

Capstone Project Submission

Instructions:

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

Team Member's Name, Email and Contribution:

- 1. Name** → Meenakshi
Email → meenakshicuul@gmail.com
Role :
 - Finding out which is the busiest month for both hotels?
 - Finding out which is the most occupied month for City hotel and Resort hotel?
 - Analysis of the percentage of cancelled and non-cancelled bookings.
 - Finding out which type of hotel is more likely to be cancelled?
 - Analysis of the effect of meal type on cancellations.
 - Finding out the percentage of bookings for each year.
 - Finding out the total number of bookings by market segment.
 - Analyzing how the Price Per Night (ADR) vary over the year by hotel type.
 - Finding out how many night spent by Guest at the hotel by market segment.
 - Finding out the most booked accommodation type (Single, Couple, Family).
- 2. Name** → Gopal Ji Gupta
Email → gopaljigupta45@gmail.com
Role :
 - Finding out what is the best time of the year to book a hotel room and which is the busiest month of the hotel?
 - Analysis of the optimal length of stay to get the best daily rate.
 - Finding out which market segment makes the highest number of Bookings?
 - Analysis of effect of deposit type on cancellations.
 - Analysis of special requests made by customer travelling with a child or baby.
 - Finding out how often repeated guests cancel their booking as compared to others?
 - Analysis of total number of bookings by Customer type?
 - Analysis of number of cancellations by market segment and the relationship between cancellation and repetition of customers
 - Analysis of days on waiting list by market segment and distribution channels.
 - Analysis of number of booking changes on cancellations.
- 3. Name** → Huzaifa Khan
Email → huzafakhan2974@gmail.com
Role :
 - Checking which country has highest number of bookings.
 - Finding out the busiest month of the hotel.
 - Finding out which hotel has the highest number of cancellation.
 - Finding out the most preferable meal.
 - Analyzing that how long the guest stay at hotel on weekends and weekdays.
 - Analyzing the bookings by customer type.
 - Analyzing the total number of bookings and cancellations by market segment.
- 4. Name** → Arbaaz Malik
Email → malikarbaaz267@gmail.com
Role :
 - Finding out the types of hotel and analyzing the type of hotel which is having highest number of cancellations.
 - Finding out the busiest month of the hotel.

- Analyzing the countries with highest bookings.
- Analyzing how cancellations vary according to month.
- Finding out the most preferred meal by the customer.
- Finding the relation between repeated customer and cancellation.
- Finding whether the guest stay in over a weekend or weekdays.
- Exploring the number of special requests in general.
- Analyzing the bookings by market segment and distribution channel.

Please paste the GitHub Repo link:

Github Link:- <https://github.com/gopaljigupta45/Gopal-Ji-Gupta-EDA-Hotel-Booking>

Please write a short summary of your Capstone project and its components. Describe the problem statement, your approaches and your conclusions. (200-400 words)

A Hotel, broadly speaking, is a managed building or establishment, which provides guests with a place to stay overnight – on a short-term basis – in exchange for money. The Hotel industry is one of the most important components of the wider service industry, catering for customers who require overnight accommodation.

In this EDA project, we were provided with a dataset which contains booking data for two hotels and has details about thousands of instances of bookings made over a period of several years. Details like – number of guests, duration of stay, room type, day, month and year of booking, the distribution channel used for booking, meal categories chosen and many more.

We start by performing data preparation operations wherein we deal with any duplicate, missing or null values and Outliers/erroneous values present in the dataset. Then, we perform data wrangling over this prepared data to arrive at some data driven industrial insights that will help the hotels improve by analyzing customer behavior and strategize accordingly.

We've done this in three parts – Firstly, we analyzed the number of bookings by a variety of factors like the distribution channel used for booking, the market segment the customers belong to, analyzing the monthly booking data to find a trend etc. This resulted in providing several useful insights like which market segment and distribution channels should be prioritized to maximize revenue.

In the second part, we have done analysis of factors that will improve the end user experience and in-turn increase revenue. Like finding out that how often do the guests travelling with a child/baby make a special request and finding out what is the optimal length of stay to get the daily best rate.

In the third part, we have done analysis of cancellation of bookings like deposit type chosen vs cancellations, cancellation by market segments, cancellations of repeated customers, etc. and have found some interesting insights like how when customer has made a deposit, the chances of cancellation take a significant drop.

Using these operations, we have arrived at some insights that can be useful to the hotels and help them improve. We found that customers who make a deposit tend to cancel less so the hotels could encourage the customers to make a deposit by offering a discount on pre-paid bookings which will make the cancellations drop significantly. These minor adjustments, when done right and on the basis of previous data analysis can make a big impact on these Businesses.