

## Ideation Phase

### Brainstorm & Idea Prioritization Template

Date	19 September 2022
Team ID	PNT2022TMID10046
Project Name	Project - Crude Oil Price Prediction
Maximum Marks	4 Marks

### Brainstorm & Idea Prioritization Template:

For the project Crude Oil Price Prediction, Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.

We as a team conducted Brainstorming which provided many solutions that led to problem solving.

### Step-1: Team Gathering, Collaboration and Select the Problem Statement

Crude Oil Price Prediction

## Brainstorm & idea prioritization

The Brainstorming and Idea Prioritization of developing the project Crude Oil Price Prediction is discussed.

### Crude Oil Price Prediction

#### Before you collaborate

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

🕒 10 minutes

##### Team gathering

Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.

##### Set the goal

Think about the problem you'll be focusing on solving in the brainstorming session.

##### Learn how to use the facilitation tools

Use the Facilitation Superpowers to run a happy and productive session.

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#### Define your problem statement

Oil demand is inelastic, therefore the rise in price is good news for producers because they will see an increase in their revenue. Oil importers, however, will experience increased costs of purchasing oil.

🔗 Problem Statement:

Because oil is the largest traded commodity, the effects are quite significant. A rising oil price can even shift economic/political power from oil importers to oil exporters. The crude oil price movements are subject to diverse influencing factors.

This Guided Project mainly focuses on applying Neural Networks to predict the Crude Oil Price. This decision helps us to buy crude oil at the proper time. Time series analysis is the best option for this kind of prediction because we are using the Previous history of crude oil prices to predict future crude oil. So we would be implementing RNN(Recurrent Neural Network) with LSTM(Long Short Term Memory) to achieve the task.

##### PROBLEM

How might we solve the issue of predicting the future Crude Oil Prices?

#### Key rules of brainstorming

To run an smooth and productive session

Stay in topic.

Encourage wild ideas.

Defer judgment.

Listen to others.

Go for volume.

If possible, be visual.

## Step-2: Brainstorm, Idea Listing and Grouping

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### Brainstorm

The ideas by the team are addressed below

🕒 10 minutes

**TIP**  
You can select a sticky note and hit the pencil (switch to sketch) icon to start drawing!

#### Shriram S

Using Deep Learning to solve the problem	Web based Solution	Using RNN, LSTM

#### Suryaprakash S

Using the previous data to train the model	Using the previous data to predict the future price	Using RNN and LSTM

#### Tallapaneni Thanmai Chowdary

A web based solution to provide for the use of all people	Using python for web based solution	Downloading data from internet for training

#### Yarramasu Ramya Sree

Use of RNN and LSTM which keeps memory	using noise free data	using web based solution to solve the problem

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### Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.

🕒 20 minutes

The Group Ideas discussed are given below

#### Shriram S

Using Deep Learning to solve the problem	Web based Solution	Using RNN, LSTM
Since it is a problem related to prediction deep learning will be a good idea	A Web based solution will be useful for users to predict the prices	Using RNN and LSTM will be useful since we want to predict future prices

#### Tallapaneni Thanmai Chowdary

A web based solution to provide for the use of all people	Using python for web based solution	Downloading data from internet for training
A web based solution will be more useful for predicting the prices	Python will be a good choice to implement the web based solution	We can download data from internet to train the model

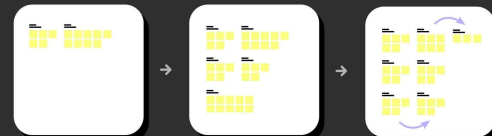
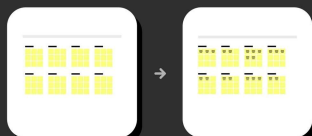
**TIP**  
Add customizable tags to sticky notes to make it easier to find, browse, organize, and categorize important ideas as themes within your mural.

#### Suryaprakash S

Using the previous data to train the model	Using the previous data to predict the future price	Using RNN and LSTM
We can use the previous dataset to train the model	We can use the previous dataset to predict the future prices	LSTM and RNN will be good choice since we want to predict the future prices

#### Yarramasu Ramya Sree

use of RNN and LSTM which keeps memory	using noise free data	using web based solution by using flask and python
We can use RNN and LSTM since it keeps memory of data	Using noise free data is very important	A web based solution can be developed using flask and python



## Step-3: Idea Prioritization

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### Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

🕒 20 minutes

Prioritizing  
is given  
below

