

GARVIT GUPTA

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Education

Thapar Institute of Engineering and Technology, Patiala, India <ul style="list-style-type: none">Computer Engineering	2021 - 2025
DCM Presidency School, Ludhiana <ul style="list-style-type: none">CBSE (Class XII), Aggregate: 94%	2020 - 2021
DCM Presidency School, Ludhiana <ul style="list-style-type: none">CBSE (Class X), Aggregate: 93%	2018 - 2019

Work Experience

Software Developer Intern | *Bharti Airtel — Gurugram, India* | **Feb 10, 2025 – June 25, 2025** | [Certificate](#)

- Queried and analyzed large-scale datasets using **SQL** and **Apache Spark** to support analytics workflows
- Built data visualizations and dashboards using **Tableau** to derive actionable insights
- Collaborated with analytics teams to understand **data pipelines, transformations, and reporting processes**.

Software Developer | *ONS Logistics — Ludhiana, India* | **Nov, 2025 – present** | [Website](#)

- Built and deployed the **company website** to establish digital presence and handle customer inquiries.
- Developed a **custom internal ERP system** to manage logistics operations including orders, clients, and shipment tracking.
- Designed **REST APIs and backend workflows** for data persistence, status updates, and operational automation.
- Implemented a **modular, extensible architecture**, enabling future expansion into billing, reporting, and analytics modules.

Technical Skills

Languages: Python, C++, JavaScript

Backend & APIs: FastAPI, REST APIs, Event-Driven Architecture, Auth

Data: Pandas, NumPy, Time-Series Data, SQL

Tools: Git, Linux, Docker

Frontend: React, Next.js

Databases: PostgreSQL, SQLite, Mongo DB

Functional Skills

System Design | Event-Driven Processing | Backtesting & Simulation | Data Pipelines | Debugging & Reliability | API Integration

Projects

1. Automated Trading Platform — Core Engine & Simulation Layer | [Link](#)

- Designed and implemented a **modular strategy execution engine** supporting pluggable trading strategies and rule-based decision logic
- Built a **multi-symbol, candle-by-candle CSV replay system** to simulate real-time market behavior deterministically
- Implemented a **paper-trading engine** mirroring live execution flow to validate strategies without capital exposure
- Architected clear separation between **data ingestion, strategy evaluation, and execution layers**
- Roadmap includes **REST APIs and a monitoring dashboard** for strategy control and observability

2. ForgeQueue — Distributed Job Queue & Scheduler | [Link](#)

- Built a **production-style background job processing system** using **Python** and **Redis**, supporting **asynchronous** execution and **persistent** job storage
- Designed **priority-based** queues and a **multiprocessing** worker pool to enable **scalable**, concurrent job execution
- Implemented retries with **exponential** backoff, **dead-letter queues**, **delayed jobs**, and **cron-based scheduling**, with graceful shutdown and operational metrics

3. Roadside Litter Detection & License Plate Recognition System | [Link](#) | [Roboflow link](#)

- Built a **real-time computer vision** system for roadside litter detection using **YOLO**-based object detection
- Integrated **OCR** for **automated license plate recognition** and offender identification
- Designed a modular pipeline enabling scalable **detection, reporting, and notification workflows**

Academic and Extracurricular Achievements

- Engaged in **Extra Learning Credits (ELC)** activities, collaborating in groups of 4 – 5 students on projects
- Learning Japanese:** Completed 7+ Duolingo units to advance Japanese proficiency | [Duolingo LINK](#)
- Achieved fluency in **French** by dedicating 10 hours per week to conversational practice

Certification and Licenses

- Career Essentials in **Software Development** by **Microsoft** and **LinkedIn** | [Link](#)
- Career Essentials in **GitHub** Professional Certificate by **GitHub** | [Link](#)

