

SAYAN MANNA

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EXPERIENCE

TATA Consultancy Services (TCS) – Full-stack Developer

Jan 2024 – Present

Bangalore, India

Client: TFG Limited | Supplier Collaboration

B2B platform that enables streamlined coordination between buyers, suppliers, and sourcing managers.

- Engineered **recommendation engine** with multi-attribute weighted scoring (configurable via YAML properties) that ranks 300+ supplier products in <200ms, improving procurement efficiency through automated matching.
- Implemented **Redis caching with TTL** for frequently accessed product catalog data, reducing database queries by 65% and improving average API response time from **800 ms to 400 ms** for read-heavy endpoints.
- Added alert system using **Spring Scheduler** and **JavaMailSender** that monitors product catalog changes every 60 seconds and notifies 100+ buyers via email when matching opportunities are detected for that specific Indent-to-Source.
- Achieved **80% unit test coverage** using **JUnit** and **Mockito**, identifying and fixing 20+ edge cases.
- Integrated **Apache Kafka** with Spring Boot microservices for asynchronous ERP data synchronization, implementing **separate topics** (purchase-orders, invoices, product-catalog, item, GRN) with **consumer groups for parallel processing** across 3 services
- Established **CI/CD pipeline** standards for 6+ microservices using **Azure DevOps** templates with **Jib containerization** and integrated security scanning (**Trivy, Semgrep**), streamlining deployment process.

Client: Woolworths SA | Sales iAssist

Sales and operations monitoring dashboard for Woolworths stores.

- Developed Sales iAssist in **React.js** and **Spring Boot** that replaced manual Excel reporting and email-based updates with near real-time sales, backlog, and transaction tracking across multiple store locations.
- Created REST APIs, implementing query optimization and redis caching layer to **support concurrent dashboard access** with consistent **sub-second response times**.
- Built interactive data visualizations using **Recharts** with server-side pagination and lazy loading, enabling store managers to analyze 100K+ daily transactions without performance degradation.
- Automated daily, ad-hoc SQL checks, batch job monitoring, peer systems tracking, reducing manual effort by 20% and **saving 15–20 hours/week** for business and support teams.

PROJECTS

PatientCare [↗](#) | Spring Boot, PostgreSQL, Docker, Kafka, Spring Cloud

April 2025 – July 2025

- Developed **6+ domain-specific microservices** (Appointment, Patient, Doctor, Notification, Analytics, Auth, Gateway) end-to-end using Spring Boot, each with isolated responsibilities and persistent layers.
- Implemented **event-driven** messaging with **Apache Kafka** and high-performance **gRPC APIs** for low-latency inter-service communication and data consistency.
- Used **Spring Cloud Gateway** for centralized API routing and secure **JWT-based** authentication.

AnonExchange [↗](#) | Next.js, TypeScript, Auth.js, MongoDB, Upstash Redis

March 2025 – April 2025

- Built a **serverless feedback platform** using **Next.js Server Actions** and **Zod** for runtime validation.
- Improved search responsiveness by compound indexes and **debounced** input handling for 1000+ entries.
- Secured public endpoints with **Upstash Redis-backed sliding window rate limiter (100 req/15min)**, protecting against abuse and **Auth.js** with **RBAC** for secure, **tier-based access control**.

TECHNICAL SKILLS

Languages: Java, JavaScript, TypeScript, Python

Frameworks & Libraries: Spring Boot, Spring MVC, React.js, Node.js

Database Systems: PostgreSQL, MySQL, MongoDB

Other Skills: Docker, Azure DevOps, Kafka, Microservices, Git

EDUCATION

Netaji Subhash Engineering College

Kolkata, India

Bachelor of Technology in Computer Science and Engineering; CGPA: 9.24/10

2019 – 2023

ACHIEVEMENTS

Woolworths Innovation Award 2024 for the development of Sales iAssist.