Anwesa Mondal

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Education

Indira Gandhi Delhi Technical University for Women — CGPA 8.99 *[Aug '24 – Present]*
B.Tech in Computer Science Engineering with specialization in Artificial Intelligence
- ○ **Computer Science:** Database Management System, Object-Oriented Programming, Data Structures and Algorithms
- ○ **Artificial Intelligence:** Introduction to Data Science, Foundation and Application of Artificial Intelligence
- ○ **Mathematics:** Probability and Statistics, Linear Algebra, Vector Calculus, Advanced Calculus, Discrete Mathematics

Experience

Carnegie Mellon University — *Research Intern* [*GitHub*] *[Jun '25 – Oct '25]*
- Under the supervision of Dr. Xiangrui Zeng, Department of Computational Biology
- ○ Implemented unsupervised surface registration and correction of 3D MRI images using neural deformation field learning
- ○ Achieved **98.7%** Dice score by reducing **self-intersection loss** through training label maps that controlled deformation

National Institute of Technology, Rourkela — *Research Intern* [*Completion certificate*] *[May '25 – Jul '25]*
- Under the supervision of Dr. Souvik Das, Department of Industrial Design
- ○ Built a hybrid **Grid-Tuned LSSVM** and **Ensemble Learning** model for data imputation with **80%** missing rates
- ○ Benchmarked against baselines on real-world multi-sensor time series, achieving **RMSE 0.0168** and **MAE 0.014** overall

Skills and Technologies

Programming Languages: C++, Python, SQL — High proficiency; R — Medium proficiency
Skills: Problem Solving, DBMS, OOP, DSA, OS, Git, GitHub, REST APIs, Machine Learning, Deep Learning
Python libraries: NumPy, Pandas, Matplotlib, Seaborn, OpenCV, Scikit-Learn, TensorFlow, Keras, PyTorch, Transformers

Publications

A Grid-Tuned LSSVM and Ensemble Learning Framework for Missing Data Imputation [*Paper*]
- ○ Presented and published in the conference proceedings of the 5th Indian IEOM Conference 2025, VIT Vellore, India

Projects

AI-powered road safety and insurance system — Google Solution Challenge, 2025 *SafeDrive* ↗
- ○ Achieved real-time drowsiness detection based on EAR values with **85%** accuracy leveraging **OpenCV** and **MediaPipe**
- ○ Developed jerk analysis using speed data from Geolocation API and insurance validation with **Google Gemini 2.5 Pro**
- ○ Implemented an in-app chatbot by providing **Gemini 2.5** with engineered prompts that increased engagement by **30%**

Stock Price Prediction using Long Short-Term Memory *GitHub* ↗
- ○ Standardized dataset and engineered **sliding-window** sequences using **20** historical values to train an LSTM model
- ○ Trained an **LSTM** using Chinese historical stock data, achieving **0.11 MSE (0.33 RMSE)** on real stock price forecasts

AI-powered train traffic management system — Smart India Hackathon, 2025 *Speedline* ↗
- ○ Deployed a **CP-SAT solver** based conflict-free train scheduling system that improved scheduling efficiency by **80%**
- ○ Leveraged **Llama 3.3** through **Groq API** for improved analysis of data and increased delay management efficiency

Achievements

- ○ Solved **550+** problems on **LeetCode** involving various algorithms and achieved a peak rating of **1583** (top **25%** globally)
- ○ Achieved **rank 951 out of 30,000+** contestants in CodeChef Starters 203 contest, placing in the top **3%** of participants.
- ○ Achieved a max rating of **1432 (2 *)** on **CodeChef** and **1223 (Pupil)** on **Codeforces**. [*CodeChef* ↗][*Codeforces* ↗]
- ○ Solved **700+** problems overall, across various platforms like **GeeksForGeeks**, **Code360**, and **HackerRank**

Competitions

- ○ **Winner** at **Industrial Ideathon 2025** among **400+** teams across India, organised by the Government of Delhi
- ○ Secured **top 10** position and advanced to the finals from among **130+** teams in **Ignitathon 2025**, organised by RCCIIT
- ○ Progressed to the finale (**top 17** among **200+**) of **SpaceCon,** Space-Tech Hackathon, organised by NSUT [*Certificates*]
- ○ Ranked among the **top 15** teams from **300+** teams in **Vihaan 8.0**, National Level Hackathon organised by DTU
- ○ Finished among the **top 20** teams at **Innov8 3.0**, AI & Innovation Challenge, organised by Eightfold.ai [*Certificates*]