

MUHAMMAD WAQAR

Senior Full-Stack Engineer | Fintech • Healthcare • Blockchain | React • Node.js • TypeScript

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PROFESSIONAL SUMMARY

Senior Full-Stack Developer with 7+ years designing and scaling web, mobile, and blockchain applications across fintech, healthcare, and real estate. Specialized in building secure, high-performance platforms supporting large-scale user bases (500K+ active users). Expertise spans React, Next.js, Node.js, and Nest.js on the product side and PostgreSQL, AWS serverless, and microservices on the infrastructure side, with deep blockchain experience across Ethereum, BSC, and Bitcoin. Proven track record leading cross-functional teams and delivering clean, scalable architecture with a focus on user experience, security, and performance.

TECHNICAL SKILLS

Languages: JavaScript (ES6+), TypeScript, Python, SQL, HTML5, CSS3, Solidity

Frontend: React, Next.js, React Native, Redux, Tailwind CSS, shadcn/ui, React Flow, TanStack Query, Tiptap, Vite

Backend: Node.js, Express.js, Nest.js, RESTful APIs, GraphQL, Microservices, Serverless Architecture, WebSockets

Databases: PostgreSQL, MongoDB, MySQL, Supabase, DynamoDB, Redis, Database Design, Query Optimization

Cloud & DevOps: AWS (Lambda, S3, DynamoDB, Chime SDK), Docker, Kubernetes, CI/CD, GitHub Actions, Serverless Framework

Blockchain: Ethereum, Binance Smart Chain, Bitcoin, Web3.js, Ethers.js, Smart Contracts, NFTs, DeFi, Bitcoin Ordinals

Testing: Jest, React Testing Library, Cypress, Mocha, Chai, Unit / Integration / E2E Testing

Tools: Git, GitHub, Agile/Scrum, Code Reviews, Performance Optimization, AI Integration (LangChain, Claude)

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 Pelog 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

EDUCATION

Bachelor of Science in Software Engineering | University of the Punjab | 2018 – 2022