Rajalakshmi Engineering College

Department of Computer Science and Engineering

Batch: 2016-2020 / Academic Year: 2019-2020

Team No: 17 Guide Name: \_\_\_\_Bhavani\_\_\_\_

Class: IV CSE C; Team Members:

1. Roll No/Reg-No/Name: 201601133/211616104134/Muthu Kumar S

2. Roll No/Reg-No/Name: 201601158/211616104161/Padma Gokul N

3. Roll No/Reg-No/Name: 201601127/211616104128/Mohith Vasan S

Title: Medium-Term Wind Energy Forecasting

Abstract:

Wind energy is a renewable energy that is free, clean and readily available. However, the random nature of the wind and its associated uncertainty create challenges in dealing with the generation of wind power effectively, which can result in unnecessary restrictions to the potential of a wind farm. This system makes use of data mining and neural network approaches to predict the wind power using Gaussian Mixture Model(GMM) and Back Propagation Neural Network(BPNN). In earlier system K-Means Clustering is used to predict power for a single wind turbine but for a wind farm, K-Means loses its accuracy. So GMM is used for clustering the training datasets based on meteorological conditions and historical power data. After clustering the datasets BPNN is used to predict the wind power which improves the accuracy of the system.

Student Signature1:

Student Signature2:

Student Signature3: Guide Signature: Coordinator

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| **S.No.** | **Review Date** | **Review Comments** | **Present** | **Implement** | **Viva Voce** | **Guide Signature** | **Coordinator Signature** |
|  |  | Review 0  Reg-No: 211616104134  Reg-No: 211616104161  Reg-No: 211616104128 |  |  |  |  |  |
|  |  | Review 1  Reg-No: 211616104134  Reg-No: 211616104161  Reg-No: 211616104128 |  |  |  |  |  |
|  |  | Review 2  Reg-No: 211616104134  Reg-No: 211616104161  Reg-No: 211616104128 |  |  |  |  |  |
|  |  | Review 3  Reg-No: 211616104134  Reg-No: 211616104161  Reg-No: 211616104128 |  |  |  |  |  |
|  |  | Review (Model)  Reg-No: 211616104134  Reg-No: 211616104161  Reg-No: 211616104128 |  |  |  |  |  |