



## Atharva Muley

B.Tech. (Electronics & Communication Engineering)  
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Indian Institute of  
Technology  
Roorkee



### Areas of Interest

Solidity Smart Contract + Backend Development, Smart Contract Security, DeFi Protocol Math & Implementation, EVM internals, Data Modelling & OOPs

### Education

Year	Degree/Examination	Institution/Board
2025	B.Tech in Electronics and Communication Engineering	Indian Institute of Technology, Roorkee
2021	91.83 % in Intermediate (Class XII)	Sanjay Ghodawat University, Kolhapur, Maharashtra
2019	91.60 % in Matriculate (Class X)	St Patricks School, Pune, Maharashtra

### Projects

#### BTC Vesting Contract | Blocksoc, IIT Roorkee

July – August, 2025

- Built an on-chain BTC-backed vesting system on Citrea zkEVM rollup that solves the problem of trustless, time-locked BTC distribution
- Developed an ERC-721 based vesting contract in solidity where each NFT represents a unique, transferrable BTC vesting position
- Implemented security measures like reentrancy guards, emergency pause, admin control to avoid Reentrancy attacks, Unauthorized Access
- Built react interface with etherjs based smart contract & wallet integration for users to create/unlock new positions & display owned positions
- Learned web3 integration using etherjs, bitcoin's philosophy on freedom and borderlessness, the UTXO model
- Tech Stack: Solidity, Foundry, React, Etherjs

#### GoodMaps | ETH Global, New Delhi

September 2025

- GoodMaps is a crowdsourced location review system leveraging ZK-proofs for location verification
- Built a React-based map interface using Leaflet library to render review labels from fetched JSON data
- Designed dynamic relabels with zoom awareness, adaptive font size, color, and z-index based on strength
- Learned about efficient frontend rendering pipelines, Leaflet - A Open Street Map
- Tech Stack: Reactjs, Javascript, Leaflet - OSM React Library

#### Gasless Swapper | Account Abstraction Project

May – June, 2025

- Built a gasless ERC-20 swapping contract solving the problem of user onboarding friction by allowing swaps without paying gas fees
- Developed a custom SwapRouter solidity contract enabling gasless token swaps between any two ERC-20 tokens
- Implemented a ERC-4337 Paymaster to sponsor gas exclusively for transactions coming from SwapRouter
- Implemented a minimal ERC-4337 Smart Account with ECDSA signature validation and controlled execution via EntryPoint
- Learned advanced Account Abstraction architecture, Paymaster Implementation, third Party Bundlers, Standard Entry Point Contract

#### BetsAndStreaks | Etherlink Summer Of Code

July – August, 2025

- Built a 1v1 on-chain Rock-Paper-Scissors betting protocol with automated escrow solving the problem of trust and fairness in betting games
- Engineered secure commit-reveal logic to prevent front-running, implemented escrow-based fund locking, and wrote gas-optimized state transitions for match settlement and streak tracking
- Integrated wallet-connected frontend using Viem + JavaScript to enable real-time match creation, challenge acceptance, and seamless payout
- Deployed on Etherlink to leverage fast finality of less than 500ms and extremely low transaction costs of less than few cents
- Learned end-to-end dApp architecture, commit-reveal patterns, metamask wallet integration and transaction sending

#### Nft-Marketplace | Self Project

January 2025

- Built a NFT Marketplace in Solidity enabling users to list, update, cancel, and purchase NFTs securely
- Achieved 100% test coverage using Foundry, validating listing creation, cancellation, updates, and purchases
- Tracked gas costs with snapshots for create, update, cancel, and purchase operations

#### Phillip Reward Token | Full Stack Project

November 2025

- Built a Dapp that issues ERC20 Reward Tokens to users and allows transfers through a web interface
- Implemented a pausable, ownable ERC20 smart contract with permit function and deployed on Sepolia Testnet
- Implemented React based user interface and etherjs based wallet connection, and smart contract interaction

### Awards / Scholarships / Academic Achievements

- Secured All India Rank 3689 JEE Advanced 2021
- Secured Rank 159 MHT-CET 2021

### Skills

- Computer Languages Solidity, Javascript, C++, Rust
- Libraries/Frameworks Etherjs, Nodejs, Express, MongoDB, Rest API, Postman, Remix, Foundry, Viem, Wagmi, Chainlink
- Additional EVM, DeFi, Data Structures and Algorithms, Object Oriented Programming.

### Positions of Responsibility & Extra Curriculars

#### Additional Secretary | Choreography and Dance Section, IITR

August 2024 – May 2025

- Administered the Operations, Managed Team and Social Media promotions of the college dance crew of 50+ members
- Coordinated the final performance to compete with 23 IITs, secured 1st position in dance arts at Inter IIT Cultural Meet 5.0