Project Design Phase-I Proposed Solution Template

Date	03 November 2022
Team ID	PNT2022TMID31004
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)	Crude oil is the world's leading fuel, and its prices have a big impact on the global environment its forecasts are very useful to governments, the industry is individuals. The continuous usage of statistical and econometric techniques including AI for crude oil price prediction might demonstrate demotions to the prediction performance.
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 used to predict the future price and use the oil according to the prices. • This price directly influences a variety of items, and its variations have an impact on the capital markets. • In addition to being influenced by economic factors, major events can have an impact on oil prices.
5.	Business Model (Revenue Model)	• It can help decision makers – either firms, private investors, or individuals – when choosing to buy or sell the crude oil • crude oil is one of the most profitable trading commodities for traders. • RNN and LSTM models are used as the benchmark model to predict crude oil prices.
6.	Scalability of the Solution	• PCA, MDS, and LLE methods are used to reduce the dimensions of the data • Improve the accuracy of the RNN and LSTM models.