

Anwesa Mondal

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in LinkedIn

🔗 GitHub

🌐 Portfolio

🔗 LeetCode

Education

Indira Gandhi Delhi Technical University for Women (8.71 CGPA)

Aug 2024 – Present

B.Tech in Computer Science Engineering with specialization in Artificial Intelligence

- **Computer Science:** Database Management System, Object Oriented Programming, Data Structures and Algorithms
- **Mathematics:** Probability and Statistics, Linear Algebra, Vector Calculus, Advanced Calculus, Discrete Mathematics

Experience

National Institute of Technology, Rourkela—*Research Intern* [[Completion certificate](#)]

May 2025 – July 2025

- Applied Machine Learning to design a hybrid model using LSSVM and Random Forest for sensor degradation data with high missing rates (10–80%).
- Benchmarked against baseline methods using RMSE, MAE, and variance on real-world multi-sensor time series.

Carnegie Mellon University (Computational Biology Dept.)—*Research Intern* [[Github](#)]

June 2025 – Present

- Assisting in a collaborative project between Carnegie Mellon University and Harvard Medical School on 3-D MRI unsupervised surface registration using neural deformation field learning.
- Working under Dr. Xiangrui Zeng to implement anatomical alignment techniques using digital image processing.

Publications

- Research paper titled “A Grid-Tuned LSSVM and Ensemble Learning Framework for Missing Data Imputation” accepted for publication and presented at the 5th Indian IEOM Conference 2025, VIT Vellore, India(Nov 6–8, 2025) [[Letter](#)]

Technologies

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

Skills: Problem-Solving, Machine Learning, Deep Learning, Data Analytics, RAG Systems, PostgreSQL, Generative AI

Libraries: NumPy, Pandas, Matplotlib, Scikit-Learn, TensorFlow, PyTorch, LangChain, OpenAI, SciPy, Seaborn, BeautifulSoup, Streamlit, Flask, OpenCV, Mediapipe, NLTK, Tiktoken, Transformers, Plotly, Pillow, Uvicorn

Projects

SafeDrive – AI-powered road safety and insurance system

[SafeDrive](#) 🔗

- Built **GenAI-powered analytics and real-time alert systems** using the Gemini API to analyze driving behavior (jerk, speed, etc.) for insurance claim suggestions and **detect drowsiness with MediaPipe**, triggering emergency alerts via Twilio.
- Developed an AI chatbot for live claim support and dynamic **GPS-based risk analysis** using accident-prone zone data.
- **Technologies:** Gemini API, Twilio, FastAPI, RESTful API, Python, OpenCV (Computer Vision), MediaPipe

Stock Price Prediction using Recurrent Neural Networks

[github](#) 🔗

- Automated historical equity market data ingestion and engineered structured time-series datasets for forecasting closing price movements using recurrent neural architectures.
- Built and trained an **LSTM-RNN model** achieving **0.11 MSE (0.33 RMSE)** on real stock price forecasts.
- **Technologies:** Python, Pandas, NumPy, Scikit-Learn, TensorFlow/Keras, TuShare, Jupyter

Speedline – AI-powered train traffic management system

[Speedline](#) 🔗

- Designed and deployed a real-time AI system for conflict-free train scheduling and predictive delay management, and improved scheduling efficiency using track, signaling, and platform constraints.
- Built a **GenAI-powered CP-SAT solver** for optimal rerouting, achieving reliable conflict resolution.
- **Technologies:** Next.js, FastAPI, Groq

Achievements

- Solved **600+** questions across **LeetCode**, **CodeChef**, **Codeforces**, and **GeeksforGeeks** and achieved a max rating of **1428 on CodeChef** and **1189 on Codeforces**. [[CodeChef](#) 🔗][[Codeforces](#) 🔗]
- **Won Industrial Ideathon 2025** by the Delhi Government; **Secured Top 10 and Top 17 positions** in **Ignitathon 2025** (Organized by RCCIIT) and **SpaceCon**, National Space-Tech Hackathon (Organized by NSUT). [[Certificates](#)]
- **Secured Top 15 and Top 20 positions** in **Vihaan 8.0**, National-Level Hackathon (Organized by DTU) and **Innov8 3.0**, AI & Innovation Challenge (Organized by Eightfold.ai & IIT Delhi) [[Certificates](#)]