DEVANSH SAHNEY

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CAREER OBJECTIVE

Final Year Engineering student at NIT Delhi with a strong foundation in C++, Golang and Python, and a keen interest in highly available, low-latency distributed systems. Bringing an "can-do" mindset and a passion for tackling complex resiliency and virtualization challenges. Eager to apply my hands-on experience in concurrency, data pipelines, and integration testing to deliver real-time communications solutions.

EDUCATION

National Institute of Technology Delhi (NIT Delhi) — New Delhi, India
Bachelor of Technology in Electrical Engineering; CGPA: 7.83 — Aug. 2023 – May 2027

CKC Academy — Uttar Pradesh, India
CBSE Class 12th (91.8%) — Apr. 2022 – Apr. 2023
CBSE Class 10th (95.2%) — Apr. 2020 – Apr. 2021

TECHNICAL SKILLS

Languages & Frameworks: Python, C/C++, Golang, SQL, Next.js
Distributed Systems & Cloud: AWS (EC2, RDS, S3), Docker, Apache Kafka, gRPC, REST APIs
Databases & Data Processing: PostgreSQL, Redis, Neo4j, Vector Databases, Data Pipelines
Testing & Observability: Unit & Integration Testing, Prometheus, Grafana, MLflow, CI/CD
Core Competencies: Low-Latency Architecture, High-Concurrency (Goroutines), Agile Development

ENGINEERING PROJECTS

Distributed Job Queue Engine | *Golang, PostgreSQL, gRPC, Docker, Prometheus, Grafana*

- Engineered a high-concurrency job queue exposing gRPC endpoints, utilizing PostgreSQL `SELECT ... FOR UPDATE SKIP LOCKED`; achieved 1,393 jobs/sec throughput at 6ms p50 / 36ms p99 claim latency.
- Implemented exactly-once execution via TOCTOU-safe dual-layer idempotency and an in-table Dead-Letter Queue (DLQ).
- Validated crash recovery over 10,000 jobs through rigorous integration testing using `testcontainers-go`.
- Built end-to-end observability using Prometheus and pre-provisioned Grafana dashboards tracking queue depths.

Lightweight In-Memory Key-Value Store | *Golang, Raw TCP Sockets, RESP*

- Engineered a zero-dependency, Redis-compatible KV store over raw TCP, implementing a custom recursive descent RESP wire protocol parser with buffered I/O to minimize syscall overhead.
- Architected a 32-shard concurrent storage engine utilizing FNV-1a hashing and independent `sync.RWMutex` locks, successfully eliminating global lock contention for high-throughput access.
- Designed an O(1) LRU eviction policy via an intrusive doubly-linked list (avoiding boxing overhead) alongside a non-blocking, dual-layer TTL expiration system to ensure zero memory leaks.

Autonomous GraphRAG & Data Pipeline | *Python, LangGraph, Neo4j, FastAPI, Docker*

- Developed a complex data processing pipeline using Neo4j and Python to resolve multi-hop analytical queries.
- Orchestrated a multi-agent reasoning loop with rule-based guardrails to ensure output quality and reduce hallucinations.
- Deployed as a full-stack FastAPI service in Docker, successfully tracking system latency and quality metrics via MLflow.

CERTIFICATIONS

Deep Learning Specialization – Coursera (Offered by DeepLearning.AI)

PROBLEM SOLVING & ACHIEVEMENTS

- **Algorithmic Problem Solving:** Global Rank 698 in LeetCode Weekly Contest 506 (Rating: 1850+), demonstrating strong command of data structures and efficient C++ code optimization.
- **Competitive Engineering:** Pre-finalist in Flipkart GRiD 8.0 Software Development Track, demonstrating the ability to solve complex, real-world engineering and scalability challenges.
- **Hackathon Excellence:** National Finalist, Hackfinix 2026; shortlisted for Round 3 (Top 60 teams nationally) in Deloitte Hacksplosion 2026.
- **Rapid Prototyping Finalist:** Finalist among the top 65 teams out of 10,541 participants in CodeSlayer 2k25 at NIT Delhi.