**Project Design Phase-I**
**Proposed Solution**

| | |
|---|---|
| Date | 19 September 2022 |
| Team ID | PNT2022TMID53936 |
| 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 is the world's leading fuel, and its prices have a big impact on the global environment and its forecasts are very useful to governments, 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 | RNN is used with long short-term memory to achieve future crude oil using previous history of crude oil. The cost is measured as the mean squared error to determine its effectiveness. The performance of the proposed model is evaluated using the price data in the WTO crude oil materials |
| 3. | Novelty / Uniqueness | Crude oil price fluctuations have a far-reaching impact on global economies and thus price forecasting can assist in minimising the risks associated with volatility in oil prices.<br><br>Price forecasts are very important to various stakeholders: governments, public and private enterprises, policymakers, and investors. |
| 4. | Social Impact / Customer Satisfaction | It is used to predict the future price and use the oil according to the prices.<br><br>This price has direct effects on several goods and products and its fluctuations affect the stock markets.<br><br>Oil prices are not only driven by economic variables, but they are also affected by key events ... |
| 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<br><br>Crude oil is one of the most profitable trading commodities for traders. |

| | | |
|---|---|---|
| | | RNN and LSTM models are used as the benchmark model to predict the crude oil prices. 6 |
| 6. | Scalability of the Solution | PCA, MDS and LLE methods are used to reduce the dimensions of the data<br><br>Improve the accuracy of the RNN and LSTM models. |