

PNT2022TMID35585Date	19 September 2022
Team ID	PNT2022TMID35585
Project Name	Predicting the energy output of Wind Turbine based on Weather conditions
Maximum Marks	2

1.	Problem Statement (Problem to be solved)	Because wind power availability cannot be predicted in advance, wind farm operators have trouble planning their systems and energy needs. In order to get over the obstacles, a detailed prognosis is needed. The climate at the location determines how much power a wind farm produces. In this project, we predict the energy output of wind turbines based on weather conditions.
2.	Idea / Solution description	Use a machine learning model to make accurate predictions of the wind turbine output based on climate using the available information.
3.	Novelty / Uniqueness	<ul style="list-style-type: none"> The user interface allows a user to enter the relevant information and obtain an accurate forecast easily. Data-driven approach to wind farming
4.	Social Impact / Customer Satisfaction	<ul style="list-style-type: none"> Creating new job opportunities Gives farmers and ranchers a new stream of income in the form of land lease payments. Customer satisfaction: With rare exceptions, wind turbines do not emit pollutants that can harm the air or water, and they do not need water for cooling. Even without technology, windmills have always offered a dependable energy supply.
5.	Business Model (Revenue Model)	The ability to predict the output of a wind turbine benefits all the end users. The wind turbine companies will be able to keep track of the performance of their wind turbine, the government will be able to see how much electricity can be obtained from the wind turbines.
6.	Scalability of the Solution	<ul style="list-style-type: none"> Cloud based hosting could ensure zero down time As an alternative to traditional relational data storage mechanisms, nosql could be considered to deal with large volumes of data