

HARSH GUPTA

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Education

Vellore Institute of Technology, Vellore

B.Tech in Computer Science and Engineering

Jul 2020 – May 2024

9.09, CGPA

Experience

Luganodes [🔗](#) [Software Development Engineer]

Sep 2023 – Present

- Built automated experimentation and optimization tools for Berachain validators, **achieving top 10 leaderboard position with 95% less stake than competitors** through data-driven optimization strategies.
- Architected high-performance **data ingestion pipelines** and **indexers** for 8+ blockchains (Ethereum, Polygon, Solana, Polkadot, Avail, Berachain [🔗](#), MultiversX, Kava), processing **billions of events** in real-time.
- Built an **event-driven data capture system** to track validator deposits, eliminating third-party dependencies, and **saving \$399/month** in operational costs.
- Engineered a sophisticated reporting dashboard, integrating **20+ blockchains**, delivering accurate financial reports for clients with over **\$3B+** staked with us.
- Spearheaded** the migration of services from Docker on individual VMs to **Kubernetes**, implementing a **GitOps workflow** with ArgoCD, secrets management with Infisical, a monitoring stack, and MongoDB replica sets.
- Led the development of a **batch contract** [🔗](#) which enables **high-throughput transaction batching** to optimize operational efficiency for large-scale validator operations.
- Automated a zero-touch validator onboarding pipeline, **eliminating 100% manual errors**.
- Implemented **end-to-end monitoring and analytics** dashboards using Grafana, Mimir, Alloy, and Loki, with **real-time logging and alerting** for critical services.
- Developed and contributed to high-volume staking APIs (Ethereum, Solana, Polygon) that secured over **\$1.3B+** in institutional client stake.

Dyte (YC W21) [🔗](#) [Software Engineering Intern]

May 2023 – Aug 2023

- Conducted large-scale load testing on real-time socket services, validating system reliability and performance under **100,000 concurrent connections**.
- Authored comprehensive unit tests in Go for the core sockets layer, achieving **90% test coverage** and automating coverage reporting within the CI/CD pipeline.
- Implemented a health probe to monitor socket service uptime, delivering **real-time status alerts** to Slack and improving incident response time.

Projects

Freelance Marketplace (Surgeped) [🔗](#)

- Engineered a **full-stack, multi-tenant SaaS platform** used by **100+ users**, which centralized freelance management and reduced manual coordination efforts by an estimated **40-50%**.
- Built the backend API with Express, PostgreSQL, and Prisma, featuring a sophisticated **RBAC**, a **public bidding feature**, and an **integrated wallet** to securely manage on-platform transactions and payouts.
- Developed a responsive, component-based frontend with **Next.js**, **React Query**, and **Zustand** to manage complex application state, ensuring a seamless and intuitive user experience across the platform.

Email Extractor

- Automated IEEE-VIT's sponsorship workflow using Selenium WebDriver and Python3, achieving a **300% increase in sponsorship revenue** from the previous year
- Designed a high-volume email delivery system using AWS SES, SendGrid, and Mailgun, capable of dispatching over **10,000 emails per event**.

Leadership / Extracurricular

Technical Head, IEEE-VIT

Dec 2020 – Dec 2023

- Oversaw technical growth of **75+ members**, promoting open-source culture and engineering best practices.
- Launched projects and software for events used by **1500+ participants** in **100+ countries**.
- Speaker at [Techloop – Introduction to MERN](#) [🔗](#), guiding **400+ students** in Web Development.

Achievements

- Awarded the [Merit Scholarship](#) [🔗](#) for Outstanding Performance in academics by VIT Vellore, twice.

Skills

Programming Languages: Go, JavaScript, TypeScript, Python, Rust, Java, C, C++

Cloud & Infrastructure: AWS, Azure, GCP, Cloudflare Workers, Docker, Kubernetes, ArgoCD

Databases: PostgreSQL, Google BigQuery, MongoDB, Redis, MySQL

Developer Tools & Concepts: Git, Grafana, Prometheus, Loki, Mimir, A/B Testing, Data-Driven Optimization