS Cloud Engineers. Facilitated onboarding for new engineers through comprehensive documentation and knowledge sharing sessions, accelerating their integration into the team and promoting a collaborative environment.
- Enhanced system reliability through effective incident management and troubleshooting, with a focus on root cause analysis and continuous improvement, reducing downtime and service disruptions.
- Strengthened cross-team collaboration by providing hands-on support to developer teams, streamlining release processes, and supporting service launches. This resulted in increased release velocity, minimized incidents, and improved team efficiency.
- Promoted a collaborative and empathetic team environment, fostering knowledge sharing, improving team morale, and mentoring junior engineers.
- Platform operations and maintenance for CI/CD, Monitoring, Deployment systems (including migrating legacy systems). Including GitHub Enterprise, GitHub Actions, ArgoCD, Jenkins, Kubernetes, Datadog, Azure Active Directory, Azure DevOps, Rundeck, IIS, and Rundeck.

## Armorblox

Senior System Reliability Engineer

Mar 2021 - Jul 2022

Hired as Product / Platform engineer for this small email security SaaS 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 organization management.

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:

- Automation of manual tasks in the production environment (as well as development and staging), 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 development environment Kubernetes / Helm management
- Monitoring of 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 (IaC) defining environments, clusters, services with reproducible Terraform, Helm, and ArgoCD code managed in understandable and testable Git repositories
- 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

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## New Context

Senior DevSecOps Consultant

Mar 2020 - Mar 2021

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.

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## Atlassian

Senior Trust Engineer

Feb 2017 - Feb 2018

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:

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

## Salesforce

Distributed Systems/Security Engineer

Jun 2016 - Dec 2016

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

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## Cloudflare

Cryptographic Systems Engineer

Sep 2014 - Mar 2016

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.

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## Google Summer of Code

Tor Project Student Developer

Jun 2014 - Jul 2014

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.

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## Amazon

Software Development Engineering Intern

Oct 2013 - Dec 2013

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.

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## Mozilla, OWASP

Security Tools Intern

Jul 2013 - Sep 2013

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) and QUIC (later HTTP/3) support by rewriting the internal network stack using the Netty framework.

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## VMware

Security Intern

Mar 2013 - Jun 2013

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

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## Facebook

Security Infrastructure Intern

Jan 2013 - Apr 2013

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

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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.

## SKILLS

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SYSTEM RELIABILITY ENGINEERING

DEVOPS

INFRASTRUCTURE AS CODE (IAC)

CONTINUOUS INTEGRATION/CONTINUOUS DEPLOYMENT (CI/CD)

KUBERNETES

DOCKER

AMAZON WEB SERVICES (AWS)

GOOGLE CLOUD PLATFORM (GCP)

AZURE

TERRAFORM

ANSIBLE

JENKINS

GITOPS

SERVICE MONITORING

SITE RELIABILITY ENGINEERING (SRE)

AUTOMATION

SCRIPTING (BASH, PYTHON)

NETWORKING

SECURITY

CONTAINER ORCHESTRATION

LOG MANAGEMENT

INCIDENT RESPONSE

AGILE/SCRUM

LOAD BALANCING

INFRASTRUCTURE SCALABILITY

CICD PIPELINES

GIT

HELM

PROMETHEUS

GRAFANA

DISTRIBUTED SYSTEMS

CONFIGURATION MANAGEMENT

DATABASE ADMINISTRATION

CLOUD MIGRATION

NETWORK SECURITY

CI/CD TOOLS

CLOUD SERVICES (EC2, S3, VPC, GKE)

LINUX/UNIX SYSTEMS

SCRIPTING (SHELL, PERL, RUBY)

WEB SERVERS (NGINX, APACHE)

SERVICE DISCOVERY

ELASTICSEARCH

LOAD TESTING

WEB APPLICATION FIREWALL (WAF)

CONTAINERIZATION

CHANGE MANAGEMENT

GITLAB

AUTOMATION TOOLS (PUPPET, CHEF)

MONITORING TOOLS (DATADOG, NEW RELIC)

SERVERLESS COMPUTING

DATABASE MANAGEMENT (MYSQL, POSTGRESQL)

MICROSERVICES ARCHITECTURE

NETWORK PROTOCOLS (TCP/IP, HTTP, DNS)

SHELL SCRIPTING

VERSION CONTROL (GIT)

SAAS/PAAS/IAAS

INCIDENT MANAGEMENT

CROSS-TEAM COLLABORATION

ROOT CAUSE ANALYSIS

INFRASTRUCTURE OPTIMIZATION

LOG ANALYSIS

DEVSECOPS

MACOS

LINUX

UNIX

MAVEN

POWERSHELL

C# / CSHARP

TEST-DRIVEN DEVELOPMENT (TDD)

SSH

## EDUCATION

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### Stanford University

Aug 2010 - Jul 2014

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

### Gatton Academy of Mathematics and Science

Jul 2008 - Apr 2010

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