Prithvish Baidya

mail@d4mr.com   GitHub   LinkedIn   @earth_ish   [d4mr.com](d4mr.com)

India · Remote-first · Comfortable with US (PT), EU (CET), or async timezones

Systems engineer. Co-authored [ERC-7518](ERC-7518). Built the transaction backend powering American Express's NFT program. Won ETHIndia 2024 (2,500+ hackers, 36 hours). 4 years shipping production systems: transaction infrastructure, cryptography, and protocol tooling.

EXPERIENCE

thirdweb | Software Engineer   *Jul 2024 – Nov 2025*

Remote

- Built engine-core: Rust transaction backend powering thirdweb's API. 100k+ daily transactions across 2,000+ chains. Nonce management is the hard part, and this makes "mint 10,000 NFTs in one call" actually work.
- Powers Amex Passport, issuing digital collectibles to 140M+ cardholders. Zero failed transactions in production.
- Built twmq: Redis-backed job queue with exactly-once delivery, sub-100ms p99 latency. Handles crash recovery and retries for engine-core.
- Designed **Vault**: non-custodial key management using AWS Nitro Enclaves. Keys live in a TEE with cryptographic attestation. Enterprise custody without the custody risk.

Zoniqx | Lead Architect   *Jul 2022 – Jun 2024*

Remote

- Led team of 4 engineers. Co-authored [ERC-7518](ERC-7518): Ethereum standard for compliant real-world asset tokenization. Introduces partition-based semi-fungible tokens with dynamic transfer restrictions.
- Built the first compliant RWA tokenization layer on XRPL.
- Architected enterprise platforms: **Heimdall** (web3 operational layer) and **CompliTO** (compliant security token transfers).

Biconomy | Software Engineer   *Nov 2021 – May 2022*

Remote

- Rebuilt gasless transaction infrastructure processing 2M+ meta-transactions/month. Enterprise clients included JP Morgan.
- Built the first multichain **ERC-4337** smart contract wallet (hackathon POC → production in 3 months).

Libertas Network | Senior Fullstack Developer   *Mar 2021 – Nov 2021*

Remote

- Built decentralized censorship-resistant podcasting platform using IPFS, Node.js, and Ethereum. (Company shut down)

PROJECTS

zkRail | ETHIndia 2024 Winner | Demo Video   *Dec 2024*

Trustless fiat settlement using ZK proofs over banking APIs. Solver network executes real payments; 150% collateral + game-theoretic bonds prevent fraud. Won 1st place overall (2,500+ hackers, $50k+ prize pool) plus 4 track bounties. Built in 36 hours solo. Technical writeup.

[t2z](t2z) | 1st Place ECC Track, Zypherpunk 2025 ($9k total)   *2025*

Rust library for Zcash shielded transactions. Compiles Halo 2 ZK proving to 3.7MB WASM (no 50MB parameter downloads). Implements ZIP-374 PCZT with external signer support for hardware wallets. Cross-platform via UniFFI.

Coredrain   *2025*

Indexer for Hyperliquid's exotic architecture (HyperCore L1 to HyperEVM). Correlates L1 transfers with EVM transaction hashes. Discovered undocumented dual-hash convention for system transactions by reverse-engineering nanoreth source. Lazy indexing with block interpolation search.

PUBLICATIONS & OPEN SOURCE

ERC-7518: Dynamic Compliant Interop Security Token, Co-author *Review, Ethereum EIPs*

engine-core: Production Rust transaction infrastructure for blockchain. Primary author. *2024–2025*

Bun, PR #25514: Added S3 Requester Pays support to Bun's native S3 client. Zig, TypeScript. *2025*

STACK

Languages / Rust, Go, TypeScript, Solidity

Infrastructure / PostgreSQL, Redis, Kafka, AWS Nitro Enclaves, Cloudflare (Workers, D1, R2, Durable Objects, Queues)

Cryptography / ZK (Halo 2, Noir), Zcash/Orchard, WASM

Frontend / React, Next.js, Astro, Tanstack, Three.js

RECOGNITION

ETHIndia 2024: 1st place overall (2,500+ hackers) plus Polygon, Coinbase, CDP, Base bounties *Dec 2024*

Zypherpunk 2025: 1st place ECC track ($5k), plus Tachyon, Raybot, Network School bounties ($9k total) *2025*

KVPY-SA Fellowship: National science fellowship by Indian Institute of Science. Top 1% of 100,000+ applicants selected for research mentorship. *2019*

NTSE Scholar: National Talent Search Examination. Nationwide exam selecting top 1,000 students from 1.5M+ for merit scholarship. *2019*