**Capstone Project Submission**

|  |
| --- |
| **Team Member’s Name, Email, and Contribution:** |
| **Name** - Ajit kumar patel  **Email** - [ajit04022000@gmail.com](mailto:ajit04022000@gmail.com)  **Contribution –** Everything (Individual Project) |
| **Please paste the GitHub Repo link.** |
| Github\_Link:- <https://github.com/ajit04022000/Bike-Sharing-Demand-Prediction.git> |
| **Please write a summary of your Capstone project and its components. Describe the problem statement, your approaches, and your conclusions. (200-400 words)** |
| **problem statement:**   * Look at the data and try to find the booking pattern by several items like lead\_time, Arrival\_staus, etc, Once we found all these things then it’s helpful to manage resources priorly. * Look for the cancelation rate and see if there is any pattern that affects the Booking cancellation. And find a solution or method to reduce the cancelation rate. * Look at the data and find the approach to increase the profitability of Accommodation.   **Approaches :**   * At 1st Handel all the null values, Replace all null values in an appropriate manner * 2nd using different lenses(library) to view data across the segment. * 3rd to answer a few questions I sliced the data across various cuts with the help of group-by-function. * 4th preparing the data and done the feature selection. * 5th treating skewness,removing outlier, and encode the categorical values. * 6th Choosing model ,traning model , Evaluating model , * 7th parameter tuning and pass for deploy.   **Conclusions :**   * No overfitting is seen. * Random forest Regressor and Gradient Boosting gridsearchcv gives the highest R2 score of 98% and 95% recpectively for Train Set and 92% for Test set. * Feature Importance value for Random Forest and Gradient Boost are different. * We can deploy this model. |