

Zubair Khalid

Manchester, UK | +44 07859 010112 | zubairkhalidce@gmail.com | [Portfolio](#) | Right to work: UK (Spouse Visa)

Full-Stack Software Engineer with 4+ years' experience delivering scalable SaaS products. Specialises in TypeScript, Node.js, React/Next.js, PostgreSQL, REST API design, and LLM integrations. Streamlined CI/CD pipelines with Docker and GitHub Actions; experienced across AWS, GCP, and DigitalOcean. Led cross-functional teams and lifted developer productivity through mentorship and code quality reviews.

Skills

Core: TypeScript, Node.js, React, Next.js, Express, NestJS, Tailwind CSS, JavaScript

APIs & Types: REST APIs, Zod Schema Validation

Database & Caching: PostgreSQL, Redis, MySQL, SQLite, Firestore, TypeORM, MikroORM, Drizzle ORM

Cloud & DevOps: Docker, GitHub Actions, CI/CD, Nginx, AWS, GCP, DigitalOcean, Firebase

Queues & Jobs: BullMQ, Hatchet.run

Auth & Security: OAuth 2, JWT, Web3Auth, AWS KMS, Firebase Auth, Passport.js, OpenSSL

Testing & Quality: Vitest, Mocha/Chai, Code Reviews, Lint, Prettier

Observability: PostHog, Winston

AI: LangChain, LangGraph, OpenAI Agents SDK, OpenAI/Anthropic/Gemini APIs

Web3: EVM, ERC-4337, Wallets, RPC APIs, Solana, Foundry, Hardhat, Solidity, DeFi, Smart Contracts

Payments: Stripe, PayPal

Experience

Senior Full-Stack Engineer (Contract) | Sage Studios AI (via Digitalux), Remote

Aug 2024 – Jul 2025

Contracted through Digitalux to deliver core engineering work for Sage Studios AI.

- Led architecture and delivery of an event-driven no-code platform for visually composing multi-agent AI workflows, using TypeScript, React, Node.js, Express, LangGraph and PostgreSQL.
- Developed type-safe LLM tools using TypeScript, Zod, and LangChain to bridge LLMs with DeFi & analytics platforms.
- Accelerated local development builds by 60x (~300 seconds to ~5 seconds) through the integration of just-in-time (JIT) TypeScript compilation, eliminating development bottlenecks.
- Provisioned DigitalOcean infra, containerised services, and replaced manual SSH deployment with Docker and GitHub Actions CI/CD, cutting deployment time to under 20 minutes.
- Shipped workflow versioning feature (preview & one-click restore) for a no-code AI builder, preventing destructive edits and improving UX (TypeScript, React, MUI, Node.js).
- Closed 100+ GitHub issues (bug fixes & feature requests) through cross-functional collaboration.
- Implemented maker-checker approval flow for high-risk actions, reducing erroneous auto-executions by LLMs.
- Led a refactor of LLM tool integrations, raising tool-call accuracy from ~40% to 80%+ via prompt tuning, typed schemas (Zod), clearer tool definitions, and error handling.
- Implemented Firebase Authentication with email/password, Google/GitHub OAuth, and TOTP MFA; secured backend APIs via JWT token verification.
- Integrated Redis caching for third-party APIs, reducing the volume of external calls and preventing rate-limit errors.
- Standardised the PR process with checklists, review guidelines, and CI gates plus automated TS/ESLint/Prettier checks, reducing regressions and improving reliability.
- **Web3 work highlights:**
 - Designed a serverless custodial Web3 wallets system with AWS Lambda + KMS
 - Implemented ERC-4337 account abstraction for gasless transactions
 - Built a fault-tolerant EVM transaction orchestration system via Node.js BullMQ queues and cron jobs
 - Integrated DeFi trading platforms and trading Telegram bot

Full-Stack Freelancer | Remote

May 2023 - Aug 2024

- Developed a full-stack eBay order fulfillment system using Next.js, Node.js, PostgreSQL, and Firebase, deployed to Vercel serverless infrastructure, enabling over £10,000 in client sales.
- Built a Progressive Web App (PWA) in React for mosque discovery in the UK, integrated with .NET REST APIs deployed on Azure, improving access to local prayer data and serving 500+ monthly organic users.
- Developed a serverless backend for a fitness app using Firestore, TypeScript, and Cloud Run on GCP for workout tracking and user management.
- Developed a Next.js web app for an online retail business to calculate profits from \$30,000+ in monthly sales by processing Excel sheets with SheetJS library and managing subscriptions using PayPal API.

Technical Team Lead | Blockchain Security Lab, LHR, Pakistan

Sept 2021 - Jan 2023

- Led a team of three engineers to build a decentralised SSL certificate issuance platform using Solidity, Geth, EVM, Node.js, Next.js, and OpenSSL, enabling cryptographically verifiable, on-chain SSL certificate validation.
- Deployed Solidity smart contracts on Polygon PoS and TypeScript microservices on AWS EC2, delivering a secure, verifiable domain validation system and securing a grant from Polygon DAO.
- Contributed to the extraction and analysis of 23,000+ Ethereum smart contracts for a research paper on storage state and smart contract behavior, published in *ACM Transactions on Software Engineering and Methodology*.
- Co-delivered a featured talk on “*Reimagining PKI with Blockchain*” at the IEEE 2nd International Conference on Cyberwarfare & Cybersecurity in Islamabad.
- Co-organised a technical workshop at Information Technology University Pakistan and led hands-on Solidity programming training sessions for students and industry professionals.

Education

- **MSc in Data Science** (CGPA 3.73 / 4) | ITU, Lahore, Pakistan

Sept 2020 - Oct 2022

- **BSc in Computer Engineering** (CGPA 3.69 / 4) | UET, Taxila, Pakistan

Oct 2015 - Aug 2019