Capstone Project I
Hotel Booking Analysis

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Points to Discuss:

- Agenda

- Data summary

- Hotel wise analysis

- Booking wise analysis

- Correlation Matrix

- Conclusion

Agenda

To discuss the analysis of given hotel bookings data set from 2015-2017.

We'll be doing analysis of given data set in following ways :

- Hotel wise analysis

- Booking cancellation analysis

By doing this we'll try to find out key factors driving the hotel bookings trends.

Data Summary

Given data set has different columns of variables crucial for hotel bookings. Some of them are:

hotel: The category of hotels, which are two resort hotel and city hotel.

is_cancelled : The value of column show the cancellation type. If the booking was cancelled or not. Values[0,1], where 0 indicates not cancelled.

stayed_in_weekend_nights: The number of weekend nights stay per reservation

stayed_in_weekday_nights: The number of weekday nights stay per reservation.

meal: Meal preferences per reservation.[BB,FB,HB,SC,Undefined]

Country: The origin country of guest.

Hotel Wise Analysis

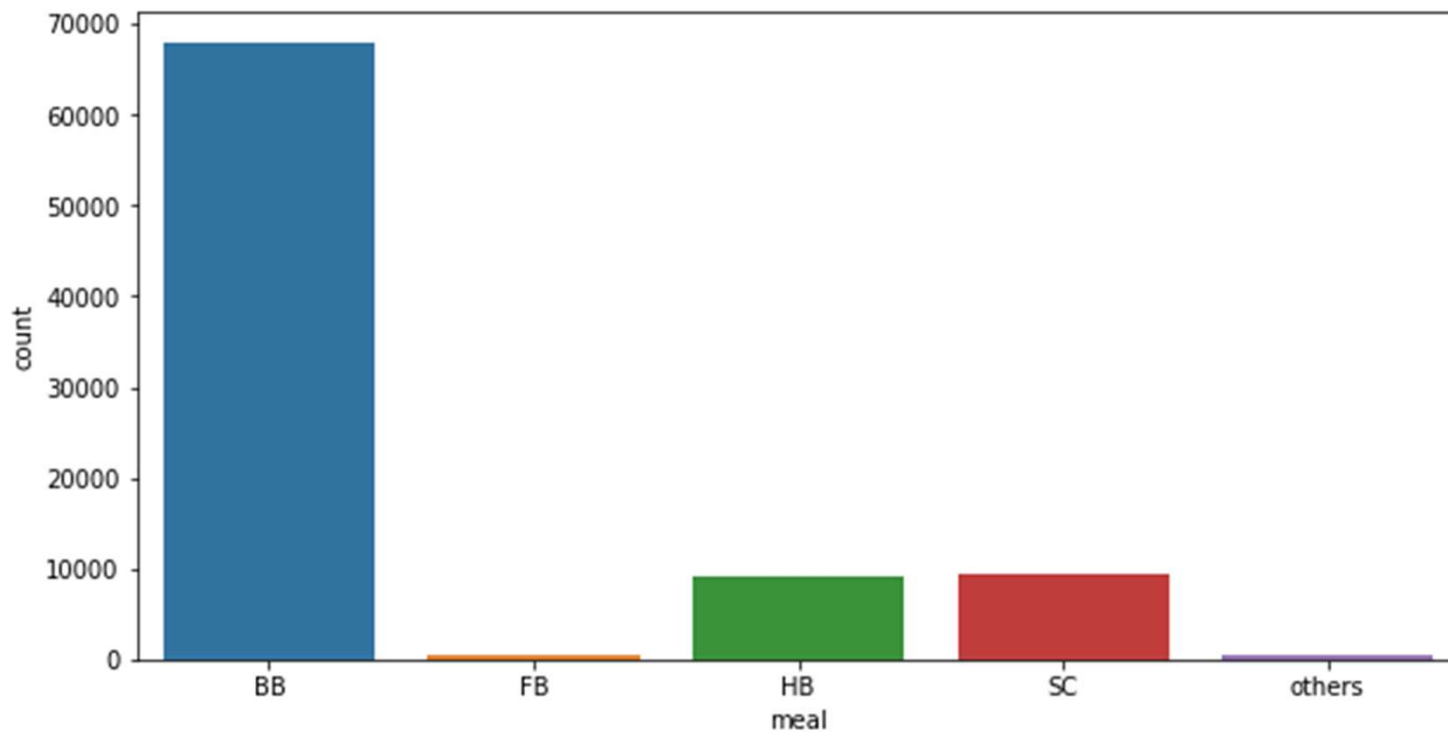While doing univariate analysis of given hotel booking dataset, we answered following questions:

1) Which meal is preferred by most Customer?

2) Which Hotel is booked most?

3) From which country most of the customers are coming?

# MOST PREFERRED MEALS BY THE CUSTOMERS:
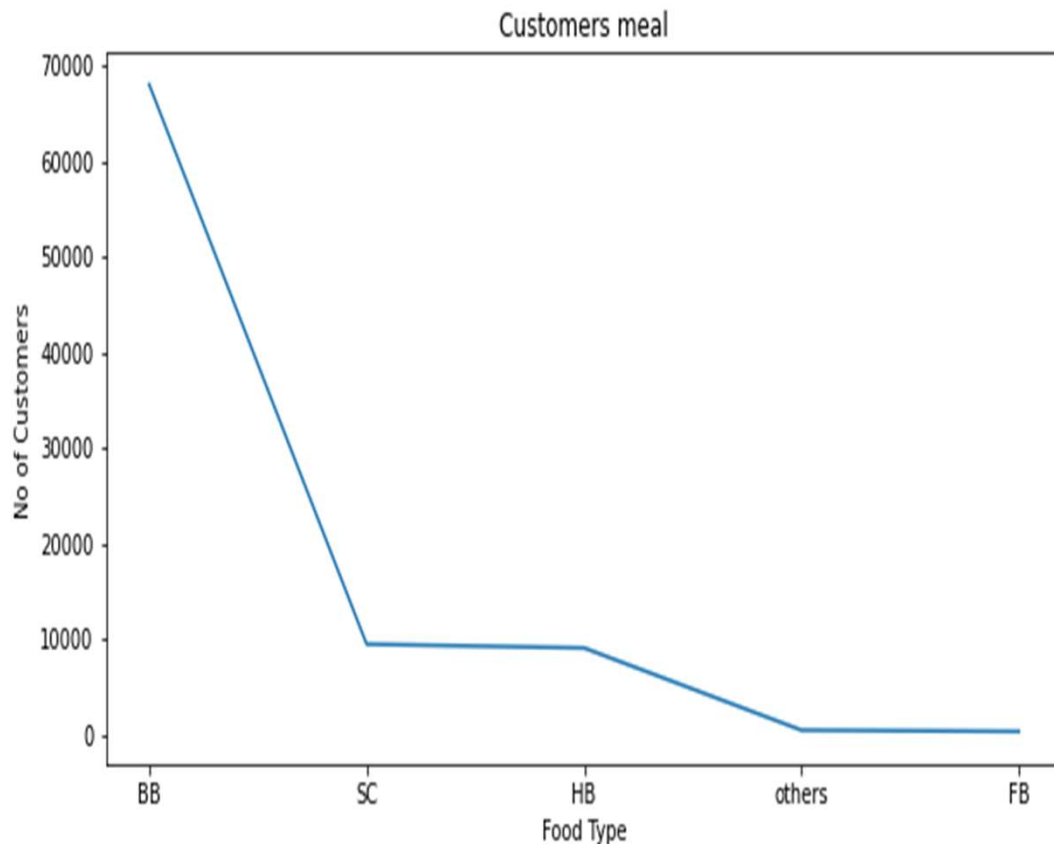
Customers meal

- Here we have 5 types of food provided to the customers i.e, BB, SC, HB, FB and Others.

- There were number of undefined food items which might mean that the customers must have ordered food from outside and so it is named as Others.

- Most preferred meal by the customer is BB which is ordered most either from city Hotel or resort Hotel

MOST PREFERRED MEAL (CONTINUATION...)

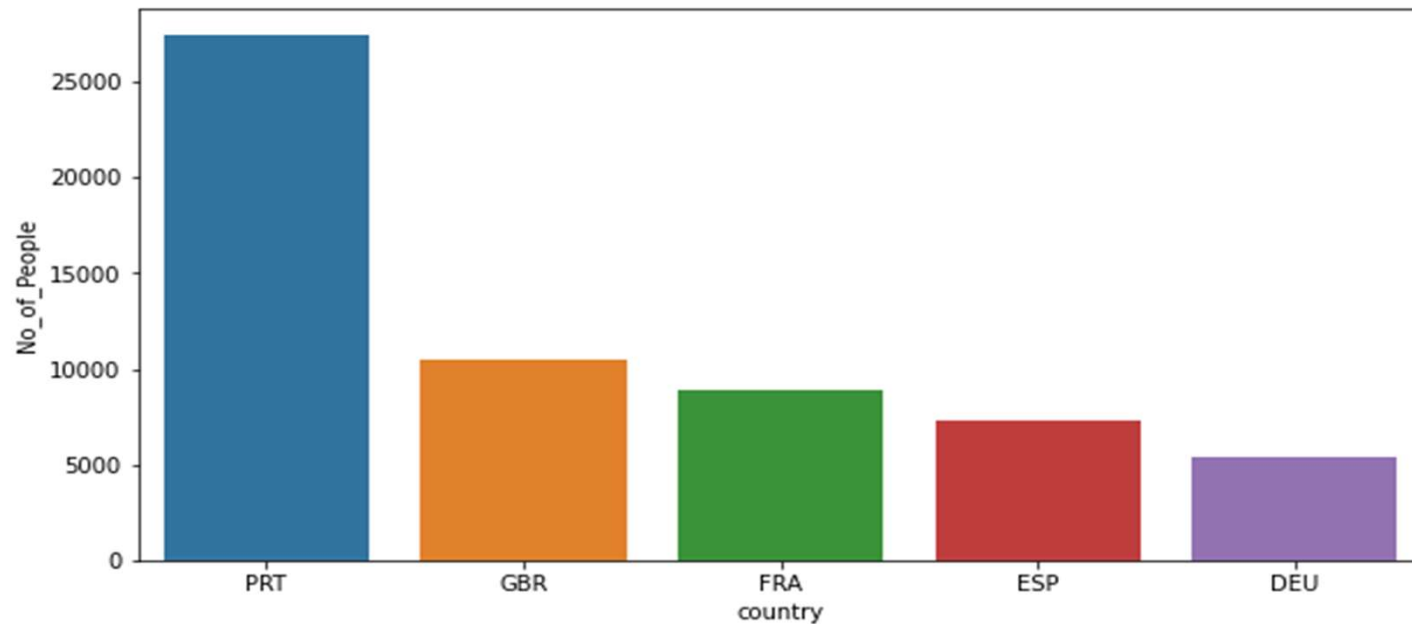From the above given chart it is clear that maximum number of customers preferred BB type food.

MOST BOOKED HOTEL:
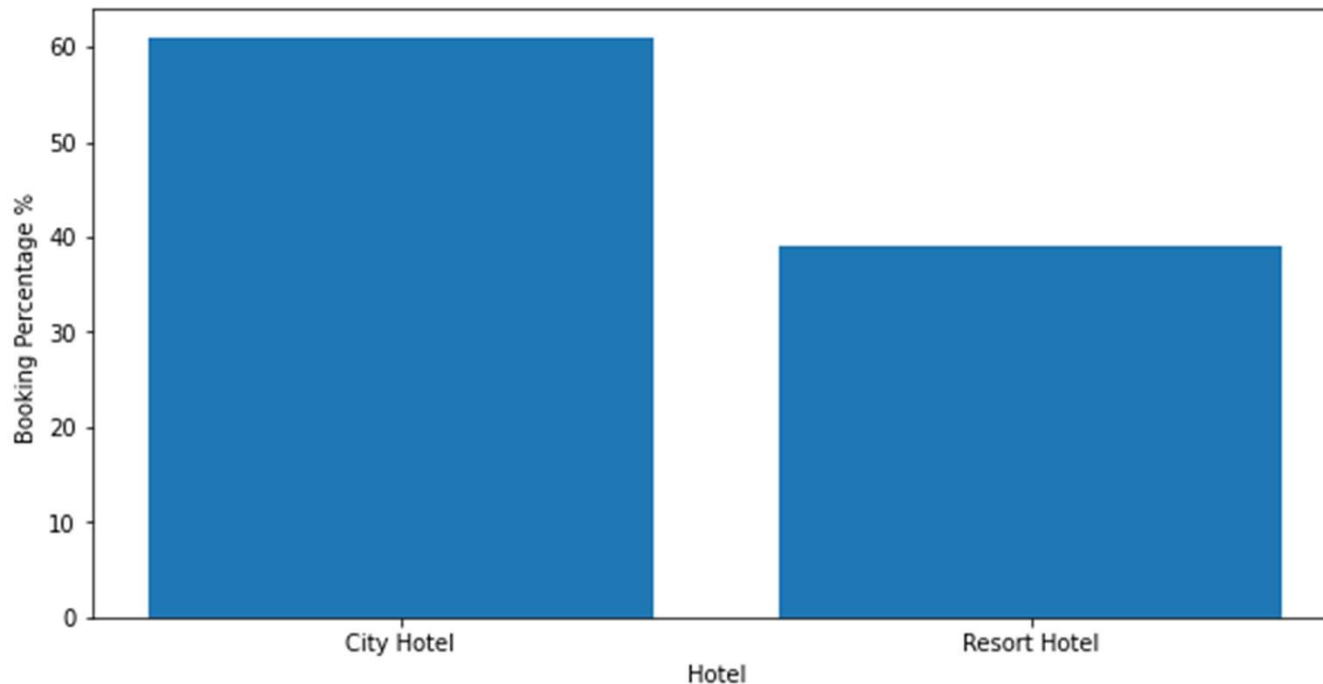
- The chart above shows that most bookings where made for City Hotel.
- People preferred City Hotels most as compared to Resort Hotels. As we can see 61% of City Hotels were booked and just 41% of Resort Hotels were booked.

Most Customers are coming from

The chart depicts that the maximum number of Visitors were from Portugal i.e, approximately 30000 whereas, the rest were from other European Countries.

Booking Wise Analysis

While doing booking analysis of given hotel booking dataset, we answered following questions:

1) Which hotel has higher bookings cancellation rate?

2) Which month have most Guest?

3) Which month is best for booking Hotel?

4) Which one is booking Hotel most(Single, Couple, Married)?
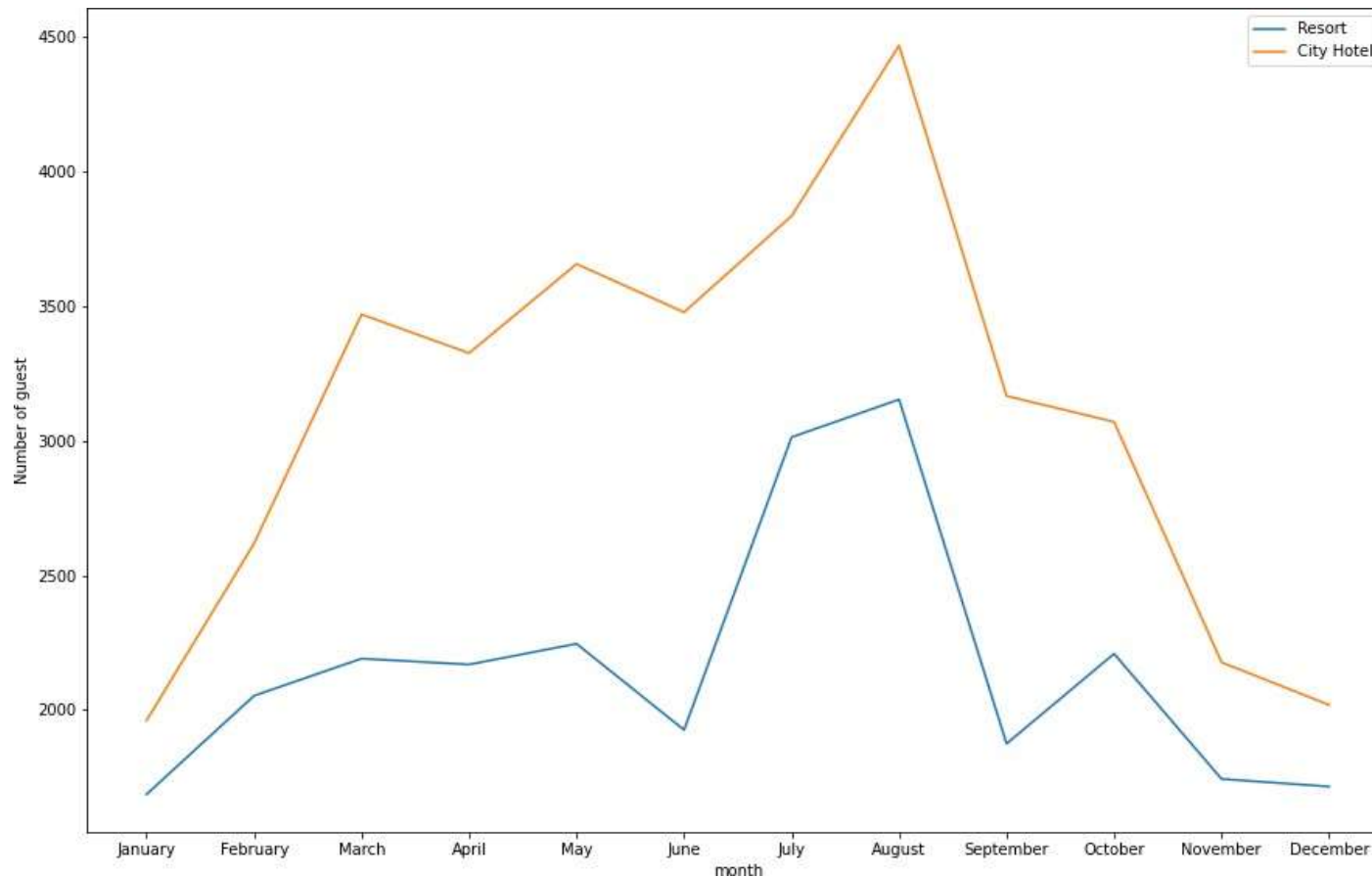
Which hotel has higher bookings cancellation rate?
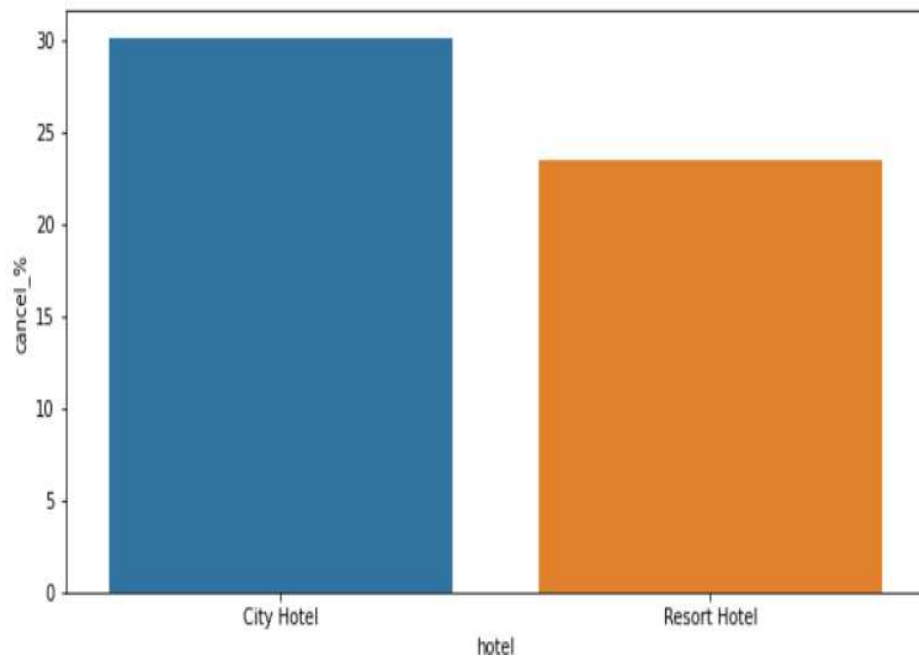
HOTEL	TOTAL BOOKING
CITY HOTEL	53427
RESORT HOTEL	33968

Almost 30 % of City Hotel bookings and 25 % of Resort hotel bookings got canceled .

For some reason these people might instantly cancelled hotel. It can be like they did't like that Hotel they booked
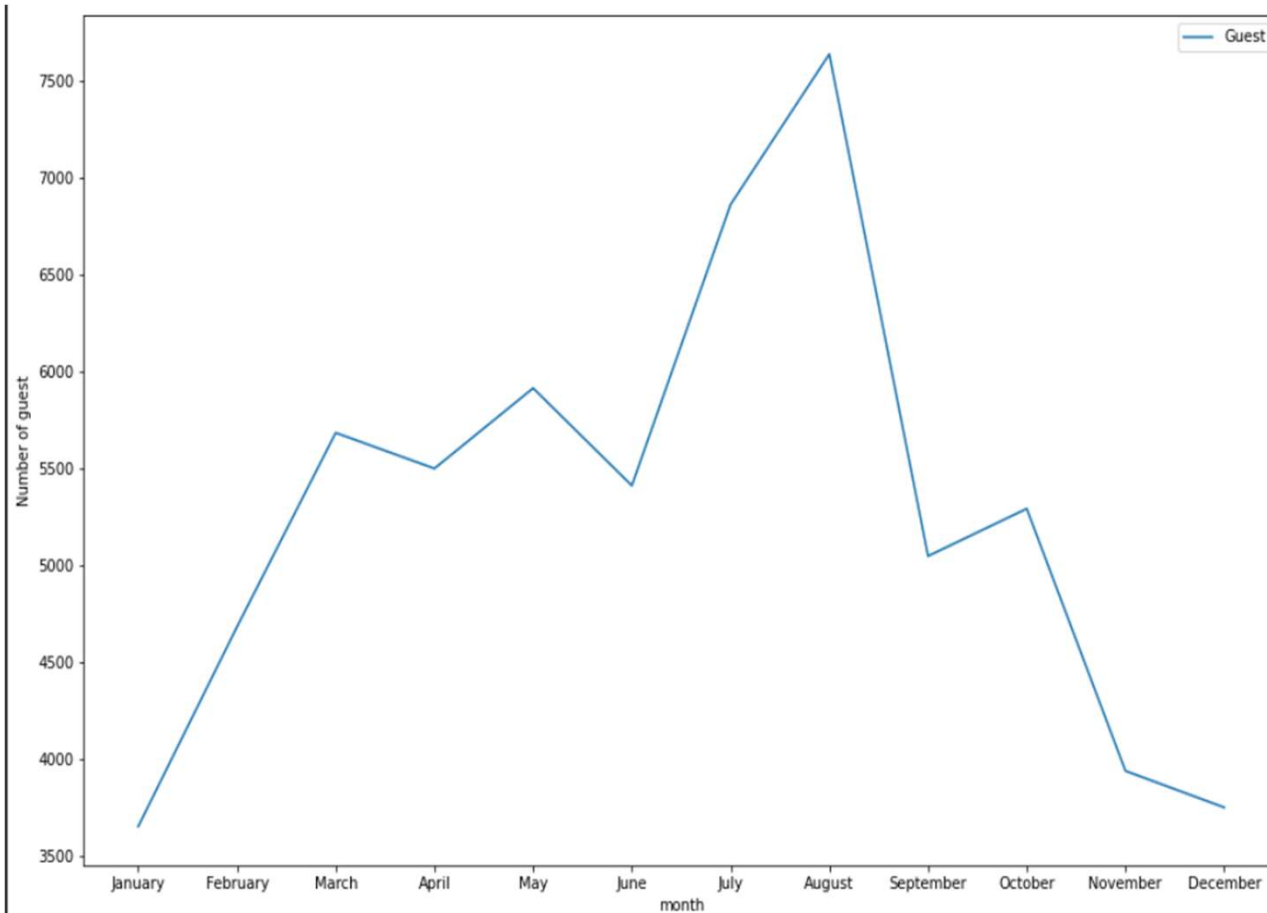
Which month have most Guest?

Between June and the end of August,
Guest is at its peak

From the month of July to August the
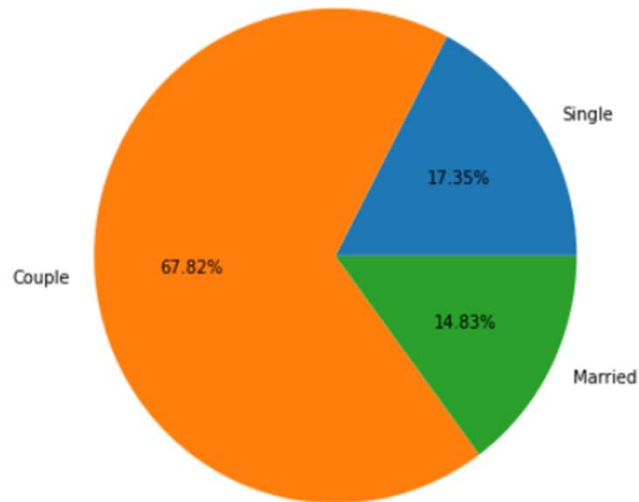number of bookings increased

In August, City Hotel got most
number of guests.

Which month is best for booking Hotel?

So between June and the end of August, attendance is at its peak.

So the best month for booking hotel should be **June**

Which one is booking Hotel most(Single, Couple, Married)?

|	Guest Type	Total
0	Single	16503
1	Couple	64496
2	Married	14101

From the given data we can see that a total of 67.82% of guest were couples, 17.35% were singles and 14.83% were Married or family travelling together.

Hence, the maximum number of booking were made by **Couples**.

CORRELATION MATRIX
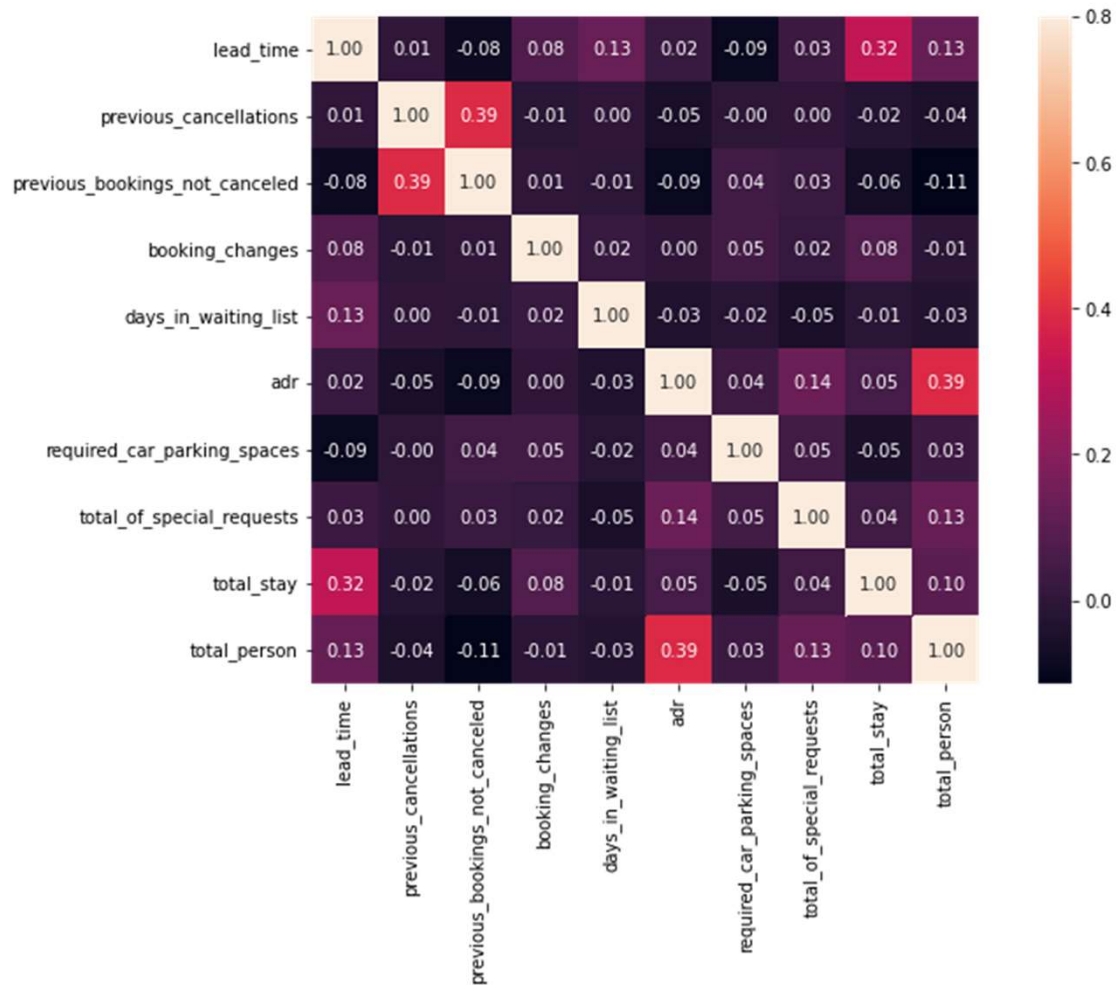
Total stay length and lead time have slight correlation. This may mean that for longer hotel stays people generally plan a little ahead of the actual arrival..

adr is slightly correlated with total number of people, which makes sense as more number of people means more revenue, therefore more adr.

LONGER STAYS AFFECTING THE 'adr':
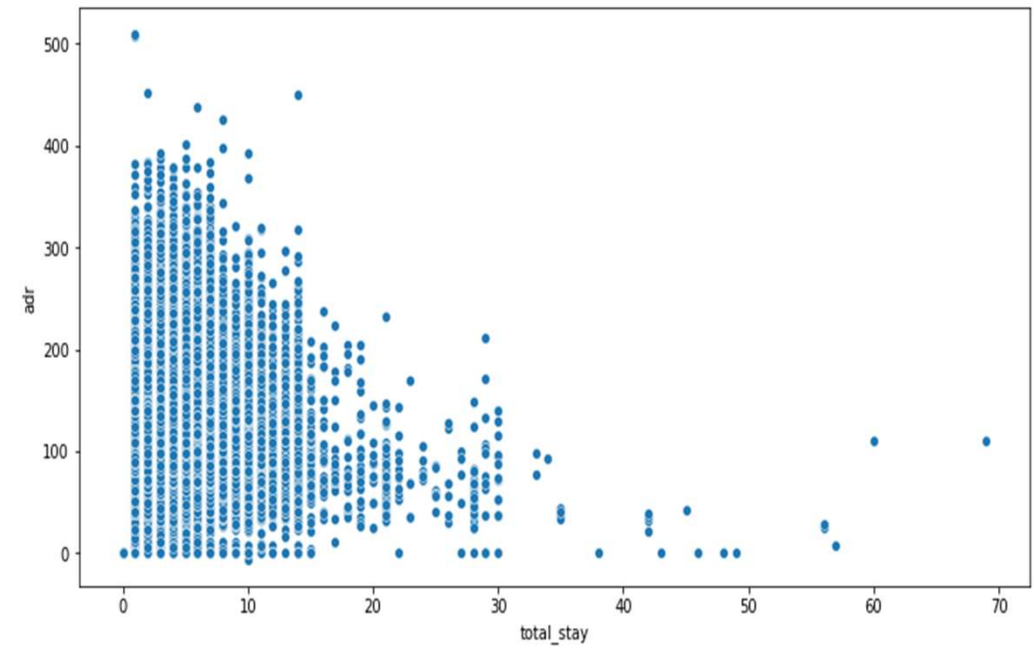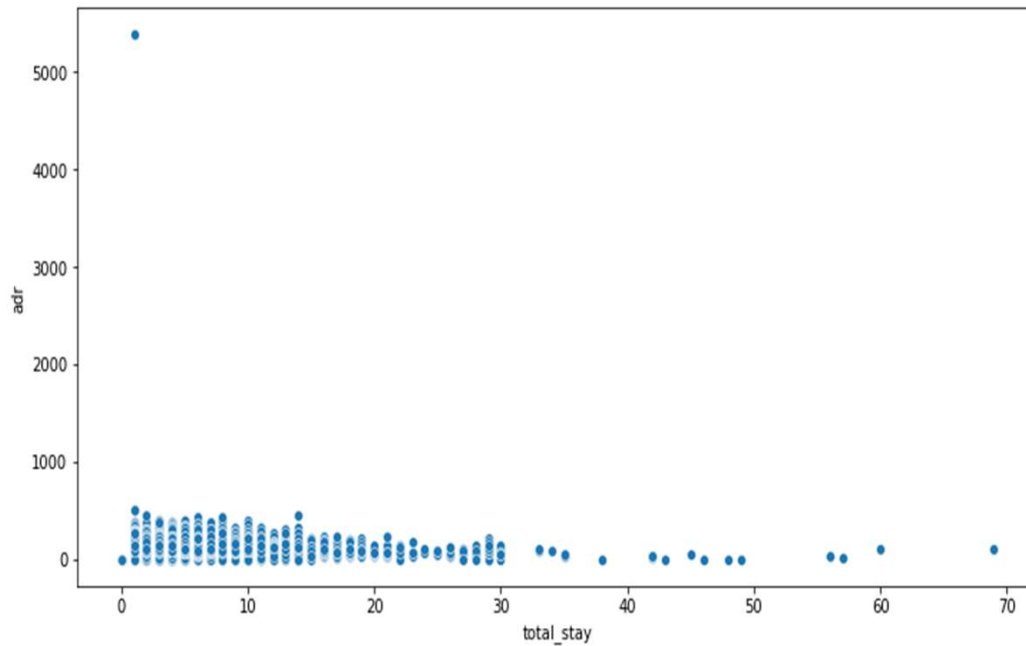
From the scatter plot we can see that as length of total stay increases the adr decreases.
This means that for longer stay, better deals for customers can be finalised.

Conclusion

○ Around 60% bookings are for City hotel and 40% bookings are for Resort hotel, therefore City Hotel is busier than Resort hotel.

○ Most loving BB type food either from City or Resort Hotels.

○ Most of the guests came from european countries, with most no. of guest coming from Portugal.

○ Almost 30% of bookings are cancelled.

○ Most number of guest comes in month of August.

○ July- August are the most busier and profitable months for both of hotels.

○ Couples are the most common guests for hotels, hence hotels can plan services according to couples needs to increase revenue.

Thank You