

Weather-Based Prediction of Wind Turbine Energy Output: A Next-Generation Approach to Renewable Energy Management

DATE	28-02-2026
TEAM ID	LTVIP2026TMIDS90651
PROJECT NAME	Weather-Based Prediction of Wind Turbine Energy Output: A Next-Generation Approach to Renewable Energy Management
MAXIMUM MARKS	2 MARKS

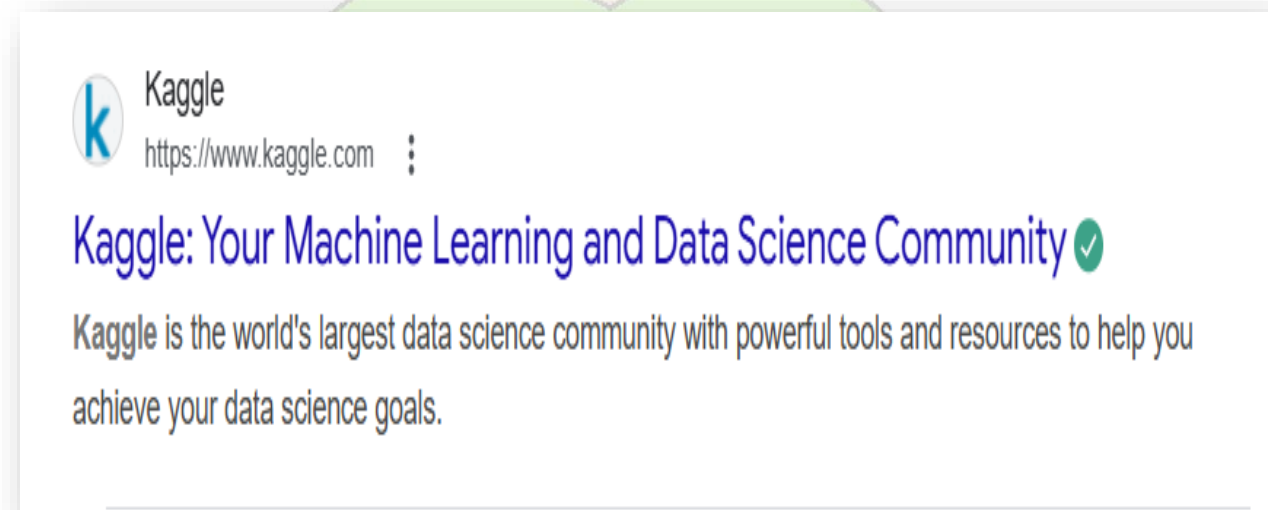
6.2 - Data Collection:

ML depends heavily on data, without data, a machine can't learn. It is the most crucial aspect that makes algorithm training possible. In Machine Learning projects, we need a training data set. It is the actual data set used to train the model for performing various actions.

➤ **Download dataset /create dataset:**

The dataset for wind energy prediction is to be collected. The dataset which is considered here will have the environmental conditions. You can collect datasets from different open sources like kaggle.com, data.gov, UCI machine learning repository etc.

Step 1: Open Kaggle.com in Google.




Gayathri Educational Society
ESTD-2001

Step 2: Click on the link and select Sign in with google.

Step 3: In the search bar “Weather-Based Prediction of Wind Turbine Energy Output: A Next-Generation Approach to Renewable Energy Management” to see the dataset.

Weather-Based Prediction of Wind Turbine Energy Output: A Next-Generation Approach to Renewable Energy Management

 MUBASHIR RAHIM · UPDATED 2 YEARS AGO

65<> CodeDownload

Wind Power Generation Data - Forecasting

Wind Energy Dataset from 4 different locations

[Data Card](#)[Code \(11\)](#)[Discussion \(1\)](#)[Suggestions \(0\)](#)

About Dataset

This dataset is a unique compilation of field-based meteorological observations and wind power generation data, collected directly from one of our company's operational sites. The dataset represents a detailed hourly record, starting from January 2, 2017. This rich dataset provides real-world insights into the interplay between various weather conditions and wind energy production.


Context and Inspiration: The dataset was conceived out of the necessity to understand the dynamic relationship between meteorological variables and their impact on wind power generation. By collecting data directly from the field and the wind turbine installations, we aim to provide a comprehensive and authentic dataset that can be instrumental for industry-specific research, operational optimization, and academic purposes.

Usability 10.00

License
CC0: Public Domain

Expected update frequency
Never

Tags



Step 4: Click the download option to download the dataset.

Step 5: Click on Download dataset as zip (3MB).

Step 6: Open the downloaded file.

Step 7: Unzip the file.

Today

- archive (1) 12-02-20
- kaggle_step_1 12-02-20

Yesterday

- Likhitha Kulala_BSc Profile 11-02-20
- HelpWire Client (5) 11-02-20

Last month

- archive 27-01-20
- HelpWire Client (4) 27-01-20
- HelpWire Client.dmg 20-01-20
- HelpWire Client (3) 20-01-20
- JC4977-DSTFULL 10-01-20
- JC4039DSTFULL 10-01-20
- HelpWire Client (2) 06-01-20
- HelpWire Client (1) 06-01-20
- HelpWire Client 03-01-20
- HelpWire Genie Nexus 01-01-20

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Select a Destination and Extract Files

Files will be extracted to this folder:






C:\Users\LIKHITHA\Downloads\archive (1) Browse...

☒ Show extracted files when complete

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Step 8: Use the XL sheet which you have used in the project.

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▼ Today			
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 Location3	12-02-2026 15:20	Microsoft Excel Co...	2,633 KB
 Location4	12-02-2026 15:20	Microsoft Excel Co...	2,638 KB
 readme	12-02-2026 15:20	Text Document	2 KB

