

Capstone Project Submission

Instructions:

- i) Please fill in all the required information.
- ii) Avoid grammatical errors.

Team Member's Name, Email and Contribution:
Individual NAVED MANSURI - navedmansuri165@gmail.com
Please paste the GitHub Repo link.
GitHub Link: - https://github.com/NavedMansuri/Bike-Sharing-Demand-Prediction
Please write a short summary of your Capstone project and its components. Describe the problem statement, your approaches and your conclusions. (200-400 words)
<p>Rental bikes are being introduced in urban areas to increase mobility comfort. It is important to have the rental bike available and available to the public at the right time, because it will reduce the waiting time. It is a major concern to provide the city a stable supply of rental bikes. Predicting the bike count at each hour is the most important part.</p> <p>The dataset contains weather information (Temperature, Humidity, Windspeed, Visibility, Dewpoint, Solar radiation, Snowfall, Rainfall), the number of bikes rented per hour and date information.</p> <p>we did EDA on some features to see the trend. We observed high demand at morning 8am and evening 6pm and clear visibility and low solar radiation is increasing bike demand. holiday or non-working days there is less bike demand. We used the categorical features to decode each attribute. We started with loading the data, null values treatment, feature selection, and model building. We tried to study various models so that we could get the best model for our project. Linear Regression is not giving great results in the project. Random forest has performed equally well in terms of adjusted r2. Gradient boosting R2 score is 99% and random forest R2 score is 98%. The performance could be due to the proper pattern of data, large data, or the relevant features. The most significant variables for all the models were found after the variable importance analysis. We are getting the best results from random forest.</p>