# VIRAJ BHARTIYA

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## PROFESSIONAL SUMMARY

Backend Engineer with strong systems focus and open-source experience at Protocol Labs. Built scalable infrastructure with Go, Rust, and Docker, contributed to production-grade blockchain tooling (Lotus, Forest), and orchestrated distributed compute workflows.

#### **EDUCATION**

### B.Tech, Computer Engineering

K.J. Somaiya College of Engineering, Mumbai

Relevant Coursework: OS, Distributed Systems, Cloud Computing, Algorithms, DBMS

#### TECHNICAL SKILLS

Languages Go, Rust, TypeScript, JavaScript, Python, Dart

Backend Node.js, Express.js, PostgreSQL, gRPC, REST, WebSockets

Infra Docker, GitHub Actions, CI/CD, IPFS, AWS (EC2, S3, Lambda, CloudWatch)

Observability Prometheus, Grafana, Logging, Monitoring, Alerting, Jaeger Systems Distributed Systems, Concurrency, Event-Driven Architectures Redis, NGINX, Git, Ollama, Hardhat, Ethers.js, Postman, Figma

## SYSTEMS PROJECTS

#### Parity Protocol

github.com/theblitlabs/parity-protocol

- Built full orchestration layer for LLM inference and federated training across 20+ Dockerized runners.
- Cut model convergence time 32% using parallel aggregation and dynamic runner allocation.
- CLI handled 200+ AI jobs in live testnet; implemented staking, slashing, and reputation scoring on-chain.

## MapReduce in Go and Rust

github.com/virajbhartiva/map-reduce

- Master-Worker compute framework using gRPC + concurrency primitives; achieved 3.2x parallel speedup on 10-node testbed.
- Implemented retry + failure handling logic for partial job loss scenarios under simulated node churn.

## Trading Engine

github.com/virajbhartiya/Stock-trader-Bot

- Backtested RSI/EMA crossover strategy on equities; yielded 12.4% return in 6 weeks, beating benchmark by 7.3%.
- Built interactive CLI with pandas-based metrics and matplotlib charts for trade insight visualization.

#### WORK EXPERIENCE

## Open Source Engineer

Protocol Labs — Remote

Sept 2024 - Present

- Contributed to production-grade Filecoin tooling: Lotus (Go) and Forest (Rust), with 15+ PRs merged.
- Built and maintained 'PDP Explorer', a Go-based proof validator that verified over 2M proofs daily.
- Extended Synapse SDK to support storage deal negotiation, retrieval, and task orchestration in TypeScript.
- Led async collaboration across Filecoin teams; triaged issues, reviewed PRs, and co-authored improvement RFCs.

## Lead Software Engineer

MGEPL — Mumbai

March 2024 - Present

- Built a tenant-based Inventory Management SaaS used by multi-brand retailers to track stock, manage vendors, and reconcile billing across locations.
- Engineered an end-to-end order flow system with status tracking, delivery SLAs, and real-time updates via Web-Sockets and Firebase.

# Founding Software Engineer

TopClub — Remote

Jan 2024 - Sept 2024

- Built scalable Flutter + React apps with real-time updates; served 10K+ monthly active users.
- Designed REST APIs and Lambda functions on AWS; handled 100K+ weekly requests under 300ms median latency.
- Aggregated data from 15+ third-party APIs; implemented auto-repair pipelines improving sync consistency by 28%.

#### HACKATHON HIGHLIGHTS

EthIndia 2024 — Built decentralized file storage with on-chain proof gen; selected from 3K+ developers.

Unfold 2024 — GitHub-integrated crypto bounty protocol; won 1st out of 120+ teams.

**Prakalpa 2025** — National engineering project competition; software track winner.