

Adarsh Kumar

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SUMMARY

- **Full Stack Developer** with **3+ years of experience** building **scalable, event-driven, AI-powered systems** using **Java, Spring Boot, Kafka, WebFlux, and React**. Strong in microservices, distributed systems, and **GenAI**, with hands-on experience in **LLMs, RAG, AI Agents, Spring AI, MCP, and Vector Databases**, large-scale data processing using Spark and Databricks, and designing cloud solutions on **Azure** and **GCP**.

Work Experience

Software Engineer

Bengaluru, Karnataka

 **Albertsons Companies India**

Aug 2025 – Present

- Built reactive backend services using **Spring WebFlux** for the **Catalog platform**, enabling scalable, non-blocking processing of item data and real-time synchronization with **Google Retail Search**.
- Implemented event-driven pipelines using **CDC** and **Kafka Connectors**, processing **125K+ messages/day** for reliable, asynchronous data flow across upstream and downstream systems.
- Optimized **Spark** workloads with **broadcast joins** and shuffle reduction in **Databricks**, cutting transformation time by **32%**.
- Built a production-scale **GenAI-powered catalog enrichment platform** using **Vertex AI (Gemini)**, orchestrating event-driven **Cloud Functions, Cloud Run, GCS, and BigQuery** to automate product attribute generation, value normalization, and variant grouping for millions of retail products, contributing to over **\$27M** in incremental revenue.
- Engineered an AI-powered image generation platform using **Spring Boot** and **React Module Federation**, integrating async **Vertex AI** pipelines with dynamic compression cascades and secure **Azure Blob Storage**.
- Designed a **React Micro Frontend** for item and modifier management, enabling real-time business overrides with **RBAC** and **concurrent edit locking**.

Associate Product Engineer

Bengaluru, Karnataka

 **Temenos**

Feb 2024 – Aug 2025

- Built horizontally scalable backend services across **8+ microservices**, optimizing request handling to sustain high concurrency with **sub-200ms** response times.
- Implemented **Spring Security, OAuth2, and RBAC** with **Entra ID** for JWT authentication and fine-grained authorization.
- Centralized API management using **Azure APIM**, enforcing strict routing, authentication, and rate-limiting policies.
- Orchestrated distributed transactions using the **SAGA pattern** and **Resilience4J** circuit breakers for fault tolerance.

Projects

AI-Driven Code Generation SaaS Platform | React, Spring AI, RAG, PgVector, Kafka, Redis

 Code  Live

- Built an **AI SaaS** generating React apps with **Spring AI**, leveraging **RAG** context and guardrails to mitigate hallucinations.
- Implemented **SSE-based real-time streaming** supporting 10K+ concurrent sessions with **sub-200 ms** token latency; integrated **MinIO + NFS** for reliable code persistence.
- Deployed auto-scaling services on **Kubernetes** with Fabric8 + Ingress; enabled **<2s cold-start** previews and designed the system to be **capable of serving 50K+ requests/day**.
- Added **RBAC**, token quota tracking, and subscription plans, making the platform **multi-tenant and SaaS-ready**.

Distributed Payment Gateway Platform | Spring WebFlux, Kafka, PostgreSQL

 Code  Live

- Built a PCI-compliant payment gateway using **Spring WebFlux** and **Kafka**, sustaining **10K TPS**, and engineered an **AES-256** card vault where raw PANs exist in-memory for <50ms without reaching logs.
- Engineered a webhook engine with **HMAC-SHA256** signing, exponential backoff, and a nightly batch settlement system.

TECHNICAL Skills

- **Languages:** Java (17+), Python, JavaScript
- **Frameworks & Libraries:** Spring Boot, FastAPI, React, TypeScript, Spring Security, Playwright, RestAssured
- **Backend Expertise:** Apache Kafka, Reactive Programming, Concurrency, OAuth2
- **AI Engineering:** GenAI, LLMs, RAG, AI Agents, MCP, LangChain, LangGraph, Spring AI, Vector Databases
- **Databases & Storage:** PostgreSQL, MySQL, MongoDB, Azure Managed Redis, BigQuery
- **Cloud & DevOps:** Docker, Kubernetes, Azure, GCP, GitHub Actions (CI/CD)
- **Data Engineering:** Apache Spark, PySpark, Databricks
- **Tools:** Git, SonarQube, Veracode, Prometheus, Grafana, JMeter

EDUCATION

Sir M Visvesvaraya Institute of Technology

B.E. Computer Science (CGPA: 8.61)

Bengaluru, Karnataka

2020 – 2024