**Capstone Project Submission**

**Instructions:**

i) Please fill in all the required information.

ii) Avoid grammatical errors.

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| **Team Member’s Name, Email and Contribution:** |
| Rinkesh Das  Email ID- [rinkeshdas2001@gmail.com](mailto:rinkeshdas2001@gmail.com)  Contribution- Data Cleaning, EDA, Model Training, Evaluation and Validation |
| **Please paste the GitHub Repo link.** |
| Github Link:- https://github.com/rinkeshdas01/Bike-Rental-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)**  **Problem Statement-** Currently rental bikes are introduced in many urban cities to enhance mobility comfort. It is important ot make rental bikes available and accessible to the public at the right time as it lessens the waiting time. Eventually, providing the city with a stable supply of rental bikes becomes a major concern. The crucial part is the prediction of bike count required at each hour for the stable supply of rental bikes.  **The project involves the following steps:-**   1. Understanding of Business Objective 2. Data Cleaning 3. EDA 4. Model Training and Implementation 5. Model Evaluation and Validation   **After performing all the steps above, the following conclusions were obtained:-**   * Linear Regression and Ridge Regression did not give us satisfactory results. They performed bad on both train and test data. * Decision Tree Regressor performed very well on train data but not so well on test data. This suggests that the model was overfitting on the train data. * XG Boost Regressor and Random Forest Regressor performed well on both the train and test data. But out of the two, XG Boost performed better. It gave us an Adjusted R2 score of 0.94 which is very good. * So we chose XG Boost regressor as the optimum model for our problem. |
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