

TUSHAR BAUSKAR

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Education

Veermata Jijabai Technological Institute (VJTI)

August. 2019 – July 2023

Bachelor of Technology in Information Technology C.G.P.A: 8.51 / 10

Mumbai, Maharashtra

Technical Skills

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

Frameworks: Spring Framework, Spring Boot, Spring Data JPA, Hibernate, React, REST APIs, Microservices

Databases & Messaging: IBM Db2, MongoDB, Apache Kafka

Infrastructure & Tools: Docker, OpenShift, Jenkins, Git, Linux, Maven, JUnit

Core Concepts: Distributed Systems, Event-Driven Architecture, System Design, Concurrency, Performance Optimization

Experience

Morgan Stanley

August 2023 – Present

Technology Associate

Mumbai, Maharashtra

- Engineered distributed **Spring** microservices that processed confirmations across four financial asset classes using **event-driven** integrations with MarkitWire, ICE, SWIFT and Paper, increasing straight-through processing by **78%**.
- Serve as the primary technical owner for the Equity and Interest Rate Derivatives MarkitWire confirmation channel by reviewing pull requests, onboarding new engineers, and driving architectural decisions for complex trade workflows.
- Reduced NFS storage utilization by implementing a blob lifecycle strategy that prevented redundant blob creation and cleaned up obsolete blobs, eliminating approximately **75%** of redundant blob storage.
- Optimized database performance through **SQL execution plan analysis**, index redesign, and query tuning, reducing platform search latency from **40 seconds to less than 3 seconds**.
- Designed a **MongoDB-backed** polyglot persistence layer to support rapidly evolving reporting requirements without schema migrations, reducing onboarding effort for new asset classes while maintaining compatibility with legacy **IBM Db2**-based reporting service.
- Designed and executed the production migration of **100K+ FX Options trades** from a legacy platform to a modernized system, driving migration planning, validation, and execution over multiple phases to achieve **100% data integrity**, zero migration defects, and seamless support for trade amendments and lifecycle events.
- Led the **end-to-end design and delivery** of **ICE exchange integrations**, enabling onboarding of **12 new commodities products** to the OTC Confirmation platform.
- Engineered an automated **signature reconciliation and replacement pipeline** for **20K+ production confirmation PDFs**, eliminating **100+ hours** of manual effort while ensuring accurate client confirmation documents.

Citi

May 2022 – June 2022

Summer Analyst Intern

Pune, Maharashtra

- Built producer and consumer **Spring Boot** microservices using **Apache Kafka** to implement an event-driven transaction processing workflow, leveraging asynchronous messaging, topic partitioning, and concurrent consumers for scalable processing.
- Containerized Spring Boot microservices using Docker and deployed them on OpenShift, configuring Jenkins pipelines to automate build, test, and deployment workflows.

Projects

Graph MLIR | C++, MLIR, LLVM, CMake

December 2022

- Designed and implemented custom **MLIR compiler passes** and **LLVM backend optimizations** to generate efficient code for graph-processing workloads targeting Breadth-First Search, Bellman-Ford, Floyd-Warshall and Minimum-Spanning Tree algorithms, achieving up to **34% runtime improvement** over baseline LLVM-generated implementations.

Workflow Management Platform | React, Node.js, MongoDB, Docker

February 2025

- Developed a full-stack workflow management platform to automate idea submission, review, and approval workflows, improving collaboration and reducing manual coordination.
- Designed REST APIs, integrated MongoDB for persistence, and containerized the application using Docker.