

Capstone Project Submission

Instructions:

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

Team Member's Name, Email and Contribution:

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Contribution:

- Defining the problem statement
- EDA and data visualization
- Data preprocessing
- Feature selection
- Preparing Dataset for model
- Applying model
- Model validation and selection

Please paste the GitHub Repo link and drive link.

GitHub Link:-<https://github.com/SuvOnGithub/Bike-Sharing-Demand-Prediction---Capstone-Project>

Drivelink:-https://drive.google.com/drive/folders/1z6cplyueZHrIR11a4gsEFfkPiLD_cT7E?usp=sharing

**Please write a short summary of your Capstone project and its components.
Describe the problem statement, your approaches and your conclusions. (200400 words)**

A hotel booking is a process that enables guests to schedule dates and length of stay, room selection, extras and payment all in one place. Hotel bookings can be done through several ways like Direct, Online/Offline TA/TO etc. In this EDA project we were provided with 'Hotel Bookings' data set to analyze and gain insights from it.

We followed step by step process for the project like data collection, data wrangling, EDA, Visualization and finally the conclusion.

In the first step we collected data and explored data set to get a rough idea about data. In data wrangling process on raw data, we cleaned data by replacing null values with something meaningful. Removed duplicate rows, formatted data type of columns and added some columns for our analysis.

In EDA we divided analysis into several part hotel wise bookings, distribution channel wise, booking cancellation, time wise and some other question.

In hotel wise analysis we compared which hotels has the highest bookings and we found out that city hotels have the highest bookings. In distribution channel wise analysis, we compared

which distribution channel brings more booking to hotel and compared distribution data hotel wise.

In bookings cancellation we compared performance and distribution of different distribution channel in booking cancellation. Reason for bookings cancellation and we found out that Travel agents/ Travel operator has the highest booking cancellation rate.

In time wise analysis we checked year wise, month wise and overall day wise bookings. We found out that highest number of bookings were in month of August. Then we compared guests from which countries are coming, their meal choices, car parking spaces required, repeated guests, agent contribution in bookings, average daily rate, optimal stay length and number of people wise, etc.

Plotted graphs of analysis to have clear understanding to gain insights from data. We concluded

that city hotels have highest booking than resort hotel, most numbers of bookings were in year 2016, most of the guests were coming from European countries like Portugal, Great Britain, France and Spain and city hotels has highest daily rate than resort hotels, thus city hotels were generating more revenue.