

Ideation Phase

Brainstorm & Idea Prioritization Template

Date	15 February 2026
Team ID	LTVIP2026TMIDS62246
Project Name	Weather-Based Prediction of Wind Turbine Energy Output: A Next-Generation Approach to Renewable Energy Management
Maximum Marks	4 Marks

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.

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



Brainstorm & Idea Prioritization Wind Turbine Energy Prediction System

This brainstorming session focuses on developing a machine learning-based system to predict wind turbine energy output using weather-related parameters such as wind speed, wind direction, and theoretical power curve.

⌚ 10 minutes to prepare
⌚ 1 hour to collaborate
👤 2-8 people recommended

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

Assign roles. Data preprocessing, Model training, Deployment, Documentation.

Set the goal

- Build a regression model.
- Achieve high R² score.
- Deploy model using Flask.

Learn how to use the facilitation tools

- Python
- Pandas
- Matplotlib
- Flink
- Github

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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

PROBLEM

How might we accurately predict wind turbine energy output using weather parameters to improve renewable energy management?

Key rules of brainstorming

To run an smooth and productive sess on

⌚ Stay in topic.	💡 Encourage wild ideas.
恧 Defer judgment.	👂 Listen to others.
⌚ Go for volume.	👓 If possible, be visual.

Step-2: Brainstorm, Idea Listing and Grouping

2

Brainstorm

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

⌚ 10 minutes



3

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

TIP
Use option + space to drag notes to make a note-to-note, box, or circle and escape to invert or clear as themes with your mind.

- Data Preprocessing
- Handle missing values
 - Rename columns
 - Feature selection
 - Correlation analysis

- Model Development
- Linear Regression
 - Random Forest
 - Hyperparameter tuning
 - Train-test split

- Web Application
- Flask integration
 - HTML form
 - Prediction display
 - CSS styling

Step-3: Idea Prioritization

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

TIP

Participants can use their cursors to point at where sticky notes should go on the grid. The facilitator can confirm the spot by using the laser pointer holding the **H** key on the keyboard.

