**PREDITING THE ENERGY OUTPUT OF WIND TURBINE**

**BASED ON WEATHER CONDITION**

**TEAM MEMBERS:**

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| S.NO | AUTHOR/YEAR | TITTLE | TECHNIQUE USED | MERITS | DEMERITS |
| 1. | A.Clifton/2012 | Using machine learning to predict wind turbine power output. | Machine learning. | Strong function wind speed. | Affected by turbulence and shear. |
| 2. | Aman Bahugun/2013 | Predicting the energy output of wind turbine based on weather conditions watson auto AI | IBM WATSON AUTO AI machine learning. | Predicted more accurately. | However,in another study it was found that the prediction errors do not satisfy the KolmogoroveSmirnov test for normal distribution. |
| 3. | Haroon Rashid/2020 | Forecasting of wind turbine output power using machine  Learning. | Machine learning | Accurate predicting of output power. | Absolute errors for the proposed model. |
| 4. | Katya Vladislavleva/ 2019 | Predicting the Energy Output of Wind Farms  Based on Weather Data: Important Variables  and their Correlation | wind energy, prediction, genetic programming, DataModeler | A good prediction of the energy output. | However, levels of production of wind energy are hard  to predict as they rely on potentially unstable weather conditions present at  the wind farm. |
| 5. | J K Lundquist and P.Fleming1/2012 | Using machine learning to predict wind  turbine power output | Machine learning, classiﬁcation and regression trees, wind energy, wind turbine | Reduce bias in power  predictions that arise because of the different turbulence and shear at the new site, compared to  the test site. | Changes of wind direction with height, non-uniform shear,  and the state of the turbine were not considered here but  may impact turbine deployment sites. |
| 6. | Aoife M. Foley/2020 | Review  Current methods and advances in . forecasting of wind power generation | Meteorology  Numerical weather prediction  Probabilistic forecasting  Wind integration wind power forecasting | Thus wind power forecasting plays a key role in dealing with the challenges of balancing supply  and demand in any electricity system, given the uncertainty associated with the wind farm power  output. | Overall accurate wind power prediction  reduces the ﬁnancial and technical risk of uncertainty of wind  power production for all electricity market participants. |