

# Rajnikant Kumar

Hyderabad, Telangana | +91 6281067941 | rajnikantkumar2209@gmail.com  
linkedin.com/in/rajnikant-kumar | github.com/rajni2209

## Skills

**Programming Languages:** Java, SQL

**Backend:** Spring Boot, Spring MVC, Spring Security, Spring Data JPA, Microservices, RESTful APIs

**AI & GenAI:** Spring AI, Retrieval-Augmented Generation (RAG), Model Context Protocol (MCP), LLM Integration

**Messaging & Streaming:** Apache Kafka, RabbitMQ, Event-Driven Architecture

**Databases & Caching:** MySQL, PostgreSQL, Redis

**Software Design:** Object-Oriented Programming (OOP), SOLID Principles, Low-Level Design (LLD), Database Design

**Testing:** JUnit, Mockito

**DevOps & Tools:** Docker, Kubernetes, GitHub, Maven, Swagger/OpenAPI, Postman

## Education

**Malla Reddy University, Hyderabad, Telangana**

2023–2027

B.Tech in Computer Science and Engineering

**CGPA: 8.2**

## Projects

### E-Commerce Backend Application

[GitHub](#) [Docker Hub](#)

Designed and deployed a distributed e-commerce backend with 12 Spring Boot microservices, independent databases, and AI-powered search across a fully containerized architecture.

- Architected an event-driven communication layer across 12 Spring Boot microservices using Apache Kafka, implementing idempotent consumers and transactional outbox patterns to ensure reliable, fault-tolerant message delivery across 7 independent databases.
- Built a secure, production-grade backend with OAuth2 + JWT-based centralized authentication, Redis caching for performance optimization, and Resilience4j circuit breakers for service fault tolerance across the distributed system.
- Engineered an AI-powered semantic product search using RAG pipelines with vector embeddings, Elasticsearch, and Spring AI - enabling contextual recommendations and dynamic product retrieval via MCP tool calling.
- Containerized all 12 microservices with Docker and orchestrated local deployment using Kubernetes, configuring service discovery, inter-service networking, and environment-based config management via Kubernetes manifests.

**Stack:** Java, Spring Boot, Spring AI, RAG, MCP, Apache Kafka, MySQL, Redis, Elasticsearch, JWT, OAuth2, Resilience4j, Docker, Kubernetes

### FilmFusion

[GitHub](#) [Live](#)

A full-stack movie quiz platform with actor, actress, and movie identification challenges across multiple difficulty levels, backed by a Spring Boot REST API and deployed for public access.

- Designed and implemented RESTful APIs for quiz question management, answer verification, dynamic hint delivery, and option retrieval — supporting real-time game interactions across multiple challenge modes.
- Engineered a MySQL-backed question bank of 225 curated questions with difficulty-based filtering, ensuring varied and progressive gameplay across actor, actress, and movie identification categories.
- Deployed the full-stack application with the React frontend on Vercel and Spring Boot backend on Render, configuring seamless cross-origin API integration for reliable public access.

**Stack:** Java, Spring Boot, Spring Data JPA, Spring Security, MySQL, REST APIs, HTML, CSS, JavaScript

## Experience

### Backend Developer

Ongoing *Student Collaboration Platform (College Project)*

- Engineered a Spring Boot backend serving 4 core modules — user management, project postings, team formation, and collaboration workflows — with clean service-layer architecture and role-based JWT authentication.
- Designed normalized MySQL schemas and implemented JWT-based authentication to secure user sessions and enforce role-based access across platform features.
- Collaborated with frontend developers to define API contracts and integrate end-to-end features, ensuring consistent request/response structures and smooth cross-team delivery.

## Achievements and Certifications

**Data Structures and Algorithms** - NPTEL, IIT Madras

Oct 2024

**Advanced Software Engineering Job Simulation** - Walmart Global Tech (Forage)

→ View

**Top SQL 50** - LeetCode

→ View

**250+ Problems Solved** - LeetCode & GeeksforGeeks

→ LC → GFG