

Tushar Singh

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Portfolio: workwithtushar.vercel.app | San Jose, CA

Professional Summary

Software Engineer with **2.5 years** of experience delivering high-performance features using React, Next.js. Specializing in the application of AI by integrating Large Language Models (LLMs) with Python to build intelligent and responsive web solutions.

Education

San Jose State University

Jan 2025 – Present | San Jose, CA

Masters in Computer Software Engineering | **GPA: 3.7/4.0**

- **Coursework:** Enterprise Distributed Systems, Software Systems Engineering, Enterprise Software Applications

Experience

Software Engineer, Tekion Corp

July 2022 – Dec 2024 | Bengaluru, India

- Architected **real-time transaction status** with **Server-Sent Events**, cutting latency from over **3s to less than 500ms** and lifting Tekion Pay adoption by 45%.
- Implemented **Module Federation** across the microfrontend monorepo to enable dynamic code sharing and independent team deployments, reducing initial application bundle sizes by 33%.
- Built a hybrid rendering strategy (SSG + CSR) for the vehicle comparison page, catapulting its **performance rating from 'Poor' to 'Good' in Google Lighthouse** and reducing LCP by 60%.
- Designed and implemented 10+ interactive user interfaces using **NextJS, React & Material UI** primarily leveraging **Client-Side Rendering (CSR)** to create a highly interactive, app-like user experience that led to a significant increase in user engagement.

Engineering Intern, Tekion Corp

Jan 2022 – Jun 2022 | Bengaluru, India

- Engineered a JSON-driven configurable forms engine that applied dealer-specific region and business logic to render data-driven, customized inputs and fields, slashing new dealer setup and configuration time by an estimated 55%.
- Authored comprehensive Unit tests with **Jest and React Testing Library (RTL)**, achieving over 85% code coverage for the Account Receivables module.

Technical Skills

Programming Languages: JavaScript(ES6+), Java, C++, Python, SQL, Data Structures, Algorithms

Frontend: Next.js, React, Redux, DOM, HTML, CSS, Sass, Atomic Design, Material UI

Backend: Spring, Spring Boot, FastAPI, Spring JPA, JDBC, Restful APIs, Microservices

Databases & Message queues: MySQL, NoSQL, Redis, RabbitMQ, Kafka, MQTT

AI / ML: LLMs Integration, LangChain, Vector Database(ChromaDB), Gemini, Google AI Studio, Sentence-Transformers.

Software Tools: Git, Docker, Kubernetes, Figma, IntelliJ, Postman, Jenkins

Academic Projects

Customer Support Analyzer [RAG based Application]

[GitHub](#)

- Architected a full-stack semantic search engine, featuring a **Python/FastAPI** backend to power a **Retrieval-Augmented Generation (RAG)** pipeline to enable natural language queries on a knowledge base of customer support tickets and achieving 80% accuracy in generating context-aware responses.
- Combined Google's **gemini-1.5-flash-latest LLM** with a **ChromaDB** vector database and '**sentence-transformers**' to deliver context-aware resolution from a knowledge base.
- **Technologies Used:** Python, FastAPI, Next.js, React, Vector Database(ChromaDB), Google Gemini API, Sentence-Transformers, Hugging face, Tailwind CSS.

BookTable [Restaurant Booking Application]

[GitHub](#)

- **Led key frontend development:** Established the UI project, **dockerized** frontend, built core user interfaces (Login, Homepage, Profile), and engineered dynamic restaurant search and discovery by integrating **Google Maps API**.
- Developed backend REST APIs in **Spring Boot** for user registration, booking, and restaurant search functionalities. Leveraged **Spring JPA and JDBC** to connect and perform CRUD operations on a **MySQL** database for data persistence.
- **Technologies Used:** Spring boot, JDBC, MySQL, Gradle, NextJS, React, Docker, NPM, Google Places API.