

RITESH RANKA

Backend Engineer (SDE-2) | Java, Spring Boot, Kafka, AWS | GenAI Platform & Payments Systems

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SUMMARY

Backend engineer with **3+ years** building GenAI infrastructure and payments systems in Java and Spring Boot on AWS. Architected a multimodal AI orchestration platform routing image, video, and audio generation across **8 model providers**, and own Payments and Billing microservices built from scratch. Strong in event-driven architecture, Kafka, Redis, distributed systems, and production ownership from design to on-call.

EXPERIENCE

Software Development Engineer 2 - Eloelo (StoryTV, Dolphin AI)

May 2025 - Present

Bengaluru, India

Java, Spring Boot, Kafka, Redis, AWS

- **GenAI Orchestration Platform:** Architected a creator-facing multimodal AI playground that chains image, video, and audio generation models into end-to-end content pipelines; live in internal beta under active load and concurrency hardening ahead of public launch.
- **Multi-Provider Model Routing:** Designed an event-driven async inference pipeline on Kafka and AWS SQS orchestrating calls across **8 third-party AI model providers** with retry, fallback routing, and per-provider concurrency caps; cut end-to-end request failure rate from **18% to under 5%**.
- **Prompt Optimization:** Own prompt engineering and prompt-quality iteration for image and video generation models, improving output consistency and reducing wasted inference calls and provider cost.
- **Payments and Payout Infrastructure:** Built an instant creator payout system on Cashfree with automated KYC and TDS deduction workflows, processing INR 60L (USD 70K) per month and eliminating a recurring manual finance process.
- **Real-Time Leaderboard Engine:** Engineered a Redis sorted-set leaderboard fed by a Kafka event stream, serving reads at **sub-10ms p99** under **20K+ score updates per minute**; supported a 20% MoM increase in creator activity.
- **Service Ownership and Reliability:** **Sole owner of 4 production microservices** (Payments, Billing, Campaign Management, Global Kafka Consumer) from design and code to deployment, on-call, and incident response; built observability with Prometheus metrics and Grafana dashboards and alerts (plus CloudWatch) on DB load, consumer lag, and error rates, sustaining **99.9% availability** and reducing MTTR.

Software Development Engineer 1 - Tekion

Jan 2023 - Apr 2025

Bengaluru, India

Java, Spring Boot, Kafka, Elasticsearch, MySQL, MongoDB

- **Real-Time CDC Data Pipeline:** Built a custom Kafka connector for Change Data Capture from MySQL and MongoDB to Elasticsearch, processing **2K+ events per second** across **50+ tables** and reducing event loss from **about 5% to under 1%**.
- **Throughput Optimization:** Re-engineered Kafka consumers with multi-threaded, partition-aware parallel processing, increasing throughput **10x** and cutting processing latency on high-volume streams.
- **Elasticsearch Cost and Performance:** Refactored sync queries and implemented index-merging strategies, reducing Elasticsearch infrastructure cost by **30%** while improving p95 query latency.
- **Service Ownership:** Owned **5+ critical microservices** in the Parts domain and scaled 10-12 modules supporting dealer workflows; shipped a dynamic Label Design microservice (Spring Boot + React) that contributed to a 50% lift in feature engagement with zero post-release bugs.

PROJECTS

Real Estate Digital Platform - Shruti Developers

Java, Spring Boot, AWS, JavaScript

- Shipped a full-stack dealer-driven real estate platform with dynamic listings, EMI calculators, and inventory management; drove 300+ organic clicks in 15 days via technical SEO and supported the sale of **35 flats in 2 months**.

SKILLS

Languages: Java, Python, SQL, JavaScript, C++

Backend and Architecture: Spring Boot, Microservices, REST APIs, Event-Driven Architecture, Distributed Systems, System Design, Low-Level Design, Multithreading, Concurrency, Hibernate, JPA, Idempotency, Rate Limiting

Data and Messaging: Apache Kafka, Redis, MySQL, PostgreSQL, MongoDB, Elasticsearch, Change Data Capture (CDC)

Cloud and DevOps: AWS (EC2, SQS, CloudWatch, S3), Docker, Kubernetes, CI/CD, Prometheus, Grafana, Observability, Monitoring and Alerting, On-Call, Incident Response

AI / GenAI: LLM and Multimodal Model Integration (Image, Video, Audio), Prompt Engineering, Model Orchestration, Async Inference Pipelines, Multi-Provider Fallback Routing, Concurrency Control, Inference Cost Optimization

Payments: Cashfree Integration, Payout Automation, KYC and TDS Workflows, Billing Systems

Achievements: Solved **800+ DSA problems** on LeetCode and GeeksforGeeks

EDUCATION

Manipal Institute of Technology (MIT), Karnataka - B.Tech in Information Technology, CGPA 9.3/10

Aug 2019 - May 2023