Waqar Ilyas

Senior Full-Stack Engineer

Senior Full-Stack Engineer with 8+ years building web, mobile, and blockchain platforms across fintech, healthcare, and real estate. Experienced in secure, high-performance systems serving 500K+ active users, and in leading cross-functional teams to ship clean, scalable architecture.

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TECHNICAL SKILLS

Languages	JavaScript (ES6+), TypeScript, Python, SQL, Solidity, HTML5, CSS3	**Cloud & DevOps**	AWS (Lambda, S3, AppSync, RDS, Route 53, Cognito, Amplify, EC2, Elastic Beanstalk, CloudFormation, CloudWatch, VPC, IAM, Aurora, Redshift, DynamoDB, Chime SDK), Docker, Kubernetes, CI/CD, GitHub Actions, Serverless Framework
Front-End	React, Next.js, React Native, Redux, Tailwind CSS, shadcn/ui, Material UI, Bootstrap, React Flow, TanStack Query, Tiptap, Vite	**Blockchain**	Ethereum, Binance Smart Chain, Bitcoin, Bitcoin Ordinals, Web3.js, Ethers.js, Smart Contracts, NFTs, DeFi, Tokenization
Back-End	Node.js, Express.js, Nest.js, Flask, RESTful APIs, GraphQL, Microservices, Serverless Architecture, WebSockets	**Google Firebase**	Firestore, Storage, Hosting, Authentication, Messaging, Realtime Database, Cloud Functions, Analytics & Crashlytics
Databases	PostgreSQL, MongoDB, MySQL, Supabase, DynamoDB, Redis, Firebase Firestore, Database Design, Query Optimization	**Payments**	Stripe, PayPal, Apple and Google In-App Purchases, Coinqvest, Checkbook.io, SWIFT, Crypto Payments
Testing	Jest, React Testing Library, Cypress, Mocha, Chai, Unit / Integration / E2E Testing	**Tools & AI**	Git, GitHub, Agile/Scrum, Code Reviews, Performance Optimization, LangChain, Claude, PostHog

EDUCATION

BS Software Engineering
Punjab University College of Information Technology (PUCIT), University of the Punjab
2018 - 2022

PROFESSIONAL EXPERIENCE

Senior Software Engineer
TappEngine Inc. (Fintech SaaS) | Remote, United States
April 2025 - Present

- Built 9SQUID, a loan securitization and tokenization platform that tokenized millions of dollars in loan portfolios for credit unions and financial institutions, using React, TypeScript, Node.js, and PostgreSQL.
- Developed a loan tape Quality Control system to validate and clean loan data files, ensuring accuracy and compliance before securitization processing.
- Implemented a loan tape stratification engine segmenting loan pools by risk characteristics, credit scores, and loan-to-value ratios for optimal portfolio composition.
- Built a cashflow waterfall generation system projecting investor returns, principal payments, interest distributions, and servicing fees across multi-year loan lifecycles.
- Created tokenization infrastructure enabling fractional ownership of loan portfolios on blockchain, allowing investors to purchase digital securities backed by real loan assets.

- Developed RESTful APIs for real-time payment monitoring and SWIFT network integrations, ensuring 24/7 uptime for critical financial operations.
- Integrated Checkbook.io payment processing for investor-to-trustee transfers with secure payment flows for securitization trust operations.
- Implemented SOC 2 and GDPR compliance requirements including vulnerability scanning, access controls, and security audit frameworks.

Software Engineering Lead

Yadn (SaaS Platform) | Remote, Saudi Arabia

November 2024 - July 2025

- Led end-to-end development of OLAB, architecting a scalable visual canvas (similar to Draw.io) with React Flow and a Notion-style database system powered by TanStack Table, serving thousands of users.
- Designed advanced database features including custom column types, rollups, relations, inline editing, and real-time syncing across canvas and document views.
- Built a custom document editor on Tiptap supporting multi-page editing, embedded tables and canvases, import/export, and automated PDF generation.
- Engineered frontend and backend architecture using Next.js, Tailwind CSS, shadcn/ui, and Supabase for performance, scalability, and maintainability.
- Introduced AI-powered automation with LangChain and Claude, enabling natural language workflows and intelligent structure generation.
- Integrated PostHog for behavioral analytics, enabling data-driven product decisions and continuous UX optimization.

Senior Software Engineer / Blockchain Developer

Zogi Labs | Remote, Dubai, UAE

February 2024 - October 2024

- Led development of a Web3 gaming platform integrating WebGL with the Bitcoin blockchain to enable NFT-based reward systems tied to gameplay achievements.
- Architected and deployed full Bitcoin Ordinals minting infrastructure, ensuring secure, scalable reward distribution for thousands of players.
- Built a comprehensive admin dashboard for NFT lifecycle management with real-time monitoring, distribution, and control of digital assets.
- Engineered backend systems for Bitcoin Ordinals transaction processing and wallet integration, ensuring reliability and security at scale.
- Optimized the platform website, delivering 40% faster load times and measurable improvements in user experience metrics.

Senior Software Engineer & Team Lead

Pixelpk Technologies | Lahore, Pakistan

September 2023 - August 2024

- Built the Peplog fintech platform from the ground up using Next.js and AWS serverless architecture, achieving a 40% reduction in operational costs.
- Developed a group consultation feature for Attend Anywhere using the AWS Chime SDK, now deployed across the UK's National Health Service for secure telehealth consultations.
- Rescued and delivered the Mindshift project by stabilizing an inherited unfinished codebase and releasing a production-ready solution under a tight deadline.
- Designed and deployed microservices architecture with AWS Lambda, DynamoDB, and Node.js, ensuring seamless scalability during high-traffic periods.
- Implemented CI/CD pipelines, reducing deployment times by 65% while maintaining rigorous code quality and test coverage.

Senior Software Engineer

Utopia Homes (Real Estate Fintech) | Remote, United States

October 2022 - November 2023

- Engineered a full-stack real estate technology platform focused on democratizing home ownership, handling thousands of listings with advanced search and filtering.
- Built scalable backend systems to process large volumes of real estate data and manage users at scale while maintaining performance and reliability.
- Designed intuitive user interfaces that streamlined the home-buying journey, resulting in a 45% increase in user engagement.
- Integrated secure payment processing and document management, ensuring compliance and trust throughout property transactions.
- Created a data analytics dashboard providing actionable insights on market trends and user behavior to support product decisions.

Senior Full-Stack Engineer
KryptoMind LLC (Blockchain Development) | Lahore, Pakistan
October 2021 - September 2023

- Led multiple blockchain development teams, guiding architecture decisions and mentoring junior engineers while delivering enterprise-grade solutions across Ethereum, Binance Smart Chain, and Bitcoin.
- Developed commodity-backed digital wallet applications enabling users to store, transfer, and manage tokenized precious metals with real-time pricing and secure asset management.
- Built decentralized wallet infrastructure with React Native and Node.js, supporting wallet restoration, transaction history, multi-token support, and cross-platform iOS and Android functionality.
- Implemented smart contract integration for asset tokenization, connecting physical commodities held in vaults to their digital token representations.
- Audited and optimized smart contracts, improving security protocols and reducing gas fees by 30%, directly cutting transaction costs for end users.

Full-Stack Engineer
Coding Pixel | Lahore, Pakistan
April 2020 - October 2021

- Specialized in building cross-platform mobile applications with React Native, delivering native-level performance on both iOS and Android.
- Developed Sports Saver, Siteseekr, the Clout social media analytics platform, and the gWallet payment app with integrated payments, real-time features, and biometric authentication.
- Established reusable component libraries, accelerating development cycles and reducing delivery times across projects by 35%.

KEY ACHIEVEMENTS

- Built and scaled fintech platforms processing millions in loan securitization and tokenization transactions with 99.9% uptime on cloud infrastructure.
- Reduced operational costs by 40% through serverless architecture optimization and performance tuning.
- Increased user engagement by 45% through intuitive UI/UX design and data-driven product iterations.
- Led development of a mission-critical healthcare platform deployed across the UK's NHS serving thousands of patients daily.
- Architected blockchain and tokenization solutions for commodity-backed assets and digital securities with enterprise-grade security and regulatory compliance.