Poulav Bhowmick

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Summary

Core Blockchain developer and enthusiast. Shipped a memory-aware cache in an Ethereum consensus client replacing a count-based LRU, which prevents the disks from OOM situations and during non finality. Comfortable across PBS, current EIPs, fork-choice, and p2p networking. I have a good experience in working with teams, be it in core blockchain dev or as a product team, having won multiple hackathons and grant recipient.

Experience

Blockchain Intern *Jan 2026 – Present*
Nethermind

- Working on Taiko Rollup's Preconfirmation Sidecar Catalyst, and implementing core functionalities
- Contributing to the Rust implementation of Obol's distributed validator Charon

Ethereum Protocol Fellow at Lighthouse *June 2025 – Nov 2025*
Ethereum Foundation

- Selected as 1 of 20 fellows from 1,200 applicants (1%).
- Implemented memory-aware caching; validated via tracing, benches, and property tests; aligned with consensus data-flow. *(PR)*
- Introduced and sltot aware dynamic delay in reconstruction for different networks.
- Hardened libp2p Identify/Ping behaviour and peer lifecycle logging; added flaky-test repros.
- Contributed to SSZ/consensus paths; wrote attestation-handling benches to surface hotspots.

OnlyDust Fellow *June 2024 – Aug 2025*

- Selected 1 of 40 (500 participants). Built Rust backends with Actix/SQLx; integration tests; Docker; Nginx LB.

Grant Recipient - StarkFinder (Starknet) & MidoFinance (Solana) *2024*

- Seed Grant from Starknet Foundation; accepted to Argent Telegram Accelerator (StarkFinder).
- Solana x CoinDCX InstaGrants via Superteam (MidoFinance).

Full-Stack Developer *Aug 2024 – Oct 2024*
Invisible Studios

- Built and maintained apps (React, Node.js, PostgreSQL); real-time sync; reduced API p95 by 30% via query-plan tuning and indexes.

Projects

Operating System in Rust *GitHub*

- Built a minimal operating system kernel in Rust implementing bootloader setup, paging, and interrupt handling.
- Designed and tested custom memory management routines and basic task scheduling to explore kernel-level concurrency and gained hands-on experience with low-level systems programming, x86_64 architecture.

Gossimini *GitHub*

- CLI pub/sub node; validated topic mesh/backoff/ack paths; simulated N peers with chaos (drops/partitions); metrics for rebroadcast/fanout.
- Comprehensive networking protocol, working on async rust, threads, libp2p, concurrency.

Merkle Tree implementation in Rust *GitHub*

- Developed a Merkle Tree implementation in Rust, encompassing core data structures, hashing algorithms, and proof generation.
- Inclusion/consistency proofs with SSZ-style hashing; property/fuzz tests; CLI with fixtures for quick verification.

Technologies

Languages: Rust, Solidity, C, C++, Cairo
Systems & Infrastructure: Git, Docker, Kubernetes, Redis, Kafka, PostgreSQL, AWS

Education

Heritage Institute of Technology *Sept 2022 – June 2026*
B.Tech in Electronics and Communication Engineering
CGPA: 7.9 / 10