Project Design Phase-I
Proposed Solution Template

Date	10 October 2022
Team ID	PNT2022TMID43580
Project Name	Project - Crude Oil Price Prediction
Maximum Marks	2 Marks

Proposed Solution Template:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	The price of crude oil, the most essential fuel in the world, has a big impact on the environment globally, thus forecasts are very helpful for governments, businesses, and people. Continuous use of statistical and econometric methods, including AI, may have a negative impact on prediction accuracy.
2.	Idea / Solution description	In order to predict future crude oil using historical data on crude oil, RNN is utilised with long short-term memory. The effectiveness of the cost is calculated using the mean squared error. Using the pricing information in the WTO crude oil materials, the proposed model's performance is assessed.
3.	Novelty / Uniqueness	● Crude oil price variations have a significant impact on the world's economies, thus price forecasting can help reduce the risks brought on by this volatility. ● For a variety of stakeholders, including governments, public and private businesses, legislators, and investors, price projections are crucial.
4.	Social Impact / Customer Satisfaction	● It is employed to forecast future pricing and consume oil in accordance with such prices. ● This price directly affects a number of goods and products, and its changes have an impact on the stock markets. ● In addition to economic factors, significant events can have an impact on oil prices.
5.	Business Model (Revenue Model)	● When deciding whether to purchase or sell crude oil, it can be useful to decision-makers who may be businesses, individual investors, or both. ● One of the most profitable commodities for traders to trade is crude oil. ● **To anticipate the price of crude oil, RNN and LSTM models are employed as the benchmark model.**
6.	Scalability of the Solution	● The dimensions of the data are reduced using the PCA, MDS, and LLE methods. ● RNN and LSTM model accuracy should be increased.