# Bharath reddy Italapur

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## SUMMARY

Senior Cloud & DevOps Engineer with 9+ years of experience in AWS (primary) and Azure, specializing in Kubernetes, Terraform, CI/CD automation, and observability (ELK, Prometheus, Grafana). Proven ability to reduce deployment cycles by 60%, cut cloud costs 30%, and improve MTTR by 40%. Recent projects include building AI-enabled data pipelines with embeddings and vector search in OpenSearch, modernizing workflows with Python microservices, and automating data analytics with AWS Glue. Skilled at driving cloud migrations, scaling platforms, and ensuring platform reliability for Fortune-500 enterprises.

## SKILLS

**Cloud**: AWS (EC2, S3, VPC, Route53, Lambda, MWAA, Glue, IAM), Azure (AKS, ACR, AAD, DevOps, Artifacts)
**Containers & Orchestration:** Openshift**,** Kubernetes (EKS, AKS), Helm, Rancher, Docker, Docker Swarm
**IaC & Config Mgmt:** Terraform, CloudFormation, Ansible, YAML, JSON
**CI/CD:** Jenkins, CloudBees, Azure DevOps, GitLab CI/CD
**Monitoring & Observability:** ELK/OpenSearch, CloudWatch, Grafana, Prometheus, Jaeger
**Programming & Development:** Python (FastAPI, Flask, Pandas), Shell, Bash, SQL, HTML, CSS, JS
**AI/ML & Data Engineering:** RAG pipelines, embeddings, vector DBs, MCPs (Model Context Protocols), LangChain/LangGraph, OpenSearch vector search, AWS Glue DataBrew, Lambda
**OS & Platforms:** Linux (CentOS, Ubuntu, RHEL), UNIX, Windows
**Collaboration:** Git, Bitbucket, Jira, ServiceNow

## PROFESSIONAL EXPERIENCE

**TIAA (via Cognizant)** **May 2023 – Present**
**Sr. Cloud DevOps Engineer**

- Architected and deployed large-scale AWS cloud infrastructure using Terraform, building reusable modules for compute, networking, security, and data platforms; improved environment provisioning speed by 65% and reduced configuration drift across Dev/QA/PreProd/Prod.
- Built end-to-end Infrastructure as Code (IaC) for EC2, VPC, Subnets, Routing, ALBs/NLBs, Security Groups, IAM Roles/Policies, KMS, SSM, Secrets Manager, Lambda, S3, CloudWatch, Glue, MWAA, Step Functions, SNS, and OpenSearch.
- Designed a fully automated OpenSearch/ELK platform including index templates, pipelines, ISM/ILM policies, hot-warm-cold tiering, dashboards, alerts, KNN search configs, and cross-cluster search integrations.
- Led migration of Airflow services to Amazon MWAA, modernizing orchestration pipelines, reducing scheduler failures by 80%, and eliminating on-prem dependencies.
- Converted legacy CloudFormation → Terraform codebases supporting 100+ AWS resources, enforcing module standardization, tagging compliance, encryption requirements, and environment-specific parameterization.
- Modernized the enterprise-wide EDC (Enterprise Data Cloud) platform by migrating to AWS 2.0, re-architecting ETL pipelines, Glue jobs, data quality rules, and S3 → Iceberg table conversion for analytical workloads.
- Built scalable ETL pipelines using Glue, PySpark, Lambda, and DataBrew to ingest, cleanse, validate, transform, catalog, and publish datasets into Apache Iceberg tables backed by Glue Catalog.
- Implemented automated orchestration for Iceberg table lifecycle: schema evolution, partitioning, vacuum/compaction, metadata pruning, snapshots, and version rollback.
- Created a fully autonomous AI Agent for Terraform (Python + LLM) capable of:
  - Understanding user requests in natural language
  - Generating Terraform resources, modules, variables, locals, outputs
  - Running static validation, dependency graph checks, and plan summaries
  - Pushing changes to GitLab pipelines
  - Reducing IaC authoring time by 40% and eliminating low-quality code

- Automated environment bootstrapping via Python, Shell, boto3, and GitLab CI/CD, improving deployment reliability and reducing manual operations by 70%.
- Integrated CloudWatch metrics, alarms, dashboards, log insights queries, OpenSearch logs, and Grafana visualizations for complete production observability.
- Implemented advanced security controls: IAM boundary policies, SCP checks, Config rules, GuardDuty findings remediation, encryption enforcement (S3/KMS/AES-256).
- Performed disaster-recovery simulations, data replication checks, and multi-AZ failover designs for critical workloads.
- Collaborated with architecture, platform engineering, compliance, audit, InfoSec, data engineering, and SRE teams to deliver cloud environments aligned with AWS Well-Architected, FinOps, NIST, and TIAA governance.
- Keywords: AWS, Terraform, OpenSearch, ELK, EC2, VPC, IAM, Glue, ETL, Iceberg, EDC, MWAA, CloudFormation Migration, GitLab CI/CD, Python, Automation, Data Pipelines, IaC, Observability, CloudWatch, Lambda, Data Engineering, DevOps, SRE, AWS 2.0 Migration, Security, FinOps

**Amdocs (via Sai Global Solutions)** **Feb 2022 – May 2023**
**Sr. Cloud DevOps Engineer**

- Architected highly available Azure Kubernetes Service (AKS) clusters using Terraform with modular IaC patterns for VNets, NSGs, Route Tables, ACR, Managed Identities, Load Balancers, and Azure Monitor.
- Built microservices deployment systems using Helm, Docker, Kubernetes, and Azure DevOps Pipelines, ensuring repeatable deployment of 5G network service functions.
- Automated cluster lifecycle operations (scaling, upgrades, node pools, RBAC) using Terraform and Rancher, improving operational consistency and reducing manual errors.
- Implemented centralized logging and tracing via ELK + Jaeger, enhancing debugging for high-volume microservices and reducing MTTR by 55%.
- Built end-to-end CI/CD pipelines with Azure DevOps (YAML), integrating quality gates, artifact storage, policy checks, Helm packaging, automated tests, and multi-cluster deployments.
- Automated infrastructure and application configuration using Ansible, enabling consistent deployments across Dev/Stage/Prod.
- Implemented Pod Security Policies, Azure Key Vault integration, CNI networking, and managed identities for secure cluster communication.
- Used Azure Monitor, Log Analytics, Prometheus, and Grafana to build complete observability for 5G services.
- Integrated ACR image scanning, security baselines, Kubernetes CIS benchmarks, and container vulnerability scanning.
- Implemented Blue/Green and Canary deployments using Helm + App Gateway for zero-downtime rollouts.

**Environment** : Azure, AKS, Terraform, Helm, Docker, Rancher, Azure DevOps, Jaeger, ELK, Microservices, Kubernetes, 5G, CI/CD, Observability, Ansible, Linux

**GXO Logistics (via Lakarya LLC)**
**Sr. DevOps Engineer** **Dec 2019 – Jan 2022**

- Led migration of 45+ ELK clusters & Kafka from legacy on-prem VMs to a scalable Kubernetes microservices architecture, reducing infra cost and improving reliability.
- Built and maintained advanced Helm charts for Kafka, Zookeeper, Logstash, Elasticsearch, Kibana, Beats, and internal services.
- Deployed multi-cluster Kubernetes environments with optimized autoscaling, resource quotas, affinity rules, node selectors, and taints/tolerations.
- Automated deployments with Ansible, reducing manual operations by 70% and improving deployment consistency.
- Upgraded ELK clusters through multiple major versions (5.6 → 6.8 → 7.9) using Helm-based rolling upgrades with zero downtime.
- Set up Grafana dashboards, Prometheus scrapers, alerting rules, and SLO-based monitoring for microservices, Kafka topics, consumer lag, and cluster health.
- Supported production 24/7 in high-availability, low-latency Kubernetes environments with strict SLAs.
- Containerized legacy workloads using Docker, improving portability and reducing deployment times.
- Implemented logging, metrics, distributed tracing, cluster-autoscaler, kube-state-metrics, and Prometheus Alertmanager.
- Performed performance tuning on Elasticsearch clusters: shard allocation, segment merging, index design, warm/cold tier optimization.

**Environment** : Kubernetes, Docker, Helm, ELK, Kafka, Prometheus, Grafana, Ansible, Microservices, CI/CD, Linux, Observability, Containerization

**AT&T (via Ordusion Technologies)** **Dec 2017 – Dec 2019**

**DevOps Engineer**

- Deployed ELK microservices on AWS EKS using Helm, Ansible, and Jenkins CI/CD pipelines.
- Built custom Docker images for Elasticsearch, Logstash, Kibana, and Beats with optimized JVM tuning, index templates, and configuration automation.
- Automated rolling upgrades and blue-green deployments using Helm strategies.
- Developed Jenkins pipelines for build, test, container scan, artifact upload, Helm packaging, and Kubernetes deployment.
- Designed and maintained integrations for AWS services including EC2, S3, Route53, IAM, CloudWatch, and Load Balancers.
- Implemented observability using Grafana + CloudWatch metrics and EKS cluster insights.
- Supported production Kubernetes clusters under a 24/7 on-call rotation.

**Environment** : AWS, EKS, Docker, Jenkins, Helm, ELK Stack, Grafana, CloudWatch, Linux, DevOps

**DTCC (via Veridic Solutions)** **May 2017 – Dec 2017**

**DevOps Engineer**

- Built AWS environments using CloudFormation, provisioning EC2, S3, VPC, IAM, Security Groups, ALBs, CloudWatch metrics, and logging pipelines.
- Documented IaC standards, tagging models, and provisioning patterns for cross-team adoption.
- Coordinated with application teams to deploy secure, scalable AWS environments for data and analytics workloads.
- Implemented monitoring, alerting, and automated remediation rules for deployed infrastructure.

**Environment** : AWS, CloudFormation, EC2, VPC, S3, IAM, CloudWatch, Infrastructure as Code, DevOps, Automation

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## EDUCATION & CERTIFICATIONS

**Master of Science**
Wright State University, Dayton, OH — Dec 2016

**Microsoft Certified:** Azure DevOps Engineer Expert

**Microsoft Certified:** Azure Administrator Associate

**HashiCorp Certified:** Terraform Associate

## PROJECTS & PORTFOLIO

**ChatVault.ai** | GitHub Repo

**MycoBites** | GitHub Repo