CAPSTONE PROJECT-1

HOTEL BOOKING ANALYSIS

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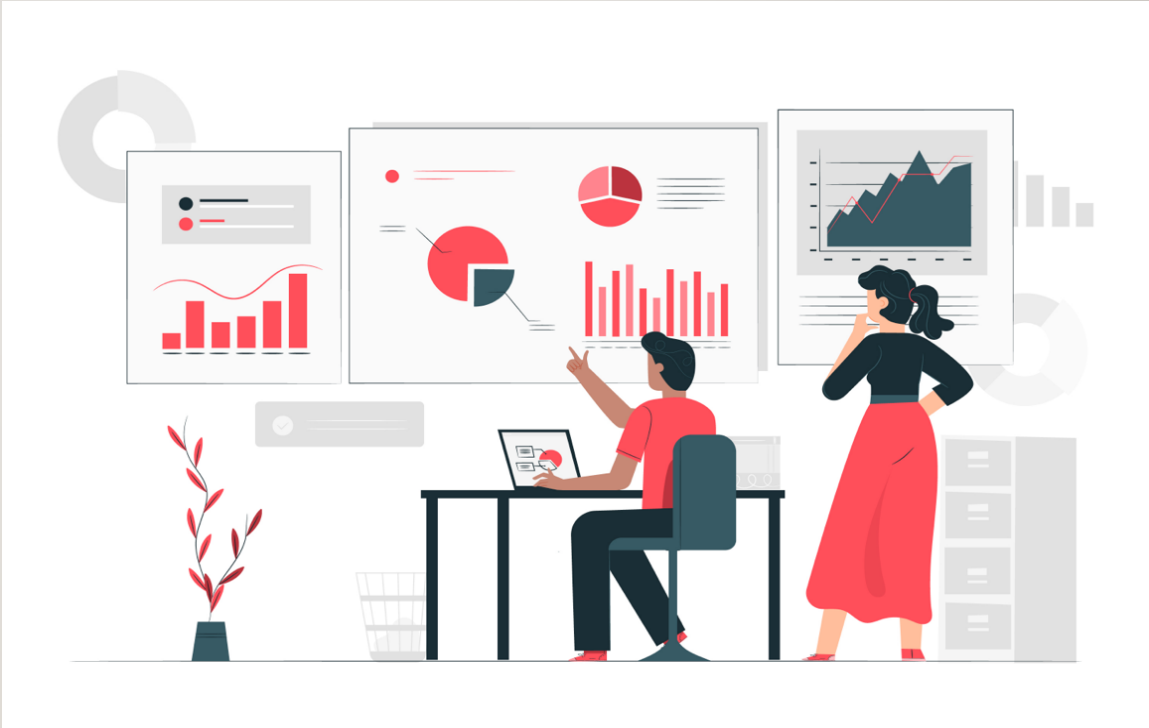
CONTENTS :

- Data Understanding
- Data Cleaning
- Correcting Data Type
- EDA
- Observation
- Missing/Null Value



Agenda

1. Project Recap
2. Problem
3. Analytics Team
4. Process
5. Insights

Project Recap

Hotel Booking analysis

AI

challenges

- Handling Duplicate data
- Data presented in unwanted Datatype
- Choosing appropriate visualization techniques to was difficult
- A lot of null values were there in dataset

Insights/Story

Observation-1

The best time of year to book a hotel room :

1)From correlation we can say when total peoples is greater then the price of average daily price is high

So this period of time is not good for booking

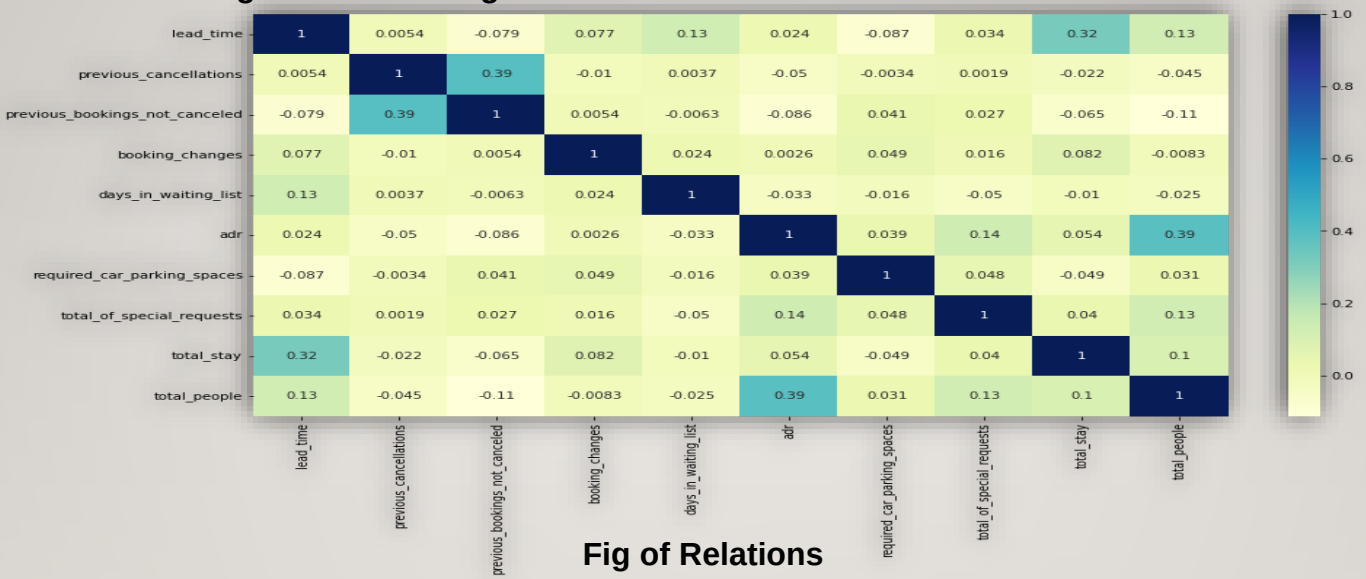


Fig of Relations

First the correlation between the numerical data

1-'total_people' and 'adr' has slight correlation. It means more number of people means, more adr which in turns more revenue.

2-'lead_time' and 'total_stay' has slight correlation, which indicates usually people with longer stay plans earlier than the actual arrival.

Observation-2

Lets see does length of stay affects the adr.

1)The pricing of hotel is also depending of day of stay

for example- If adr for one day stay 2000rs if we stay

2 days in hotel then its 1600 and similarly if we stay 3 days then the adr is lowest means 1500rs

So this is best length of staying duration

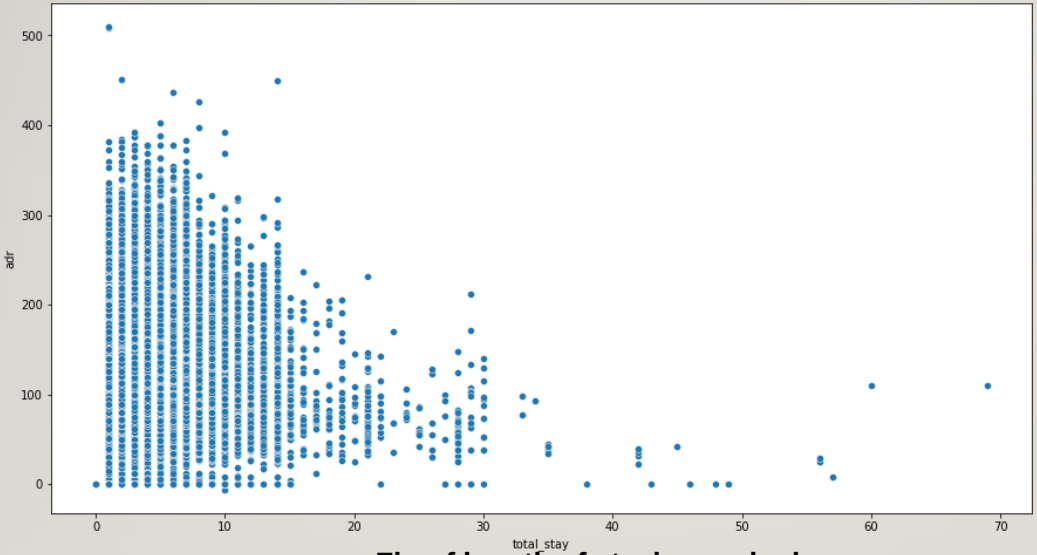


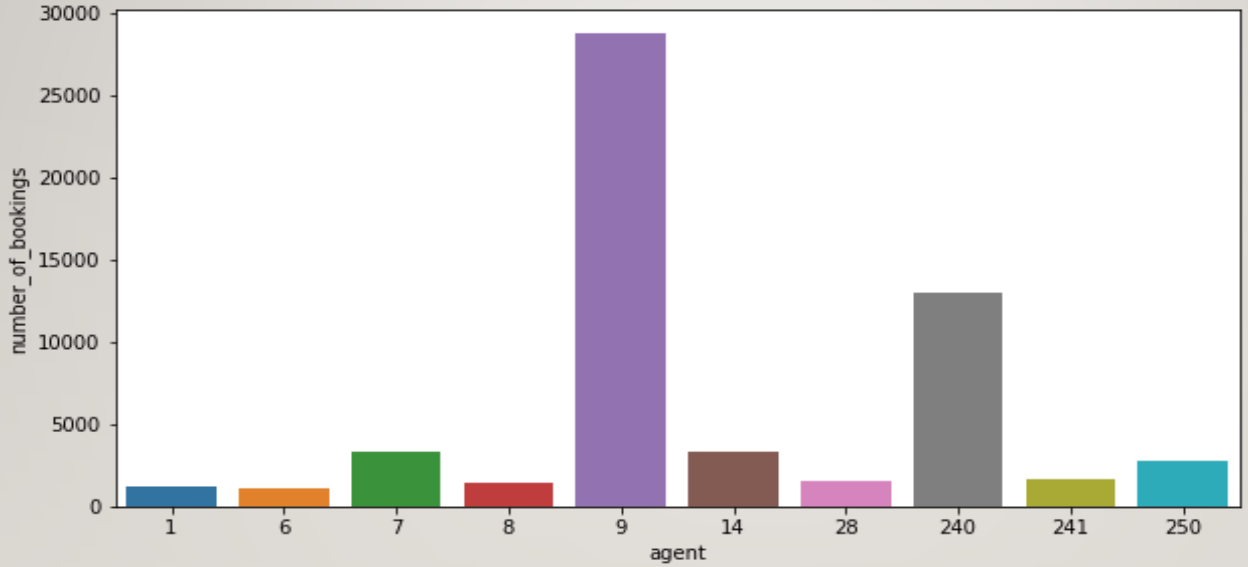
Fig of length of staying and adr

From the scatter plot we can see that as length of 'total_stay' increases the 'adr' decreases.
This means for longer stay, the better deal for customer can be finalized.

Observation-3:

Univariate Analysis

AS shown in fig number of booking and agent are plotted here we can see agent no. 9 makes maximum bookings.



Which agent makes most no. of bookings

Observation-4

room type is in most demand and which room type generates highest adr

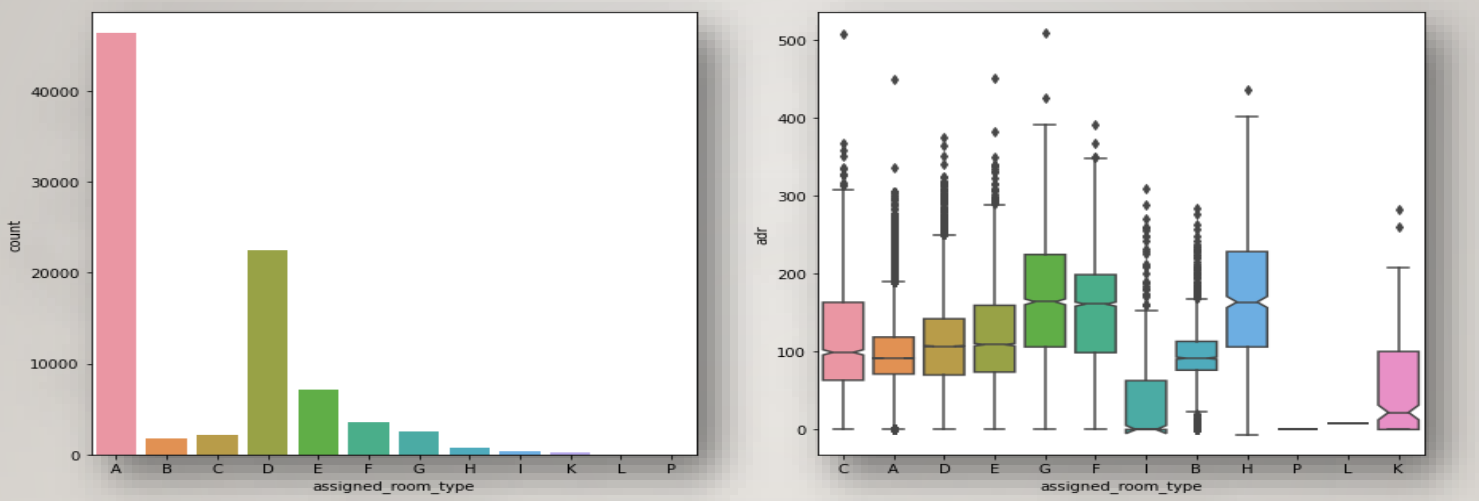


Fig of Analysis Room Demand

As shown in fig Most demanded room type is A, but better adr rooms are of type H, G and F also. Hotels should increase the no. of room types A and H to maximize revenue

Observation-5

meal type is most preferred meal of customers:

Here we will use count plot to plot the chart

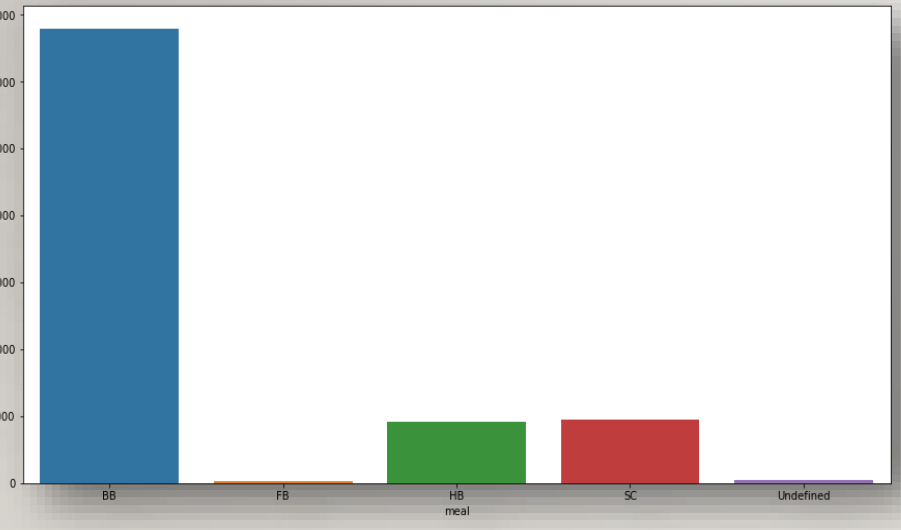


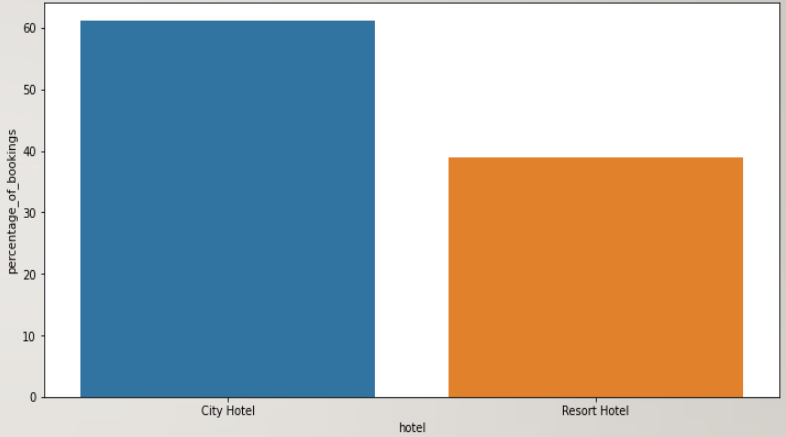
Fig. of meal preferred

As shown in fig Most preferred meal type is BB (Bed and breakfast).

Observation-6

Hotel wise analysis

What is percentage of bookings in each hotel?



As we seen in fig most of the peoples choose city hotel then Resort around 60% bookings

are done in 'City Hotel' nd 40 % bookings are done in 'Resort Hotel'.

Form this we can also say 'City Hotel' has more avg adr as compared to 'Resort Hotel',

hence 'City Hotel' is having more revenue than 'Resort Hotel'

Observation-7

What is preferred stay length in each hotel?

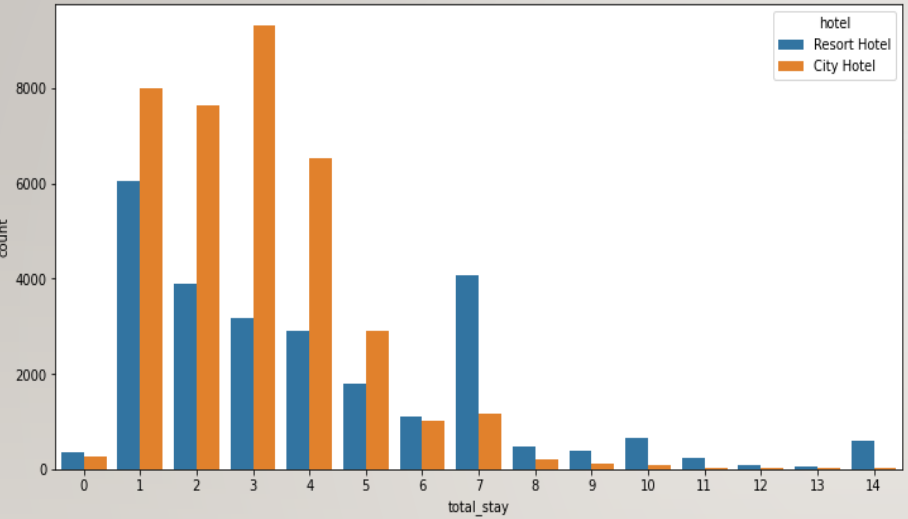
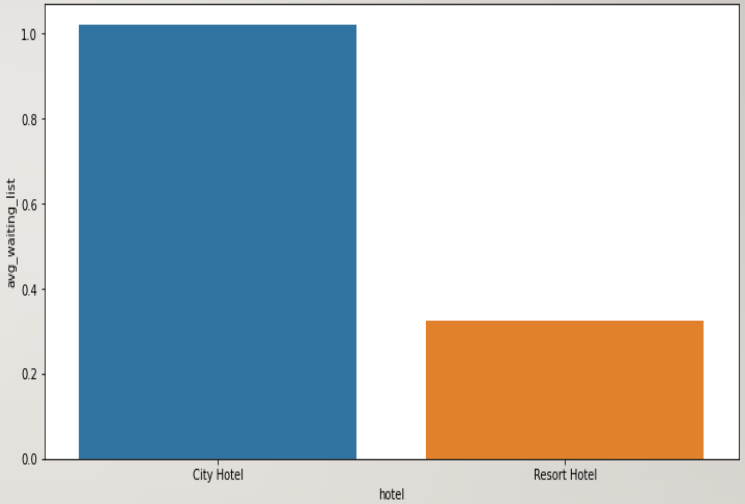


Fig. total stay and count

Most common stay length is less than 4 days and generally people prefer City hotel for short stay, but for long stays, Resort Hotel is preferred.

Observation-8

Which hotel has longer waiting time?



City hotel has significantly longer waiting time, hence City Hotel is much busier than Resort Hotel.

Observation-9:

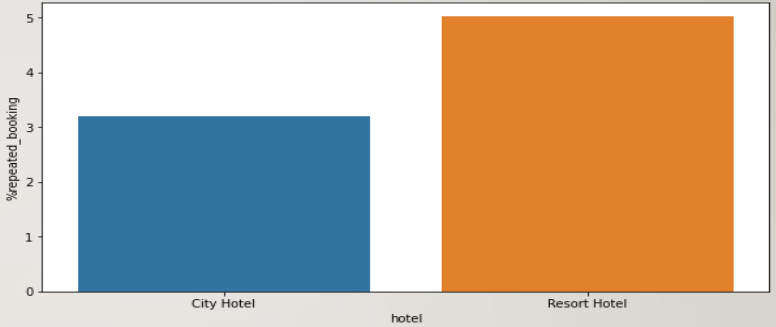
Which hotel has higher bookings cancellation rate.

Selecting and counting number of cancelled bookings for each hotel.
Counting total number of bookings for each type of hotel
Calculating cancel percentage
The after plotting this in table here we can seen that

Fig Hotel cancelation rate
Almost 30 % of City Hotel bookings got canceled.

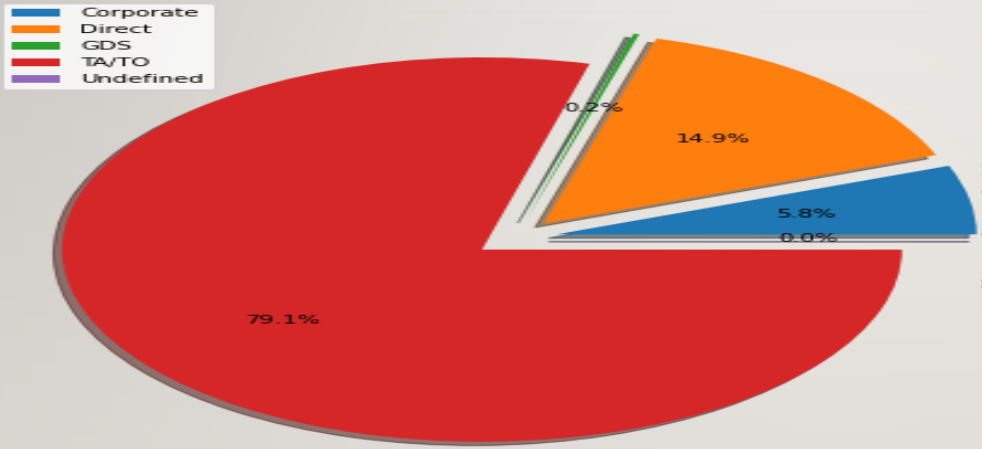
Observation-10:

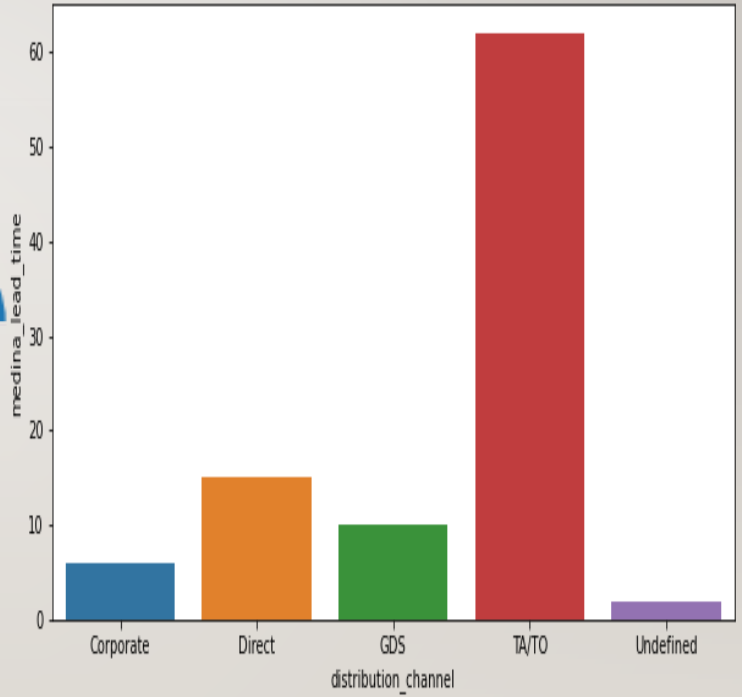
Both hotels have very small percentage that customer will repeat, but Resort hotel has slightly higher repeat % than City Hotel.



Observation-11:

the most common channel for booking hotels





As shown in fig the TA/TO has most commonly booking channel

CONCLUSION AND FUTURE WORK

The dataset contains immense possibilities to improve business values and have a positive impact. It is not limited to the problem taken into consideration for this project.

If it has user-friendly front-end user interface then on The base of data set is one of the use full
Data analysis system

ACKNOWLEDGEMENT

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THANK YOU