# Mohammad Afzal

Lead Cloud Engineer | Product Development Engineer | Web Application Specialist  
[mohammadafzal.tech@gmail.com](mailto:mohammadafzal.tech@gmail.com) | +917222876247 | <https://www.afzalex.com>

<https://www.linkedin.com/in/afzalex> | <https://github.com/afzalex>

## Summary

Experienced **Lead Engineer at Technumen** with 10+ years of success in building and deploying **scalable, cloud-native web applications** across monolithic and microservice architectures. Proficient in **Kotlin**, **Java**, **Spring Boot**, and **Hibernate** for backend development, and skilled in **ReactJS** and **Angular** for dynamic front-end interfaces. Adept at designing RESTful APIs, integrating payment systems like **Stripe**, and deploying secure, high-performance solutions on **AWS** (EC2, Lambda, S3), using **Docker**, **Kubernetes**, and **Jenkins** for **CI/CD** automation. Strong command over **Linux system administration**, infrastructure optimization, and DevOps practices. Known for leading full-cycle ERP and SaaS product builds in both product and service environments. Active contributor on Stack Overflow (8K+ rep) and driven by a passion for clean architecture, team mentorship, and continuous learning.

## 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.
* 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, Graphana, Codacy etc.

### Product Development Engineer, Calibo | 2020 - 2023

* Led the development of **scalable microservices** using **Java (Spring Boot + Hibernate)** and **Node.js**, architecting backend systems optimized for both compute-heavy and real-time use cases.
* Built and integrated data pipelines with **Snowflake** to support ETL workflows, enabling efficient analytics and downstream data processing for business intelligence and ML models.
* Architected and implemented DevOps practices using **Docker, Kubernetes (EKS), Jenkins**, and **Terraform** to manage infrastructure as code and automate environment provisioning.
* Built cloud-native applications leveraging **AWS services** including **EC2, 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** for core business logic.
* Led a small team of engineers in designing, developing, and maintaining microservices, ensuring high scalability and modularity.
* Led the digital transformation of project development by developing web applications using **Kotlin** + **Spring Boot**, **RabbitMQ**, **Angular 8**, and **Postgresql**.
* Actively participated in agile development processes, including sprint planning, daily stand-ups, and retrospective meetings.

### Senior Software Engineer, Enbraun | 2015 – 2019

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## 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, driving successful feature releases and production deployments.
* Designed and implemented microservices using **Kotlin and Java with Spring Boot** 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, Jenkins**, and **Terraform** for infrastructure as code (IaC), streamlining provisioning and environment automation.
* 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—enhancing data usability across teams.

### 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:

* **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.

### 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**, enabling secure, responsive, and modular scheduling capabilities.
* 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

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