Abhinav Ashish

Founding Backend Engineer | Blockchain Infrastructure | Distributed Systems | OSINT

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Professional Summary

– Backend engineer with **2+ years** of experience building blockchain infrastructure, distributed systems, and scalable backend services in Go. Deployed and managed **10+ production blockchain nodes**, built high-throughput ingestion pipelines, observability systems, and multi-tenant backend platforms. Experienced in system design, caching, cloud infrastructure, indexing pipelines, and large-scale data processing.

Work Experience

Hornet Decentratech Pvt. Ltd., Kolkata Jul 2024 – Present

*Software Engineer ⟶ **Sr. Software Engineer*** *Promoted: Jan 2025*

– Deployed and maintained **10+ blockchain full nodes** across UTXO and account-based chains for analytics, monitoring, ingestion, and large-scale backend processing workloads.
– Designed backend systems for **multi-tenant enterprise platforms**, including org-level access control, RBAC, subscription management, feature isolation, and scalable user hierarchy models.
– Built **in-house blockchain indexers and high-throughput ingestion pipelines** for Dogecoin and BCH with Neo4j integration, reducing dependency on third-party providers, lowering operational costs, and improving API response time by **∼40%**.
– Optimized internal **dark-web crawling and search systems** by rewriting critical services from Python to Go, improving indexing pipelines, and integrating automated OSINT enrichment workflows, reducing execution time from **∼45 minutes to ∼5 minutes**, cutting fetch latency by **∼75%**, and reducing manual analyst effort by **∼60%**.
– Built end-to-end **observability and monitoring stack** using Prometheus, Grafana, and Uptime Kuma, reducing incident detection time by **∼70%** and improving service reliability across production systems.
– Introduced **Redis-based caching and optimization layers** across backend services to improve response time, reduce database load, and stabilize performance under high concurrency.
– Led **on-prem to cloud migration** on AWS and GCP with near-zero downtime, improving deployment reliability, infrastructure scalability, and operational monitoring.
– Managed backend infrastructure across Linux production environments, including process supervision, service automation, backup workflows, deployment pipelines, and system performance tuning.

Open Source Projects

– **Bitcoin Blockchain Indexer** — Go-based blockchain indexer with batch ingestion, UTXO parsing, resumable sync, and PostgreSQL storage for large-scale blockchain data processing. Built custom backfill and checkpointing mechanisms for reliable sync recovery, optimized bulk ingestion pipelines for high-throughput indexing, and designed schema structures for efficient transaction and address-level querying.
– **Traffic-Monitor** — Real-time network traffic monitoring system in Go using libpcap/gopacket with GeoIP and ASN enrichment, Prometheus metrics, and Grafana dashboards. Added support for PROXY protocol based real-IP extraction behind load balancers, concurrent packet processing pipelines, and low-overhead monitoring for high-volume traffic environments.
– **Terminal-Chat** — Terminal-based real-time chat system in Go with Telnet and HTTP support, PostgreSQL storage, Redis pub/sub messaging, AES-256-GCM encryption, and Tailscale VPN integration. Built concurrent session handling, terminal UI rendering, secure authentication flows, and distributed messaging support for low-latency communication across multiple clients.

Technical Skills

– **Languages & Databases:** Go (Golang), PostgreSQL, Redis, Neo4j, Python, SQL
– **Backend & Systems:** REST APIs, microservices, Linux (Ubuntu), concurrency (goroutines), caching, cron jobs, distributed systems
– **DevOps & Observability:** Docker, Prometheus, Grafana, Uptime Kuma, CI/CD, AWS (EC2, S3, RDS), GCP, monitoring, backup & recovery
– **Blockchain & Infrastructure:** Blockchain nodes, UTXO systems, indexing pipelines, OSINT, TOR, network analysis

Education

Future Institute of Engineering and Management *2020 – 2024*

B.Tech in Computer Science & Engineering **CGPA: 8.94 / 10**

Research Work

– **B2RAM: Design and Practical Implementation of a Secured Information Management Framework for Dynamic Resource Allocation Using a Novel 2-Tier Blockchain Model**
Elsevier ScienceDirect — Simulation Modelling Practice and Theory, March 2025 · **Co-author** (2nd of 6)
· DOI: 10.1016/j.simpat.2025.103096