Project Design Phase-I
Proposed Solution

Date	19 September 2022
Team ID	PNT2022TMID21644
Project Name	Crude Oil Price Prediction
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	The price of crude oil has a significant impact on the environment globally, and its forecasts are particularly helpful to governments and industry. Crude oil is the most widely used fuel in the world. The ongoing application of statistics and econometric methods for crude oil, including AI Price forecasting could show reductions in the accuracy of the prediction.
2.	Idea / Solution description	In order to predict future crude oil using historical data on crude oil, RNN (Recurrent Neural Network) 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 crude oil materials, the proposed model's performance is assessed.
3.	Novelty / Uniqueness	Since changes in the price of crude oil have a significant impact on national economies around the world, price forecasting can help reduce the risks brought on by oil price volatility. Governments, public and private businesses, legislators, and investors all place a high value on price estimates.
4.	Social Impact / Customer Satisfaction	I. This model is used to forecast future pricing and to manage oil use. II. This price directly influences many different items and goods, and its variations have an impact on the capital markets. III. Important events also have an impact on oil prices, in addition to economic factors.
5.	Business Model (Revenue Model)	I. It can assist those who are making decisions about whether to buy or sell crude oil, whether they are businesses, private investors, or individuals. II. The benchmark model for predicting crude oil prices uses RNN and LSTM models.

| 6. | Scalability of the Solution | I. | The dimensions of the data are reduced using the PCA, MDS, and LLE methods. |
| | | II. | Enhance the RNN and LSTM models' accuracy. |