# AKASH PAWAR

# Summary

DevOps/SRE Engineer with 2.5+ years of experience building resilient, cloud-native systems on AWS and Azure. Proficient in Kubernetes automation, observability, GitOps workflows, and cloud cost optimization (achieved 35% savings). Demonstrated success in high-ownership startup environments—leading infrastructure design, multi-cloud migration, and SRE platform development.

#### Certifications

Certified Kubernetes Administrator — AWS Solutions Architect — AWS Certified Developer

## **Key Achievements**

#### Winner - CNCF Pune Hackathon 2025

June 2025

Cloud Native Hackathon - Team Kubetux

Pune, India

- Won 1st place building production-grade SRE platform with automated CI/CD, Kubernetes observability stack, and secure Karpenter-based autoscaling infrastructure.
- Official CNCF Recognition

# Experience

DevOps Engineer

Dec 2022 - Present

Trames Private Limited India, Remote

- Cloud Migration & Cost Optimization: Led complete AWS-to-Azure migration while optimizing performance & reducing operational complexity across systems. Achieved 35% total cost reduction (\$5,500/month) through spot instances, auto-scaling, reserved instances, and automated VM management via Lambda/EventBridge.
- Kubernetes Infrastructure: Architected production EKS clusters using Terraform with multi-node groups, ALB controller, EBS CSI driver, and IRSA for secure workload identity management. Implemented HPA for resource-based pod scaling, **KEDA** for SQS-driven scaling, and **Karpenter** for infra autoscaling to handle dynamic workloads efficiently.
- GitOps & CI/CD: Built comprehensive GitOps pipeline using ArgoCD with app-of-apps pattern for micro-services deployment and ESO for external secrets management. Configured GitHub Actions, AWS CodePipeline, and Azure DevOps with automated deployment workflows and self-hosted runners.
- Observability Stack: Configured monitoring infrastructure using Prometheus, Grafana, OpenSearch, & Fluent Bit with custom dashboards for comprehensive workload analysis. Utilized CloudWatch and Logz.io for centralized logging and advanced analytics capabilities across environments.
- Incident Management: Built SRE workflows integrating Prometheus, Alertmanager, & Slack to monitor SLIs and trigger SLO-based alerts. Collaborated with developers to define SLIs and automate blameless postmortems via a Python CLI, fostering a reliability culture. Worked cross-functionally with backend and product teams to ensure stable deployments and rapid incident resolution.
- Serverless & Automation: Designed event-driven backends using API Gateway, Lambda, S3, SQS, & SAM for scalable processing workflows. Automated infrastructure provisioning with **Terraform** and **AWS CDK**. Built custom monitoring tools using **Python** and **Ansible** for comprehensive metrics tracking.
- Database Migration: Migrated prod PSQL databases from AWS to Azure PostgreSQL Servers ensuring high availability, data integrity, and seamless replication processes. Implemented minimal downtime migration strategies with complete data validation and performance optimization across all database systems.
- Security & Networking: Enforced IAM policies, RBAC, IRSA, and AWS Identity Center (SSO) across AWS cloud environments for comprehensive access control. Implemented GuardDuty for threat detection, OpenVPN for secure private resource access, VPC peering and Kubernetes Network Policies for pod traffic control and secure multi-application routing.
- Advanced Networking & DNS Optimization: Troubleshot service disruptions by analyzing UDP-based DNS lookups and fallback TCP resolution, optimizing ndots and enforcing FQDNs to reduce DNS latency and network overhead in Kubernetes clusters.
- Cost Analyzer Platform (MCP): Engineered a modular cost intelligence system with a context-driven protocol (MCP) and backend APIs integrating AWS Cost Explorer via boto3. Designed for LLM integration (e.g., Claude) to enable natural language-driven spend analysis and insights.

• Graceful Shutdown & Pod Lifecycle Management: Troubleshot and resolved deployment traffic leaks by coordinating preStop hooks, SIGTERM handling, and readiness probes. Ensured zero-downtime rollouts through ALB coordination and pod lifecycle debugging.

## **Technical Skills**

- Cloud Platforms: AWS (EC2, EKS, Lambda, S3, IAM), Azure (VM, AKS, App Service), Kubernetes, Docker, Helm
- Infrastructure as Code: Terraform, AWS CDK
- CI/CD & GitOps: GitHub Actions, AWS CodePipeline, Azure DevOps, ArgoCD, Azure Pipeline
- Programming & Scripting: Python, Node.js, TypeScript, Bash, boto3, Basics of Golang
- Monitoring & Observability: Prometheus, Grafana, OpenSearch, Fluent Bit, CloudWatch, Logz.io
- Databases & Messaging: PostgreSQL, MongoDB, SQS, EventBridge, Redis
- Security & Networking: IAM, IRSA, RBAC, VPN, ALB/NLB, GuardDuty, VPC/VNet, Security Groups, NACLs
- Tools & Technologies: NGINX, ESO (External Secrets Operator), Karpenter, SAM, Ansible, Slack integrations

### Education

# MIT Academy of Engineering (MITAOE)

2019 - 2023

B. Tech in Electronics & Telecommunication, Cloud Computing Specialization

Pune, India