

Ankita Kapoor

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Objective

Data Science student with expertise in machine learning, deep learning, and agentic AI, seeking a Data Scientist/Data Analyst/GenAI role to drive measurable business impact through data-driven solutions.

Experience

Head of CoEET & Teaching Assistant, NIIT University

Jan 2023 to May 2025

Worked on educational technology research and project management for **2.5 years** using data analytics and process optimization technologies to achieve improved academic outcomes with 20+ course faculty and industry collaboration.

- Managed **400+ student** projects per semester using **Asana**, **ClickUp**, and **ETIC Portal** for progress tracking, while conducting research analysis on **150+ EdTech** initiatives through Excel, PivotTables, and Google Apps Script automation.
- Coordinated strategic industry-academia partnerships with data-driven companies such as PerspectAI to enhance applied learning opportunities and bridge academic research with real-world applications.
- Developed executive **leadership and technical mentoring capabilities**, mastering team alignment, innovation management, and data-driven decision-making under tight deadlines—skills essential for technical leadership roles.

Projects

Financial Market Risk Prediction System

- Developed **statistical time series models** using ARIMA and GARCH algorithms for automated portfolio risk assessment, processing **50+ NSE-listed** stocks with dynamic forecasting and confidence intervals. [\[Github\]](#)
- Deployed production-ready solution with **Docker containerization** and **Jenkins CI/CD pipeline**, delivering automated risk reporting with JSON output and real-time visualization for trading system integration.

Comprehensive Predictive Modeling Portfolio

- Developed **11 end-to-end machine learning case studies** across finance, astronomy, e-commerce, and computer vision domains, implementing diverse **10 + ML techniques** including regression analysis, classification algorithms, time series forecasting, clustering analysis, and deep learning CNNs with cross-validation methodologies. [\[Github\]](#)
- Achieved significant business impact and technical performance with **84.6% accuracy** in **multi-class food image classification** using balanced F1-scores, while delivering practical solutions for risk management, investment strategy, and inventory management.

AI Code Review Assistant

- Developed full-stack intelligent code review system with **FastAPI backend** and responsive frontend UI supporting multiple programming languages (Python, JavaScript, Java, C++), featuring metrics visualization and severity-categorized issue detection. [\[Github\]](#)
- Implemented hybrid AI analysis pipeline combining AST parsing, pattern recognition, and AI-driven suggestions using **OpenAI GPT-4** and **Hugging Face transformers** for contextual code understanding, automatic security fixes, and real-time quality recommendations deployed on **Railway.com** [\[Live Demo\]](#)

Multi-Agent Traffic Management System using Reinforcement Learning

- Developed a decentralized multi-agent traffic management system using **GNNs**, **transformers**, and reinforcement learning (**DQN**, **A3C**), enabling autonomous decision-making without centralized control — an **agentic AI approach**. [\[Github\]](#)
- Achieved **97.4% processing efficiency** with **318.12 vehicles/time** unit throughput across coordinated traffic controllers in a simulated environment.

Education

B.Tech In Computer Science, NIIT University

2022 to 2026

CGPA: 9.36

XII, Parmarth International School (CBSE)

2022

X, Parmarth International School (CBSE)

2020

Skills

- Programming:** Python, SQL, R | **Databases:** MySQL, MongoDB, OracleDB
- Technologies:** Git, Docker, Jenkins, Jupyter Notebook, Kaggle, Labelbox
- Data Science:** Pandas, NumPy, Matplotlib, Seaborn, PowerBI
- AI/ML:** Machine Learning, Deep Learning, Statistics, Data Mining, Big Data Analytics, Agentic AI and AI Agents

Achievements

- Co-authored research paper accepted at **International Conference on Engineering Trends in Education Systems & Sustainability (ICETESS 2025)** with literature review of 40+ research papers. [\[Certificate of proof\]](#)
- Orange House Captain and Vice-Captain at NIIT University during tenure Jan 2024 – Dec 2025.