

ROHAN SINGH

Senior Software Engineer — Java | Spring Boot | Microservices | Distributed Systems

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PROFESSIONAL SUMMARY

Senior Software Engineer with 4+ years building **distributed backend systems in Java and Spring Boot** at a fast-scaling product startup — event-driven microservices on **Kafka, RabbitMQ, and ActiveMQ**, Hibernate/JPA data layers, Redis caching and Pub/Sub, and containerized deployments on **Docker and Kubernetes**. Scaled a real-time fleet platform from **10,000 to 20,000+ vehicles at 99% data accuracy**, and built Spring Boot orchestration and privacy platforms processing **3 TB+ across 20+ global sources** with GDPR/CCPA compliance. Complementary depth in data engineering and GenAI/RAG platforms. Strong CS fundamentals: DSA, OOP, LLD/HLD, system design.

WORK EXPERIENCE

Entiovi Technologies — Kolkata, India

Dec 2022 – Present

Senior Software Engineer (Apr 2024 – Present) · **Software Engineer** (Dec 2022 – Apr 2024) — promoted after 16 months for end-to-end ownership of backend and platform delivery.

Real-Time Fleet & Transport Platform — Java Microservices

Dec 2022 – 2025

- Scaled real-time vehicle tracking microservices from **10,000 to 20,000+ vehicles** by re-architecting ingestion, messaging, and caching paths — partitioned workloads and tuned thread/connection pools to double fleet capacity with no loss in accuracy.
- Designed asynchronous middleware (**Spring Boot + ActiveMQ**) with **Redis cache optimization**, significantly improving reliability, latency, and throughput under bulk fleet load.
- Achieved **99% real-time data accuracy** across bulk fleet operations by diagnosing and resolving complex production metric discrepancies across distributed services.

Backend Platform, Orchestration & Privacy Engineering (Xafe.ai)

Apr 2024 – Present

- Developed a **Spring Boot dynamic ETL and orchestration layer** built on proven design patterns, powering a Differential Privacy engine with dynamic PII masking and column-level encryption — **GDPR/CCPA compliance at terabyte scale**.
- Built real-time streaming of pipeline and job status to clients using **Server-Sent Events (SSE) backed by Redis Pub/Sub**, keeping service instances stateless and enabling seamless **horizontal scaling** behind the load balancer.
- Containerized services with **Docker** and deployed on **Kubernetes** with replica-based scaling, health probes, and rolling deployments for zero-downtime releases.
- Built and owned a middleware-controlled ETL platform (**Spring Boot + Apache Airflow + Python**) with runtime-configurable bulk/incremental modes, scheduling, and source selection — new data sources onboarded with **zero code changes**.
- Engineered Parquet-based checkpoint staging that eliminated data loss on failure, made pipelines fully resumable, and cut peak memory usage by **40%+**.

Large-Scale Data & GenAI Platforms — scale and system-design depth

Apr 2024 – Present

- Delivered a GCP-hosted Semantic Intelligence Platform ingesting **3 TB+** of US legislative, Senate, and court data while mentoring a small engineering team; two-phase Airflow pipeline (raw sync → normalization/enrichment) cut sync time by **40%** and handled API throttling gracefully.
- Unified **20+ global sources** (World Bank, IMF, GDELT, WTO, Meltwater) into a canonical schema for GRIPP (World Bank / Stanford); parallelized DAGs cut sync time by **30%** with end-to-end OpenTelemetry observability.
- Built a **RabbitMQ-decoupled RAG pipeline** for unstructured sources (dense + sparse chunking, Qdrant retrieval); delivered **Namaiste.ai** (self-hosted RAG over 3,000+ docs, LLaMA 70B) and currently building **Idéevin V2.0**, an enterprise multi-agent AI platform with a privacy gateway and vLLM serving.

HighRadius — Software Development Intern, Bhubaneswar

May 2021 – May 2022

- Developed full-stack features in **Java EE and React** for enterprise fintech clients, including production support and client delivery.

TECHNICAL SKILLS

Core Backend: Java, Spring Boot, Spring MVC, Hibernate / JPA, REST APIs, Microservices Architecture

Distributed Systems & Messaging: Kafka, RabbitMQ, ActiveMQ, Redis (Caching & Pub/Sub), Server-Sent Events (SSE), Event-Driven Architecture, Concurrency & Multithreading

System Design & CS Fundamentals: DSA, OOP, LLD / HLD, Design Patterns, Distributed Systems, High Availability & Horizontal Scaling

Databases & Storage: MySQL, Redis, Qdrant (Vector DB), pgvector, MinIO (S3-compatible)

Cloud & DevOps: Docker, Kubernetes, GCP, Azure, Jenkins CI/CD, Nginx, Linux, Git

Data Engineering & AI/GenAI: Apache Airflow, Dagster, ETL/ELT, Parquet, LangChain, RAG Pipelines, Multi-Agent Systems, LLM Serving (vLLM, Ollama)

Security & Observability: Differential Privacy, Column-level Encryption, GDPR/CCPA, OpenTelemetry, Grafana

EDUCATION

B.Tech — Electronics & Instrumentation Engineering, KIIT University, Bhubaneswar | CGPA: 8.6 / 10 | 2018 – 2022