Asir Shahriar Roudra

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Professional summary

Full-stack blockchain developer working across the whole dApp stack: NestJS and Go backends, Next.js frontends with wagmi/viem, and Solidity smart contracts built and tested with Foundry and Hardhat. At Deepchain Labs, built the backend, frontend, and smart contract integration for a production validator-staking platform with **~$350K in staked KROWN**, including a self-healing, event-driven indexer that keeps PostgreSQL in sync with on-chain state, and designed and implemented five modules for a multi-tenant employee management platform. At VDEX, a perpetuals DEX, built trading logic and token-listing integrations that enabled **1,000+ active users** to trade newly listed tokens.

Core competencies

Full-Stack dApp Development • Solidity & Smart Contracts • Web3 Integration (wagmi, viem, Ethers.js) • EVM Event Indexing • NestJS & Go Backends • React / Next.js Frontends • PostgreSQL Data Modeling • DeFi (Perps, Vaults, Stablecoins)

Work experience

Deepchain Labs - Krown Validator Platform January 2026 - Present

Junior Full Stack Blockchain Developer *Remote*

- Designed and implemented the backend APIs, React/Next.js frontend, and smart contract integration for a production validator-staking platform (NestJS + Next.js) with **~$350K in staked KROWN**, covering pooled shared staking and platform-managed validators.
- Designed a backend-assembles / wallet-signs / indexer-reconciles transaction model for both staking types, with a reusable useWeb3Transaction hook (wagmi v3 + viem) handling gas estimation, receipt confirmation, and decoding on-chain revert reasons into human-readable errors.
- Built an event-driven blockchain indexer over a single resilient WebSocket connection to the Krown EVM chain - auto-reconnect with backoff and live subscription re-attachment - delivering idempotent, gap-free, self-healing ingestion that keeps PostgreSQL in sync with on-chain state across restarts and outages.
- Implemented bounded-chunk historical backfill resuming from a persisted block-sync cursor, decoding contract logs into append-only event tables projected onto current-state entities; gated live-vs-backfill side effects to prevent replay on historical data.
- Hardened the API with JWT + Argon2 authentication, Redis-backed rate limiting, CSRF protection, and Zod schema validation.
- Wrote Jest unit tests for backend services and authored and ran PostgreSQL schema migrations.

Deepchain Labs - Kazentic Employee Management Platform (in development) January 2026 - Present

Junior Full Stack Blockchain Developer *Remote*

- Designed and implemented the CRM, HR Documents, Storage, Leave Management, and Global Search modules end-to-end for a multi-tenant platform (NestJS, PostgreSQL, Next.js): domain models, API contracts, database schemas, workflow specifications, and implementation documentation.
- Built a multi-tenant, Google Drive-style file storage system with tenant-scoped isolation, project workspaces, soft-delete and restore, quota accounting, inheritable sharing (user, project, tenant), and secure share links.
- Modeled the folder hierarchy in PostgreSQL using the materialized path pattern, so descendant listing, subtree moves, and permission-inheritance checks each run as a single SQL query instead of recursive application code.

VDEX (perpetuals DEX) June 2025 - September 2025

Full Stack Blockchain Developer - Intern *New York City, NY (Remote)*

- Built trading logic around the platform's existing matching engine, including position netting for both market and limit orders: when a user holding a long opens a short on the same asset, the system nets the two positions and reuses the margin already posted.
- Listed and deployed multiple trading pairs by dynamically integrating Binance and Twelve Data APIs to fetch OHLCV data when unavailable on primary sources, enabling **1,000+ active users** to trade newly listed tokens on the platform.
- Built and maintained backend services in Go (Golang) within a monorepo architecture spanning multiple internal services across the trading platform.
- Designed and managed database models and queries using GORM, ensuring consistent data access across backend services.
- Introduced Soulbound Tokens (SBTs) issued to traders for decentralized identity and community reputation management.
- Developed and deployed backend services for airdrops and announcements, coordinating on-chain actions with off-chain infrastructure.
- Set up the i18n base infrastructure for multilingual support, implementing and testing two initial translations to expand platform accessibility.

Skills

Blockchain: Solidity, Hardhat, Foundry, Ethers.js, viem, wagmi, RainbowKit, OpenZeppelin, ERC Standards, Chainlink (VRF, Automation, Price Feeds, Data Streams), ZoKrates / zk-SNARKs

Frontend: React.js, Next.js, React Native, TailwindCSS

Backend: Node.js, NestJS, REST APIs, TypeORM, GORM

Languages: TypeScript/JavaScript, Golang, Python, Java, Kotlin, C/C++

Database & Storage: PostgreSQL, MongoDB, MySQL, Redis, AWS S3/MinIO, IPFS/Pinata

Testing: Jest, Foundry

DevOps & Tools: Git, Docker, Linux, Vercel, Claude Code (AI-assisted development)

Data & ML: FastAPI, TensorFlow, Pandas, NumPy, NetworkX, Matplotlib

Projects

ZKAuth - ZK Identity Verification with NFC Passports *Undergraduate Thesis | Aug 2025*
| *Solidity, Hardhat, ZoKrates (zk-SNARKs), Java/Kotlin (Android)*

Privacy-preserving system that lets dApps verify identity attributes (e.g., age > 18) without exposing personal data. An Android app extracts ICAO-compliant ePassport data via MRZ and chip scanning and generates zk-SNARK proofs locally (zokrates.js in a WebView) in response to a QR-based, nonce-based challenge; a backend manages circuits and proving/verifier keys and submits proofs to a Solidity verifier contract on-chain. Deployed to testnet and compared against existing identity-verification work.

ChitChat - E2E Encrypted Messaging | *Next.js, React, TailwindCSS, IPFS, Ethereum*

End-to-end encrypted messaging using AES-256-GCM and RSA-2048 keys, with IPFS for storage and Ethereum contracts for friend requests and key mapping. Performed all cryptography in-browser without central servers.

Delta-Neutral Vault on GMX V2 *Cyfrin Updraft course project* | *Solidity, Foundry, GMX V2, Chainlink Data Streams, Arbitrum*

Delta-neutral DeFi vault integrating directly with GMX V2 to earn funding fees without directional price exposure. Modular contracts (Vault, Strategy, WithdrawCallback) handle deposits, withdrawals, and GMX's asynchronous execution flow; tested with Foundry on an Arbitrum mainnet fork, with Chainlink Data Streams for real-time pricing and safety checks.

HeatMap - Blockchain Wallet Analytics & ML Platform | *Python, FastAPI, Next.js, NetworkX*

Applied K-Means clustering, with t-SNE/PCA for dimensionality reduction, to group 511 wallets into 9 behavior communities from 21K+ blockchain transfers for targeted Web3 marketing; visualized 10K+ wallet connections in a NetworkX force-directed graph to identify transaction hubs; flagged suspicious volume and frequency patterns with Isolation Forest. Next.js + FastAPI dashboard with filtering, search, and CSV/JSON export.

DSC - Decentralized Stablecoin System *Cyfrin Updraft course project* | *Solidity, Foundry, Chainlink Price Feeds*

Overcollateralized stablecoin pegged to USD with automatic liquidation and bonus incentives, Chainlink price feeds for real-time collateral valuation, and a modular design with separate token and engine contracts.

ArtBlockForge - Dynamic Token & NFT Platform

Decentralized system with ArtBlock Tokens for user-driven economies: bonding-curve token pricing that adapts to supply and user engagement, weighted voting with community tokens to approve products, and a trading platform integrated with resale royalties.

Raffle - Blockchain Lottery System *Cyfrin Updraft course project* | *Solidity, Foundry, Chainlink VRF & Automation*

Transparent on-chain lottery using Chainlink VRF for fair winner selection and Automation for scheduling; follows the Checks-Effects-Interactions (CEI) pattern for reentrancy protection, with optimized gas usage and Foundry tests.

AVAXGods - Blockchain Card Game *JavaScript Mastery tutorial project*

Turn-based battle game with NFT integration; smart contracts handle game state, combat mechanics, and on-chain rewards.

Anon - Anonymous Content Platform

Anonymous content submission with community-driven moderation, and CSE tokens for popular content with abuse-control mechanisms.

JnU Health Care - React Native Android App | *React Native (Expo), Node.js*

App for students to book and manage medical appointments, backed by a Node.js REST API for scheduling, notifications, and record handling.

Bitcoin Price Prediction using LSTM | *Python, TensorFlow, NumPy, Pandas, Matplotlib*

Time-series forecasting model using LSTM networks to predict Bitcoin prices, with data preprocessing, normalization, and model training in TensorFlow; prediction accuracy and trends visualized with Matplotlib and Pandas.

Education

B.Sc. in Computer Science and Engineering *Jagannath University* January 2020 - September 2025
Dhaka, Bangladesh

Coursework: Data Structures and Algorithms, Cryptography, Computer Networks, Operating Systems, Database Management Systems, Software Engineering, Object Oriented Programming, Digital Logic Design, Web Development, Mobile Application Development, Cloud Computing, Data Science

Certifications

GMX Perpetuals Trading (Advanced) *Cyfrin Updraft* 2024
Advanced Foundry (Intermediate) *Cyfrin Updraft* 2024
Foundry Fundamentals (Intermediate) *Cyfrin Updraft* 2024
Solidity Smart Contract Development (Beginner) *Cyfrin Updraft* 2023

Hackathons

HackTheVerse Blockchain Hackathon *Shortlisted among 60+ teams; designed and developed community token contracts (ERC-20, ERC-721)* 2023
Affine Blockchain Hackathon *Shortlisted among 75+ teams; developed a smart contract for judge election* 2022
BUET Web3 Hackathon *Shortlisted among 70+ teams; designed a smart contract for an online learning platform* 2022
Code Samurai *Built a mobile app platform using REST APIs; shortlisted among 500+ participants* 2022