Debabrata Chandra
UG (III Year II Semester)
B.Tech. (Mechanical Engineering)
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Registration No: 22113042/2025

Indian Institute of
Technology
Roorkee

VERIFIED

Area of Interest

Problem solving, ML,DL and Data analysis

Education

Year	Degree/Examination	Institution/Board	CGPA/ Percentage
2024	B.Tech. 3rd Year	Indian Institute of Technology, Roorkee	9.101
2022	Intermediate (Class XII)	Modern Vidya Niketan Sr Sec Sch Sec 17, Fbd, Hry (CBSE)	95.40 %
2020	Matriculate (Class X)	Modern Vidya Niketan Sr Sec Sch Sec 17, Fbd, Hry (CBSE)	98.00 %

Internships

Winter Internship | Acmegrade   January 2024 - March 2024
- Pre-processed the data, analyzed the input columns and developed a **Random Forest** model through the **SMOTE** technique to handle imbalanced datasets to detect fraudulent credit card transactions.
- Fine-tuned the hyperparameters and evaluated the model using key metrics, achieving an **85%** precision and **80%** recall.

Projects

Stock Sentiment Analysis Using Machine Learning | Finance Club, IIT Roorkee   May 2024 - June 2024
- Web-scraped Google news headlines, pre-processed the text and converted it into vectors using **GloVe embeddings.**
- The vectors obtained were used to train **LSTM** model which predicted if the news headlines depicted a positive or negative sentiment and based on it predicted if the stock depicts a buy or sell signal, achieving **67% accuracy.**
- Obtained a portfolio value of **$15,600.48** , sharpe ratio of **1.70** , **-5.54** maximum drawdown and a total return of **5.6%.**

Duplicate Question Pair Detection | DOMS, IIT Roorkee   October 2024 - November 2024
- Designed a logistic regression model with TF-IDF and feature engineering on **40,000** question pairs to detect duplicates.
- Applied PCA to reduce dimension to **2937** , achieving an accuracy and precision of **86%** on the test dataset.

Plastic Waste Management System | MIED, IIT Roorkee   August 2024 - November 2024
- Built a **C++** algorithm to optimize recycled plastic allocation using vendor capacity, dispatch timing, and delivery dates.
- Proposed to build a portal for communication between companies and recycling vendors and integrated incentive system to boost recycling.

Mathematical Modelling of SortPuz (water sort puzzle) | DOMS, IIT Roorkee   January 2025 - Present
- Developing a recursion-based algorithm in **C++** to play the water sort puzzle in the minimum number of steps.

Awards / Scholarships / Academic Achievements

- Secured AIR- **6512** in JEE ADVANCED 2022
- Secured AIR- **7155** in JEE MAINS 2022
- Secured AIR- **3946** in SX category in KVPY Aptitude Test 2021
- Achieved Global Rank- **4346** in Codeforces CodeTON Round 8 (Div. 1+ Div.2)
- Achieved Global Rank- **666** in Codechef Starters 127 Division 3
- Achieved Rank **22** in Graphs contest held by AlgoUniversity in April 2024

Skills

Computer languages	Python, C++, SQL
Software Packages	NumPy, Pandas, Seaborn, Matplotlib, Tensorflow, Scikit-learn, OpenCV, LangChain
Additional Courses	IBM-322 (Analytics for Managerial Decision Making)
Minor/Honors Courses	CSC-202 (Theory of Computation)
Languages Known	English, Hindi and Bengali

Positions of Responsibility & Extra Curriculars

Competitive Programming | Online Judges: August 2023 - Present
- Codeforces: Max Rating- **1226** (handle : debabratachandra04)
- Codechef: Max Rating- **1614** (handle : debabrata04)

Coordinator | Cognizance -2024   March 2024
- Coordinated DSA workshop in collaboration with Geeks for Geeks, attended by **100+** students from various colleges.
- Coordinated Thermaoracle competition at Cognizance (Tech Fest of IIT Roorkee), participated by **20+** college teams.

Department Placement Representative | Placement and Internship Cell, IIT Roorkee   September 2024 - Present
- Serving as the main contact between **150 batchmates** and the Placement Cell, sharing internship opportunities, addressing inquiries, and resolving issues.