


# TEST AND EXECUTE

## TEAM ID:PNT2022TMID39908

### Step 1: Login page - Wind Energy prediction

### 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??


### Step 2: Click the tab- Click here to predict the wind energy.

IBM -Project-53621-166142448/ x Wind Energy Prediction x +

127.0.0.1:5000

Gmail YouTube Translate

### 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??

76°F Cloudy



ENG IN 7:57 PM 11/19/2022

### Step 3: A new page will appear

The screenshot shows a web browser window with the URL `127.0.0.1:5000/predict`. The page title is "Predicting The Energy Output Of Wind Turbine Based On Weather Condition". The background image shows a row of wind turbines on a beach at sunset. The interface includes a text prompt "GIVE YOUR CITY NAME TO KNOW THE WEATHER CONDITIONS" above a "select City" dropdown menu. Below the dropdown is a green "CHECK THE WEATHER CONDITIONS" button. To the right, under the heading "Predict the Wind Energy!!", there are two input fields: "Theoretical Power in KWh" and "Wind Speed in m/s", followed by a green "PREDICT" button. A modal box in the center-left displays the text "The weather conditions of the city are" above a table with four rows: "Temperature", "Humidity", "Pressure", and "Wind Speed". The Windows taskbar at the bottom shows the system clock as 7:59 PM on 11/19/2022.

### Step 4: Choose your city

This screenshot shows the same web application interface as the previous one, but with the "select City" dropdown menu open. The menu lists various Indian cities, with "Chennai" highlighted in blue. The cities listed are: Chennai, Daman, Dehradun, Delhi, Dispur, Gandhinagar, Gangtok, Hyderabad, Imphal, Itanagar, Jaipur, Kavarratti, and Kohima. The rest of the interface, including the "CHECK THE WEATHER CONDITIONS" button and the "Predict the Wind Energy!!" section, remains visible in the background.



**Step 5:**Then click – check the weather condition

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	26.990000000000001 °C
Humidity	69 %
Pressure	1011 mmHG
Wind Speed	5.5440000000000005 Km/s

Predict the Wind Energy!!

Theoretical Power in KWh

Wind Speed in m/s

PREDICT

**Step 6:**Enter the fields – Theoretical power and Wind Speed

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	26.990000000000001 °C
Humidity	69 %
Pressure	1011 mmHG
Wind Speed	5.5440000000000005 Km/s

Predict the Wind Energy!!

23

2

PREDICT

**Step 7:**Then click predict – the predicted output will appear as follows

← → ↻ 127.0.0.1:5000/y\_predict

Gmail YouTube Translate

## 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

**Predict the Wind Energy!!**

Theoretical Power in KWh

Wind Speed in m/s

PREDICT

The weather conditions of the city are

Temperature	
Humidity	
Pressure	
Wind Speed	

The energy predicted is 3.26 KWh