

RAJAT SANTRA

Java Backend Developer | Spring Boot & Microservices

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PROFESSIONAL SUMMARY

Backend Software Engineer with 3+ years of experience building scalable RESTful APIs and microservices using Java and Spring Boot. Skilled in MongoDB pipeline optimization for large-scale production datasets, enterprise ERP/PLM integrations (SAP, Windchill, Teamcenter, Oracle), event-driven systems with Kafka and Redis, AWS (EC2) deployment, and SAML 2.0 / SSO security implementations. Applies system design fundamentals to build high-throughput, production-grade applications. Seeking a Java Backend Developer role focused on Spring Boot and microservices.

TECHNICAL SKILLS

Languages: Java, JavaScript, SQL

Frameworks & Libraries: Spring Boot, REST APIs, RestTemplate, WebClient, Reactive Programming (WebFlux)

Databases: MongoDB (Aggregation Pipelines, Indexing), MySQL, PostgreSQL, Redis

Messaging & Infra: Apache Kafka, Docker, Microservices Architecture

Cloud & DevOps: AWS (EC2), CI/CD (Jenkins — repo integration, build & deployment setup)

Security: SAML 2.0, SSO, Azure Active Directory, ADFS

Core CS: Data Structures & Algorithms, System Design Fundamentals, Debugging, System Integration

PROFESSIONAL EXPERIENCE

Software Engineer — Zumen Software India Pvt. Ltd.

Chennai, India (Remote from West Bengal)

Oct 2023 – Present

- Built a **cost-impact analysis feature** for the product, calculating projected impact across multiple factors (**commodity pricing, freight, supplier negotiation**, and others) with **36-month** forward projections to support strategic sourcing decisions.
- Optimized **MongoDB** queries, aggregation pipelines, and indexes for data-intensive APIs and dashboards handling **1M+ records**, reducing API response times from **~45 seconds to 5-10 seconds** and complex aggregation execution times from **~30 seconds to ~5 seconds**.
- Integrated external **ERP and PLM systems (SAP, Windchill, Teamcenter, Oracle)** via RestTemplate, WebClient, and Reactive Programming, enabling seamless cross-platform business process automation.
- Built **batch processing pipelines** and bulk save strategies for **SAP** integration, reducing API call overhead by **~50%** and improving data sync throughput.
- Implemented **SAML 2.0-based Single Sign-On (SSO)** via **Azure Active Directory** and **ADFS** with SHA-256 signing, including metadata configuration and ExtendedMetadataDelegate setup, securing enterprise user authentication.
- Leveraged **Kafka** and **Redis** for asynchronous messaging, caching, and high-performance file upload/download handling, improving system responsiveness under load.
- Designed and deployed scalable **microservices** following well-defined architecture patterns, improving scalability and maintainability.
- Developed **RESTful APIs** in **Spring Boot** using MongoDB aggregation pipelines to power dynamic dashboard features and core product functionality.
- Deployed and managed backend services on **AWS EC2**, handling instance provisioning and basic scaling for application hosting.
- Diagnosed and resolved production issues with rapid turnaround, minimizing customer-facing downtime and maintaining high system reliability.
- Partnered with product managers and customer success teams to translate customer pain points into shipped features, directly improving product-market fit.

EDUCATION

M.Sc. Computer Science — Midnapore City College

Sep 2021 – Oct 2023

CGPA: 9.45 / 10

Full Stack Web Development — Masai School

Feb 2022 – Oct 2022

B.Sc. Computer Science — Chandrakona Vidyasagar Mahavidyalaya

Aug 2018 – Sep 2021

CGPA: 7.75 / 10