

Talha Imtiaz

DevOps Engineer

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Summary

DevOps Engineer with production experience across GCP/GKE, Kubernetes, CI/CD, zero-trust access, and incident response. Software engineering background makes it possible to debug deployment and pipeline failures across both infrastructure and application code. Production work includes multiplayer scaling, regulated fintech access controls, mobile release automation, and incident response.

Experience

CarbonTeq

Jun 2025 – Present

DevOps Engineer

Lahore, Pakistan

- Scaled a production real-time multiplayer platform on **GCP/GKE** from **~80 to 400+ concurrent users**. Load testing showed horizontal scaling made collaboration traffic worse because Hocuspocus broadcast overhead grows $n \times (n - 1)$ across pods; moved to fewer, larger pods, split API and Hocuspocus workloads, and used **KEDA** to scale on waiting-room player count instead of CPU.
- Reduced **Next.js build time from 6 min to 2 min** with Turbo prune, standalone output in a multi-stage Docker build, GitHub Actions layer caching, and Turborepo remote caching.
- Rebuilt access for a regulated fintech platform on GKE using a **NetBird/WireGuard zero-trust overlay**: three isolated environment networks, resource-level grants, two human access tiers, per-environment CI identities, and Cloud Armor allowlists. Databases reachable from the public internet went from **3 of 3 to 0 of 4**.
- Led response to a production security breach on self-hosted infrastructure: identified and removed malicious scripts, restored service within **~2 hours**, then hardened access with UFW and Cloudflare Tunnel; brute-force attempts dropped **~70%**.
- Built end-to-end **GitLab CI/CD** for a React Native app, including linting, security audits, unit tests, Expo builds, automated App Store / Play Store deployment, and self-hosted runners for Appium E2E tests on Android emulators.
- Built **RobinRelay**, an internal SRE assistant for Datadog alert triage in Slack using FastAPI, RAG, and Azure OpenAI. Diagnosed retrieval and data-flow limitations rather than treating the LLM as the bottleneck, then redesigned preprocessing and the RAG pipeline to improve incident-context responses.

RSSD Infotech

Jun 2024 – May 2025

Software Engineer

Remote, India

- Ran production workloads on **DigitalOcean** with Docker and Nginx, plus on-prem systems for secure real-time laboratory streaming across **three lab sites**.
- Optimized a GPU-accelerated motility pipeline from **~17s to ~5s** using multi-threading, frame-skipping, and ToupCam SDK tuning, validated against the same-length, same-frame-count sample video.
- Built a Flask + Flask-SocketIO backend for live microscope streaming at **~5ms end-to-end latency**, integrated ToupCam hardware controls, and connected a YOLOv8 computer-vision pipeline.

Selected Reference Architecture

AWS EKS GitOps Platform

Published reference build – not production

- Provisioned VPC, EKS, and IAM with **Terraform**; used **ArgoCD** app-of-apps for GitOps delivery from a separate reusable configuration repository.
- Integrated **External Secrets Operator** with AWS Secrets Manager through **IRSA**, keeping static cloud credentials out of both Git and the Kubernetes cluster.

Skills

Cloud & Containers: GCP (GKE, Cloud SQL, Cloud Armor, IAP, Shared VPC, SCC), Kubernetes, Docker, Helm, KEDA, HPA; AWS (EKS, IAM, ECR, Secrets Manager – reference builds)

Infrastructure & Delivery: Terraform, Pulumi (TypeScript), GitHub Actions, GitLab CI, ArgoCD, GitOps, Nginx

Observability & Security: Datadog, Prometheus, Grafana, Loki, Alertmanager, NetBird, WireGuard, Workload Identity Federation, External Secrets Operator, Infishal, Gitleaks, Trivy, tfsec, incident response

Programming: Python, Bash, TypeScript, Node.js, FastAPI, Flask, Flask-SocketIO

Education & Publication

B.S. Computer Science, Ghulam Ishaq Khan Institute of Engineering Sciences and Technology (GIKI)

IEEE, Jul 2024: *A Novel Genetic Algorithm Based Timetable Generator for Optimized University Timetable Solution*