Data Collection and Preprocessing Phase

Date	20 july 2024
Team ID	Team-739770
Project Title	Predicting the energy output of wind turbine based on weather conditions.
Maximum Marks	2 Marks

Data Collection Plan & Raw Data Sources Identification Template

Elevate your data strategy with the Data Collection plan and the Raw Data Sources report, ensuring meticulous data curation and integrity for informed decision-making in every analysis and decision-making endeavor.

Data Collection Plan Template

Section	Description
Project Overview	- The project aims to develop a predictive model for estimating wind turbine energy output based on real-time and historical weather data. - The model will leverage machine learning techniques to analyze weather variables such as wind speed, temperature, humidity, and air pressure to forecast energy production. - The goal is to enhance operational efficiency and optimize energy generation in wind farms by providing accurate predictions of turbine performance.

Data Collection Plan	- The data collection plan involves gathering both real-time and historical weather data from meteorological stations located near wind farm sites. - Real-time data will be collected continuously at regular intervals (e.g., every hour) to capture current weather conditions affecting turbine operations. - Historical data spanning several years will be sourced to analyze long-term trends and seasonal variations in weather patterns that impact energy output. - Data integrity and quality checks will be implemented to ensure consistency and reliability in the collected datasets.
Raw Data Sources Identified	Kaggle.com

Raw Data Sources Template

Source Name	Description	Location/URL	Format	Size	Access Permissions
Dataset 1	The dataset which is considered here will have the predicting the energy output of wind turbine. can collect datasets from different open sources like kaggle.com, data.gov, UCI	https://www.kaggle.com/datasets/predicting	CSV	41.37 kB	Public

	machine learning repository etc.				