

M Adeel Akram

Senior Full Stack Engineer | Staff Software Engineer

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Senior Full Stack Engineer with 12+ years of experience building scalable web applications across fintech, healthtech, AI, logistics, and aviation. Expert in JavaScript, TypeScript, React.js, and Node.js with deep proficiency in PostgreSQL, AWS cloud infrastructure, serverless architecture, and event-driven architecture. Built 5+ products from scratch with full end-to-end ownership — frontend UI, backend REST APIs, database design, and cloud deployment. Proven technical leader promoted from Software Engineer to Principal Software Engineer — leading a team of 12 engineers, owning system design and architecture decisions, conducting technical interviews, mentoring engineers, and establishing engineering standards in Agile/Scrum teams. Strong track record of performance optimization, SQL query optimization, caching, observability, test automation, CI/CD pipelines, and process automation. Since 2025, building production AI agent systems at Beam.AI — agent tool integrations, document extraction producing structured output from unstructured input, and AI prompt auto-tuning from production feedback. Works AI-native: delivers every feature through a structured Claude Code workflow where projects are planned, documented, tested, and managed through a proper flow.

SKILLS

Frontend

React.js **TypeScript** **JavaScript (ES6+)** Next.js Redux (Thunk, Saga, Toolkit) Context API HTML5
CSS3 SCSS Styled Components Ant Design Chakra UI Bootstrap Responsive Design
Figma-to-UI Shared Component Libraries Code Splitting Lazy Loading Tree Shaking

Backend

Node.js Express.js Python REST API Design GraphQL Serverless Framework
Microservices Architecture Event-Driven Architecture System Design Message Queues (NATS) Webhooks
Background Jobs Asynchronous Processing Authentication & Authorization

Databases

PostgreSQL MySQL MongoDB SQL Query Optimization Database Indexing Performance Tuning
Schema Design Data Modeling Redis Caching In-Memory Caching

Cloud & DevOps

AWS (Lambda, EC2, RDS, S3, Cognito, Amplify) Docker Kubernetes (familiar) CI/CD Pipelines
GitHub Actions AWS CloudWatch Sentry Infrastructure as Code Cost Optimization

Testing

Jest Mocha Unit Testing Integration Testing Test Automation TDD Code Reviews

AI Engineering

AI Agents (Production) **LLM Integration** Agentic Tool Use Document Extraction (Structured Output)
Prompt Engineering AI Prompt Auto-Tuning Feedback Loops LangChain Mastra (TS Agent Framework)
Vector Databases

AI-Native Delivery

Claude Code (Daily) Claude Agent SDK AI-Assisted Development
Plan → Build → Document → Test Delivery Flow

Tools & Practices

Git / GitHub Nx Monorepo Webpack Babel Vite Jira Agile / Scrum Cross-Functional Collaboration
Mentoring Technical Interviewing Hiring Technical Leadership

PROFESSIONAL EXPERIENCE

Staff Software Engineer (ML & Backend) — Beam.AI, Germany (Hybrid)

Apr 2025 – Present

AI agent platform running thousands of automated workflows daily using LLM-powered agents.

- Drove the platform's testing strategy: designed and built the automated unit and integration test framework from zero, raising code coverage from 0% to 67% in a production codebase powering thousands of daily automations, and established testing as a team-wide standard
- Owned and automated the integration development process, cutting delivery of a new integration from 4 days to a few hours and defining the standard integration workflow for the team
- Designed and built backend integration actions (GitHub, Stripe, Salesforce) with webhook handling and RESTful APIs consumed by AI agent workflows
- Ship document extraction in production: AI agents producing structured output from unstructured input for client workflows
- Built an AI Auto Tuner that automatically tunes AI task prompts based on production feedback, improving agent task accuracy across the platform
- Work across the platform's backend evolution from Python/FastAPI to Mastra (TypeScript agent framework), with PostgreSQL, vector databases, and NATS message broker in an event-driven architecture
- Conduct technical interviews for engineering candidates as part of the hiring process
- Collaborate cross-functionally with product and ML teams in an Agile environment

Senior Technical Lead (Contract) — Z2C Limited, Karachi

Jan 2025 – Mar 2025

Three-month consulting engagement: technical audits of product infrastructure, data usage, and architecture.

- Optimized database storage from 900GB to 300GB (67% reduction) through SQL data analysis, query optimization, and database performance tuning
- Audited AWS infrastructure and eliminated abandoned EC2 instances, reducing monthly cloud costs
- Led architectural audits across the product portfolio, identifying and resolving system inefficiencies and scalability bottlenecks, and advising stakeholders on remediation priorities

Senior Full Stack Developer — Founder & Lightning Ltd., London, UK (Remote)

Jul 2021 – Dec 2024

3.5 years of remote, async full stack delivery with a London-based product team across 3 products.

- Owned end-to-end delivery of the Tradeaze logistics platform — system design through deployment: React.js frontend, Node.js/Express backend, PostgreSQL database, Docker containers, in an Nx monorepo with unit testing and CI/CD
- Owned frontend technical direction for ClientShare (B2B SaaS) using React.js and Redux Toolkit, defining REST API contracts with the backend team
- Improved frontend performance through code splitting, lazy loading, and tree shaking, and built shared component libraries within the Nx monorepo
- Performed infrastructure cost audit and optimization for BSecure, a fintech payment platform supporting multiple payment methods

Principal Software Engineer — VentureDive Pvt Ltd., Karachi

Apr 2016 – Aug 2021

Promoted from Software Engineer to Principal Software Engineer over 5+ years. Led a team of 12 engineers across multiple product teams — system design, architecture decisions, mentoring, and hiring.

- Owned system design and architecture for SIRC, a waste collection and fleet management platform built from scratch — waste pickup across areas routed to designated dumping sites, with every driver, loader, and truck tracked and managed: React.js frontend with Redux, serverless Node.js backend on AWS Lambda, PostgreSQL database
- Delivered the TeleHealth doctor-patient telemedicine platform under tight COVID timelines: React.js UI, Node.js REST APIs, PostgreSQL — direct real-world healthcare impact
- Built VistaJet aviation itinerary management and booking portal from scratch with React.js, Redux, Styled Components, and comprehensive Jest test coverage
- Led frontend development for OverJet (AI dental diagnostics), building complex UI rendering real-time AI diagnostic feedback
- Defined coding standards and code review processes adopted by the team, mentored a team of 12 engineers, and fostered a culture of engineering quality
- Conducted technical interviews and contributed to engineering hiring decisions
- Won Leadership Excellence Award for mentoring and hands-on technical leadership

Software Engineer — GoodCore Software Inc., Karachi

Aug 2013 – Apr 2016

- Built and maintained web applications for international clients (UK, Europe, Malaysia) using PHP, JavaScript, and MySQL
- Managed multiple products simultaneously across the full software development lifecycle with international, cross-functional collaboration

KEY PROJECTS

Tradeaze — Logistics & Delivery Platform. Full stack development from frontend to backend, database to deployment, with unit testing. *React.js, Node.js, Express, TypeScript, Nx Monorepo, PostgreSQL, Docker, CI/CD*

SIRC — Waste Collection & Fleet Management Platform. Built from scratch as technical lead. Serverless operations platform with end-to-end tracking of drivers, loaders, and trucks. *React, Redux, Node.js, AWS Lambda, Serverless Framework, PostgreSQL*

TeleHealth — Healthcare Platform. Full stack telemedicine product built from scratch during COVID. *React, Redux, Node.js, PostgreSQL, Ant Design*

VistaJet — Aviation Booking & Itinerary Portal. Itinerary management and customer booking portal with comprehensive testing. *React, Redux, Styled Components, Jest*

Beam.AI — AI Agent Platform. Agent tool integrations, document extraction, AI prompt auto-tuning, and test automation for an LLM platform executing thousands of automated workflows daily. *TypeScript, Mastra, Python, FastAPI, PostgreSQL, Vector Databases, NATS, Event-Driven Architecture*

EDUCATION & MORE

Education: BS Computer Science — FAST NUCES, Karachi (Aug 2009 – Jun 2013)

Awards: Leadership Excellence Award — VentureDive Pvt Ltd. · Multiple coding awards

Languages: English (Professional) · Urdu (Native)