

Anas Alakkad

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Full Stack Engineer | Software Engineer

TECHNICAL SKILLS

Programming Languages: JavaScript, Python, Typescript, C++, HTML, CSS, Verilog, Assembly, MATLAB

Frameworks/Libraries: React, Node.js, React Native, Express.js, Flask, Redux, SQLAlchemy, Next.js, Tailwind CSS

Data/Databases: SQL, PostgreSQL, SQLite, MySQL

Tools & Platforms: Docker, Git, Pytest, Amazon Web Services (AWS), Google Cloud Services, Google Colab, NLTK

Methodologies: Object-Oriented Design, Test Driven Development, Functional Programming, Agile, SCRUM, OAuth

Others: Linux, Web Servers, Client Management, Customer Service, Data Analysis, Adobe InDesign

PROFESSIONAL EXPERIENCE

Software Engineer | Ceravo Care, Upland, CA

Aug 2017 – Current

- Architected FleetWizard, a HIPAA-ready SaaS platform for NEMT providers, integrating a real-time Vite/React dispatcher dashboard, Expo React Native driver app, and scalable Flask backend.
- Engineered real-time trip dispatching and live driver tracking with WebSockets, Google Maps, and GPS for minute-by-minute fleet visibility and automated assignment.
- Automated Excel/CSV ingestion with an AI-powered pipeline leveraging a RandomForest ML model, streamlining data normalization and column mapping.
- Delivered a modular microservices backend (Flask, Celery, SQLAlchemy, Redis, PostgreSQL) supporting multi-tenant SaaS and robust task orchestration.
- Implemented async file upload and scalable background processing using Redis APIs and status endpoints, supporting seamless bulk data imports with real-time progress feedback.
- Built an enterprise-grade dispatcher UI with live map tracking, route filters, analytics, and CSV reporting.
- Drove feature development and maintenance of the Expo React Native driver mobile app, delivering real-time trip workflows, offline GPS caching, socket chat, notifications, and shift inspection forms for field reliability.
- Orchestrated CI/CD and Dockerized deployments with Nginx, HTTPS, persistent Redis, scalable Gunicorn, and Prometheus/Grafana monitoring.
- Championed observability and compliance by centralizing logs and automating inspection/shift reporting.
- Increased dispatch efficiency by 30% via optimized trip assignment algorithms.
- Developed a secure, scalable real-time chat system enabling instant communication between dispatchers and drivers, with delivery receipts and presence indicators, integrated seamlessly across web and mobile.
- Led technical architecture, DevOps, and platform operations as founding engineer.

Full Stack Engineer | Mentor A Promise, Inc, Remote

Mar 2024 – Dec 2024

- Architected a microservices application with Next.js (auth/users) and separate Flask backends for shifts and chat. Deployed using AWS EC2, LightSail, and managed with Portainer Docker.
- Enhanced performance and SEO with server-side rendering in Next.js, reducing load times and improving user experience. Built dynamic UIs with React, PostgreSQL, and Tailwind CSS, boosting user engagement by 40%.
- Collaborated with cross-functional teams to diagnose and resolve complex technical issues, streamlining processes and reducing resolution times by 25%, ensuring high service quality and customer satisfaction.
- Implemented site-wide real-time UI updates with WebSocket technology, enabling instant user notifications and workflow changes without page reloads.

EDUCATION

Bachelors of Science, Computer Engineering, California State Polytechnic University, Pomona

May 2022