Project Design Phase-I
Proposed Solution Template

Date	19 September 2022
Team ID	PNT2022TMID10858
Project Name	Project – 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)	Crude oil price prediction is a challenging task in oil producing countries. Its price is among the most complex and tough to model because fluctuations of price of crude oil are highly irregular, nonlinear and varies dynamically with high uncertainty. This paper proposed a hybrid model for crude oil price prediction that uses the complex network analysis and long short-term memory (LSTM) of the Artificial Intelligence algorithms.
2.	Idea / Solution description	The basic idea is to take advantage of the corelation between train and test. In that train is 75% and the rest 25% for test. The empirical results show that the LSTM model based on transfer learning has strong generalization ability and high prediction accuracy.
3.	Novelty / Uniqueness	LSTM model can provide as with the large range of parameters such as learning rates and input and output basis. Hence it has no need for adjustments. Back propagation Through Time(BPTT) were used in this LSTM. This BPTT is the main advantage of our model.

4.	Social Impact / Customer Satisfaction	Accurate predictions of oil prices have important economic and social values. However, the price of crude oil is highly nonlinear under the influence of many factors, so it is very difficult to predict accurately. crude oil futures were officially listed in March 2018. It is of great significance to accurately predict the price of crude oil futures for guiding China's domestic production practice.
5.	Business Model (Revenue Model)	Crude oil is an essential commodity for industry and the prediction of its price is crucial for many business entities and government organizations. While there have been quite a few conventional statistical models to forecast oil prices, we find that there is not much research using decision tree models to predict crude oil prices.
6.	Scalability of the Solution	Our project dataset is standardized and Normalized for the better accuracy and flexibility for the predicted outcomes. The LSTM cell adds long-term memory in an even more performant way because it allows even more parameters to be learned. This makes it the most powerful [Recurrent Neural Network] to do forecasting, especially when you have a longer-term trend in your data.