BIKRAM DHOJU

Senior DevOps & AI Agent Engineer · CKA · AWS SAA-C03

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PROFESSIONAL SUMMARY

Senior DevOps and AI Agent Engineer with 8+ years of experience architecting cloud-native infrastructure and designing autonomous AI agent systems for cloud automation and operational intelligence. Deep expertise in Kubernetes orchestration, AWS services, GitOps practices, and LLM-powered agentic workflows using LangChain, LangGraph, and the Anthropic API. Proven track record of leading infrastructure modernisation initiatives, reducing operational costs, and building AI-driven automation pipelines that eliminate toil at scale.

KEY ACHIEVEMENTS

Area	Impact
Cost Optimisation	Intelligent autoscaling on custom metrics cut AWS infrastructure costs by 20% while sustaining 99.9% uptime
Infrastructure Modernisation	Led monolith-to-microservices migration on Kubernetes, increasing deployment frequency by 300%
DevOps Culture	Introduced GitOps with ArgoCD across multiple teams, enabling developer self-service and reducing deployment time by 75%
AI Agent Automation	Built multi-agent cloud automation platform using LangGraph and AWS Bedrock; reduced manual operations by 70%
Knowledge Engineering	Architected enterprise RAG system over Confluence and internal docs, cutting incident resolution time by 40%

TECHNICAL EXPERTISE

CLOUD PLATFORMS
AWS (EKS, ECS, RDS, Lambda, Bedrock, Cognito) · Azure (AKS, Functions) · GCP (GKE, Cloud Run, BigQuery)

AI & AGENTIC SYSTEMS
LangChain · LangGraph · Anthropic API · OpenAI API · AWS Bedrock · RAG · pgvector · Pinecone · MCP · Multi-agent orchestration

CONTAINER & ORCHESTRATION
Kubernetes (prod scale) · Docker · Helm · Kustomize · Istio · Linkerd · KEDA · Service Mesh

INFRASTRUCTURE AS CODE
Terraform · Terragrunt · AWS CloudFormation · Ansible

CI/CD & GITOPS
ArgoCD · FluxCD · GitHub Actions · GitLab CI · Flagger · Canary deployments

MONITORING & OBSERVABILITY
Prometheus · Grafana · DataDog · ELK Stack · Graylog · APM · Distributed tracing

PROGRAMMING
Python (Django, Flask, LangChain) · Go (APIs, CLI, K8s webhooks) · Bash scripting

SECURITY & COMPLIANCE
GuardDuty · HashiCorp Vault · CIS Benchmarks · IAM · Cloudflare · iptables

PROFESSIONAL EXPERIENCE

Senior DevOps & AI Agent Engineer
September 2023 – Present

Farmforce AS · **Bangkok, Thailand**

ECS, Fargate, Terraform, Terragrunt, AWS Bedrock, LangGraph, Anthropic API, RAG, Lambda, Graylog, Prometheus, Grafana, Go, Python

- **Designed and deployed a multi-agent cloud automation platform** using LangGraph and AWS Bedrock, enabling autonomous execution of infrastructure tasks (scaling, cost analysis, incident triage) via natural language — reducing manual operations by 70%
- **Architected an agentic API layer** over AWS service APIs, allowing AI agents to safely provision, inspect, and remediate ECS/Fargate workloads using structured tool-calling with guardrails and full audit logging
- Built an enterprise RAG application ingesting Confluence, runbooks, and internal docs into a pgvector store, enabling on-call engineers to query institutional knowledge and cutting incident resolution time by 40%
- Developed MCP-compatible prompt templates and tool schemas, standardising how LLMs interact with AWS APIs across the engineering organisation
- Implemented intelligent autoscaling on custom business metrics, reducing AWS costs by 20% while maintaining 99.9% uptime

- Established comprehensive observability with Prometheus, Grafana, and Graylog, achieving sub-5-minute incident detection
- Designed disaster recovery procedures with regular tabletop exercises, ensuring RTO < 4 hours

Senior DevOps Engineer (Lead) September 2022 – September 2023

Arthuronline SEA · **Bangkok, Thailand**

Kubernetes (EKS), AKS, AWS Cognito, Helm, Kustomize, Terraform, ArgoCD, GitHub Actions, DataDog, Prometheus

- Introduced GitOps workflow with ArgoCD, giving development teams full infrastructure ownership and reducing deployment time by 75%
- Architected multi-account AWS environment following the Well-Architected Framework security best practices and compliance requirements
- Enhanced security posture with GuardDuty integration and Cloudflare rate limiting, blocking 99.9% of malicious traffic
- Developed custom Kubernetes webhooks in Go for resource automation and compliance validation across all clusters
- Built end-to-end monitoring with Prometheus and DataDog, achieving 99.9% system visibility across all environments
- Implemented KEDA-based autoscaling using RabbitMQ metrics, optimising resource utilisation by 35%

Senior DevOps Engineer December 2021 – September 2022

CREA Pvt. Ltd. · **Bangkok, Thailand**

Kubernetes (EKS), AWS Cognito, Helm, Kustomize, Terraform, ArgoCD, Vault, GitHub Actions, DataDog, Airflow, Airbyte

- **Prototyped agentic automation workflows** using Python and AWS Lambda for automated cost anomaly detection and self-healing infrastructure responses, laying the foundation for later multi-agent systems
- Implemented centralised data warehouse with PostgreSQL logical replication and AWS DMS, ensuring 99.9% data consistency
- Deployed highly available Apache Airflow and Airbyte for ETL/ELT pipelines processing 1 TB+ of data daily
- Standardised CI/CD pipelines across teams, reducing deployment errors by 60% and improving release velocity significantly
- Established GitOps cluster management with ArgoCD and self-managed Helm repository
- Migrated to Kubernetes-based RabbitMQ cluster with high availability and comprehensive monitoring

Senior Site Reliability Engineer April 2020 – August 2021

Sertis Co., Ltd. · **Bangkok, Thailand**

Kubernetes, Helm, Terraform, Flux, Flagger, Ansible, GitLab CI, ELK Stack, Linkerd, Airflow

- Maintained 99.9% uptime for production ML systems serving 1M+ predictions daily
- Architected microservices migration from monolith, improving scalability and significantly reducing technical debt
- Implemented GitOps with Flux and Flagger for reliable canary deployments with automated rollback
- Developed high-frequency CI/CD pipeline supporting 50+ daily deployments with zero downtime
- Built centralised logging and monitoring with ELK Stack, reducing MTTR by 60%
- Deployed and managed Apache Airflow for orchestrating large-scale ML training and data pipelines

Senior System Administrator June 2015 – October 2019

Open Learning Exchange · **Nepal**

Linux (CentOS, Ubuntu), AWS, Kubernetes, Docker, LAMP Stack, Apache/Nginx, BIND DNS, Ansible, Jenkins, GitLab CI/CD, Python/Django, Nagios, ELK Stack

- Administered 50+ Linux servers across multiple data centres, maintaining 99.8% uptime for educational services
- Built fully automated CI/CD infrastructure reducing deployment time from hours to minutes using Jenkins and shell scripts
- Automated system provisioning using Ansible playbooks, reducing manual setup time by 80%
- Managed multi-tier LAMP stack environments optimised for 10,000+ concurrent student users
- Implemented security hardening following CIS benchmarks; managed iptables, SSH key distribution, and access controls
- Designed custom Linux-based routers and file servers for remote educational sites with limited connectivity
- Collaborated with international teams across Nepal, Ghana, and the USA on EdTech infrastructure standardisation

CERTIFICATIONS

Certified Kubernetes Administrator (CKA)
Cloud Native Computing Foundation (CNCF)

AWS Solutions Architect – Associate (SAA-C03)
Amazon Web Services

EDUCATION

Bachelor of Engineering — Electronics and Communication
Pulchowk Campus, IOE, Tribhuvan University · 2010 – 2014
Specialisation: Networking with IPv6 and Remote Sensing

AREAS OF EXPERTISE

☁ Cloud Architecture
Multi-account AWS design · Well-Architected reviews · Cost optimisation · Disaster recovery · High availability systems at scale

🎖 AI Agent Engineering
Multi-agent orchestration · Tool-calling & guardrails · RAG pipeline design · LLM evaluation · Agentic API patterns · MCP integration

⚙ Platform Engineering
Developer self-service platforms · Internal tooling · GitOps workflows · Kubernetes operators · Webhook automation

🔄 Reliability Engineering
SLO/SLA management · Incident response · Canary & blue-green deployments · Chaos engineering · On-call process design

📊 Data & ML Ops
Airflow orchestration · Airbyte ELT · Vector databases · PostgreSQL replication · AWS DMS · BigQuery pipelines

🔒 Security & Compliance
CIS benchmark hardening · Secrets management (Vault) · GuardDuty · Network policies · Zero-trust architecture