ALAN JOSHY

Backend & DevOps Engineer — Cloud Infrastructure Engineer
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SUMMARY

Backend & DevOps Engineer with 2+ years of experience architecting scalable multi-tier services with Python (FastAPI, Django) and Node.js (Express), and managing production AWS and GCP cloud infrastructure through Infrastructure as Code (Terraform, CloudFormation). Proven track record of end-to-end ownership of system reliability, containerized deployments (Docker, Kubernetes), and automated CI/CD pipelines, delivering platforms that serve 100,000+ combined active users across multiple production environments.

CORE SKILLS

- **Cloud & Infrastructure:** AWS (EC2, RDS, S3, VPC, ALB, EKS, IAM), GCP (Compute Engine, Cloud SQL, Cloud NAT, Cloud Scheduler), Docker, Kubernetes, Helm, Terraform, CloudFormation, GitHub Actions, Jenkins, Argo CD
- **Backend Development:** Python, FastAPI, Django, Node.js, Express, SQLAlchemy, Sequelize, REST APIs, Socket.IO
- **Databases & Caching:** PostgreSQL, Redis, Database Migrations (Alembic), Query Optimization
- **Observability & Security:** Prometheus, Grafana, Loki, AWS CloudWatch, AWS Secrets Manager, JWT, PASETO, Zero-Trust Security, Rate Limiting
- **DevOps Practices:** CI/CD Pipeline Design, Infrastructure as Code, Container Security, Zero-Downtime Deployments, Load Testing, Cost Optimization

WORK EXPERIENCE

Codeteak Technologies **Bengaluru, India**
Backend & DevOps Engineer **Apr 2025 – Present**

Yaadro Restaurant Management System (UAE)

- Provisioned AWS infrastructure (EC2, RDS PostgreSQL, ElastiCache Redis, ALB, ECR) for a multi-actor delivery platform serving 5,000+ active users, architected to scale to 500,000+ users.
- Designed VPC architecture with public/private subnets, route tables, security groups, and IAM roles; implemented Redis pub/sub for horizontal scalability of real-time Socket.IO location tracking.
- Configured AWS CloudWatch metrics, alarms, and log groups, plus Prometheus and Grafana dashboards, for full-stack observability.

Yaadro Delivery Management System

- Architected and deployed a zero-to-one delivery management platform (orders, live tracking, partner APIs) using Node.js 18, Express 4, Sequelize 6, and PostgreSQL 16.
- Provisioned AWS production infrastructure via CloudFormation IaC, automating VPCs, dual-AZ subnets, security groups, encrypted RDS PostgreSQL 16, ElastiCache Redis 7, and encrypted S3 storage.
- Engineered real-time event streaming with Socket.IO 4 and a Redis adapter, handling 300+ events/sec and 10,000+ concurrent socket connections behind a tuned Application Load Balancer.
- Built automated CI/CD pipelines using GitHub Actions and Amazon ECR with scan-on-push policies, multi-stage Docker build caching, and zero-downtime rolling deployments via AWS SSM.
- Hardened container and runtime security with non-root Docker builds, Docker Compose resource limits, Helmet HTTP protection, Redis-based rate limiting, and AWS Secrets Manager integration.

YaadroLens Multi-tenant Platform

- Architected and deployed a zero-to-one enterprise workforce platform serving 100+ organizations and 4,000+ daily active users using Python 3.12, FastAPI, PostgreSQL 15, and Redis.
- Engineered GCP production infrastructure using modular Terraform IaC: isolated VPCs, Cloud NAT, private Cloud SQL, Secret Manager, Artifact Registry, and Global Load Balancers.
- Optimized cloud infrastructure costs with dynamic Compute Engine Managed Instance Groups and automated scaling policies; implemented CI/CD pipelines via GitHub Actions and Cloud Build with automated pytest gates and IAP-secured SSH rollouts.
- Enforced zero-trust security via JWT token denylists, bcrypt hashing, HMAC device authentication, and Fernet-encrypted secrets; managed schema evolution using Alembic migrations, SQLAlchemy 2 ORM, and Cloud Scheduler jobs for attendance/payroll processing.

PERSONAL PROJECTS

Online Boutique – Cloud-Native DevOps Platform — GitHub — Medium Blog **2024**

- Designed and operated Kubernetes releases for 11 microservices and Redis using a custom Helm chart, replacing manual YAML deployment with a single Helm install / Argo CD sync.
- Authored Terraform for AWS (multi-AZ VPC, EKS, managed node groups, NAT, IAM) for reproducible cluster provisioning, and built CI/CD pipelines in GitHub Actions and Jenkins with Trivy vulnerability scans and Helm linting.
- Implemented readiness/liveness probes, resource limits, and NetworkPolicies; load-tested at 400-800 requests/minute using Prometheus, Grafana, and Loki while capping infrastructure cost at $8-$15/day via AWS Budgets and automated teardowns.

EDUCATION

Indira Gandhi National Open University (IGNOU) **New Delhi, India**
Master of Computer Applications (MCA) **July 2026 – 2028**
Mahatma Gandhi University **Kerala, India**
Bachelor of Computer Applications (BCA) **Jun 2018 – Mar 2021**