Ali Javed

Lead Full Stack & AI Engineer – JavaScript / TypeScript / Python

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Professional Summary

Full Stack & AI Engineer with 6+ years of experience architecting and shipping production-grade SaaS and AI-powered platforms end-to-end in JavaScript/TypeScript and Python – from NestJS/FastAPI backends and React/Next.js frontends to LLM-based agents and retrieval-augmented generation (RAG) systems. Currently a Lead Software Engineer at Coding Cops, owning architecture decisions from database schema and API design through deployed UI, mobile apps (React Native, Swift), and AI agent workflows, while directing technical design and code review across cross-functional teams. Production experience with real-time WebSocket systems, multi-tenant authentication, payment integrations, and RAG-based knowledge platforms, with a track record of leading projects from concept to production.

Technical Skills

Languages: JavaScript (ES6+), TypeScript, Python, SQL, Swift
AI & Machine Learning: LLM Integration (Claude, GPT), Retrieval-Augmented Generation (RAG), LangChain, AI Agents / Agentic Workflows, Vector Search, Prompt Engineering
Backend: Node.js, NestJS, Express.js, FastAPI, Microservices, Clean Architecture, REST & GraphQL APIs, WebSockets, Prisma & Sequelize ORM
Frontend & Mobile: React.js, Next.js, React Native, Redux Toolkit, Zustand, Tailwind CSS, Ant Design, Material UI, Apache ECharts
Databases & Messaging: PostgreSQL, MongoDB, MySQL, Elasticsearch, ClickHouse, Redis, Vector Databases
Security: JWT, OAuth 2.0, RBAC, SSO (Google, Azure AD B2C), MFA (TOTP/OTP)
Testing: Jest, Vitest, Supertest, E2E
Cloud & DevOps: AWS (EC2, S3, CloudFront, ECS), Azure (App Service, ADLS, DevOps), GCP, Docker, CI/CD (GitHub Actions)
Integrations: Stripe, SendGrid, Daily.co, Google Maps, Claude API

Education

Punjab University College of Information and Technology (PUCIT) Lahore, Pakistan
Bachelor of Science in Software Engineering

- Relevant Coursework: Software Architecture, Database Systems, Web Engineering, Object-Oriented Programming, Data Structures and Algorithms

Professional Experience

Lead Software Engineer February 2022 – Present
Coding Cops *Lahore, Pakistan*

- Lead full-stack and AI engineering across multiple client engagements, owning architecture decisions from database schema through deployed UI and production AI agent systems.
- Architected multi-tenant backend services (NestJS, Prisma, PostgreSQL) and AI-powered platforms (FastAPI, RAG, LLM agents) supporting production systems processing 50M+ data and IoT events daily.
- Directed technical design reviews and mentored engineers across backend, frontend, and mobile workstreams, setting engineering standards for authentication, real-time systems, and CI/CD.
- Owned frontend architecture across React, Next.js, and React Native applications – component libraries, normalized state management, and route-level code splitting – reducing re-render overhead on data-heavy dashboards.
- Built ETL pipelines and optimized ClickHouse schemas for high-throughput IoT data ingestion, reducing analytical query latency from 6–8s to under 500ms.
- Led adoption of CI/CD pipelines (GitHub Actions, Azure DevOps) and containerized deployments (Docker, AWS ECS), standardizing staging-to-production rollouts across client projects.

Senior Software Engineer May 2020 – February 2022
Fliclicks *Lahore, Pakistan*

- Owned full-stack delivery of UBU, a large-scale social engagement platform for brands and influencers, spanning backend (NestJS/PostgreSQL), web frontend (React/Redux), and mobile (React Native, Swift).

- Implemented OAuth 2.0 authentication with RBAC and secure refresh token rotation, enforcing multi-tenant access control across brand, influencer, and consumer segments.
- Designed database schemas and backend architecture for core platform modules, integrating Amazon Affiliate links to enable revenue tracking per product.
- Built native iOS (Swift) and React Native mobile experiences alongside the web app, including REST endpoints for body-measurement data consumed by an internal AI recommendation engine.
- Progressed from mid-level contributor to senior full-stack ownership, taking on independent API design and architecture decisions.

Software Engineer June 2019 – May 2020

DevPoint Studios *Lahore, Pakistan*

- Started career building full-stack features across NestJS/Express backends and React frontends for production SaaS platforms in the event-management and geospatial signage domains.
- Developed REST API endpoints, database schemas, and UI components for EventCraft and YardSign under senior engineer guidance, gaining hands-on production experience across the stack.
- Contributed to authentication flows, real-time WebSocket features, and third-party integrations (Stripe, Daily.co, SendGrid, GeoServer).
- Built foundational skills in query optimization and API performance that carried into later senior and lead roles.

Projects

PowerRay – Enterprise AI Knowledge & Operations Platform | *React, Next.js, Python, FastAPI, RAG, Vector Search,*

- Architected an enterprise AI knowledge and operations platform for a solar construction business, connecting internal documentation with departmental workflows.
- Built document ingestion and retrieval pipelines using vector search and RAG to generate source-backed answers from project documents, company policies, and operating procedures.
- Developed AI agents that retrieved business information, prepared operational reports, and executed approved tasks through connected services.
- Implemented department-level access controls, Google SSO, and approval workflows governing information access and agent actions.
- Built document summarization and report-generation capabilities supporting construction operations, safety, finance, and HR.
- Established evaluation and monitoring workflows tracking response quality, retrieval accuracy, execution failures, and model usage.

Calculum – AI Procurement Negotiation Platform | *React, FastAPI, RAG, LLM Agents, Azure AD B2C Coding Cops*

- Led architecture and development of an AI-powered procurement negotiation platform combining supplier information, payment-term intelligence, and company policies.
- Developed data ingestion and normalization workflows for supplier records, invoices, purchase orders, and contractual payment terms.
- Built LLM-based AI agents that assembled supplier context, identified negotiation opportunities, and generated evidence-backed negotiation briefs using RAG over contracts, procurement policies, and negotiation history.
- Developed scenario-analysis services comparing payment terms and early-payment discounts against projected working-capital impact using auditable calculations.
- Packaged the platform's chatbot frontend as an NPM module and integrated it into a client's existing platform, engineering cross-domain session handling between separate cookie-based and JWT-based (Azure AD B2C) authentication systems.
- Built approval workflows and negotiation tracking, separating projected opportunities from agreed terms and realized outcomes.

AcwaPower Nomac – Analytics Platform | *React, Redux Toolkit, Apache ECharts, FastAPI* *Coding Cops*

ClickHouse, Redis, PostgreSQL, ADLS, Docker, Azure

- Designed a FastAPI backend data architecture processing 50M+ IoT events daily for real-time analytics and predictive maintenance systems.
- Built ETL pipelines handling 10,000+ messages per second with idempotent processing and 99.9% data integrity guarantees.
- Optimized ClickHouse schemas and materialized views to achieve sub-200ms queries across billion-row datasets, a 5x performance improvement.

- Implemented a Redis caching layer, reducing API latency from 800ms to 150ms and decreasing database load by 45%.
- Built the React/Redux Toolkit frontend with Apache ECharts visualizations, delivering real-time monitoring dashboards for industrial IoT and predictive maintenance data.
- Architected containerized deployment workflows with automated testing and a blue-green deployment strategy, achieving 99.8% service uptime.

UBU – Brand and Influencer Platform | *React, React Native, Swift, Redux, NestJS, PostgreSQL, OAuth 2.0 Fliclicks*

- Built the full-stack backend and frontend of a large-scale social engagement platform, designing NestJS services and React campaign management workflows to support high user concurrency across brand and influencer segments.
- Delivered native iOS (Swift) and cross-platform (React Native) mobile experiences alongside the web app, maintaining feature parity across web and mobile surfaces.
- Implemented detailed onboarding questionnaire modules for influencers and brands, capturing profile data used downstream for matching and campaign targeting logic.
- Designed the database schema and backend architecture for core platform modules including influencer posts and brand product listings, integrating Amazon Affiliate links to enable revenue-tracking per product.
- Provided backend support for the iOS mobile app, implementing database schema and REST API endpoints for body measurement collection during user onboarding – data later consumed by the internal AI team to power a personalized recommendation engine.
- Implemented OAuth 2.0 authentication with RBAC and secure refresh token rotation, enforcing multi-tenant access control across brand, influencer, and consumer user segments.

EventCraft – Event Management Platform | *React, TypeScript, NestJS, REST APIs, MongoDB DevPoint Studios*

- Contributed to a production SaaS event platform, building REST API endpoints in NestJS for event CRUD, attendee management, and role-based permission enforcement.
- Developed React/TypeScript frontend components for organizer dashboards and attendee flows, implementing role-aware UI states driven by the backend permission model.
- Integrated Daily.co for live video streaming rooms and implemented real-time in-call chat between organizers and attendees using WebSockets.
- Assisted with Stripe Payment Intents integration and webhook handling for ticket purchase processing, and configured SendGrid transactional emails for payment confirmations.
- Built attendee check-in features with atomic database writes to prevent duplicate check-ins under concurrent access.

YardSign – Digital Signage Platform | *React, Redux, Node.js, Express.js, PostgreSQL* *DevPoint Studios*
GeoServer, AWS EC2, Docker

- Developed backend API endpoints for a geospatial SaaS platform, integrating PostgreSQL and GeoServer for spatial data handling and WFS-based map feature delivery.
- Contributed to database query optimization and API response caching, helping reduce initial page load latency from ˜4s to under 800ms.
- Implemented chunked data loading strategies to reduce blank-screen delays caused by large WFS responses on low-bandwidth connections.
- Assisted with deployment of backend services to AWS EC2 using Docker, and configured Nginx for production hosting.
- Applied OWASP security practices, including SQL injection prevention and XSS protection, across API endpoints.