

IOT BASED ONLINE MONITORING AND FORECASTING OF WIND POWER GENERATED USING FF-ANN

Manal Saleh Al- Habsi (ID: 32J1678), Tafoul Saud Al- Daroushi (ID: 32J1619)

Supervisor: Mr. Moola Pratap Raju Technician: Mr. R. Markandan

Abstract:

In the current circumstances, the world is striving to produce sufficient electricity energy using renewable energies, so our project Titled 'IoT Based Wind Power Generation Forecasting Using Artificial Intelligent Techniques' is focused on forecasting wind power using FF-ANN on the cloud, which would help to optimally use wind energy in distributed micro grid environment using Internet of Things (IoT). We suggested a wireless system using IoT to continuously monitor the wind power generated along with wind speed, temperature, humidity at the same time stamp. Wind speed sensor, DHT11 are used to measure wind speed, humidity and temperature. A prototype of the wind speed monitoring and forecasting system using the said sensors and Arduino UNO is designed and developed. The data from the wind mill is acquired in thingspeak cloud (web server). Simulation and experimental results presented to witness the feasibility of online forecasting of wind power production are presented towards the end. The integrated setup of Arduino based hardware and thingspeak cloud has the ability to predict the wind power production of any locality where ever the setup is installed.

