

Gaurang Mangla

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EDUCATION

Thapar Institute of Engineering and Technology
Bachelor of Engineering in Computer Engineering | CGPA: 8.11

Patiala, India
Aug. 2023 – May 2027

Amity International School
Class 12th – CBSE: 95% | Class 10th – CBSE: 99.2%

Gurugram, India
May 2023

SKILLS

Languages: Python | R | C / C++ | SQL
Libraries & Frameworks: Pandas | NumPy | Scikit-learn | TensorFlow | Keras | CatBoost | Matplotlib | Streamlit
Machine Learning & AI: Regression | Classification | Statistical Modeling | Deep Learning | Generative AI | Feature Engineering | Hypothesis Testing
Data & Tools: MySQL | SQL | Excel | Google Sheets | Web Scraping | Jupyter Notebook | Google Colab | Git/GitHub
Coursework: DBMS | OOP | Operating Systems | Computer Networks | Computer Architecture
Soft Skills: Analytical Thinking | Problem Solving | Cross-Functional Collaboration | Stakeholder Communication

EXPERIENCE

McKinsey & Company Jun. 2026 – Jul. 2026
Technology Intern, McKinsey Tech – Engagement Lifecycle Group Gurgaon, India

- Drove product definition for an enterprise Generative AI platform built on Model Context Protocol (MCP), enabling natural-language access to governed enterprise data and eliminating manual dashboard navigation.
- Translated business requirements into implementation-ready specifications across Product, Business Analysis, and UX teams, authoring functional documents, use cases, and user workflows.
- Designed wireframes and prototypes to validate user flows, delivering documentation that enabled engineering to estimate effort and execute the product roadmap.

PROJECTS

Bike Rental System | *Relational Database Design* Nov. 2025 – Feb. 2026
MySQL | SQL | Stored Procedures | Triggers | ER Modeling

- Designed a normalized (3NF) relational schema across 9 tables for a bike rental service, eliminating data redundancy by separating pricing, location, and transactional data into dedicated tables.
- Built stored procedures and triggers to automate booking, payment calculation, and real-time bike status transitions, enforcing data integrity at the database level.

Delhi Air Quality Prediction | *Deep Learning Time-Series Forecasting* Oct. 2025 – Dec. 2025
Python | TensorFlow/Keras (LSTM, GRU, CNN-LSTM) | Pandas | Scikit-learn | Web Scraping

- Extracted, cleaned, and consolidated 8 years of pollutant and meteorological data (self-scraped) into an analysis-ready dataset to track long-term pollution trends.
- Built and benchmarked a forecasting model (GRU, $R^2 = 0.85$, RMSE = 38.45) that reliably predicts next-day AQI, providing a data-driven tool to support early-warning public health decisions.

AI Fitness Tracker | *Full-Stack + ML* Mar. 2026 – Jun. 2026
Next.js | TypeScript | FastAPI | PostgreSQL | SQLAlchemy | Docker | GitHub Actions

- Built a production-style full-stack platform exposing 39 JWT-authenticated REST endpoints for workout, nutrition, and progress tracking.
- Integrated a RandomForestClassifier recommendation engine (scikit-learn) behind a rule-based fallback that auto-degrades on low confidence or model failure, keeping the API error-free end-to-end.
- Designed and shipped a CSV/PDF report-export feature end-to-end, adding 6 tests to a 256-test pytest suite run through GitHub Actions CI/CD alongside Docker Compose.

CERTIFICATIONS

Machine Learning Specialization | *DeepLearning.AI & Stanford University*

- Developed ML models using supervised learning, deep neural networks (TensorFlow), and reinforcement learning.

Fundamentals of Deep Learning | *NVIDIA, Coursera*

- Covered neural network fundamentals, model training, and deep learning applications.