



Asir Shahriar Roudra

BLOCKCHAIN DEVELOPER · SMART CONTRACT ENGINEER

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Summary

Blockchain developer with proven expertise in developing decentralized applications and smart contracts using Solidity, Hardhat, and Foundry. Successfully built and deployed 4+ fully functional Web3 projects featuring custom token systems, NFT integrations, and secure cryptographic implementations. Consistently selected as a finalist in competitive blockchain hackathons. Seeking to leverage technical expertise and passion for decentralized technologies to contribute to innovative blockchain solutions.

Education

Jagannath University

Dhaka, Bangladesh

B.Sc. IN COMPUTER SCIENCE AND ENGINEERING

Jan. 2020 - May. 2025 (Expected)

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

Research

Blockchain-Based Selective Identity Verification Using NFC Passport Scanning and Zero-Knowledge Proofs

Jagannath University, Dhaka

UNDERGRADUATE THESIS

Expected June 2025

- Proposed a privacy-preserving system to verify real-world identity attributes (e.g., age) in decentralized applications without exposing personal data.
- Developed an Android app using Java/Kotlin to extract ICAO-compliant ePassport data via MRZ and chip scanning.
- Integrated `zokrates.js` in a mobile WebView to generate zero-knowledge proofs (zk-SNARKs) locally.
- Designed a backend API and verifier smart contract using Hardhat to validate claims on-chain without centralized authorities.
- Ensured sensitive data remains device-bound, using reusable proof verification interfaces for seamless DApp integration.

Projects

ArtBlockForge – Dynamic Token & NFT Platform

- **Tokenized Platform:** Built a decentralized system with ArtBlock Tokens for user-driven economies.
- **Dynamic Pricing:** Implemented bonding curve token pricing adapting to supply and user engagement.
- **Governance:** Created weighted voting using community tokens to approve products.
- **NFT Marketplace:** Integrated trading platform with resale royalty systems.

ChitChat – E2E Encrypted Messaging

- **Security:** Created E2E encryption using AES-256-GCM and RSA-2048 keys.
- **Decentralization:** Used IPFS for storage and Ethereum contracts for friend requests and key mapping.
- **Client-Side Privacy:** All cryptography performed in-browser without central servers.
- **Tech Stack:** Built with Next.js, React, TailwindCSS and blockchain integration.

Raffle – Blockchain Lottery System

- **Trustless System:** Built transparent lottery using Solidity and Foundry.
- **Chainlink Integration:** Used VRF for fair winner selection and Automation for scheduling.
- **Security:** Implemented reentrancy protection and optimized gas usage.
- **Architecture:** Structured following CEI pattern with comprehensive testing.

DSC – Decentralized Stablecoin System

- **Algorithmic Stability:** Developed an overcollateralized stablecoin pegged to USD.
- **Liquidation System:** Implemented automatic liquidation with bonus incentives.
- **Oracle Integration:** Used Chainlink price feeds for real-time collateral valuation.
- **Smart Architecture:** Built modular system with separate token and engine contracts.

Anon – Anonymous Content Platform

- **Private System:** Built anonymous submission with community-driven moderation.
- **Token Incentives:** Implemented CSE tokens for popular content with abuse control mechanisms.

AVAXGods – Blockchain Card Game

- **Game Engine:** Developed turn-based battle system with NFT integration.
- **Smart Contracts:** Handled game state, combat mechanics and on-chain rewards.

Technical Skills

- **Blockchain:** Solidity (Advanced), Hardhat, Foundry, Ethers.js, Openzeppelin SDK, ERC Standards, IPFS
- **Web Development:** JavaScript/TypeScript, React.js, Next.js, Node.js, REST APIs, TailwindCSS
- **Mobile:** React Native
- **Languages:** Python, Java, C/C++
- **Database & Storage:** MongoDB, MySQL, IPFS/Pinata
- **DevOps & Tools:** Git, Vercel

Certificates

Advanced Foundry (Intermediate)

Online

CYFRIN UPDRAFT

2024

- Completed 13-hour advanced course with 186 lessons and 4 projects, mastering advanced testing, fuzzing, and deployment pipelines using Foundry.

Foundry Fundamentals (Intermediate)

Online

CYFRIN UPDRAFT

2024

- Completed 10-hour course (125 lessons, 3 projects) covering Foundry for smart contract testing, scripting, and deployment.

Solidity Smart Contract Development (Beginner)

Online

CYFRIN UPDRAFT

2023

- Completed 5-hour Solidity bootcamp with 65 lessons and 3 projects, focusing on contract writing, testing, and deployment.

Blockchain Basics (Beginner)

Online

CYFRIN UPDRAFT

2023

- Completed 3-hour foundational course covering blockchain architecture, transactions, and developer tooling.

Learn Solidity - Get Started With Web 3.0 And Blockchain

Online

CODEDAMN

2022

- Built 3 hands-on smart contracts for E-commerce, Token, and ICO using Solidity.
- Learned core Solidity concepts: state variables, functions, inheritance, interfaces, and contract design patterns.
- Designed and deployed a fully compliant ERC20 token and an Initial Coin Offering (ICO) system.

Hackathons

HackTheVerse (Blockchain Hackathon)'2023

- Shortlisted among **60+** teams
- Designed & developed **ERC-20, ERC-721** native token contract for different communities

Code Samurai 2022

- Shortlisted among **500+** participants
- Worked with REST APIs to build the mobile app platform.

Affine Blockchain Hackathon'2022

- Shortlisted among **75+** teams
- Developed smart contract, which is used for electing a judge

BUET Web3 Hackathon'2022

- Shortlisted among **70+** teams
- Designed smart contract for online based learning platform like Udemy