Tushar Singh

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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

National Institute of Technology   **Aug 2018 – Jun 2022** | Meghalaya, India
Bachelors in Computer Science & Engineering | GPA: 3.4/4.0

- **Relevant Coursework:** Design & Analysis of Algorithms, Database Management Systems, Computer Networks, Operating Systems, Object Oriented Programming

Experience

Software Engineer, *Tekion Corp*   **July 2022 – Dec 2024** | Bengaluru, India

- Designed and implemented 10+ interactive user interfaces using **NextJS, React & Material UI** primarily leveraging **Client-Side Rendering (CSR)** to create a dynamic, app-like user experience, which led to a 20% increase in user engagement.
- Integrated a **configurable front-end UI** into the Account Receivables module using **TypeScript** & React.
- Independently developed a feature leveraging **local and session storage API's** to persist user vehicle builds and customizations, ensuring seamless state preservation and retrieval across browser sessions.
- Engineered a fully responsive compare vehicles page by adopting a hybrid rendering strategy. Utilized **Static Site Generation(SSG)** for initial page loads, while applying **Client Side Rendering(CSR)** for the interactive search and filtering.
- Refactored for **code-splitting and lazy loading** (–30% bundle size), introduced SEO-friendly URLs.

Engineering Intern, *Tekion Corp*   **Jan 2022 – Jun 2022** | Bengaluru, India

- Worked with the frontend team on a project aimed at streamlining dealer onboarding processes, resulting in a significant reduction in the company's costs associated with dealer onboarding.
- Authored comprehensive Unit tests with **Jest and React Testing Library (RTL)** to ensure code quality.

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.
- Integrated 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.
- Engineered a responsive frontend using **Next.js** and **React**, allowing users to submit queries and view AI-generated answers alongside the original source support tickets for verification.
- **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** the 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. For data persistence, I used **Spring JPA and JDBC** to connect and perform CRUD operations on a **MySQL** database.
- **Technologies Used:** Spring boot, JDBC, MySql, Gradle, NextJS, React, NPM, Google Places API

Technologies

Programming Languages: JavaScript, Java, C++, Python, SQL

Frontend: React, Next.js, Redux, Tailwind CSS, Sass, Material UI

Backend: Spring, Spring Boot, FastAPI, Spring JPA, JDBC

Databases: MySQL, MongoDB, Redis

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