MARVELLOUS OGUNODE

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SUMMARY

Blockchain Protocol Developer specializing in core infrastructure, zero-knowledge systems, and blockchain-AI convergence. Experienced in building production-grade Parachains, implementing novel consensus mechanisms, and conducting research in zkML and cross-chain verification systems. Strong focus on cryptographic primitives, protocol security, and scalable decentralized systems across Ethereum, Polkadot, and Solana ecosystems.

TECHNICAL SKILLS

Programming Languages: Rust, Solidity, JavaScript/TypeScript, Python, Move, Clarity
Smart Contract Languages: Solidity, Ink!, Move, Clarity, Anchor, Seahorse
Blockchain Platforms: Ethereum, Polkadot, Solana, Stacks, Lisk, Base, Celo
Development Frameworks: Substrate, Hardhat, Foundry, Anchor, Ink!
Consensus Mechanisms: DPoS, NPoS, PoW, Proof of Personhood, Proof of Intelligence, zkRollups, Optimistic Rollups
Cryptography & ZK: zkSNARKs, Hash Functions, Merkle Trees, Verkle Trees, ZK Proofs, zkML
Cross-Chain & Interoperability: Cross-chain messaging protocols, Light client verification, Identity bridges
Blockchain Integration: Ethers.js, Polkadot.js, wagmi, The Graph, Alchemy, Chainlink Functions, Oracles
Testing & CI/CD: Jest, Chai, Docker, GitHub Actions
Backend & Database: Node.js, FastAPI, SQL, NoSQL (PostgreSQL, MongoDB)

TECHNICAL PROJECTS

Self-Sovereign Identity Parachain | Substrate, Rust, zkSNARKs

Built a full-stack decentralized identity management system on Polkadot using Substrate framework, implementing novel proof-of-personhood and biometric-based identity verification.

Core Technical Achievements:

- Architected and deployed custom Substrate pallets for identity management, credential verification, proof-of-personhood, and on-chain governance

- Implemented zkSNARK-based privacy layer for credential verification without revealing underlying biometric data

- Designed proof-of-personhood mechanism tied to biometric hashes to prevent Sybil attacks and duplicate identity creation

- Integrated AI-powered behavioral analysis for identity recovery post-catastrophe using pattern matching algorithms

- Engineered time-based and social recovery mechanisms for account restoration

- Solved critical frontend ZK proof generation performance bottleneck by implementing Rust-WASM with Swift/Kotlin bridges for native mobile performance

- Developed cross-platform solution spanning web, mobile (iOS/Android), and Parachain infrastructure

- Enables organizations to issue and verify tamper-proof credentials on-chain

Technical Stack: Rust, Substrate, zkSNARKs, WASM, Swift, Kotlin, React, PyTorch

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Blockchain Protocol Research

ZK-Native On-Chain Systems & Blockchain-Native AI

- Researching integration of zero-knowledge proofs directly into consensus layers for privacy-preserving protocol operations

- Investigating zkML (Zero-Knowledge Machine Learning) for verifiable AI computation on-chain

- Analyzing Ethereum's 128-bit security model and implications for long-term cryptographic assumptions

Cross-Chain Identity Bridges & Light Client Verification

- Designing light client-based zk verification models for trustless cross-chain identity portability
- Researching cross-chain messaging protocols for seamless credential verification across heterogeneous blockchain networks

Proof of Intelligence Consensus Mechanism (Theoretical)

- Developing novel consensus mechanism for regulating AI agent-human interaction in decentralized systems
- Proposing benchmarking framework for safe progression toward AGI within blockchain-governed environments

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AI-Powered Energy Trading System | Base, Solidity, PyTorch

Developed decentralized energy marketplace leveraging AI for dynamic pricing and peer-to-peer energy trading with automated settlement on Base blockchain and Hedera.

On-Chain Intellectual Property Platform | Ethereum, Solidity

Built GitHub-like platform for researchers to publish, version-control, and monetize academic work on-chain with immutable timestamps and attribution tracking.

Insurance-Based Prediction Market | Solidity, Chainlink

Created crypto price prediction platform with insurance mechanisms, integrating Chainlink oracles for price feeds and automated payouts via smart contracts.

API Monetization Platform | Solana, Anchor

Designed decentralized API marketplace enabling developers to monetize and consume APIs with micro-payments and usage tracking on Solana.

PROFESSIONAL EXPERIENCE

Blockchain Developer Intern & Backend Instructor | Web3Nova

Akure, Nigeria | March 2025

- Conducted advanced research into zero-knowledge proofs, sidechains, and Layer 2 scaling solutions

- Deployed production distributed applications on Ethereum and Polkadot mainnet

- Integrated blockchain infrastructure with traditional backend systems using Node.js and FastAPI

- Designed and implemented payment systems supporting both fiat and cryptocurrency transactions

- Taught backend development with focus on blockchain integration and dApp architecture

- Collaborated with product teams to define technical requirements for blockchain implementations

Full Stack Developer Intern | CodeAlpha

Lucknow, India | February 2025 - March 2025

- Developed RESTful APIs for frontend-backend communication in web3 applications

- Implemented Git-based version control workflows for distributed team collaboration

- Conducted security audits and vulnerability assessments on existing codebases

- Documented comprehensive test plans and testing procedures for smart contract deployments

Frontend Developer | Brain Bench Technology

Ado Ekiti, Nigeria | October 2024 - January 2025

- Built responsive user interfaces using React.js for blockchain applications

- Integrated Web3 frontends with smart contracts using Ethers.js and Wagmi

- Collaborated with backend developers to connect decentralized applications with on-chain data

Founder | AviraX Tech

Akure, Nigeria | January 2025 - Present

- Established technology education initiative focusing on blockchain and AI development

- Organized technical workshops and bootcamps for emerging developers

- Built community of blockchain developers and fostered collaborative learning environment

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EDUCATION

Bachelor of Technology: Computer Science
Federal University of Technology, Akure (FUTA) | Expected 2027-2028

CERTIFICATIONS

- Blockchain Developer — Hedera

- Blockchain Developer — Web3Nova

- Full Stack Developer — CodeAlpha

- Frontend Developer — Brain Bench Technologies

LANGUAGES

English: Proficient | **Chinese (Mandarin):** Beginner