

## Ideation Phase

### Brainstorm & Idea Prioritization Template

Date	11 October 2022
Team ID	PNT2022TMID14768
Project Name	Predicting the energy output of wind turbine based on weather condition
Maximum Marks	4 Marks

## Team Gathering, Collaboration and Select the Problem Statement

Template

## Brainstorm & idea prioritization

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

🕒 10 minutes to prepare

🕒 1 hour to collaborate

👤 2-8 people recommended

📄 Share template feedback

### 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

#### 1 Team gathering

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

#### 2 Set the goal

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

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

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

[Open article](#)

### Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

🕒 5 minutes

Brainstorm

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Brainstorm

Write down any ideas that come to mind that address your problem statement.

🕒 10 minutes

pranathi

Check wind direction and wind speed in different outdoor temperatures

Analyze model performance on different sites

Check frequency of wind speed and determine it's likely output energy

Number of windmills in a wind farm contribute to energy output

Srinidhi.

Check for height of windmill and determine the energy output

Diameter of the rotor of a wind turbine plays a major role

Climatic condition of the wind farm is used primarily to calculate output energy

output is forecasted accurately hence energy providers can keep away from costly overproduction

Pavitra

Rotor RPM wind direction is taken into consideration for determination

collect the historical data through the Supervisory Control and Data Acquisition system of wind farms and then fitting curves

spatiotemporal correlation - winds in different places affect each other - so we can use LSTM-CNN joint model

fuzzy model approach provides an interpretable model structure

romv&r

Map weather data to energy prediction and derive analysis

Past climatic conditions of the wind farm area are used in the analysis of energy prediction

user can upload their own real time dataset (csv or xlsx format) for forecasting.

timestamp, air temperature, pressure, wind direction, wind speed and Power generated by the system are taken as user inputs

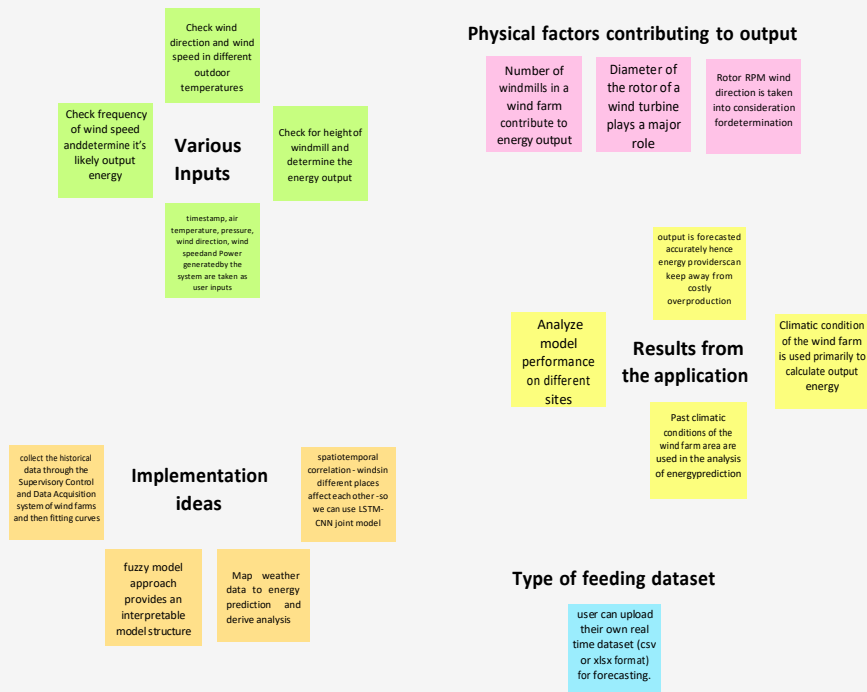
## Group Idea

3

### Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. In the last 10 minutes, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

20 minutes



4

### 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

