Mohammad Afzal

Lead Cloud Engineer | Product Development Engineer | Web Application Specialist
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Summary

Experienced **Lead Engineer** with 10+ years of building and deploying scalable, cloud-native web applications across monolithic and microservices architectures. Skilled in **Java**, **Spring Boot**, **Hibernate**, **ReactJS**, and **Angular**. Experienced in designing RESTful APIs, integrating **Stripe** payments, and deploying secure, high-performance solutions on **AWS** (**EKS**, **ECS**, **EC2**, **Lambda**, S3) with Jenkins and Github Actions for CI/CD. Strong in **Linux system administration**, infrastructure optimization, and DevOps practices. Led full-cycle ERP and SaaS product development in both product and service environments. Active **Stack Overflow** contributor with 8K+ reputation.

Technical Proficiencies

Programming Languages: Java 17, Kotlin 1.9, Python, JavaScript
Backend Development: Spring Boot, Hibernate, RESTful APIs, Node.js, Kafka
Frontend Development: ReactJS, AngularJS, Flutter
Database Systems: PostgreSQL, MySQL, MongoDB, Redis, Snowflake
Cloud Services: AWS (EC2, RDS, S3, EKS, Lambda, Cloudwatch), Azure, Docker, Kubernetes, Terraform
DevOps & CI/CD: GitHub Actions, Jenkins, Docker, Argo CD, Linux CLI, New Relic, Datadog, ELK
MLOps & Data Science: Databricks, Snowflake, MLflow, Scikit-learn, JupyterLab, Pandas

Experience

Lead Cloud Engineer, Technumen | 2024 - Present
- Designed and developed a **Spring Boot SDK** with **Spring WebFlux** to serve AI-powered insurance claim inferences through a scalable API interface for external clients, including Sapient integration.
- Led development of **OneRule SDK API layer**, enabling third-party systems to consume inference results with high reliability and low latency for **Liberty Mutual**.
- Integrated CI/CD with **StepFunctions**, **AWS Lambdas**, **EKS** and **Github Actions**.
- Integrated key enterprise systems including **Microsoft Graph API** (calendar & email automation), **Slack bots**, **email pipelines**, **S3**, and **OpenAI APIs** to streamline internal processes and external communications.
- Actively contributed to **code reviews, architectural decisions, and developer mentoring**, with tools like Datadog, Github, Sonar, Prometheus, Grafana, Codacy etc.

Product Development Engineer, Calibo | 2020 - 2023
- Led the development of **scalable microservices** using **Java (Spring Boot + Hibernate)** and **Node.js.**
- Built and integrated data pipelines with **Snowflake** to support ETL workflows for ML Models.
- Architected and implemented DevOps practices using **Docker, Kubernetes (EKS) with Helm Charts, Jenkins**, and **Terraform** to manage infrastructure as code and automate environment provisioning.
- Built cloud-native applications leveraging **AWS services** including **EKS, ECS, RDS**, and **SageMaker**.
- Implemented GitOps-driven delivery pipelines using **Argo CD** to manage Kubernetes resources declaratively, supporting faster and more reliable platform releases.

Senior Associate, Nagarro | 2019 - 2020
- Developed enterprise applications using a **hybrid microservices stack**—**Node.js** for lightweight APIs and **Kotlin and Java with Spring Boot** on **AWS (Lambda, EKS etc)**.
- Led a small team of engineers in designing, developing, and maintaining microservices.
- Designed and developed scalable web applications using **Kotlin**, **Spring Boot**, **RabbitMQ**, **Angular 8** with **typescript**, and **PostgreSQL**.

- Actively participated in agile development processes, including sprint planning, daily stand-ups, and retrospective meetings.

Senior Software Engineer, Enbraun | 2015 - 2019
- **Core contributor and technical lead** on the development of *eResource Scheduler*, a multi-user resource management platform built from the ground up for scalability, availability, and customization on **AWS (EC2, RDS, S3, ALB)**.
- Designed and developed **RESTful services** and dynamic frontend modules using **JavaEE**, **AngularJS**, and **Bootstrap**, forming the backbone of the platform's booking, timesheet, and reporting features.
- Mentored junior developers and facilitated code reviews, fostering a culture of quality and hands-on learning within the team.
- Played a core role in the platform's **first public release after 3 years of active development**, contributing across all phases—from designing architecture and building features to testing, optimization, and deployment of a **highly available and scalable system**.

Project Profile

Liberty Mutual - OneRule SDK – AI Inference Platform for Insurance Claims
An enterprise-grade SDK built to simplify and standardize the use of Sapient's AI-driven insurance claim inference engine. The SDK acted as a middleware abstraction layer, enabling client systems to integrate seamlessly without dealing with data preparation, complex dependencies, or cloud-specific configurations.
Key Contributions:
- **Designed and built the core OneRule SDK** using **Java 17 + Spring Boot**, exposing an intuitive API layer for secure and scalable AI inference integration.
- Developed reusable infrastructure kits, including **Spring Boot Starters, Spring Webflux**, **Helm charts**, and **EKS-ready deployment templates** to support rapid onboarding and consistent rollout.
- Built **cloud-native automation pipelines** using **EKS**, **AWS Lambda, Step Functions, S3, CloudWatch**.
- Built a voice-driven Customer Care Assistant Bot for IVR System with **LangChain**, GPT API, **Whisper ASR**, and **Coqui TTS** for real-time conversational AI in Python.
- Migrated repositories from Bitbucket to GitHub, and implemented **GitHub Actions** for CI/CD, integrated with **Codacy** and **Datadog** for real-time observability and alerting.
- Integrated enterprise tools such as **Microsoft Graph API** (email/calendar automation), **Slack bots**, **OpenAI APIs**, and **custom email pipelines**, enhancing internal workflows and communication automation.

LAZSA – Product Platform-as-a-Service
Industry-first Product Platform-as-a-Service (pPaaS) to redefine digital innovation and drive competitive advantage through digital business. The platform provides a comprehensive set of tools and technology stack to efficiently manage, define, design, develop, and deploy phases of product development.
Link : https://lazsa.altimetrik.com/
Key Contributions:
- **Led the engineering team** in building and delivering core platform capabilities.
- Designed and implemented microservices using **Kotlin and Java with Spring Boot, Python** and **Node.js**, selecting the best-fit tech based on functional and performance requirements.
- Built a secure and scalable **DevSecOps pipeline** using **Docker, Kubernetes, EKS with Helm Charts, Jenkins**, and **Terraform** for infrastructure as code (IaC)
- Integrated advanced tools like **Kafka**, **SageMaker**, **MLflow**, **Kedro**, and **ELK Stack** to support real-time data processing, machine learning workflows, and observability.
- Designed the data and experimentation layer using **Snowflake** for ETL workflows and **JupyterLab** for EDA, ML experimentation, and interactive reporting.

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.
Link : https://www.dipec.siemens.co.in

Key Contributions:

- **Led the end-to-end development** of critical features from inception, working closely with Siemens stakeholders to translate engineering workflows into intuitive application modules.
- Designed and implemented services using **Spring Boot** and **Kafka** to enable scalable, event-driven communication between modules.
- Developed a dynamic and responsive frontend using **Angular 8** and **Material UI**, integrated seamlessly with **PostgreSQL** for reliable data persistence.
- Took ownership of code quality, reviews, and sprint delivery, ensuring adherence to agile processes and successful on-time releases.

DiPEC (Digitalized Project Execution Cycle)

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.
Link : https://www.dipec.siemens.co.in
Key Contributions:

- Took ownership of feature development from design to deployment, building scalable microservices and intuitive frontends based on Siemens' engineering needs.
- Designed and implemented services using **Spring Boot, PostgreSQL** and **Kafka** on **AWS EKS.**
- Developed a dynamic and responsive frontend using **Angular 8** and **Material UI**.
- I was involved in code quality, reviews, and sprint delivery in agile processes.

eResource Scheduler

Enbraun's eResource Scheduler is a multi-user feature-rich software for resource management and scheduling. The application enables organizations to efficiently schedule, plan, and manage employees, equipment, and other resources.
Link : https://www.eresourcescheduler.com
Key Contributions:

- Developed scalable **RESTful APIs** and interactive frontend modules using **JavaEE**, **AngularJS**, **Bootstrap**, and **OAuth2** on **AWS (EC2, RDS, S3 etc)**.
- Implemented advanced features including **user-defined fields**, **dynamic booking charts**, **timesheet modules**, and **customized reporting**, significantly improving planning flexibility and user experience.

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.

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