

MOHAMMAD UMAR AKRAM SHAIKH

SOFTWARE ENGINEER — JAVA | SPRING BOOT | MICROSERVICES | AI / LLM

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PROFESSIONAL SUMMARY

Software Engineer with 2 years of production experience designing and building **scalable backend systems, Microservices, and AI-powered applications** with **Java (11/17/21), Spring, Spring Boot 3.x, Spring AI, and PostgreSQL** across fintech, healthcare, and govtch domains. Applied **system design principles** — **caching (Redis), connection pooling, read/write optimization, and load-balanced deployments** — to scale a platform to **10,000+ concurrent users** and cut API response times by **60%**. Shipped production **LLM features: multi-agent AI pipelines, RAG, context management, and model-agnostic orchestration**, owning features from design through production deployment.

TECHNICAL SKILLS

Languages: Java (8, 11, 17, 21), SQL, JavaScript, TypeScript, Go, Python

Java & Spring: Spring, Spring Boot 3.x, Spring MVC, Spring Security, Spring Data JPA, Spring AI, Spring AOP, Hibernate, JPA, JSP (JavaServer Pages), Servlets, JSF (JavaServer Faces), FreeMarker, Maven

Core Java: OOP, Collections Framework, Streams API, Lambda Expressions, Multithreading & Concurrency, Exception Handling, Generics

System Design: Microservices, RESTful API Design, Message Queues (Apache Kafka), Caching (Redis, Caffeine, Client-Side), Load Balancing (Nginx), Read Replicas & Connection Pooling (PgBouncer), Rate Limiting, Horizontal Scaling, High Availability, Layered Architecture, DTO Pattern

AI / GenAI: LLM Integration & Orchestration (OpenAI, Anthropic Claude, Groq, Llama, Ollama, OpenRouter), AI Agents & Multi-Agent Pipelines, RAG (Retrieval-Augmented Generation), Context Management, Prompt Engineering, Structured Outputs, MCP Servers

Databases: PostgreSQL (incl. JSONB), MySQL, SQL, Redis, Flyway, Liquibase, Query Optimization & Indexing, Schema Design

Frontend: React 18/19, Next.js 15/16 (App Router), TypeScript, Tailwind CSS

Security: JWT (Access + Refresh Token Rotation), Spring Security, RBAC, Rate Limiting, Input Validation, Audit Logging

Tools & Practices: Docker, GitHub Actions (CI/CD), Nginx, Linux, AWS, Git, JUnit 5, SonarQube, k6 Load Testing, Agile/Scrum

PROFESSIONAL EXPERIENCE

Data Innovation Technologies Pvt Ltd · datainn.io

Pune, India

Software Engineer (Java) — Promoted from Intern

Apr 2025 – Present

- Earned promotion to full-time **Software Engineer within 8 months**, as measured by consistent production releases, by shipping **Java / Spring Boot** features across fintech, healthcare, and govtch products.
- Scaled a secure examination platform to **10,000+ concurrent users** with low latency under peak load by designing a layered caching architecture — **Redis distributed cache, PgBouncer connection pooling, and client-side caching** — to keep the database from becoming a bottleneck.
- Reduced API response times by **60%** by profiling slow endpoints, optimizing **PostgreSQL** queries, adding strategic indexes, and restructuring data-access pipelines for read-heavy workloads.
- Delivered a govtch civic-complaint and voter-mapping platform to production, serving citizens across **4 user roles**, by building REST APIs with **Java 17, Spring Boot 3.2, Spring Security, PostgreSQL, and Flyway**, fuzzy record matching (**Jaro-Winkler, Apache Commons Text**) across electoral rolls, and a WhatsApp self-service bot.
- Shipped **AI-driven features** to production across Java and Next.js services by integrating **Spring AI, Groq SDK, and LLM APIs** with context-managed prompts and structured outputs, including a corporator helpline system delivered end to end.
- Designed the system architecture and built a metabolic health clinic platform — public site and custom CMS — end to end with **Next.js 16, React 19, TypeScript, PostgreSQL, and Prisma ORM**.
- Ensured secure, highly available services, as measured by zero-downtime releases, by owning deployment of the systems I built with **Docker, Nginx load-balanced reverse proxies, and GitHub Actions CI/CD**.

Data Innovation Technologies Pvt Ltd · datainn.io

Pune, India

Software Engineer Intern (Java Backend)

Aug 2024 – Apr 2025

- Shipped major production features for **SimpleAccounts.io** (fintech accounting — **Java, Spring Boot, PostgreSQL, Liquibase**) and **TherapyCRM.io** (healthcare CRM — **React, Node.js/Express**) by developing RESTful APIs and invoicing/reporting modules across the full SDLC.
- Secured multiple production APIs by implementing **JWT authentication (access + refresh token rotation)**, **RBAC**, and input validation with **Spring Security**.
- Preserved data integrity through evolving requirements by designing relational schemas and version-controlled migrations with **Liquibase and Flyway**.
- Guaranteed consistent dev-to-production behavior by writing **JUnit** unit/integration tests, building dynamic **FreeMarker (FTL)** email template systems with XML/JSON data pipelines, and containerizing services with **Docker** in **Agile/Scrum** sprints.

PROJECTS

ResumeAgent — Multi-Agent AI Resume Optimization Platform

github.com/mohammadumar-dev/resumeagent

Java 21 · Spring Boot 3.x · Spring AI · Spring Security · PostgreSQL JSONB · Next.js · FreeMarker · Docker · GitHub Actions

- Architected a production-grade **5-agent AI pipeline** (parser, JD analyzer, semantic matcher, rewriter, ATS optimizer) in **Java 21 / Spring Boot** that converts a master resume into job-specific ATS-optimized DOCX files, using structured JSON orchestration and a **model-agnostic LLM layer** (OpenAI, Claude, Llama, Ollama).
- Eliminated LLM formatting hallucinations by separating AI reasoning from layout via deterministic **FreeMarker→DOCX** rendering; secured the platform with **RSA key-pair JWT auth**, resume versioning, and **PostgreSQL JSONB** persistence.

GitPilot — AI-Powered Git Workflow Automation CLI

github.com/mohammadumar-dev/gitpilot

Go · Groq · OpenRouter · OpenAI · Anthropic Claude · Ollama · GoReleaser · GitHub Actions

- Built a cross-platform AI Git CLI generating conventional commits, semantic commit grouping, and PR summaries through a **provider-agnostic LLM architecture** with **human-in-the-loop approvals**; achieved zero plaintext credential exposure via **OS-keychain security** and shipped SHA256-verified releases via Homebrew.

Carventory — Full-Stack Dealership Management Platform

github.com/mohammadumar-dev/carventory

Java 21 · Spring Boot 3.4 · Spring Data JPA · PostgreSQL · React 18 + TypeScript · Next.js 15 · Cloudinary

- Engineered a three-app production monorepo (**Spring Boot REST API, React + TypeScript dashboard, Next.js marketplace**) covering the full dealership workflow — inventory, inquiry-to-vehicle matching, bookings, branded PDF invoices, and real-time profit/loss analytics — with **scheduled jobs, AOP aspects, and JWT + multi-role RBAC**.

Additional Projects

- **PathLab** — Laboratory Information Management System (Spring Boot, Spring Security, React, Flyway, Caffeine) with multi-status sample lifecycle tracking, 4-role RBAC, and PDF report generation (**OpenHTML2PDF + FreeMarker**).
- **DWUI New Tab** — Chrome extension (React 19, TypeScript, Vite, WebGL) published on the **Chrome Web Store**.

EDUCATION

Bachelor of Science (B.Sc.) in Computer Science — Savitribai Phule Pune University, Pune, India

Graduated 2026 · CGPA: 8.58