

Muhammad Sibghat Ullah

Blockchain Systems Architect | Blockchain Engineer | Web3 Infrastructure & Protocols

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SUMMARY

Blockchain Systems Architect and engineer with 8+ years building production-grade blockchain and Web3 systems, from smart contracts and protocol design through infrastructure, wallets, and cryptographic systems. Core strengths in Solidity and JavaScript/Node.js, with additional depth in Rust and Go across EVM and non-EVM ecosystems. Experience spans cross-chain interoperability, MPC custody, decentralized identity, DeFi, and enterprise blockchain platforms including Canton Network. Currently leads a 6-engineer blockchain division at TEKHQS, and has shipped 4 cross-chain bridge/swap systems and a vesting protocol that has moved roughly \$10M in tokens.

CORE EXPERTISE

Languages: Solidity · JavaScript · Node.js · Rust · Go

Blockchain Engineering: Smart Contracts · Protocol Engineering · EVM · Solana · Cross-Chain Interoperability · Wallet Infrastructure · DeFi

Cryptography & Identity: Cryptography · MPC / Threshold Cryptography · Decentralized Identity · zk Technologies · Web3 Security

Systems & Infrastructure: System Architecture · Distributed Systems · Microservices · Docker · Kubernetes · Technical Leadership

PROFESSIONAL EXPERIENCE

Lead Blockchain Engineer — TEKHQS

Feb 2025 – Current · Lahore, Pakistan

- Own architecture for TEKHQS's blockchain division, leading a team of 6 engineers across custom protocols, wallet systems, and identity platforms in production.
- Architected 2 flagship platforms: RYT Chain, an in-house blockchain protocol targeting scalability and enterprise adoption, and RYT Wallet, a non-custodial wallet combining MPC key management with decentralized identity support.
- Direct R&D into MPC-based custody and threshold cryptography for institutional-grade digital asset security, and into zk-rollup identity models for privacy-preserving on-chain authentication.
- Shipped 2 blockchain systems to production while extending cross-chain interoperability across Ethereum, BSC, Solana, Cosmos, and Algorand, and bringing Canton Network into the team's technical scope.
- Set engineering standards for the division — CI/CD pipelines, modular microservices architecture, and secure development practices — while mentoring and leading blockchain engineers.
- Run solution-design workshops with stakeholders, converting Web3 requirements into production-ready technical architecture.

Senior Blockchain Engineer — Ferrum Network

Aug 2022 – Oct 2024 • United States

- Led R&D on cross-chain bridging and interoperability, shipping 4 bridge and swap systems to production across heterogeneous blockchain networks; authored system scope, architecture documentation, and technical specifications for integration projects.
- Engineered the core integration layer for cross-chain communication and asset transfer, and established a microservices-based architecture to scale blockchain infrastructure.
- Delivered and maintained core blockchain modules powering cross-chain and DeFi applications; contributed to technical hiring for the blockchain engineering team.

Cross-chain systems delivered:

- **MultiSwap Alpha** — architected a cross-chain swap system unifying token exchange across multiple blockchain networks into a single infrastructure layer.
- **Algorand Cross-Bridge & Staking System** — developed and deployed bridge and staking infrastructure for the Algorand Foundation, plus Glitter Finance's staking infrastructure on Algorand, for secure asset movement and staking.
- **POKT Network Cross-Bridge** — defined the interoperability architecture enabling asset and message bridging across heterogeneous networks.
- **Casper Labs Cross-Chain Bridge** — implemented a communication layer for bidirectional asset transfer between Casper and external blockchain ecosystems.
- **Linear Release Engine** — created an on-chain vesting protocol that has vested roughly \$10M worth of tokens through structured, auditable release schedules.

Blockchain Instructor — ECS

Sep 2023 – May 2024 • Islamabad, Pakistan

- Developed Web3 training curricula across 4 core tracks — blockchain fundamentals, dApps, smart contracts, and DeFi; mentored engineers of varying skill levels on Ethereum, Solidity, and Web3.js.
- Facilitated hands-on workshops on real-world Web3 use cases, keeping curriculum current with emerging blockchain tooling and practices.

Blockchain Engineer — OptimusFox

Jan 2020 – Aug 2022 • Lahore, Pakistan

- Contributed to blockchain solutions and server-side integrations for corporate clients, working alongside senior engineers on complex, multi-stakeholder projects.
- Maintained server-side applications and business logic for blockchain-based digital payment systems, and defined data-protection practices for client projects.

Blockchain Intern → Associate — Miranz Technologies

Mar 2018 – Dec 2019 • Lahore, Pakistan

- Coordinated with the team lead on blockchain and Web3 development tasks, progressing from intern to associate over the course of the role.

SELECTED PROJECTS

Cross-Chain & Interoperability

Cross-Chain Token Bridge — engineered interoperability infrastructure connecting EVM and non-EVM ecosystems (Ethereum, BSC, Solana, Cosmos, Algorand) into a unified bridging layer.

Wallet & Cryptography

MPC Wallet Infrastructure — built a multi-party computation custody system with secure key signing, recovery mechanisms, and distributed trust model design.

DeFi

DeFi Lending Protocol — led development of an on-chain lending system with collateral management, liquidation logic, and dynamic risk parameters.

Identity & ZK

zk-Rollup DID Model — created a decentralized identity framework using zero-knowledge proofs for privacy-preserving authentication and verifiable credentials.

Web3 / Smart Contracts

WayGate Token (Ethereum) — shipped ERC-based token infrastructure with supporting analytics and trading-visibility integrations.

TECHNOLOGY STACK

Languages: Solidity, JavaScript, Node.js, Rust, Go, PHP

Blockchain / Platforms (12): Ethereum, BSC, Polygon, Solana, Cosmos, Algorand, Canton Network, Hyperledger Fabric, Hyperledger Besu, Quorum, CUDOS, POKT

Blockchain Engineering: Smart Contracts, Protocol Engineering, Cross-Chain Interoperability, Wallet Infrastructure, DeFi, Cryptography, MPC / Threshold Cryptography, Decentralized Identity, zk Technologies

Backend / Frontend: Node.js, Express.js, React, Redux, Web3.js

Infrastructure: Docker, Kubernetes, Linux, Git, Infura, Alchemy, QuickNode

Databases: PostgreSQL, MySQL, MongoDB, MS SQL

EDUCATION

BS, Information Technology — University of Okara, Pakistan (2016 – 2020)

Certificate, Decentralized Applications (DApps) — University of Buffalo (2020)

Certificate, Smart Contracts — University of Buffalo (2020)