Hardeep (Harry) Narang

(+91) <REDACTED> | hardeepnarang10@gmail.com | hardeepnarang10 | hardeep10

HIGHLIGHTS

- Engineered multiple production-ready distributed backend systems spanning 100s of microservices in Go and Python.
- Designed and developed a majority of TotalityCorp's backend, leading to 1.3M USD in funding, and an early promotion.
- Setup and managed the entirety of TotalityCorp's cloud infrastructure across AWS and GCP. Administered Kubernetes clusters.

EXPERIENCE

Totality Corp Pvt. Ltd. **Jun '21 - Jan '24**
Software Engineer II | Software Engineer I *Remote, India*

- Designed, developed, and maintained 100s of high-performance gRPC and REST APIs across various GenAI and Web3 projects.
- Setup cloud infrastructure on AWS and GCP. Potential candidate for best governance nomination by GCP partner team.
- Administered Kubernetes Clusters. Built CI/CD pipelines. Wrote CRDs and Operators for managing AI/ML workloads.
- Engineered multiple events and data-driven distributed systems architecture. Decomposed several monoliths to microservices.
- Designed multiple database and cache schemas based on known and projected requirements and access patterns.
- Authored 40+ systems development and usage documentations and wikis. Defined code contribution and testing guidelines.
- Set up and managed application security based on modern governance principles of zero-knowledge and zero-trust.
- Wrote code contribution and testing guidelines. Authored multiple systems development, usage documentations and wikis.
- Interviewed, onboarded and led a team of 4 engineers in extending application capabilities. Reviewed PRs.

Cognizant Technology Solutions India Pvt. Ltd. **Dec '20 - Jun '21**
Programmer Analyst Trainee *Remote, India*

- Prototyped low-level system design for an online product marketplace using AWS serverless stack.
- Graduated advanced communications and behavior training with a 9/10 assessment score band.

PROJECTS

Zuno: Perfect Distributed Backend **Nov '23**
Stack: Go, gRPC, OpenAPI, MySQL, Redis, OpenTelemetry, Grafana Stack, Jaeger, Envoy, Kubernetes.

- Implemented a production-ready, highly performant link-shortener application backend spanning 40+ microservices.
- Achieved response time of less than 20ms consistently across all APIs. Benchmarked against 1k RPS on a t2.medium instance.
- Features custom API definition format functioning as the source of truth, encompassing all aspects of defining the APIs.
- Integrated complete application observability at every layer of each of the services: reports logging, request tracing and metrics.
- Implemented Google AIPs in the API design, usage, implementation and documentation. Implemented detailed error reporting.
- *Personal Note: I've distilled the best of my experience, knowledge, and engineering discipline into this one project.*

Logscope: Distributed Log Aggregator **Sep '23**
Stack: Go, Python, Elasticsearch, NATS, OpenAPI, Docker.

- Built a highly-performant and scalable proof-of-concept log aggregator system featuring fully functional log ingestion and search.
- Implemented high-throughput (order of 10^5) log ingestion, and sub-millisecond search capabilities.
- Added support for multi-field ranked search, and advanced search with highly customizable, regex-enabled filters.

Pandora: Container Runtime Engine **Jul '23**
Stack: Go, Bash, Linux, Syscalls, Namespaces, Cgroups, Networking.

- Developed a non-privileged Linux container engine in Go using only system calls and zero external dependencies.
- Leveraged Linux kernel namespaces for process isolation, network namespaces and iptables for network programming, control groups for resource limiting, chroot for filesystem localization and volume mounting, and setcap for privileged access control.

EDUCATION

M.R.S. Punjab Technical University, Punjab, India **Aug '16 - Oct '20**
Bachelor of Technology (B.Tech) | Computer Science Engineering

Army Public School, Allahabad, India **Apr '14 - Mar '16**
Physics, Chemistry, Mathematics (PCM) | Computer Science

SKILLS

Languages/Frameworks: Go (Golang), Python, MySQL, PostgreSQL, MongoDB, Redis, Elasticsearch, gRPC, Kafka, NATS.

Tools/Technologies: AWS, GCP, Linux, eBPF, Kubernetes, Docker, Terraform, Ansible, ArgoCD, Github Actions, Serverless.

Concepts/Experiences: Distributed and Federated Systems. Systems and API design, Data Schema Design. Observability (Logging, Tracing, Metrics, Profiling), Systems and Process Automation, Decomposition, Continuous Integration/Delivery.