**Project Scope**

**Project Summary** **:**

     Well we all know that we are living in a world where pollution is increasing day by day and leading to big issues like Global warming things, mostly happening due to the energy prodution by coakl etc but in the other hand we have better alternative such as solar power and wind energy.

Better alternatives like wind energy need to be used in an appropriate manner or one can say in an efficient way. Efficient way is meant by the knowing of outcome for future values i.e, by proividing values of wheather condition and then getting output on those values or getting future values by just analyzing previous wheather conditions, which can be done using some machine learning algorithms.

Problem we have here: Prediction of energy output of wind turbine is highly based on the wind conditions present there, hence can do predictions by using the wind conditions to know when to use wind turbine to get best output energy. This prediction is important world-wide as the wind power generation capacity has significantly increased in recent years. In India as of till February the total installed wind power capacity was 37.669 [GW](https://en.wikipedia.org/wiki/Gigawatt), the [fourth largest installed wind power capacity in the world](https://en.wikipedia.org/wiki/Wind_power_by_country). Wind power costs are decreasing and and good prediction will result to a huge amount of money saving. In other words using wind turbine energy in efficient manner and removed over production would be a great future.

**Project Requirements:**

    There must be some features that needs to be keep in  mind while thinking before developing this project

1. Respond Immediately:  It should give output with no time.

2. Good predictions: It should be able to give future prediction most accurately.

3. Diiferent conditions: Should know how to behave with different wheather conditions.

**Functional Requirements :**

Some Functional Requirements :

1. It should be able to take input properly.

2. It should be able to take text inputs and can perform on them

**Technical Requirements:**

f ew technical Requirements are:

1. It should be pre-built and ready to use/predict for some future inputs.

2. As a developer, our work is not only end with making the module but we need a bridge that will let user to use a platform.

**Software Requirements:**

     In this project we will be using some features from IBM itself such as

**1. Language:** We will be using python as our main lamnguage and JASON work will be done by IBM feature(Service).

**2.IBM Watson Studio:** In IBM Studio I will be using it to implement coding in it using jupyter notebook, that code will bulid th model for the main project that would be helpful for prediction.

**3.IBM Node red:**  In IBM Node red I will be using it to make a flow which works in JASON format, and it will make a UI for that web application.

**Project Deliverables:**

    It will be predicting future output energy from the wind turbine so instead of using in normal way on would be able to use the wind turbine in better way by using this and will have efficient answers for the output energy.

**Project Team:**

    Md Arif Ansari, has been working alone on this project "Wind Energy prediction" and been doing work by myself.