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Team ID	PNT2022TMID45145
Project Name	Predicting the energy output of wind turbine based on weather condition
TEAM 2	

Predicting The Energy Output Of Wind Turbine Based On Weather Condition

Renewable energy, such as wind and solar energy, plays an increasing role in the supply of energy worldwide. This trend will continue because global energy demand is increasing, and the use of nuclear power and traditional sources of energy such as coal and oil is unsafe and leads to a large amount of CO₂ emission. Wind energy is a key player in the field of renewable energy. In Europe, the capacity of wind energy production has doubled from 2009 to 2010.

However, levels of production of wind energy are hard to predict as they rely on potentially unstable weather conditions present at the wind farm. In particular, wind speed is crucial for energy production based on wind, and it may vary drastically over time. Energy suppliers are interested in accurate predictions, as they can avoid overproduction by coordinating the collaborative production of traditional power plants and weather-dependent energy sources. The energy can be predicted based on the power curve and the windspeed.

WANT TO PREDICT THE ENERGY??

Predicting The Energy Output Of Wind Turbine Based On Weather Condition

GIVE YOUR CITY NAME TO KNOW THE WEATHER CONDITIONS

Tirupati

CHECK THE WEATHER CONDITIONS

The weather conditions of the city are	
Temperature	296.04 °C
Humidity	55 %
Pressure	1012 mmHG
Wind Speed	1.88 m/s

Predict the Wind Energy!!

Theoretical Power in KWh

Wind Speed in m/s

PREDICT

Predicting The Energy Output Of Wind Turbine Based On Weather Condition

GIVE YOUR CITY NAME TO KNOW THE WEATHER CONDITIONS

select City

CHECK THE WEATHER CONDITIONS

The weather conditions of the city are	
Temperature	
Humidity	
Pressure	
Wind Speed	

Predict the Wind Energy!!

45

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PREDICT

The energy predicted is 525.33 KWh