Sandesh Pathak

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Professional Summary

Full-stack Software Engineer with 3+ years of experience designing and deploying scalable web and mobile solutions at All My Sons Moving and Storage. Proficient in JavaScript, TypeScript, React, Node.js, MongoDB, and AWS, with a strong focus on building efficient CRM systems, AI-driven automation, and real-time platforms. Passionate about crafting intuitive user experiences and delivering end-to-end products that streamline operations and boost team productivity.

Skills

Languages: JavaScript, TypeScript, Python, Java
Frameworks & Libraries: React, React Native, Node.js, Express, Spring Boot, GraphQL
Cloud & DevOps: AWS (ECS, Amplify, S3), Docker, CI/CD Pipelines, WebSockets, REST
Databases: MongoDB, SQL, Firebase
AI & Tools: OpenAI API, NLP.js, RAG Pipelines, Tavily Search, MCP Tool

Experience

All My Sons Moving and Storage — Full Stack Software Engineer
Apr 2022 – Oct 2025 | Dallas, TX

Project 1: Lead Creation Plugin (AI-powered Sales Automation)

- Designed and built an **iframe-based sales plugin** integrated into **All My Sons' internal CRM** to capture and process customer leads in real time.
- Implemented **TypeScript**, **React (frontend)**, and **Node.js (backend)** with **NLP.js** and **LLM-based service classification** to extract customer intents from free-form speech.
- Integrated a lightweight **retrieval-augmented generation (RAG)** pipeline from the **LLM service table** to dynamically match vendors such as **SafeHaven**, **Penske**, **Junk.com** and **National Van Lines**.
- Used **WebSockets** for bi-directional communication between the **CRM** and the **LLM service**, enabling real-time question–response loops from agents.
- Simplified cross-team collaboration by embedding the plugin directly into the **All My Sons CRM** — allowing customer advocates to route or text customers instantly without switching apps.
- **Result:** Increased referral partnerships and improved workflow efficiency across 10+ service categories.

Project 2: Custom CRM & Partner Ecosystem Platform

- Developed a full-stack **CRM platform** to manage internal moving operations and external vendor referrals.
- Built tools to onboard partner companies, register services, assign management roles, and automate 10% referral-fee billing through integrated **service APIs**.
- Implemented an **agentic-flow system** with a visual **Journey Builder (React Flow)** that enabled non-technical users to design conversational and conditional logic flows across **chat, SMS, and voice channels**.
- Enabled cross-company collaboration — for example, SafeHaven agents could transfer moving calls to All My Sons, while All My Sons could route pest-control or rental leads to partner vendors.
- Architected the platform using **Node.js**, **GraphQL**, **MongoDB**, and **WebSockets** for real-time messaging and live departmental updates.
- Delivered measurable business growth by automating lead exchange, strengthening partner relationships, and generating new referral-based revenue streams.

Project 3: LLM Agentics Orchestration & Knowledge Automation System

- **Architected and maintained a custom LLM-powered platform** that managed internal "agentics" models used across CRM, lead-generation, and operations workflows.
- **Trained and fine-tuned agents** to interpret customer context, trigger service workflows, and deliver intelligent recommendations via integrated APIs.
- **Implemented LangChain** as the orchestration layer to coordinate reasoning chains, contextual memory, and dynamic prompt templates.
- Built a **Model Context Protocol (MCP) tool** to allow agents secure real-time retrieval and updates of operational data (customer records, referrals, service metrics).
- Integrated **web-scraping and Tavily Search APIs** for contextual enrichment and external-data gathering, enabling agents to surface real-time insights for decision support.
- Exposed selected agents through a **REST API** so other internal systems (CRM, plugins, React Native app) could reuse AI capabilities consistently.
- Resulted in faster data-access automation, improved accuracy of service recommendations, and reduced manual research for sales and support teams.

Tech Stack: TypeScript, React, Node.js, Python, LangChain, OpenAI API, Tavily Search, MCP Tool, NLP.js, GraphQL, MongoDB, React Flow, WebSocket, AWS (ECS, Amplify, S3), Docker

Personal Projects

KidsZoid — Android App for Safer and Smoother School Pickups

- Developed a mobile app to enhance school pick-up safety and reduce traffic congestion.
- Implemented real-time GPS tracking for parents and school staff to monitor student pick-ups and drop-offs.
- Integrated license plate recognition and live tracking of approaching vehicles for streamlined identification.
- Managed authentication and data storage using Firebase for secure, scalable backend operations.

Tech Stack: Java, Android Studio, Firebase, Google Maps API

Inventory Handler — Personal Full-Stack Web App

- Developed a full-stack inventory management web application with React (frontend) and Spring Boot (backend).
- Implemented role-based authentication for admin and user access levels.
- Integrated Stripe API for secure payment processing and SQL for relational data storage.
- Enabled users to browse inventory, add items to cart, and manage orders with real-time updates.

Tech Stack: React, Spring Boot, Stripe API, SQL, REST APIs, Java, JavaScript

Education
Bachelor of Science in Computer Science — University of Texas at Arlington (2021)