

MERCY BOMA NAPS-NKARI

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SUMMARY

Blockchain security researcher and Solidity developer with expertise in smart contract architecture, protocol development, and distributed systems. Experienced in Ethereum consensus and execution client development, libp2p networking protocols, and open-source community leadership. Passionate about enhancing blockchain security through rigorous verification techniques and mentoring the next generation of protocol developers.

WORK EXPERIENCE

Zeam - Zig Beam Client *September 2025 – Present*

Software Engineering Intern → Open Source Contributor

- Contributing to Zeam, a production-grade Zig implementation of Beam Chain – a ZK-based Ethereum consensus protocol unveiled at Devcon 7 Bangkok (November 2024)
- Building infrastructure to scale and decentralize Ethereum consensus through provable and verifiable ZK-VM protocols
- Implementing core components for the next-generation upgrade to the current Beacon Chain

GitHub: github.com/blockblaz/zeam

Protocol Labs Developer Guild (PLDG) - Cohort 4 *August – October 2025*

Protocol Developer

- Contributed to pylibp2p, the Python implementation of the libp2p networking stack
- Built Lighthouse Agent Tooling – a suite of MCP (Model Context Protocol) connectors, IDE extensions, and AI-native developer tools for integrating Lighthouse into AI-powered workflows
- Developed Cursor/IDE extensions supporting pinning and encrypting datasets and models

Project: github.com/Patrick-Ehimen/lighthouse-agent-tooling

Women in Ethereum Protocol (WiEP) Fellowship - Cohort 4 *2025*

Co-Lead

- Led initiatives to onboard and mentor women into Ethereum protocol development and open-source contribution
- Guided participants through contributing to Ethereum clients and core repositories

Ethereum Protocol Fellowship (Cohort 5) *June – November 2024*

Distributed Systems & Protocol Researcher

- Conducted research on distributed systems and Ethereum protocol architecture
- Contributed to core protocol development and specification improvements

Grandine - Ethereum Consensus Client *2024*

Open Source Contributor

- Contributed to Grandine, a Rust-based Ethereum consensus client, focusing on performance optimization
- Implemented tracing metrics and analyzed performance bottlenecks using flamegraph visualization
- Explored fuzzing techniques for EVM implementations to enhance protocol resilience

SolidityATL *April 2023 – May 2024*

Smart Contract Security Researcher

- Conducted security research and vulnerability analysis on smart contracts
- Performed code audits and identified potential attack vectors in Solidity codebases

EDUCATION

Bachelor of Engineering in Biomedical Engineering

Federal University of Technology, Owerri, Imo State, Nigeria | *Graduated July 2021*

OPEN-SOURCE CONTRIBUTIONS

- **Ream:** Building an Ethereum Beam chain specification written in Rust
- **Lodestar:** Ethereum consensus client written in TypeScript
- **Ethspecify:** A tool for referencing Ethereum specifications in clients

- **Bevel:** A framework for deploying production-ready DLT platforms

SKILLS

- **Proficient:** Solidity, TypeScript, Python, JavaScript, Qdrant, Pandas, NumPy, LangChain
- **Intermediate:** Rust, Go, Zig, Grafana, Docker, Milvus
- **Basic:** C, Swift, Circom

AWARDS & ACHIEVEMENTS

- **2nd Place** - libp2p Universal Connectivity Hackathon (December 2025)
- **3rd Place** - HashHive Decentralized Blogging Platform Project Competition
- **Grant Recipient** - Women Build Web3 x Encode Funding for Interplanetary Fonts NFT Marketplace

VOLUNTEER EXPERIENCE

Ethereum Improvement Proposal Reviewer

- Perform in-depth technical analysis on EIPs, ERCs, and RIPS, evaluating consensus implications, interface consistency, and protocol compatibility across clients

Ethereum Cat Herders - Volunteer Staff

- Volunteered as a full-stack developer to build and maintain the EthCatHerders website

NOTABLE PROJECTS

HashHive - Decentralized Blogging Platform

- Developed a blockchain-based blogging platform with secure smart contract architecture

Interplanetary Fonts - NFT Marketplace

- Created an innovative NFT platform for digital fonts showcasing advanced smart contract development

PROFESSIONAL INTERESTS

Formal Verification Methodologies • Ethereum Protocol Security • Consensus Algorithm Validation • Smart Contract Reliability • Decentralized System Security • Specification Language Development