

Capstone Project Submission

Instructions:

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

Team Member's Name, Email, and Contribution:

Name: Mayank Gupta

Email: mayank32849@gmail.com

Contribution:

- Contribution to Presentation.
- Contribution to team colab.
- Find the missing value, then delete it from the dataframe.
- Used heatmaps to analyze the relationship between the two data sets.
- Examination of both hotel and reservation data year-wise.
- Hotels lead time analysis.
- Based on Deposit type analysis.
- Contribution to writing inferences and conclusions of EDA.

Name: Dheeraj Patel

Email: pateldheeraj98@gmail.com

Contribution:

- Cleaning of DataSet removing null values.
- Contributed to the Exploratory Data Analysis
- Analyzed the correlation between both the data sets using heatmaps. ➤ Contributed in the Data Wrangling.
- Data Visualization.
- Prepared the presentation
- Prepared the summary
- Contributed in the collab notebook
- Fetched the insights from the data set.
- Contributed in writing inferences and conclusions of the EDA.

Name: Vishal Kumar Yadav

Email: vishalyadav1211997@gmail.com

Contribution:

- Analyzed the correlation between the Data Sets
- Prepared the presentation.
- Contribution in Team Collaboratory
- Data cleaning and manipulation
- Contributed to writing inferences and conclusions of the EDA
- Prepared individual collab
- Prepared the video

Name: Khushboo Yadav**Email: khushboo.y2111@gmail.com****Contribution:**

- Importing data from the local drive.
- Importing all the important libraries
- Understanding the dataset (like shape, head, data information) ➤ Removing the null values and duplicates.
- Prepared the Presentation.
- Data pre-processing (like data cleaning handles null values).

Name: Rozi Fatma**Email: roseimam22@gmail.com****Contribution:**

- In the data cleansing section, look for null values. Instead of using the 'isnull' method directly, I created a separate function called "null details" to find all of the data details.
- Including null values, unique values, total values, and datatype.
- Recognized the variety of hotels that appear in our data.
- Determining which hotels are preferred by which age group.
- Focus is primarily on the presentation and colab portions.

Please paste the GitHub Repo link.

[Dheeraj-Patel98/EDA_hotel-booking_Capston1: Hotel booking project for Capstone 1 \(github.com\)](https://github.com/Dheeraj-Patel98/EDA_hotel-booking_Capston1: Hotel booking project for Capstone 1 (github.com))

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

The hotel sector is very unpredictable, and bookings depend on a wide range of variables, including hotel type, seasonality, day of the week, and many more. To assist the hotels in making sound planning decisions, it is crucial to analyze the patterns present in the historical data. Utilizing past data, hotels can run a number of marketing efforts to increase business.

This data set includes booking details for a city hotel and a resort hotel, column elements like as `is_canceled`, `arrival_date_year`, `arrival_date_month`, `stays_in_weekend_nights` etc, as well as details like the date the reservation was made, the length of the stay, the number of people, kids, and/or babies, and the number of parking spaces that are available.

We may utilize this research to better understand customer behavior in the hotel booking industry after analyzing the aforementioned dataset. I analyze this data set using the steps listed below: Recognize the dataset, do data cleaning, analysis, and visualization, and find the solution to some industry-type problems.

We have analyzed several significant problems that we have posed.

- Types of hotels.
- Year-wise & hotel-wise booking analysis.
- Booking rate according to the population.
- Most preferred hotel
- The maximum number of guests from which country.
- Which Hotel produces more revenue?

In this research, we looked at which month was the busiest or most occupied by consumers. We came to the conclusion that August was the busiest month, with the most bookings, while January had the fewest. Further analysis revealed that City Hotel had the largest number of cancellations and the highest number of reservations. The most popular booking section is online TA. We have made an effort to study the variables influencing hotel reservations using the data at our disposal.

These variables can be used to forecast upcoming reservations and report trends.