Hamza Shaikh

Site Reliability · DevOps · Cloud Infrastructure

er.hamzashaikh@gmail.com linkedin.com/in/shamza31 github.com/Raynzler shamza31.vercel.app

Summary

Site Reliability and DevOps engineer, completing an M.Sc. in Computer Science at RPTU Kaiserslautern with specialisation tracks in Distributed Systems and Software Engineering. Sole infrastructure engineer at a D2C startup: migrated production from EC2 to ECS/Fargate, owned the VPC, security-group and IAM layer, built the CI/CD pipeline and ran incident response. Builds reliability tooling in Go and Python, including a chaos engineering platform and a validator anomaly detector that placed as a winner at the Superteam Germany ideathon in Frankfurt. Interested in observability, failure testing, and the question of whether monitoring actually fires on the things it was built to catch.

Location & Work Eligibility

Currently based: Kaiserslautern, Germany
Germany: German student residence permit. Work authorisation for 140 full or 280 half days per year. Completed B.E. is **ANABIN-verified**, so EU Blue Card eligibility does not depend on finishing the M.Sc. **No visa sponsorship required.**
Saudi Arabia: Valid dependent iqama (to July 2027) under Saudi Aramco sponsorship; conversion to a work iqama is easier under new HRSD rules. Resident in Dammam, Eastern Province since 2010. Valid Saudi driving licence (to 2030).
Elsewhere: Visa sponsorship required. Currently on a German student residence permit, Indian passport.
India: Indian national, unrestricted right to work.
Open to: Werkstudent, internship and junior F/T roles in Germany; full-time roles in Saudi Arabia and India and Remote.
Languages: English (professional), Hindi/Urdu, Arabic (basic), German (A2, progressing)

Technical Skills

Cloud & Networking: AWS (EC2, ECS, Fargate, VPC, Subnets, Security Groups, IAM, S3, CloudWatch, Load Balancing), Cloudflare, DigitalOcean
Infrastructure: Docker, Docker Compose, Linux, NGINX, container hardening, Kubernetes (foundational)
SRE & Observability: Site Reliability Engineering, Prometheus, PromQL, Grafana, Alertmanager, RED metrics, SLOs, chaos engineering, monitoring and alerting, incident response
CI/CD & Security: Git, GitHub Actions, CI/CD pipelines, Bash, Trivy, Bandit, pip-audit, govulncheck, pytest
Programming & Data: Python, Go, C++, FastAPI, Redis, BullMQ, MySQL

Experience

Patil Kaki, D2C Food Brand (Shark Tank India) **Jun. 2023 – Jul. 2023**
DevOps Engineering Intern (Sole Infrastructure Owner) *Mumbai, India (Remote)*

- Migrated production from EC2 to ECS Fargate as the only infrastructure engineer in a 10-person team, supporting a storefront at ˜2,500 orders/month; dynamic task provisioning cut AWS spend 27% ($230 to $168/month).
- Built the AWS network and access layer: VPC subnets, routing and security groups; S3 storage; least-privilege IAM roles scoped separately for founders, developers and logistics staff. Fronted the platform with Cloudflare.
- Root-caused a three-day chatbot outage: a whitespace character intermittently injected into the DigitalOcean-generated integration URL was silently breaking the widget. Traced it through the hosting integration and restored the service.
- Built GitHub Actions pipelines gating main-branch deployments with rollback, supporting weekly releases.
- Decoupled order processing from the request path using BullMQ over Redis, moving fulfilment work off the synchronous checkout flow.

CMP Infotech (Microsoft Partner Program) **Dec. 2021 – Jan. 2022**
Java Development Intern *Mumbai, India (Remote)*

Projects

AutoSRE: Chaos Engineering Platform | *Python, Go, FastAPI, Prometheus, Docker, GitHub Actions* **Feb. 2026 – Jul. 2026**

- Built a chaos engineering framework injecting latency, errors, CPU burn and memory pressure into live services through a REST control plane. Experiments are bounded, time-limited and self-reverting; the control plane, health probes and metrics endpoints are exempt from injection so the abort path can never be made unreachable.
- Made experiments reproducible rather than random: errors are spread deterministically across requests, and the memory injector touches one byte per page to force real commit instead of a lazy allocation.
- Implemented a three-state circuit breaker (closed, open, half-open) with an injectable clock for deterministic tests, a pluggable store interface and Prometheus state metrics, plus token-bucket rate limiting middleware returning 429 with Retry-After.
- Instrumented RED metrics through ASGI middleware with bounded label cardinality; defined a p95 500ms SLO with a 750ms alert threshold as Prometheus rules, unit-tested to assert every alert carries severity and a runbook link.
- Hardened the delivery path: 9-job CI running Bandit, Trivy, pip-audit and govulncheck with third-party actions pinned to commit SHAs; containers run read-only and non-root with all capabilities dropped and a distroless image for the Go daemon.
- 93.9% line coverage on the shared platform library. Documented with architecture decision records and game-day postmortems, each carrying a command to reproduce the incident.

SentinelSOL: Distributed Validator Node Monitoring | *Go, Prometheus, Alertmanager, Grafana* **Sep. 2025 – May 2026**

- Built a Go telemetry daemon polling a Solana validator's JSON-RPC out of process into Prometheus; backoff retries only transient failures, and both endpoints scrape concurrently under a WaitGroup so the metrics share a timestamp.

- Implemented 3-sigma Z-score anomaly detection on vote velocity as Prometheus recording and alerting rules against a rolling one-hour baseline learned from the node's own history, routed through Alertmanager to Telegram.
- Fixed a detection blind spot: the original rate-ratio rule went undefined as the validator stalled, silencing the alert at exactly the moment it existed to catch.
- Packaged the full telemetry stack with Docker Compose for single-command bare-metal deployment, with Grafana dashboards provisioned as code.
- **Winner**, Superteam Germany / neosfer Solana Ideathon, Frankfurt (2026). Also submitted to the Colosseum Frontier hackathon.

GridCast: Heatwave Forecasting | *Python, TensorFlow, Keras, LSTM, Flask, React.js, Optuna* **Aug. 2023 – May 2024**

- Built 28 region- and season-specific LSTM models (7 regions x 4 seasons) trained on 70 years of IMD gridded temperature data (1951–2021) for India-wide heatwave forecasting.
- Designed a 14-day sliding-window input pipeline predicting 7 days ahead, with Optuna (Bayesian TPE) hyperparameter search across all 28 model subsets.
- Deployed end to end as a Flask REST API serving model inference behind a React.js frontend with D3.js geospatial visualisation. B.E. capstone project, submitted to IEEE ICSPCRE 2024.

Education

RPTU Kaiserslautern-Landau **Oct. 2025 – Expected 2028**
M.Sc. Computer Science (Specialisation 1: Distributed Systems, 2: Software Engineering) *Germany*

- Coursework: Distributed Systems, Software Engineering, Machine Learning.

Career Break & M.Sc. Admissions **July 2024 – Sep. 2025**
Post-graduation period with family in Dammam; graduate applications and student visa process *Intake deferred to Oct. 2025*

Xavier Institute of Engineering **Aug. 2020 – Jun. 2024**
B.E. Information Technology | CGPA ***8.69 / 10*** *(German equivalent:* ***1.6****)* *Mumbai, India*

International Indian School Dammam **Aug. 2010 – 2018**
CBSE Schooling *Dammam, Saudi Arabia*

Certifications & Community

Certifications: AWS Certified Cloud Practitioner (2023); Postman API Fundamentals Student Expert (2023)
Community: Hack The League, Mumbai and Hack This Fall, Pune (2022); Solana Hacker House (BLR / MUM 2023, BLR 2024); Berlin Blockchain Week, Solana Summit Germany and ETH Day, Berlin (2026)