

ANKITA SHARMA

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Education

Thapar Institute of Engineering and Technology, Patiala

Sep 2020 – Jun 2024

Bachelor of Engineering in Computer Science Engineering

CGPA: 8.75/10

Army Public School Jammu Cantt, Jammu

Mar 2019 – Apr 2020

CBSE XII (Senior Secondary) Science

95.6%

Work Experience

Airtel Digital

Jul 2024 – Present

Software Developer

▷ **Backend Engineering** | *Java · Spring Boot · REST*

- Developed Java Spring Boot microservices and REST APIs powering the MITRA Airtel retailer application — serving 9L+ retailers and acting as a key revenue-generating platform.
- Built a DoT-mandated compliance portal for J&K and NESA telecom circles with paginated REST APIs for document upload, bulk-upload, and approval workflows — reducing manual verification effort by 2x.
- Built key features for RAAHI, Airtel's internal travel reimbursement app managing 5K+ trips/day — implemented trip pause/resume, dynamic manager rerouting, conditional skip-manager logic, and distance validation, reducing exploitation of company resources.
- Managed project workflows using JIRA and Bitbucket for tracking, code reviews, and collaboration.

▷ **Data Science** | *Python · YOLOv8 · OpenCV*

- Trained YOLOv5 and YOLOv8 models for real-time object detection, improving inference accuracy from 80%+ to 85%+ in production pipelines.
- Investigated facial recognition technologies for KYC processes, strengthening user verification and security.

IIT Jammu

Jan 2024 – Jun 2024

Research Intern | Deep Learning & Network Security

- Contributed to a published research paper proposing an end-to-end deep learning framework for PII detection in mobile network traffic — achieving 95.68% test accuracy on real-world datasets. [Paper](#)
- Built framework using SBert LLM + autoencoder for packet embeddings, triplet-loss fine-tuning with hard/soft mining, and PCA-based dimensionality reduction — improving accuracy from 81% baseline to 95.68%.

Microsoft

May 2022 – Jun 2022

Intern Engage Mentee '22

- Built an ATM security system using facial recognition for password-free login via OpenCV and Tkinter. [Git](#)

Technical Skills

Concepts: Data Structures, Algorithms, DBMS, Machine Learning, OOP, Microservices

Languages: C/C++, Java, Python, SQL, R (familiar)

Libraries: pandas, NumPy, Matplotlib, OpenCV, scikit-learn, seaborn, Keras

Frameworks: Spring Boot, Flask (familiar) | **Web:** HTML/CSS

Tools: Git, Jira, IntelliJ, Bitbucket, Jupyter Notebook, Tableau, Google Colab

Projects

Event Booking System | *Java 21, Spring Boot, Redis, PostgreSQL, Docker* | [Git](#)

Jul 2026

- Built a scalable event booking system with microservices architecture — separate Event Booking and Notification services communicating via REST.
- Implemented distributed seat locking using Redis (TTL), preventing double-booking under concurrency with automatic lock expiry and user-specific lock refresh.
- Designed end-to-end booking workflow — seat locking, confirmation, PostgreSQL persistence, and email notification via Notification Service with idempotency support.

Notification System | *Java, Spring Boot, Kafka, PostgreSQL, Firebase, Docker, Groq AI* | [Git](#)

Jun 2026

- Built an asynchronous, fault-tolerant notification system using Kafka, decoupling request handling from multi-channel delivery (Email via SMTP, Push via Firebase).
- Designed a 3-tier retry mechanism with increasing backoff and a Dead Letter Queue for exhausted failures, with idempotency to prevent duplicate processing.
- Integrated an LLM (Groq/Llama 3.3) to auto-generate plain-English failure analysis for DLQ entries and perform fail-open spam/abuse detection on incoming requests.

TOPSIS - Multiple Criteria Decision Making | *Python, Pandas, NumPy, Flask* | [Git](#)

Jan 2023

- Implemented the TOPSIS algorithm with a Flask web interface for multi-criteria decision making.
- Published as a pip-installable package on PyPI. [PyPI package](#)