Ideation Phase
Define the Problem Statements

Date	22 September 2022
Team ID	PNT2022TMID21439
Project Name	Predicting the energy output of wind turbine based on weather condition
Maximum Marks	2 Marks

Customer Problem Statement Template:

Extracting electricity from renewable resources has been widely investigated in the past decades to decrease the worldwide crisis in the electrical energy and environmental pollution. The climatic conditions present in the site decide the power output of a wind farm. Wind power availability is not known in advance, this causes problems for wind farm operators in terms of system and energy planning so this is considered as a random variable. In our project, we propose an intelligent technique for forecasting wind speed and power output of wind turbine from several hours up to specific hours ahead. If the output is forecasted accurately, energy providers can keep away from costly overproduction. We will carry out this problem on publicly available weather and energy data sets correlating and considering different features in our project. This will enable us to cut down on the production cost and collaborate on different energy source more efficiently. Thus, we will develop an application which can forecast the wind power of the future leveraging AI tools and powerful visualization. The advantage of using ours over others is, it provides an Application with interactive UI with optimized model with higher accuracy to predict the energy output of the wind energy's accurate parameters.

Example:

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	Manufacturer	Produce good and high quality of wind energy	I don't know where to place the windmills and how to use new technologies	I don't have a proper analysis of weather condition and latest technology	Concerned
PS-2	User	Find a reliable energy resource	I don't know how to use it effectively	I don't know the importance and uses of it	Worried
PS-3	Organization	Produce wind energy	I face overproduction and high-cost issues	I can't accurately predict the wind energy	Sad