

# Gautam Jain

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leetcode/gautam9092

## Education

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**Thapar Institute of Engineering and Technology, Patiala** *Aug 2023 – July 2027*  
*BTech in Computer Engineering* — **GPA: 9.68/10 (Top 5% of Batch)** —  
Merit Scholarship Awardee (Year 1 & 2)  
*Relevant Coursework:* Data Structures & Algorithms, Operating Systems, DBMS, Computer Networks, OOP, TCP/IP  
Networking, Distributed Systems

## Experience

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**Summer Research Intern** — *TIET-UQ Centre of Excellence in Data Science & AI (CoDSaI), TIET* *On-campus, Patiala*  
*Python, Machine Learning, Spectroscopy, AI/ML Pipelines, Research* *June 2026 – July 2026*

- Conducting applied AI/ML research on **Integrating Spectroscopy and AI for Comprehensive Microplastic Detection and Prediction** under faculty mentor Dr. Anju Bala; working towards publishable research outcomes.
- Designing and implementing end-to-end **ML/AI pipelines** to process spectroscopy datasets, extract features, and build predictive models for environmental contaminant analysis at scale.
- Contributing to **research paper drafting** and literature synthesis; applying statistical analysis, signal processing, and supervised learning techniques in a structured academic research environment.
- Collaborating with interdisciplinary teams across data science and engineering domains; participating in weekly review meetings and adhering to rigorous quality and timeline standards.

**Software Engineering Intern** — *Medlr Solutions Pvt. Ltd.* *Remote*  
*Python, Flutter, Firebase, REST APIs, Google Maps API, Docker* *July 2024 – June 2025*

- Owned end-to-end development of a production-grade pharmacy application; architected **REST API backend** with real-time data sync and distributed microservice components using **secure coding practices** and RBAC.
- Improved application performance by **35%** through optimized state management, async API handling, and code profiling; participated in **Agile/Scrum** sprint cycles with direct stakeholder communication.
- Integrated **Google Maps & geolocation services** for real-time delivery tracking; debugged full-stack edge cases improving order accuracy by **30%** and system reliability under real user load.
- Assisted in **Docker-based CI/CD pipelines**; contributed to **authentication, RBAC, and API security** fundamentals – applied secure coding principles and participated in code reviews across production services.

## Projects

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**CrisisCompute – Multi-Agent RL/LLM Cloud Backend** [GitHub] *Python, FastAPI, RL, LLM, Docker*

- Built a **FastAPI + Docker** backend exposing REST APIs for a **multi-agent gym** where three pipeline agents negotiate shared CPU/GPU/RAM resources; designed modular **microservice architecture** with clean separation between ingestion, processing, and output layers.
- Deployed on Hugging Face Spaces with real-time metrics; built training stack supporting **tabular Q-learning, LLM-driven, and hybrid agents** – validated measurable reward and on-time completion gains over untrained baselines.
- Top 800 finalist from 31,000+ teams** at OpenEnv Hackathon India 2026 (Meta & Scaler) – India's largest AI hackathon.

**Attendity – Real-Time Geolocation Attendance System** *Flutter, Firebase, MongoDB, Real-time*

- Sole developer across full product lifecycle; implemented **geofencing logic** with Firebase (Firestore + Auth) NoSQL backend for tamper-proof, **real-time attendance capture** – architecture mirrors IoT fleet telemetry systems.
- Built admin dashboard with real-time analytics and observability; improved reporting efficiency by **50%** and integrated push notifications for proactive user engagement.

**ContractIQ – NLP Pipeline & API Backend** *Python, NLP, APIs, Microservices*

- Built end-to-end **Python NLP pipeline** for contract intelligence: ingests legal documents, extracts key clauses, generates structured metadata via clean **REST API endpoints** with modular microservice components.
- Designed for extensibility, future **cloud deployment (AWS)**, and RBAC integration; clean separation between ingestion, text processing, and output generation layers.

## Technical Skills

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**Languages:** Python, C++, JavaScript, SQL, Dart, C, HTML5, CSS3

**Frameworks & APIs:** FastAPI, Flask, Node.js, Express.js, React.js, Flutter, REST API Design, Async Programming

**Databases:** MongoDB, PostgreSQL, Redis, Firebase (Firestore, Realtime DB, Auth), MySQL, SQLite

**DevOps & Cloud:** Docker, CI/CD Pipelines, Git/GitHub, AWS (EC2, S3), Linux, Hugging Face, Postman

**Distributed Systems & Networking:** Microservices Architecture, Real-Time Systems, Concurrency, Multi-threading, TCP/IP Fundamentals, Routing & Switching Concepts, Firewall/VPN/TLS Basics

**Security:** RBAC, Secure Coding, API Security

**Specializations:** Multi-Agent RL, LLM Agents, NLP Pipelines, AI/ML Pipelines, Data Structures & Algorithms, OOP, Agile/Scrum

## Achievements & Competitive Programming

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- **LeetCode:** 650+ DSA problems solved across Trees, Graphs, Dynamic Programming, and advanced algorithms – [leetcode.com/gautam9092](https://leetcode.com/gautam9092)
- **OpenEnv Hackathon × Scaler (2026):** Top 800 finalists from 31,000+ registered teams – India's Biggest AI Hackathon by Meta & Scaler, Bangalore, April 2026.
- **HackTU 2025:** Selected among Top 100 teams from 5,000+ applicants; built and demoed a fully functional MVP within a 36-hour sprint.
- **Smart India Hackathon:** Internal finalist in both 2023 and 2024 editions; recognized for innovative, execution-ready solutions under pressure.