Muhammad Abubakar

Lead Blockchain Engineer · Exchange Infrastructure & L1 Forks

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SUMMARY

Lead blockchain engineer specialising in custodial and non-custodial exchange infrastructure and custom Bitcoin and EVM L1 forks. I run fork networks in production, build deposit, swap and withdrawal pipelines across Bitcoin, EVM and TRON, and keep custodial wallets and settlement correct under real money flow. Currently leading the blockchain team at OVEX Technologies, with shipped production systems carrying live investment volume.

WORK EXPERIENCE

Blockchain Backend Lead — OVEX Technologies

On-site · Jul 2025 – Present

Islamabad, Pakistan · Promoted from Blockchain Developer

- Lead the blockchain team for custodial and non-custodial exchange products built on in-house Bitcoin and EVM L1 forks, owning node architecture, wallet design and release standards.
- Set technical direction for deposit detection, withdrawal signing and UTXO management across multi-server node deployments.
- Review architecture and code for exchange backend services and C++ Bitcoin Core node changes before they reach production.
- Developed real estate tokenization smart contracts in Solidity with Hardhat, supporting on-chain property purchase flows via MetaMask.
- Mentor developers on Bitcoin protocol internals, chainparams and consensus configuration, EVM contract patterns and custodial key handling.

SWAP21 — Centralized Crypto Exchange swap21.com

A centralized cryptocurrency exchange operated by OVEX Technologies, running on an in-house Bitcoin Core fork with its own node network, block explorer and custodial wallet stack.

CONTRIBUTIONS

- Engineered the blockchain layer end to end: wallet generation, deposit detection, transaction flow and withdrawal signing against fork nodes.
- Built the network block explorer and customised the Bitcoin Core Qt wallet for transaction tracking and wallet management.
- Operated full nodes across several Ubuntu servers; converted daemons to systemd units and added peer-maintenance scripts and timers for unattended recovery.
- Diagnosed and resolved a chain fork/split on the live network, restoring consensus across exchange nodes.
- Wrote missing deposit-monitoring workers and eliminated PostgreSQL connection exhaustion under sustained load.
- Tuned mining setup and consensus parameters to improve transaction confirmation speed.

TECH STACK

Node & Protocol: Bitcoin Core (C++), chainparams, UTXO management, systemd, mining/PoW tuning

Backend & APIs: Python, Django, Celery, REST APIs

Data & Infra: PostgreSQL, Redis, Ubuntu, Nginx, in-house servers

Backend Blockchain Developer — MicroSlush

Remote, Netherlands · Feb 2026 – Sep 2026

- Architected multi-chain cryptocurrency withdrawal and swap services on Firebase Cloud Functions with ethers.js, covering BSC, Ethereum and TRON.
- Built the investment and settlement backend on Firestore transactions and Express.js REST APIs, keeping balance updates atomic under concurrent payouts.
- Implemented a centralised admin-wallet pattern with per-asset decimal precision to prevent rounding loss on transfers.

SILPRE — Crypto Investment Platform user.silpre.net

A production crypto investment platform operated by MicroSlush, offering fixed-term ROI plans with on-chain multi-asset deposits, automated returns and user withdrawals.

CONTRIBUTIONS

- Delivered the blockchain and backend layer now carrying an active investment pool of over $600,000, reached within three months of production launch.
- Automated settlement that has paid out over $340,000 in investor returns and processed over $40,000 in user withdrawals on-chain.
- Built multi-asset deposit and withdrawal services for USDS, USDT, USDC, BNB and ETH with live CoinGecko price feeds for conversion.
- Implemented the 100-day, 12-month and group ROI plan engines, including accrual, cancellation and payout scheduling.

- Built the admin platform APIs covering users, roles, KYC verification, deposits, withdrawals, investment requests and cancellations.

TECH STACK

Backend & APIs: Node.js, TypeScript, Express.js, Firebase Cloud Functions, REST APIs

Database: Firestore (transactions), MySQL

Web3/DeFi: ethers.js, TronWeb, BEP20/ERC20/TRC20, CoinGecko API

Software Developer — Forhopps Inc **Remote · Jul 2024 – Aug 2024**

- Built a scalable SaaS platform on the MERN stack with integrated AI chatbot features and a customised TipTap rich-text editor.

BLOCKCHAIN PROTOCOL PROJECTS

Bitcoin Genesis 1 Core (BTC1) — Custom Bitcoin Fork Network

- Maintained a Bitcoin Core v22-derived fork network powering live custodial exchange backends.
- Produced cross-platform builds for Linux/WSL2, Windows (MinGW cross-compilation via depends) and macOS (Homebrew Qt 5.15), resolving GCC, miniupnpc and Qt toolchain conflicts.
- Deployed and configured a DNS seeder on AWS EC2 with Route 53, and hardened peer discovery with chainparams-level seed literals after an upstream seed outage.

Exact Bitcoin Fork — Modern Bitcoin Core Base

- Designed genesis block, premine window and emission schedule on a post-v29 Bitcoin Core (CMake) base, preserving a 21M supply cap on Bitcoin's halving curve.
- Enforced full network isolation from Bitcoin mainnet through custom magic bytes, P2P ports and removal of upstream DNS seeds.
- Built and cross-compiled a Qt GUI wallet for the fork to Windows via MinGW/depends.

EVM L1 PoW Network — Nakamoto Coefficient Chain

- Stood up a custom EVM L1 (chainId 5356) on Geth v1.10.26 proof-of-work and deployed Uniswap V3 contracts for on-chain liquidity.

TECHNICAL SKILLS

Blockchain & Protocol: Bitcoin Core / Bitcoin protocol, custom Bitcoin & EVM L1 forks, chainparams & consensus configuration, UTXO management, genesis & emission design, node operations, DNS seeders, block explorers, Geth, PoW mining setup

Smart Contracts: Solidity, ERC20 / ERC721 / ERC1155, BEP20, TRC20, OpenZeppelin, token vesting & staking, tokenization, Uniswap V3, gas optimisation, contract testing

Contract Tooling: Hardhat, Foundry, Truffle, Ganache, Remix, Mocha / Chai, thirdweb

Web3 Libraries & RPC: ethers.js, web3.js, TronWeb, Infura, Alchemy (webhooks & RPC), MetaMask, WalletConnect, IPFS, JSON-RPC & WebSocket nodes

Backend & APIs: Node.js, TypeScript, Express.js, Firebase Cloud Functions, REST APIs, WebSockets, job queues & schedulers

Databases: PostgreSQL, Firestore, MongoDB, MySQL, Redis

Infrastructure & Tooling: Linux / Ubuntu, systemd, Docker, AWS (EC2, Route 53), Nginx, WSL2, Git / GitHub, CI/CD, Jira

Frontend: React, Next.js, JavaScript, HTML/CSS

LEADERSHIP

Web3 Lead — Google Developer Groups on Campus, COMSATS Islamabad

- Led the campus Web3 track: sessions on blockchain fundamentals, smart contracts and Web3 tooling.

EDUCATION

Bachelor of Science in Computer Science **Islamabad, Pakistan**

COMSATS University Islamabad