

Harrison Muskat

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Summary

Staff engineer with 9+ years operating cloud-native infrastructure at scale, now building platform and AI infrastructure for multi-agent LLM systems. Hands-on across GCP (GKE/Autopilot, CloudSQL, Pub/Sub), Terraform, Kubernetes, and CI/CD orchestration, with a track record leading DevOps teams of 7-12 and 24/7 on-call. Shipped multi-tenant platforms serving 100+ customer environments at 300K+ messages/hour and cut deployment times ~87%.

Experience

Staff Software Engineer, Platform & AI Infrastructure

Nov 2025 - Present

Ichi · Oakland, CA

- Architected the core platform for a building-code compliance SaaS (Rails, Next.js, GraphQL), including a multi-agent LLM orchestration layer integrating Gemini Flash/Pro and OpenAI behind a unified provider abstraction.
- Stood up the observability stack from the ground up — Prometheus, Grafana, and OpenTelemetry across Sidekiq workers, API endpoints, and the LLM gateway — establishing baseline latency, error, and token-usage metrics.
- Re-architected document processing into an asynchronous, webhook-based pipeline with S3 object storage and Redis caching, eliminating synchronous blocking in the request path and removing N+1 queries.
- Designed a security-isolated public-sharing architecture using segregated GraphQL types, enabling external collaboration and audit-grade visit tracking without exposing authenticated tenant data.
- Built an end-to-end streaming pipeline delivering dynamically generated structured outputs over GraphQL subscriptions, with artifact versioning and self-healing error recovery.

Staff DevOps Engineer

Feb 2019 - Oct 2025

6 River Systems · Waltham, MA

- Converted the Terraform IaC surface to TypeScript invoking Kubernetes and Google APIs directly, cutting average deployment time from ~1 hour to ~8 minutes (~87%) and improving extensibility, reliability, and traceability.
- Built core infrastructure for a multi-tenant ETL platform on GKE Autopilot, scaling to 100+ customer environments and 300,000+ messages/hour, backed by

Prometheus/Grafana observability and Google IAP.

- Designed and rolled out OIDC-based SSO and configurable multi-tenant infrastructure with customer-facing management tooling — directly enabling two major enterprise client wins.
- Led the 24/7/365 on-call rotation and gave technical leadership to a 12-engineer platform team; as DevOps Lead, ran a 7-engineer team across release engineering, user management, metrics/reporting, and IoT.
- Cut robot-fleet upgrade time ~67% (~60 to ~20 minutes), created a CircleCI orb standardizing CI/CD across repos, and built Node.js internal tooling that replaced manual database operations.

Software, QA & Operations

Jan 2015 - Feb 2019

Earlier roles · Greater Boston, MA

- 6 River Systems — Senior Software Engineer in Test (2017-18): designed full-system regression, smoke, and integration tests for the mobile robotic fulfillment platform; first hands-on exposure to Docker, Kubernetes, Spinnaker, and GCP — the pivot into DevOps.
- Solve at MIT — Web Developer (2018-19): lead developer for the Solve platform; modernized legacy code, built test coverage, and led the transition to an Agile SDLC.
- athenahealth — Senior Payer Rules Associate (2015-17): led a cross-team Client Work Reduction project, shipping automations that cut client workload ~10%.

Skills

Cloud Platforms	GCP (GKE/Autopilot, Cloud Run, Compute Engine, CloudSQL, Cloud Storage, Pub/Sub, IAP, IAM, BigQuery)
Container Orchestration	Kubernetes, Docker, Helm
Infrastructure as Code	Terraform, Kubernetes/Google APIs, Helm, Ansible, Spinnaker
CI/CD	CircleCI, GitHub Actions, Jenkins, Cloud Build, release orchestration
Observability & Reliability	Prometheus, VictoriaMetrics, Alertmanager, Grafana, OpenTelemetry, on-call, incident response, runbooks
Security & Identity	OIDC, JWT-based SSO, Workload Identity, IAM, multi-tenant isolation
Networking	Cloud DNS, Nginx, load balancing

Data	Postgres, MySQL, SQLite, Redis, Pub/Sub, BigQuery
Languages	TypeScript, JavaScript, Node.js, Ruby, Rails, Bash
Methodologies	Agile, SRE practices, postmortems, hiring & technical interviewing

Education

B.A. in Religion, cum laude, Amherst College · 2012