

Krish Srivastava

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WORK EXPERIENCE

• PhysicsWallah

March 2025 - Present

Software Development Engineer I

On-Site

- Built and scaled an Internal Developer Platform (Go, GraphQL, PostgreSQL) that unified infrastructure workflows across teams, automating service onboarding, GitLab access, Kafka provisioning, RBAC, and self-service/ticketing workflows while improving platform-team visibility and reducing manual operational work.
- Designed a modular self-service workflow engine for platform operations, enabling teams to provision infrastructure and access through standardized, RBAC-controlled workflows instead of manual platform-team intervention.
- Migrated organizational load testing from JMeter to k6, building automated Jenkins-based load-test workflows and supporting high-scale testing for Vishwas Diwas, the company's largest event.
- Contributed to a MongoDB-to-Aerospike migration for a read-heavy workload, including POC validation and consolidating APIs from multiple services into a dedicated microservice to simplify the migration and service architecture.
- Built AI-assisted incident investigation for the Devastra platform, integrating Zenduty with Prometheus, Elastic APM, Kubernetes and service documentation to help L1 responders investigate alerts; added RAG-based querying over Confluence documentation and Slack access using the OpenAI SDK.
- Developed and maintained internal Go libraries and developer tooling used across microservices, including a library to convert k6 test scripts into Postman collections, with plans for open-source release.

PROJECTS

• Distributed Hash Table (dht) – Multi-Tenant Key-Value Store

Go, PostgreSQL, React

GitHub

- Built a production-ready distributed key-value store with multi-tenancy, supporting **per-request configurable consistency (eventual: 100ms, strong: 400ms)** enabling users to choose availability vs reliability tradeoffs for different use cases.
- Implemented **consistent hashing** with 150 virtual nodes and 3-replica replication strategy; designed asynchronous replication with exponential backoff retries and majority quorum writes for strong consistency guarantees.
- Engineered **Write-Ahead Logging** for durability, **token bucket rate limiting (100 req/min)**, and TTL support; built microservices architecture with Gateway, User Manager, DHT nodes, and Replicator services with comprehensive metrics and health monitoring.

• OneClick

Next.js, Express, Tailwind, Turborepo, PostgreSQL, Prisma, Docker

GitHub

- Developed a dual-app payment platform using Next.js, featuring on-ramping, **P2P transactions**, and integration with major bank APIs and engineered backend services with Node.js, simulating bank interactions and managing data with PostgreSQL and Prisma.
- Implemented Docker and Turborepo for scalable deployment and efficient monorepo management across diverse banking environments.

• SmartVerify

TypeScript, JavaScript, Next.js, TailwindCSS, Python, Flask, Solidity

GitHub

- This is a web application that allows users to upload their Solidity smart contracts and check if they are vulnerable based on four key parameters.
- The application uses a machine learning model running in the backend to analyze the smart contract code and provide a report on its security status.

OPEN SOURCE CONTRIBUTIONS

• redis/go-redis

Pull Request

- Refactored `cmdFirstKeyPos` to leverage cached `COMMAND INFO` metadata for cluster key routing, adding a lock-free `Peek()` method and eliminating redundant lookups across pipeline and multi-shard execution paths.

• hashicorp/go-set

Pull Request

- Optimized `TreeSet.EqualSliceSet` by replacing an unnecessary Red-Black tree allocation with a sort-and-compare approach, reducing heap allocations and improving performance for equality checks.

SKILLS

- **Languages:** Go, JavaScript, TypeScript, SQL
- **Backend/Infra:** gRPC, REST, GraphQL, Ent, Redis, PostgreSQL, Clickhouse, Kong, Nginx
- **SRE/DevOps:** Linux, Docker, Kubernetes, AWS, ArgoCD, Jenkins, GitLab, ELK, Grafana
- **Other Tools:** Machinery, Prometheus, Distributed Systems, Observability, Load Testing

EDUCATION

• SRM University, AP

2021 - 2025

B.Tech in Computer Science and Engineering

CGPA: 7.99