**BATCH-18**

NEHARIKA K - CB.EN.U4EEE22026

PRITHIKA S V - CB.EN.U4EEE22132

VEDAVARSHA N T - CB.EN.U4EE22154

**Problem Statement 6 (PS-6)**

**Weather Forecasting for Power Prediction**

**Problem Description**

➢ Weather forecasting plays a crucial role in predicting the availability and efficiency of

renewable energy sources such as wind and solar power

➢ By accurately forecasting weather conditions, we can predict power generation levels and

optimize the operation of energy systems.

➢ This project aims to use AI techniques for weather forecasting to predict power generation

in renewable energy systems.

➢ The goal is to provide accurate, real-time weather predictions and power output estimates

for better grid management and energy optimization.

➢ The project will use various weather data inputs (e.g., temperature, wind speed, solar

radiation, humidity) and apply machine learning models to forecast the expected power

output of renewable energy systems.

➢ By integrating weather forecasting with power prediction, energy companies can improve

grid stability, minimize energy waste, and ensure a more reliable power supply.

**Requirement Specification**

➢ Use the Weather and power Data sets (Datasets Attached) with different features like

clock, temp, weather, wind, humidity, barometer, cum\_power, Elec\_kW, Gas\_mxm which

is used to predict the power.

➢ Develop an appropriate ML model for Weather Forecasting for Power Prediction.

Judging Metrics

➢ Weather Forecasting for Power Prediction -Precision, Recall, Accuracy, F1-score and

confusion matrix

**Solution**