PREDICTING ENERGY OUTPUT OF WIND TURBINE BASED ON WEATHER CONDITIONS

PROPOSED SOLUTION

S.NO	PARAMETERS	DESCRIPTION
1	Problem Statement (Problem to be solved)	Our aim is to map weather data to energy production. The model prediction is then showcased on user interface to predict the energy output of wind turbine.
2	Idea / Solution description	Our approach was to use a time series forecasting model that would generate point forecast of wind generation for the upcoming three days, for a wind turbine.
3	Novelty / Uniqueness	It will be working on bad weather condition. Precise information on timing. Fluctuations in weather conditions
4	Social Impact / Customer Satisfaction	Wind energy jobs in rural communities in manufacturing, transportation and project construction.
5	Business Model (Revenue Model)	• Identifying most significant features for wind power prediction. • Continuous learning and model improvement by hybrid ensemble with data and function perturbation. • Predicting best time for wind farm energy utilization. • Integrating weather conditions for predicting various time periods like per day, per week, per month, and annual reports for wind energy generation. • Graphical representations and reports to support various business decisions on improving wind energy generation. • Balancing production and utilization of the wind energy

6	Scalability of the Solution	• To identify more environment parameters for testing their impact on wind energy generation. • To avail on-demand supply of wind energy. • To predict customer usage pattern and try to map with the wind energy generation for better business production.