# Mohammad Afzal

Lead Cloud Engineer | Product Development Engineer | Web Application Specialist  
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## 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, Lambda, Cloudwatch), Azure, Docker, Kubernetes, Terraform

**DevOps & CI/CD:** GitHub Actions, Jenkins, Docker, Nginx, Git, Linux CLI

**MLOps & Data Science:** MLflow, Scikit-learn, JupyterLab, Pandas

**Testing and Automation:** JUnit, Selenium, Cucumber, PyTest

## Experience

### Lead Cloud Engineer, Technumen | 2024 - Present

* Designed and developed a **Spring Boot SDK** 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.
* Migrated multiple repositories from **Bitbucket to GitHub**, integrating **GitHub Actions** for CI/CD automation, security scanning, and environment promotion workflows.
* 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**, promoting Kotlin best practices and accelerating team productivity.
* Introduced new tooling and process enhancements across code quality checks, dependency management, and observability practices, improving developer velocity and system reliability.

### 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.
* Collaborate with cross-functional teams to understand requirements and deliver high-quality features to production.
* Architect and implement DevOps practices, leveraging Docker, Kubernetes, and Jenkins for continuous integration and deployment.
* Built cloud-native applications leveraging **AWS services** including EC2, RDS, and SageMaker, with a focus on performance, reliability, and cost-efficiency.
* Work closely with stakeholders to gather feedback, optimize application performance, and ensure smooth product delivery.

### 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**.
* Ensured high code quality and adherence to best practices through code reviews and automated testing.
* 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 developed the core **OneRule SDK** in **Java 17 + Spring Boot**, providing a clean and reliable interface to invoke Sapient inferences with minimal setup.
* Created reusable starter kits for rapid integration including **Spring Boot Starters**, **Kubernetes Helm charts**, and EKS-ready deployment templates.
* Developed cloud-native automation pipelines using **AWS Lambda**, **Step Functions**, **S3**, and **CloudWatch**, enabling dependency updates, versioning, and environment validation without manual intervention.
* Abstracted complexities such as **data cleaning**, **data validation**, and **third-party dependency resolution**, delivering a plug-and-play experience for SDK consumers.
* Enabled multi-tenant compatibility and extensibility for internal teams and client partners to build on top of OneRule without deep platform knowledge.
* Contributed to comprehensive developer documentation, onboarding guides, and internal tooling to accelerate adoption and reduce time-to-first-inference.

### 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.

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 robust DevSecOps pipeline using **Docker, Kubernetes, Jenkins**, and AWS services for seamless deployment and environment management.
* Integrated advanced tools like **Kafka**, **SageMaker**, **MLflow**, **Kedro**, and **ELK Stack** to support real-time data processing, machine learning workflows, and observability.

### 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:

* **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.

Key Contributions:

* Developed RESTful services, utilizing AngularJS, Bootstrap, OAuth2, and JavaEE to create a comprehensive resource management solution.
* Collaborated with clients to gather requirements, design customizations, and provide technical guidance.
* Implemented user-defined fields, booking charts, time sheets, and other advanced features to enhance resource management capabilities.

## Education Detail

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