Saurabh Jayant Joshi

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Software Engineer with an MSc in Advanced Computer Science (University of Sheffield) and hands-on experience building distributed backend systems. Experienced in Java, Spring Boot, and Apache Kafka, with a focus on concurrent programming, transactional state integrity, and fault-tolerant service design. Background across AdTech and Telecom environments with exposure to real-time event processing and system observability.

PROFESSIONAL EXPERIENCE

Full Stack Junior Engineer   **Blockchain-Ads (AdTech Platform) -** *Jul 2025 - Dec 2025*

- **Asynchronous Orchestration:** Engineered 22+ Cloud Functions (Node.js) to process high-volume transactional events, implementing non-blocking patterns to maintain low-latency ad delivery.
- **Data Consistency:** Architected a synchronization pipeline between MySQL and Firestore using idempotent consumer patterns, ensuring reliable cross-database state management for campaign auditing.
- **Engineering Quality:** Influenced the adoption of Test-Driven Development (TDD) for core services, improving code coverage and reducing post-deployment regression by 20%.
- **System Refactoring:** Led a modular refactor of the campaign engine, improving throughput by optimizing resource allocation and reducing database lock contention.

Software Developer Intern   **EXFO (Telecom Infrastructure) -** *Dec 2022 - Jul 2023*

- **Performance Engineering:** Developed C#/.NET data acquisition modules for hardware sensors, prioritizing thread safety and memory efficiency to ensure high-fidelity telemetry in real-time.
- **Observability:** Integrated Microsoft Application Insights to monitor distributed system health; utilized telemetry for Root Cause Analysis (RCA), reducing production incidents by 15%.
- **Cross-Team Collaboration:** Partnered with hardware engineers to define software-hardware interface specifications, ensuring system resilience during high-concurrency stress testing.

PROJECTS

Transactional Microservice | Java, Spring Boot, PostgreSQL

- **Concurrency:** Built a thread-safe engine using Java Concurrency Utilities (Executors, CompletableFuture) to manage transactional state integrity in a concurrent environment.
- **Event-Driven Design:** Leveraged Apache Kafka (Confluent Certified) to decouple services, enabling fault-tolerant message persistence and replayability.

Vector-Based Data Pipeline (MSc Dissertation) | Python, Vector Math, NLP

- **Algorithm Design:** Built a high-dimensional analysis pipeline with 82% accuracy using vector embeddings to process massive unstructured datasets.
- **Optimization:** Achieved Distinction for technical architecture, focusing on high-performance indexing and methodical bottleneck analysis.

TECHNICAL SKILLS & CERTIFICATIONS

- **Languages:** Java, C#/.NET, Python, JavaScript, SQL (MSSQL, PL-SQL).
- **Distributed Systems:** Apache Kafka (Confluent Certified), Event-Driven Architecture, Idempotent Processing, Fault-Tolerant Design.
- **Backend & Cloud:** Spring Boot, RESTful Services, Firebase/GCP, Azure.
- **Concurrency & Principles:** Java Concurrency (Executors, CompletableFuture), OOP, SOLID, TDD, Root Cause Analysis (RCA).
- **Tools:** Git, Docker, CI/CD, Jira, Microsoft Application Insights.
- **Certifications:** Confluent Certified Data Streaming Engineer, Docker Foundations Professional.

EDUCATION

MSc Advanced Computer Science – University of Sheffield, UK   *Sep 2023 – Nov 2024*| (2:1)

- ***Modules:*** Distributed Systems, Cloud Computing, Software Testing & Analysis, Scalable Computing.