

# HARRISON KIM

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## EXPERIENCE

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### Rippling

*Staff Software Engineer*

Atlanta, GA

Aug 2022 - Present

- Built a self-service “Infrastructure Menu” portal (Retool UI + Flask API) that converts plain-language requests into Terraform pull requests using internal modules and guardrails in under a minute, cutting the time to spin up new infrastructure and freeing product engineers from manual IaC boilerplate
- Automated progressive canary releases with Argo Rollouts, using 5XX-error SLIs to automatically trigger rollbacks, slashing failed-deployment downtime and incident pages
- Led the Container sub-team within the Compute Infrastructure team, managing the uptime of our EKS clusters and all services running within them
- Implemented a proxy to establish connection pooling for MongoDB and DocumentDB databases, significantly reducing the number of connections made to databases by 80% to 95%
- Took part of an oncall rotation that assumes SRE tasks to triage alerts and coordinate with product teams to minimize customer impact and ensure system stability
- Led the initiative to convert all containerized services to be managed via ArgoCD using the App of Apps pattern, enforcing GitOps principles to mitigate drift and refining our approach to blue/green upgrades
- Re-architected org-wide secrets management by rolling out External Secrets Operator and Reloader across multiple Kubernetes clusters, enabling automatic sync and hot-reload of secrets and configurations, eliminating manual rotations and tightening compliance
- Established Kubernetes and Helm standards by creating reusable chart templates and shared libraries, improving the developer experience and accelerating new service onboarding
- Utilized Datadog to create dashboards, alerts, and monitors to ensure proper visibility and alerting
- Managed Terraform using Terragrunt and Atlantis, coordinating with InfraSec and product teams to provision infrastructure across multiple AWS accounts
- Implemented Terraform modules that follow the principle of least-privileged access, creating a streamlined interface while abstracting underlying complexities
- Mentored junior engineers by providing guidance on technical challenges and fostering growth through career development opportunities

### 1build

*Site Reliability Engineer*

Atlanta, GA

Dec 2021 - Aug 2022

- Ensured high availability of production clusters by leveraging Prometheus and Grafana for comprehensive monitoring on system performance and reliability
- Orchestrated service deployments through the integration of GitHub Actions for CI and Flux for CD
- Optimized OpenSearch autocomplete functionality, significantly improving search response times and relevance
- Implemented automated testing procedures using Playwright, ensuring rigorous validation of functionality post-deployments

### Flock Safety

*DevOps Engineer*

Atlanta, GA

Feb 2019 - Dec 2021

- First DevOps engineer, single-handedly managing CI/CD processes, infrastructure, and site reliability for the initial two years
- Implemented the usage of ARM and spot instances, reducing approximately 65% on infrastructure costs
- Helped scale a high throughput realtime processing system, averaging ~100 million daily images
- Created dynamic dashboards on Grafana utilizing Prometheus and Kubernetes metrics to ensure proper alerting and high uptime of our production system
- Introduced Terraform and standardized its usage to provision in-house modules with best practices, ensuring that infrastructure operations were always codified
- Containerized and migrated all services from ElasticBeanstalk to Kubernetes with no downtime
- Introduced Helm charts and implemented best practices for services deployed into our Kubernetes clusters
- Standardized the CI/CD process in Jenkins and implemented automation to streamline the creation of pipelines used by ~100 microservices, yielding frictionless deployments with fast rollback capabilities to reduce MTTR when errors occurred

### Tin Roof Software

*DevOps Engineer*

Atlanta, GA

May 2018 - Feb 2019

- Managed the deployment, configuration, and uptime for the Catalog service for our client NCR

- Migrated automation of infrastructure from Chef to Kubernetes on GKE
- Automated the configuration of applications using infrastructure as code with Chef

## GE Digital

*Site Reliability Engineer*

Atlanta, GA

May 2017 - May 2018

- Implemented a CI/CD Pipeline to create a bi-directional relationship for updating scripts within New Relic monitors and GitHub
- Created a distributed build model using Jenkins master/slave nodes on Scalr to implement GUI automation tests using Sikuli
- Utilized New Relic API calls and NRQL queries within an automated Jenkins job to disable consistently failing monitors, reducing private minion workloads by approximately 49%

## Macy's Systems and Technology

*DevOps Engineer*

Atlanta, GA

Jan 2017 - Apr 2017

- Wrote Jenkinsfiles to create pipelines for executing Maven builds and run tests
- Automated the post-build process of emailing Serenity reports to developers

## The Home Depot

*IT Developer Intern*

Atlanta, GA

May 2016 - Jul 2016

- Used Ruby on Rails for development of RESTful APIs in the Rental Toolbox web application
- Implemented the Test Driven Development process using RSpec, Capybara, and Jasmine to create test suites to serve as regression tests

## Partner Software

*Software Development Intern*

Athens, GA

May 2015 - Dec 2016

- Revised Python scripts to Groovy, eliminating legacy code and improving efficiency
- Developed a date-time picker application using JavaScript and jQuery for client use

## CERTIFICATIONS

<b>Kubernetes</b>	Certified Kubernetes Security Specialist, Certified Kubernetes Administrator
<b>AWS</b>	AWS Certified Solutions Architect - Associate
<b>Chef</b>	Basic Chef Fluency Badge

## SKILLS

<b>Programming</b>	Python, Typescript/Javascript, Go, Bash, Java
<b>Cloud Platforms</b>	AWS, GCP, DigitalOcean
<b>Containers &amp; IaC</b>	Kubernetes, Docker, Helm, Terraform, Terragrunt, Cloudflare
<b>CI/CD &amp; GitOps</b>	Jenkins, GitHub Actions, ArgoCD, Buildkite, Flux CD, Harness
<b>Observability</b>	Prometheus, Grafana, Loki, New Relic, Datadog, Retool
<b>Databases</b>	PostgreSQL, Elasticsearch, Redis, DynamoDB, Amazon Aurora, MongoDB
<b>E2E Testing</b>	Playwright, Puppeteer, Selenium WebDriver, New Relic/Datadog Synthetics

## EDUCATION

### University of Georgia

Bachelor of Science in Computer Science

Athens, GA

2012 - 2016