

LAKSHITA GUPTA

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EDUCATION

Thapar Institute of Engineering and Technology

B.Tech in Computer Engineering - CGPA: 8.91

- Relevant Coursework: Data Structures & Algorithms, Operating Systems, DBMS, Machine Learning

Aug 2023 - Present

Patiala, Punjab

PROJECTS

HealthGuardAI - AI Healthcare Data Platform

Python, OCR, Machine Learning, JWT, REST APIs

Nov 2025

- Built an end-to-end AI system to extract and analyze medical data from PDFs/images using OCR and ML (batch uploads up to **10 reports**).
- Implemented JWT-based auth with **6-character alphanumeric IDs** for secure family linking, anomaly detection, AI chatbot support, and downloadable PDF reports.

Real-Time Emotion Recognition System

Python, TensorFlow, CNN+LSTM, OpenCV

Apr 2025

- Developed a real-time facial emotion recognition system using CNN+LSTM to model spatial and temporal facial features.
- Trained on FER2013 achieving **72% validation accuracy**, optimized OpenCV pipelines for low-latency inference.

TOPSIS Decision Analysis Python Package (PyPI)

Python, Pandas, CLI Tools, Packaging

Jan 2026

- Developed and published a Python package on PyPI implementing the TOPSIS multi-criteria decision-making algorithm.
- Provided both CLI and Python API support with CSV/Excel input handling, validation, and automated result generation.

Constraint-Based University Datesheet Generator

Python, Flask, SQL

May 2025

- Designed a constraint-based scheduling engine to automatically generate **conflict-free examination timetables**.
- Processed faculty availability, student constraints, and exam rules to eliminate manual scheduling effort.

SKILLS

Programming Languages: C, C++, Python, JavaScript, SQL

Core CS: Data Structures & Algorithms, Object-Oriented Programming, Operating Systems, Computer Networks

Problem Solving: Solved 100+ DSA problems (arrays, trees, graphs, DP, greedy) on LeetCode

Backend Systems: REST APIs, Authentication (JWT), Flask, Node.js, Express.js

Frontend: React.js, Tailwind CSS, Responsive UI Design

Databases: MySQL, MongoDB, Firebase

Machine Learning: TensorFlow, Scikit-learn, CNNs, OpenCV, Model Training & Evaluation

Data & Analytics: NumPy, Pandas, Tableau

Developer Tools: Git, GitHub, Linux, Postman, Figma

LEADERSHIP

General Secretary - ISTE

Indian Society for Technical Education

May 2025 - Present

- Led cross-functional technical initiatives supporting 1000+ registrations and 20+ workshops across departments.

ACHIEVEMENTS & CERTIFICATIONS

Certifications & Academic Achievements

Coursera, Deloitte Forage

2024 - 2026

- Completed industry-recognized certifications in Machine Learning, Data Analytics, and Full-Stack Development (Coursera); completed Deloitte Data Analytics Job Simulation(Forage).