Mohammad Afzal

Lead Cloud Engineer | Senior DevOps Engineer | Product Development Engineer
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Summary

Lead Cloud Engineer at Technumen with 9+ years of experience in designing, building, and maintaining scalable, cloud-native systems. Specialized in **AWS infrastructure (EC2, Lambda, S3, RDS)**, **containerization (Docker, Kubernetes)**, and **CI/CD automation** using tools like **GitHub Actions**, **Jenkins**, and **GitOps workflows**. Strong backend development background in **Java**, **Kotlin**, and **Python**, enabling seamless integration between application development and deployment pipelines. Proficient in **Infrastructure as Code (Terraform)**, **observability tooling** (Prometheus, Grafana, ELK), and **DevSecOps best practices**. Experienced in enabling ML Ops using **MLflow**, **SageMaker**, and **Kedro**, supporting real-time model deployment and lifecycle automation. Adept at leading cross-functional teams, optimizing build and release processes, and delivering high-availability systems for product and service-based organizations. Active contributor on Stack Overflow (8,000+ reputation), with a passion for clean architecture, automation, and developer enablement.

Technical Proficiencies

Cloud Platforms: AWS (EC2, Lambda, S3, RDS, EKS, CloudWatch, Step Functions), GCP (basic), Serverless Framework

Infrastructure as Code (IaC): Terraform, AWS CloudFormation (basic), Kubernetes Manifests, Helm Charts

Containerization & Orchestration: Docker, Kubernetes, Docker Compose, Helm, Amazon EKS

CI/CD & Automation: GitHub Actions, Jenkins, GitLab CI/CD, GitOps workflows, Shell scripting

Programming & Scripting: Python, Kotlin, Java 17, Bash, JavaScript (basic)

DevOps & Monitoring Tooling: Prometheus, Grafana, ELK Stack, CloudWatch, Fluentd, Nginx, Kafka

Source Control & Dev Tools: Git, GitHub, Bitbucket, GitLab, Linux CLI, VS Code, IntelliJ, Postman

ML Ops & Data Pipelines: MLflow, SageMaker, Kedro, Pandas, JupyterLab, Scikit-learn

Testing & Quality Automation: JUnit, PyTest, Cucumber, Postman, Selenium (basic), BDD frameworks

Databases & Storage: PostgreSQL, MySQL, MongoDB, Redis, Snowflake (basic), S3

Experience

Lead Cloud Engineer, Technumen | 2024 - Present
- Built and deployed a scalable **Spring Boot SDK** for AI-driven insurance inference; integrated with **Sapient** and third-party clients.
- Automated **release notifications** to internal and external stakeholders via **Slack**, **email**, and **Microsoft Graph API**.
- Managed AWS infrastructure (**EKS, Lambda, S3, Step Functions**) using **Terraform**, **Docker**, and **Kubernetes**.
- Designed CI/CD pipelines with **GitHub Actions**, enabling secure, multi-stage deployments and code scanning.
- Integrated monitoring and alerting with **Datadog**, **Prometheus**, and **Grafana** for production reliability.
- Migrated codebases to **GitHub**, implemented GitOps practices, and mentored team on **Kotlin** and infra best practices.

Product Development Engineer, Calibo | 2020 - 2023
- Work closely with stakeholders to gather feedback, optimize application performance, and ensure smooth product delivery.
- Built and deployed containerized microservices using **Kotlin**, **Spring Boot**, **Docker**, and **Kubernetes (EKS)**.
- Created and maintained Helm charts for service deployment and environment-specific configurations.
- Managed cloud infrastructure using **AWS (EC2, RDS, S3, SageMaker)** and **Terraform**, enabling repeatable, scalable provisioning.
- Developed and maintained **Jenkins pipelines** for CI/CD across multiple environments, integrating testing and code quality checks.
- Monitored system health and performance using **New Relic**, **CloudWatch**, and centralized logging with **ELK Stack**.
- Contributed to **ML Ops pipelines** using **MLflow**, **Kedro**, and **SageMaker** for model deployment and monitoring.
- Collaborated with teams to implement DevOps best practices, automate deployments, and troubleshoot production issues efficiently.

Senior Associate, Nagarro | 2019 - 2020
- Developed microservices using **Spring Boot**, **Kotlin**, and **RabbitMQ**, deployed on containerized infrastructure.
- Built and maintained **CI/CD pipelines** using **Jenkins** and **Docker**, streamlining testing and release workflows.
- Collaborated on infrastructure setup with **Kubernetes**, and implemented logging/monitoring with **ELK Stack** and **CloudWatch**.
- Contributed to DevOps transformation by automating deployments and improving code quality through static analysis and test coverage.
- Participated in agile ceremonies and cross-team collaboration to deliver scalable, secure features aligned with client needs.

Senior Software Engineer, Enbraun | 2015 - 2019
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Freelancer | Before 2015
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Project Profile

OneRule SDK – AI Inference Platform for Insurance Claims
Enterprise-grade SDK designed to simplify integration with Sapient's AI inference engine for insurance claim processing. The SDK abstracted data preparation and infrastructure complexities, providing a lightweight, plug-and-play middleware solution for third-party systems.
Key Contributions:
- Designed and developed the core SDK using **Java 17**, **Spring Boot**, and **Kotlin**, enabling low-latency access to AI-driven inference APIs.
- Containerized services with **Docker** and deployed them on **AWS EKS**, with configuration management using **Helm** charts.
- Managed infrastructure using **Terraform**, provisioning AWS components like **Lambda**, **S3**, **Step Functions**, and **CloudWatch**.
- Implemented CI/CD pipelines using **GitHub Actions** for automated builds, deployments, and environment promotion.
- Developed and published reusable **CloudForge Starter Templates** (e.g., Spring Boot Starter, Kubernetes-ready Helm charts, EKS deployment blueprints) to accelerate client onboarding.
- Integrated **Slack bots** and **Microsoft Graph API** to automate release announcements and internal communications.
- Introduced observability enhancements using **Datadog** for real-time monitoring and alerting.

- Migrated repositories from Bitbucket to GitHub with enforced GitOps workflows, code quality checks, and reviewer policies.

LAZSA – Product Platform-as-a-Service

An industry-first Product Platform-as-a-Service (pPaaS) built to streamline and accelerate digital product development. LAZSA enables enterprises to manage the complete lifecycle of digital solutions—from definition and design to deployment—within a unified, cloud-native environment.

Key Contributions:

- Led the development of core platform modules using **Java 8**, **Spring Boot**, and **Kotlin**, ensuring modularity, scalability, and ease of extension.
- Architected and deployed microservices using **Docker** and **Kubernetes**, with CI/CD pipelines built in **Jenkins** for automated testing and delivery.
- Integrated **AWS services** including **S3**, **Lambda**, **RDS**, and **SageMaker** for storage, computation, and ML model hosting.
- Implemented ML pipelines using **Kedro**, with experiment tracking and model lifecycle management via **MLflow**.
- Utilized **Kafka** for asynchronous, event-driven communication across distributed services.
- Developed frontend interfaces using **ReactJS**, and managed deployment environments via **Helm** charts and infrastructure as code.
- Established observability stack using **ELK**, **Grafana**, and **CloudWatch** for real-time monitoring, logging, and performance tuning.
- Collaborated with stakeholders to define platform strategy and ensure business-aligned technical decisions for speed, compliance, and scalability.

DiPEC (Digitalized Project Execution)

Web application created to digitalize project development, utilized by engineers of Siemens. The project involved team leadership and development from the initial stages. The application was developed in a microservices architecture, ensuring scalability.

Key Contributions:

- Built core services using **Spring Boot**, **Kotlin**, and **PostgreSQL** with **Kafka** for event-driven communication.
- Developed frontend in **Angular 8** with **Material UI**, ensuring responsive UX.
- Deployed services using **Docker** and **Kubernetes**; implemented logging via **ELK Stack** and **CloudWatch**.
- Collaborated with cross-functional teams to align delivery with agile sprints and performance targets.

eResource Scheduler

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ExamChi – Online Exam Practice Platform

A cloud-based exam preparation tool designed to deliver dynamic quizzes, performance tracking, and practice sessions for students and professionals. Built as a full-stack application to demonstrate scalable architecture, real-time user interaction, and cloud-native deployment.

Link : https://examchi.afzalex.com/

Key Contributions:

- Designed and developed the platform using **Node.js** (Express) for backend services, **ReactJS** for the frontend, and **MongoDB** for schema-flexible data storage.
- Deployed on **AWS** with a focus on performance and availability, leveraging services like EC2 and S3 for hosting and storage.

Abho Costing Sheet

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Education Detail

Master of Science in Data Science from Liverpool John Moores University (Distance)
Post Graduate Diploma in Data Science from IIITB Bangalore (Distance)

Bachelor of Technology in Computer Science from Uttarakhand Technical University
Higher Secondary School from Modern School Rishikesh (CISCE)
High School from Modern School Rishikesh (CISCE)