

# NAVKIRAN SINGH

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## EDUCATION

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THAPAR INSTITUTE OF ENGINEERING AND TECHNOLOGY

Punjab, India

*B.E Computer Engineering*

2017 - 2021

- CGPA 9.88 out of 10 | AIR 4195 in GATE CS 2021

## SKILLS

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**Backend:** Python, FastAPI, Django, C++ | **Frontend:** React, Javascript, Typescript

**Databases:** MySQL, Redis, Elasticsearch, SpannerDB | **DevOps:** Docker, Kubernetes, Helm, GCP, Linux

**Others:** Machine Learning, Distributed Systems, Microservices, Scalability, Caching, SDLC

## WORK EXPERIENCE

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**NOON.COM** (ECOMMERCE STARTUP)

Gurgaon, India

Software Development Engineer 2

AUG 2022 - PRESENT

- Built the **Rule Engine** used across Noon to launch workflows with multiple decisions & parameters. Handles **5M+ tickets/day** with up to **2500 reqs/sec**. Used Python, FastAPI, React, Elasticsearch.
- Designed and developed a custom **Redis caching solution**, reducing **p99 latency by 77%** and redis memory usage by 40x for large payloads, saving infra costs.
- Improved product **search click-through rates by 12%** leveraging **text embeddings & vector search**.
- Launched a **time-saving utility to quickly set up infra alerts** on Google Cloud Platform using only Git PRs and pre-defined templates, reducing dependency on DevOps.
- Took initiative and **fixed multiple critical security vulnerabilities** (ReDos/regex catastrophic backtracking, command injection, server-side request forgery).

**ERICSSON**

Gurgaon, India

Software Engineer

JULY - DEC 2021

- Developed **Kubernetes** components for enterprise-grade **AI/ML platform**, enabling data scientists to **build, train, and deploy ML models** at scale.
- Implemented **Identity Access Management using Keycloak** for role based access to the platform.
- Created **virtual data views in Denodo**, integrating data from Hadoop and Cassandra, reduced query latency by 60%.

Software Engineer Intern

JAN - JUNE 2021

- Built Kubernetes workflows to automate Spark jobs for **data ingestion** and preprocessing and acquired hands-on understanding of **Machine Learning** lifecycle from model training to serving.

## RELEVANT PROJECTS

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**Integrated Cache Based with Change Data Capture** | [Github Link](#)

- Built a caching system with a query engine, storage engine, and change data capture (CDC) based on **Uber's CacheFront** architecture.
- Implemented **automatic cache invalidation** by tailing MySQL binlog and **cache deduplication** using custom Lua scripts for Redis.