Team Details

Name	Section	SRN
Sneha Verma	F	PES1UG23AM309
Srijan Jha	F	PES1UG23AM316
Prem Thakur	D	PES1UG23AM214
Yashas J	F	PES1UG23AM357

Project Title:

NeuroTrader: An LLM-Driven Multimodal Stock Market Advisor

Possible Dataset and source:

- Stock Market Data
    1. Yahoo Finance API
    2. Alpha Vantage API
    3. QuandI
- Financial News
    1. Reuters News Dataset from Kaggle
    2. Bloomberg, CNBC RSS Feeds
- Social Sentiments
    1. Reddit r/WallStreetBets dataset from Kaggle
    2. Twitter/X API

Uniqueness of the topic:

1. Not just a basic stock price prediction, it combines numerical data, textual data, and LLM reasoning, making it a multimodal fusion
2. Adding an extra layer of explainability through LLM
3. Explaining "Why" a certain decision has to be made, rather than simply providing an output from a black-box

Your Learning goals:

1. The primary goal is to implement the data analysis techniques on both structured and unstructured data
2. Learning the application of multimodal AI pipelines
3. Learning LLM fine-tuning for financial reasoning

Reference paper, if any (provide the URL):

No	Title	Link
1	Stock Movement Prediction from Tweets and Historical Prices	https://aclanthology.org/P18-1183/
2	FinBERT: A Pretrained Language Model for Financial Communications	https://arxiv.org/abs/2006.08097
3	A deep fusion model for stock market prediction with news headlines and time series data	https://link.springer.com/article/10.1007/s00521-024-10303-1