Vivek Pal

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LinkedIn Profile | GitHub Profile | Portfolio Website

Summary

Systems and infrastructure focused software engineer with a strong foundation in Rust and distributed systems. Specialized in building decentralized applications, OS-level software, and peer-to-peer systems since more than five years. Active open-source contributor with demonstrated experience in system architecture and blockchain technologies.

Technical Skills

- **Primary Languages:** Rust, C, TypeScript
- **Systems Programming:** WASM, Linux Kernel Modules, GTK
- **Blockchain:** Solana (@solana/kit, anchor, agave, etc..), IPFS, Filecoin
- **Web Technologies:** WebGL, React.js, Next.js
- **Tools & Platforms:** Git, Linux, Docker, IPFS, Libp2p
- **Databases:** PostgreSQL, LightSQL, Redis

NOTABLE PROJECTS

wind network (Feb, 2025-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 (2019-2023)

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

Protocol Labs Dev Guild (Cohort 1, 2 and 3)

OSS Contributor

- Participated in Filecoin Hacker House to solve Solana's historical retrivals from Filecoin
- Contributed to rust-libp2p
- Contributed to forest, filecoin implementation in rust

GNOME Foundation (2021-2022)

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 300+ members
- Contributed to and reviewed Rust-based system utilities
- Organized workshops and training sessions on systems programming

PROFESSIONAL EXPERIENCE

wind network (March, 2025-Present)

Tech Founder

- Solana's data steaming and archiving decentralized node consensus network.
- Powered by Jito, got 2nd prize in Jito GRID, global hackathon.
- Got support from Superteam and Solana Foundation to build the infrastructure,

Aletheia Labs (2024 November - 2024 March)

Rust and Systems Engineer and Founding Member

- Developing high-performance distributed protocols for data retrieval
- Implementing for Solana decentralized data streaming with libp2p gossipsub(Interplanetary Data Machine)
- Maintaining working group of 30 people

Cypher (2024 July - 2024 November)

Founder and Enginer

- Built Indexer for my project with wormhole - Senshi (Cross chain in game assets)
- Built sdk for wormhole's crosschain in game assets, purchases and deposits
- Later opened the indexer to used by community and ecosystem.

Cubik (2024)

Fullstack Software Engineer

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

Buidlers Tribe (2023-2024)

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)
- Harvard's CS50 2021
- Helsinki University's Full Stack Open 2020

ACHIEVEMENTS

- Wormhole Fellowship Program Participant
- Solana Hackathon Winner (Solway Project)
- Jito Hackathon Winner (Windexer Project)
- Active member of Superteam