Hardeep (Harry) Narang

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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.
- 3+ YoE. Pragmatic problem solver. I bring business value by engineering sophisticated solutions that solve specific problems.

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: More than just a URL Shortener   **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 t3.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 no external dependencies.
- Leveraged Linux Kernel and Network Namespaces, and Control Groups to achieve process isolation and resource restriction.

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, Kubernetes, Docker, Terraform, Ansible, ArgoCD, Github Actions, Serverless.

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