SUBHADIP MUKHERJEE

Full Stack Java Developer (Kolkata, West Bengal, India)
Portfolio - https://subc-portfolio.vercel.app/

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Summary

Senior Software Engineer with 5 years of experience specializing in high-scale distributed systems and Reactive Java. Expert in architecting Event-Driven Microservices using Spring Boot and Apache Kafka to drive system resilience and performance. Proven track record in modernizing legacy architectures, optimizing databases, and leading technical initiatives that align engineering output with business growth.

Skills

Programming Languages: Java 8/11/17 (Core & Reactive), JavaScript (ES6+).
Backend Frameworks: Spring Suite (Spring Boot, Spring WebFlux,Spring Data JPA), J2EE.
Frontend Technologies: React Js, Thymeleaf, JSP.
Data Management: Oracle SQL, PostgreSQL, JDBC, Hibernate/JPA.
Messaging & Middleware: Apache Kafka, RESTful Web Services, Microservices Architecture.
Testing & Quality: JUnit 5, Postman.
Build & Environment: Maven, Apache Ant.
Version Control & Tools: Git (TortoiseGit, GitHub).

Experience

Full Stack Java Dev   March 2021 - January 2025
Tata Consultancy Services Ltd   Kolkata, West Bengal
Tech Stack :- J2EE, JSP, Oracle Sql, JBOSS.
- **Crafted intuitive UI components** using **JSP**, enhancing user interaction and overall application usability.
- **Developed** reusable **utility methods** in **Java** to streamline development and code maintainability.
- **Developed** Batch Jobs, stored procedures and functions in **Sql**, to enhance data manipulation and processing.
- **Utilized JDBC and JPA** for seamless database interaction within the application.
- **Revamped** existing features and fixed critical bugs, **elevating system performance** and user satisfaction.
- **Accelerated query performance** by implementing effective **indexing and joining techniques**, resulting in faster data retrieval and improved overall application **responsiveness.**

Full Stack Java Dev   January 2025 - Present
Infosys Ltd   Kolkata, West Bengal
Tech Stack :- Java 11/17, Spring Boot, Spring WebFlux, PostgreSQL, Apache Kafka.
- Engineered highly scalable, non-blocking microservices using **Spring WebFlux (Reactive Java)** and **Apache Kafka**. This architecture successfully handled 100K+ concurrent requests during peak loads, maintaining a 99.99% system availability SLA.
- Led a strategic overhaul of the **PostgreSQL** persistence layer. By implementing indexing strategies, query plan analysis, I achieved a **40% reduction in average API latency** and optimized resource utilization across high-traffic clusters.
- Spearheaded the migration of monolithic legacy modules into a distributed microservices. Integrated circuit breaker patterns (Resilience4j) to ensure fault tolerance and system stability under high-contention scenarios.

Projects

Auth Service | *Spring Boot, PostgreSql, Webclient*
- **Developed a comprehensive authentication microservice** with custom JWT-based security implementation, handling user registration, authentication, and session management for secure access control.
- **Engineered custom Spring Security architecture** by implementing JWT filters and overriding authentication provider classes to create a tailored security framework aligned with business requirements.
- **Built scalable user management service** enabling profile updates and personal information management with role-based access control and data validation.
- **Implemented secure inter-service communication** using Spring WebClient for REST API integration, ensuring encrypted data transmission and proper error handling.

Insurance Web Application | *J2EE, JSP, Oracle SQL*
- **Designed** and **implemented** user-friendly **UI components** using **JSP**, significantly improving **user experience** and **application accessibility**.
- Built **modular** and **reusable utility functions** in **Java**, aiding in **efficient development** and simplifying **future maintenance**.
- Created and **optimized batch processes**, **stored procedures**, and **SQL functions** to handle **complex data processing** tasks effectively.
- Leveraged **JDBC** and **JPA** to facilitate **efficient** and **reliable communication** between the application and the **database**.
- **Boosted database performance** by applying **advanced indexing strategies** and **optimized joins**, leading to quicker **query execution** and enhanced **application speed**.

Education Management System | *Reactive Java, Thymeleaf, Webclient, H2, Websocket, Apache Kafka*
- **Designed and implemented an event-driven education management platform** using **Reactive Java & Kafka**, enabling **real-time scheduling, notifications, and class progress tracking**.
- **Built a scheduling engine** that ensured **conflict-free allocation** of classes across students and faculties, enforcing slot validation and preventing double bookings.
- **Implemented reactive email notifications** with **JavaMailSender**, sending automated updates for class scheduling, progress reports, and course completion.
- **Engineered advanced search capabilities** (by date, time, or both) with efficient query handling using **Reactive DB Client & H2 file-based persistence**.

Education

Modern Institute of Engineering and Technology — B.TECH in ECE
> AUGUST 2016 - JUNE 2020, Bandel, West Bengal, India. CGPA - 7.6

Chandannagar Banga Vidyalaya — WBCHSE in Science
> JUNE 2014 - JULY 2016, West Bengal, India. % - 69

Achievements

- Earned Beyond Performance Award for exceptional client-side contributions.
- Delivery Excellence Award for on-time delivery with approx **50% less bugs & escalations.**