

Abhishek Bhagat

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Education

8.71/10 **B.Tech in Computer Science and Engineering**, Indian Institute of Information Technology Sri City | Andhra Pradesh, India 2021-25

Research

T-REITs: A Regulatory Compliant Blockchain-based Framework for Tokenization of Real Estate Investment Trusts

IEEE International Conference on Blockchain and Cryptocurrency (ICBC), 2025

- Presented novel framework for tokenizing Real Estate Investment Trusts (REITs) with automated regulatory compliance
- Designed modular architecture integrating identity management, compliance enforcement, and fund distribution
- Conducted smart contract testing and gas optimization for real-world implementation

Experience

Bitmor, Full-Stack Engineer | Remote

Aug 2025 - present

- Architected serverless AWS Lambda tasks (Serverless Framework, Node.js 24, ARM64) for automated liquidations, Deribit options hedging, and cross-chain USDC-to-ETH bridging via Relay Protocol with AWS Secrets Manager key management.
- Architected and deployed a DeFi lending protocol on Base L2 enabling BTC-collateralized loans, integrating Aave V3 flash loans and Uniswap V4 swaps for single-transaction loan origination with UUPS upgradeable proxy architecture.
- Built and shipped a DCA (Dollar-Cost Averaging) smart contract to Base mainnet, processing 5,900+ on-chain transactions with \$10,800+ in user funds, automating scheduled USDC-to-cbBTC swaps via Uniswap.
- Developed the DCA backend (Express.js, MongoDB) with cron-driven plan execution, dust sweep consolidation, gamification (streaks, points, leaderboard), social card generation (Satori), and Telegram/email notifications.
- Built a blockchain event indexer (Envio, PostgreSQL, Hasura) tracking lending pool, vault, and loan events, exposing real-time GraphQL APIs consumed by multiple frontend and backend services.
- Engineered a transaction manager microservice (Fastify) with multi-account nonce management, mutex-locked execution, and EIP-1559 gas estimation, serving as the signing layer for liquidation and insurance operations.
- Built dual-product Next.js frontends with chain-aware routing (Base mainnet for DCA, Base Sepolia for Loans), SIWE authentication, GSAP animations, and RainbowKit wallet integration.

CrypDefi, FullStack Engineer | Remote

Jan 2025 - July 2025

- Developed and implemented comprehensive logging middleware in libcommon, enhancing system observability across multiple services
- Created performance monitoring dashboards with Datadog to visualize service metrics, endpoint response times, and error tracking based on the logs from the logging middleware
- Designed and implemented a comprehensive audit logging system, featuring a service for exporting data in CSV and JSON formats, with an interactive UI that includes filtering options and pagination
- Implemented an auto-refresh session management system that detects expiring user sessions and presents a prompt to maintain connectivity, reducing unexpected logouts and improving user retention
- Developed an interactive banner system for the platform to notify users about system updates, maintenance windows, and bug fixes, improving communication and user experience
- Engineered automated cron jobs to extract and store wallet data (assets, balances) in audit databases, enabling organization-level financial tracking
- Led significant UI enhancements including implementing dark mode, designing a new home page, creating reusable components like MultiSelect, and restructuring the complete interface for improved user experience

Farcaster Builder India (Based Fellowship), FullStack Blockchain Developer | Dharmashala

Apr 2024 - May 2024

- Built and shipped <https://degenask.me/>, a social Q&A platform on the Farcaster network.
- Implemented user authentication using Warpcast for seamless login experience.
- Designed and developed a monetization model where users are rewarded in Degen tokens for answering questions, and askers earn a percentage fee when others unlock their answers.
- Achieved significant traction within a week of launch: 200+ users, 50+ questions asked, and over 10,000 degen transferred in volume.

4Bits Solution LLP, Frontend Developer Intern | Remote

Nov-2022 - Jan 2023

- Used Redux-saga as a side effect manager and made API calls for CRUD operations before updating the state in the reducer.
- Significantly reduced initial bundle size using React.lazy, enhancing load performance.
- Built various UI components, including forms, loaders, and pagination.

Skills

Programming C/C++, Python, Typescript, Javascript, Java, Solidity, Rust, Yul, Golang, Noir
Development Next.js, React.js, Node.js, Foundry, Express.js, Hardhat, Ethers.js, Web3.js, Thirdweb, Viem, Wagmi, Redis
General AWS, GraphQL, Docker, EVM, AI, Decentralized Finance (DeFi), System Design, Cryptography
Tools git, Latex
Database MongoDB, Postgres

Projects

PayAPI – x402-style Crypto Payment Gateway Infrastructure | GitHub

2026

Hackathon Project

- Implemented an x402-style crypto payment protocol enabling APIs to enforce payment before granting access, introducing HTTP-native blockchain payment authorization.
- Engineered backend using Node.js, Express, and TypeScript to handle payment intents, transaction validation, and automated on-chain confirmation tracking.
- Implemented payment verification middleware enforcing payment-required access control for protected API endpoints.

Wandrlust - Social Travel Website

2024

University Project

- Developed a social travel website where users can share travel experiences through posts, images, and stories.
- Implemented a real-time feed page with functionality similar to Instagram, allowing users to like, comment, follow each other, and view profiles.
- Created an admin dashboard to provide insights into user activity, including analytics on registered users, posts, and interactions.
- Implemented login functionality using session keys stored in Redis, improving both security and performance by managing user sessions effectively.
- Utilized Redis for caching frequently accessed data, optimizing performance.
- Set up a CI/CD pipeline using GitHub Actions to automate testing, building, and deployment processes across multiple Node.js versions.

Zk-Gas – Privacy-Preserving Social Application using Zero-Knowledge Proofs

Feb 2024

Eth Global – Circuit Breakers Hackathon

- Built a decentralized social platform enabling privacy-preserving participation using Zero-Knowledge Proof verification on Ethereum Sepolia testnet.
- Designed and implemented Noir circuits for access control, compiled into verification smart contracts deployed on EVM chains.
- Integrated Solidity smart contracts with Node.js backend and React frontend to enable secure proof generation and verification.
- Ensured on-chain verification of user eligibility without exposing private data, improving privacy and security guarantees.

Cryptocurrency Wallet Management Platform

Nov 2024

Personal Project

- Developed secure cryptocurrency wallet infrastructure using Golang microservices architecture with AWS KMS-based key management.
- Implemented wallet creation, transaction handling, and real-time balance tracking integrated with Ethereum blockchain.
- Built scalable backend services using PostgreSQL and Redis for persistence, caching, and session management.
- Containerized services using Docker enabling reproducible deployment and scalable infrastructure setup.

Achievements

EthIndia 2025

Dec 2025

Retrace

- Developed Retrace, a DeFi platform implementing Vitalik Buterin's "Reversible Ether" concept that enables transaction reversibility in blockchain
- Created a new token standard which is backward compatible with ERC20 and DAO-governed transaction reversal functionality
- Engineered smart contracts allowing users to reverse erroneous transactions within a predefined timeframe with the DAO Governance

Hackathon Winner - First Prize

Sept-Oct 2024

Living Knowledge Decentralized AI Hackathon

- Developed an intelligent Telegram bot for the Gaiant protocol that answers questions about the ecosystem using RAG (Retrieval-Augmented Generation) and the Gaiant LLM model.
- Implemented vector database search using Hugging Face embeddings to efficiently retrieve relevant documentation for user queries.
- Built a robust question-answering system that processes natural language queries and provides properly formatted responses with Markdown support.

Hackathon Winner - Briefly.AI

July 2024

Decentralized AI Buildathon

- Developed Briefly.AI, an AI-assisted meeting platform integrating Huddle01's SDK for video calls with OpenAI's APIs (Whisper, GPT-3.5-turbo, TTS-1) for automated meeting summarization.
- Built a robust backend using FastAPI for efficient audio processing workflow - handling file uploads, transcription, summarization, and text-to-speech conversion.
- Implemented a modern frontend using Next.js and Tailwind CSS, with Dynamic.xyz integration for secure user authentication and authorization.

Hackathon Winner - Hackverse 2024

March 2024

Hackverse 2024

- Developed Keep It Safe (KiS), a decentralized document vault application for students to securely receive and store documents from their universities using Soul Bound Tokens (SBT) and ERC 4907 (Rental NFTs).
- Implemented Soul Bound Tokens (SBT) to permanently mint non-transferable documents, such as college degrees, gradesheets, and letters of recommendation, to students' addresses, ensuring lifelong accessibility and security.
- Utilized ERC 4907 standard for time-based document issuance, allowing temporary documents like institute ID cards to be automatically burned after a set period, preventing misuse post-graduation and returning ownership to the issuing institute.

Hackathon Winner - Hackverse 2.0

Oct 2023

Hackverse 2.0 Chennai

- We built Certificate Generation and validation DApp and deployed it on the XDC Apothem testnet.
- Used XRC721 standard for minting the certificate as NFTs.