proof of work

Vivek Pal

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LinkedIn Profile | GitHub Profile | Portfolio Website

Summary

Yet another software engineer with a strong foundation in Rust and distributed systems. Specialized in building decentralized applications, OS-level software, and peer-to-peer systems. Active open-source contributor with demonstrated experience in system architecture and blockchain technologies.

Technical Skills

- Primary Languages: Rust, TypeScript
- Systems Programming: WASM, Linux Kernel Modules, GTK
- Blockchain: Solana, Ethereum, IPFS, Filecoin
- Web Technologies: WebGL, React.js, Next.js
- Tools & Platforms: Git, Linux, Docker, IPFS, Libp2p
- Databases: PostgreSQL, LightSQL, Redis

NOTABLE PROJECTS

wIndexer (2024-Present)

Decentralized Data Streaming for Solana

- Solana data streaming engine built on libp2p's gossipsub protocol
- Applying zero-knowledge proofs for efficient state representation

ShastraOS (2022-2024)

Decentralized Desktop Operating System

- Architected and developed an Arch-based Linux distribution with custom package management
- Implemented Filecoin and IPFS integration for decentralized software package distribution
- Built system-level applications using Rust and GTK for the GNOME desktop environment



· Designed and implemented time-shift backup systems with decentralized storage

GossipRPC (2024)

Distributed RPC Implementation

- Developed a novel RPC system using libp2p's gossipsub protocol for P2P communication
- Implemented resilient message broadcasting across decentralized networks
- Created robust error handling and network resilience mechanisms

Chat p2p (2023)

Peer-to-Peer Communication Platform

- Built a decentralized chat application using Rust, WASM, and Libp2p
- Implemented secure peer discovery and connection handling
- Developed efficient message routing and delivery systems

OPEN SOURCE CONTRIBUTIONS

GNOME Foundation

Open Source Contributor

- Contributed to some gtk components and applications, like gnome-web
- Improvements and some fixes in gtk-rust bindings
- Collaborated with international developer community through GitLab

FOSSCU (2022-Present)

OSS Maintainer

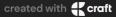
- Lead maintainer for open-source community with 200+ members
- Contributed to and reviewed Rust-based system utilities
- Organized workshops and training sessions on systems programming

PROFESSIONAL EXPERIENCE

IPDM

Rust and Systems Engineer and Founding Member

• Developing high-performance distributed protocols for data retrieval



- Implementing for Solana decentralized data streaming with libp2p gossipsub
- Maintaining working group of 20 people

Cubik

Fullstack Software Engineer

- Implemented Wallet Contexts and Modal
- Worked on UI Components Library

Buidlers Tribe

Web3 Engineer

- Created smart contract implementations for decentralized applications
- Worked on Data Analysis and Graph protocol
- Ethereum Contracts and Twitter Bots

EDUCATION

- B.Tech Computer Science, IFTM University (2021-2025)
- <u>Harvard's CS50</u> 2021
- Helsinki University's Full Stack Open 2021

ACHIEVEMENTS

- Wormhole Fellowship Program Participant
- Solana Hackathon Winner (Solway Project)
- Active member of <u>Superteam</u>