

Koushik Gurralla

DevOps Engineer

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PROFESSIONAL SUMMARY

AWS DevOps Engineer with 3.8 years of hands-on experience in cloud infrastructure automation, CI/CD pipeline development, and secure containerized deployments. Expert in **CI/CD (Jenkins, GitHub Actions, Argo CD)**, **containerization (Docker, Kubernetes)**, and IaC with **Terraform**. Adept at leveraging AI-driven tools for vulnerability detection, cost optimization. Reduced deployment errors by 70% and infrastructure costs by 30% via automation. Enhanced predictive monitoring with Prometheus and Grafana. Proven ability to enhance system reliability, speed up deployments, and secure production environments at scale.

TECHNICAL SKILLS & TOOLS

- **Cloud Platforms:** AWS, Azure
- **CI/CD:** Jenkins, GitHub Actions, Argo CD
- **Containers & Orchestration:** Docker, Kubernetes, EKS
- **IaC & Automation:** Terraform, Shell scripting, YAML
- **Security Tools:** SonarQube, Trivy
- **Monitoring & Logging:** Prometheus, Grafana, AWS CloudWatch
- **DevOps & Cloud Practices:** Linux, GitOps, Blue/Green & Canary Deployments, Serverless(lambda), AWS SNS

PROFESSIONAL EXPERIENCE

Wipro Technologies, Hyderabad

DevOps Engineer

Jan 2022 - May 2025 (3 years 5 months)

Project: NetOxygen Loan Origination System

Applied software engineering initiatives for NetOxygen LOS, a comprehensive mortgage lending platform by Gallagher Solutions Inc. Applied comprehensive AWS cloud infrastructure (EC2, Auto Scaling Groups, ECR, VPC, CloudWatch) supporting enterprise-scale applications.

- **CI/CD & Automation:** Designed and maintained robust CI/CD pipelines using Jenkins and GitHub Actions to automate end-to-end software delivery—from Git source to production. Integrated SonarQube for static code analysis and vulnerability detection and worked with Maven and MSBuild as build tools.
- **GitOps & Kubernetes Deployments:** Implemented **GitOps** using **Argo CD**, managing and versioning Kubernetes manifests for consistent, auditable deployments. Deployed applications into Kubernetes clusters via Argo CD controller ensuring **scalability** and **high availability**.
- **Progressive Delivery:** Integrated **Argo Rollouts** to enable **Canary** and **blue-green deployments** across UAT and staging environments, ensuring controlled releases with zero downtime.
- **Image Lifecycle Management:** Automated image updates in manifests using **Argo CD Image Updater**, pulling the latest versions from **Amazon ECR** seamlessly into production.

- **Security & Image Hardening:** Incorporated AI-driven Trivy for intelligent vulnerability prioritization and scanning of Docker images, Implemented **Trivy** for vulnerability scanning of both standard and **Distroless Docker images**, enhancing container security before pushing images to ECR.
- **Production-Grade Dockerization:** Built secure, lightweight **Distroless Docker images** for production workloads, significantly reducing image size and minimizing attack surfaces.
- **AWS Infrastructure Automation:** Provisioned and managed AWS services such as **EC2, Auto Scaling Groups, ECR, VPC, and CloudWatch** using **Terraform**, ensuring repeatable and scalable infrastructure deployment and enabled notifications when drift detected in infrastructure.
- **Monitoring & Observability:** Deployed **Prometheus** and **Grafana** to monitor Kubernetes clusters at the pod and node levels. Configured **CloudWatch** metrics for EC2 (CPU and memory) and automated alerting.
- **Event-Driven Automation:** Used serverless architecture **Lambda functions** to trigger automation workflows event-driven infrastructure events for S3 file uploads, bucket creation, email transaction post payment and Auto-shutdown unused EC2/RDS instances after hours.

Key Project Outcomes:

- Achieved 30% cost reduction via container optimization and distroless images, minimizing attack surfaces.
- Implemented Argo CD GitOps strategy resulting in faster and error-free deployments in Kubernetes cluster.
- Reduced deployment failures with CI/CD pipeline standardization and improved build time using caching.
- Reduced critical vulnerability resolution time by implementing AI-powered prioritization in Trivy scans and SonarQube analysis.
- Implemented Lambda functions on post-transaction to send SMS and email notifications to customers via SNS/SES.

Project Engineer (Software Modernization)

Project: NetOxygen Launchpad Modernization

September 2021 - January 2022 (5 months) | Hyderabad,

Led strategic software modernization initiative to transform legacy application delivery systems. Applied software engineering principles to analyse existing systems and implement modern deployment methodologies across multiple environments.

- **Deployment Optimization & Automation:** Reduced deployment time by 40% and manual errors by 70% through optimized CI/CD pipelines, rollback mechanisms, and PowerShell automation on Azure VMs.
- **System Reliability & Monitoring:** Improved system reliability by 60% with auto-scaling and proactive monitoring solutions across environments.
- **Cost Efficiency & Containerization:** Achieved 30% cost savings by optimizing resources and adopting containerized, MSI-based installations for better scalability and maintainability.
- **Security & Compliance:** Enhanced security posture through integrated vulnerability scanning, compliance checks, and modernized deployment tooling like Trivy and WiX Toolset.
- **Legacy Modernization & Collaboration:** Transitioned legacy systems to modern DevOps workflows in collaboration with engineering teams, ensuring consistent, scalable, and automated multi-environment deployments.

Key Project Outcomes:

- Reduced deployment errors by 70% and infrastructure costs by 30% via automation and containerization.

EDUCATION

MTech in Software Systems (Expected Dec 2025) | BITS Pilani

Software Systems (Work Integrated Learning Programme)

Birla Institute of Technology and Science (BITS Pilani)

Bachelor of Science (Jun 2018 – Aug 2021)

Computer Science & Engineering

Aditya Degree College

CGPA: 8.5/10.0

CERTIFICATES

AWS Certified DevOps Engineer (Expected July 2025)

Be10x: AI Tools for Automation & Productivity