Nehal Hosalikar

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Professional Summary

Software Engineer specializing in **scalable microservices** and distributed enterprise applications. Expert in **Node.js**, **TypeScript**, **Javascript**, **React**, **PostgreSQL**, and **AWS**, with a strong focus on **secure API integrations** and database architecture. Proven track record of enhancing system reliability and performance, highlighted by an **60% reduction in API latency**.

Education

B.E. in Information Science and Engineering (CGPA: 8.2) Nov 2020 – June 2024
Sahyadri College of Engineering and Management (VTU)

Professional Experience

Deloitte Touche Tohmatsu India LLP, Bengaluru
Senior Software Engineer - 1 May 2026 – Present
Previously: Software Engineer – June 2024 – May 2026

- Developed and co-architected the backend for **2 multi-tenant, microservices-based platforms**, using **Node.js, Express, TypeScript, PostgreSQL, and RabbitMQ** on AWS.
- Led a major **backend and database architecture overhaul**, implementing **PostgreSQL Row-Level Security (RLS)** and restructuring and partitioning the database schema to strengthen tenant isolation, security, and maintainability.
- Improved API latency by nearly **60%** (from 30s to 11s), through efficient data processing, targeted database indexing, and query optimization using **TypeORM QueryBuilder**.
- Designed and executed **production database migration scripts** to support schema changes while preserving data integrity and enabling **zero-downtime migrations**.
- Engineered secure payment gateways and digital signature workflows, leveraging **message queues** for asynchronous event processing to reliably handle **10,000+ daily transactions** across enterprise marketplace operations.
- Managed AWS cloud deployments **(EKS, EC2, RDS, S3, ECR)** and developed custom **Docker and Kubernetes** configurations to orchestrate containerized microservices and support seamless scaling.
- Implemented secure API communication and access controls using **REST and GraphQL APIs**, integrating JWT authentication and role-based access control (RBAC) to strengthen authorization and protect sensitive business data.
- Engineered reusable, high-performance **React components**, improving development efficiency by **50%** while enhancing application maintainability and performance.
- Strengthened application reliability through **automated unit and integration testing**, improving code quality and reducing regression risks across backend and frontend components.

Projects

- **A-EYE - Smart Visual Assistance System** — Real-time smart glasses system connected to a mobile app for assisting visually impaired with currency and text recognition. Implemented image processing and ML models on the companion mobile app.
  Tech Stack: Flutter, Embedded C, Python, TensorFlow, ESP32
- **Raisin - File Compression Tool** — Created a Python CLI tool to compress text files using layered Huffman encoding algorithm. Achieved higher compression ratio than standard Huffman.
  Tech Stack: Python
- **AEROPHILIA'22 - Organizer Application** — Engineered secure mobile app for event organizers to track, verify, update participant status in real time. Built using Flutter for cross-platform and Firebase backend.
  Tech Stack: Flutter, Firebase, Android Studio

Technical Skills

Languages: JavaScript, TypeScript, Python, SQL, Java

Frameworks: React, Node.js, Spring Boot, Express.js, Flask

Tools & Platforms: Kafka, RabbitMQ, AWS, Git, Docker, Jest, CI/CD, Linux, AI Coding Assistants

Databases: PostgreSQL, Redis, MySQL, MongoDB

Concepts: System Design, Microservices, Row-Level Security, RBAC, GraphQL, REST API, OOP, DSA