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EDA ON : Hotel Booking Analysis

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Legends



- I. Hotel Selection Aanalysis
- II. Based on facility.
- III. Summary Data.
- IV. Market Aanalysis.
- V. Booking cancellations .
- VI. Challenges .
- VII. Conclusion .

I. Hotel Selection Aanalysis

Based on
Categories.

Resort Hotel.

City Hotel.



Continue...

Based
Categories.

```
graph TD; A[Based Categories.] --> B[Tourism]; A --> C[Official]; B --> D[Adults]; B --> E[Children]; C --> F[Business person]
```

Tourism

Official

Adults

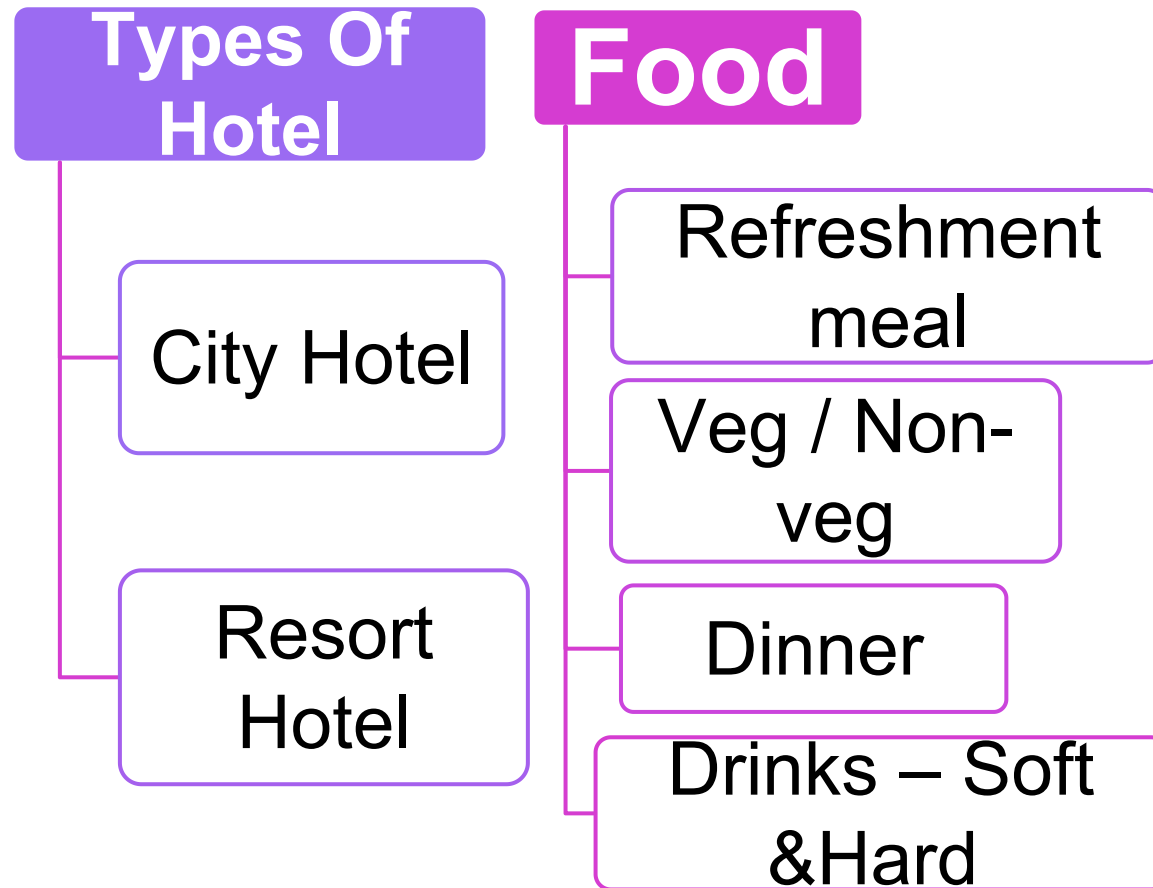
Children

Business
person

Based On Facilities.

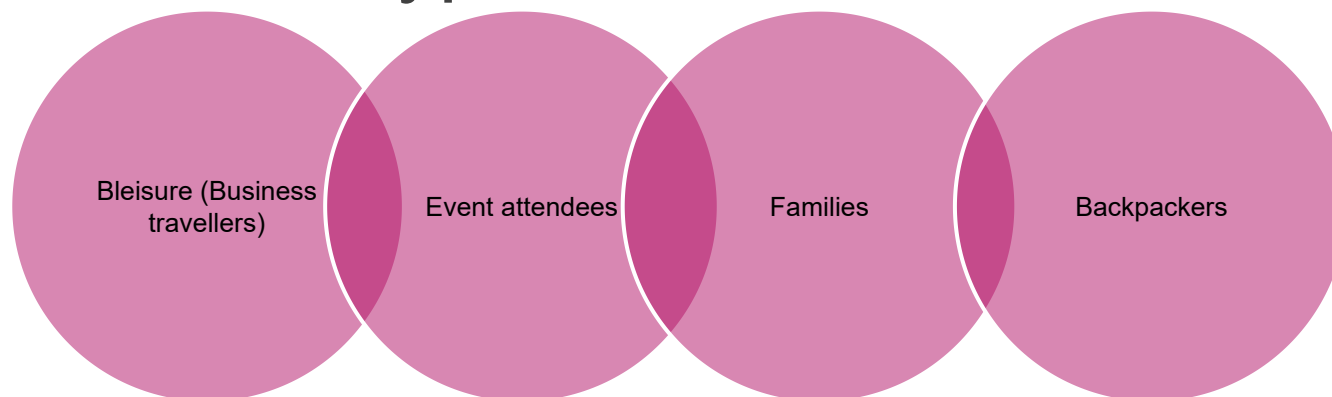
- I. Purpose Of Visit :: A. Official
B. Tour/Spiritual**
- II. Based On Area / Location .**
- III. Car Parking – Sufficient space
with good car parker / driver
availability.**

II. Summary Data.



III. Market Segment.

- In that we have summarize the purpose of booking , it may be official work / corporate and may be picnic / tourism also.
- Timewise analysis – Duration.
- Customer type



IV. Booking /Cancellations

Booking

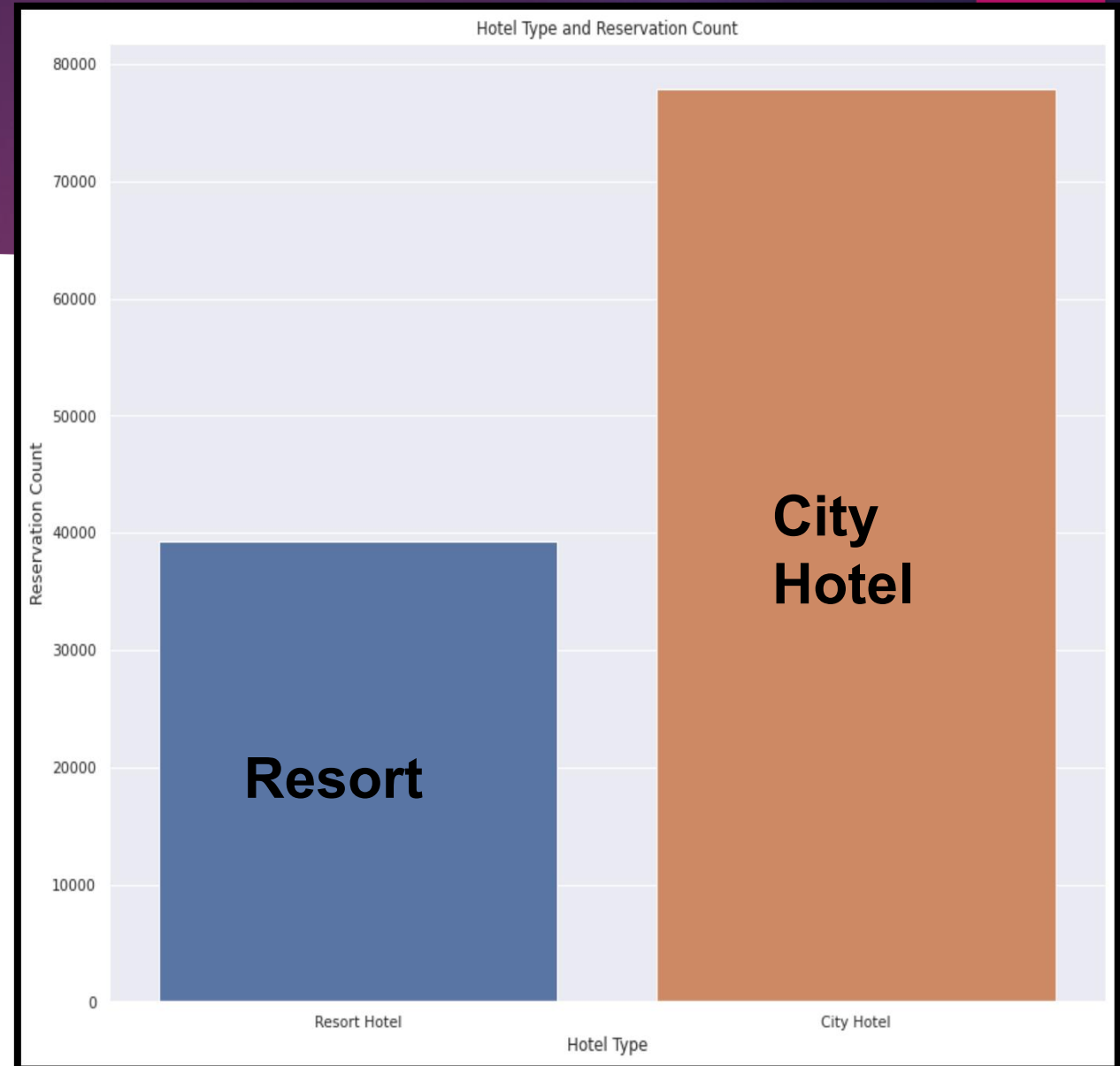
- Maximum :- July to August
- Minimum :- November to February

Cancellations

- I. Sudden changes in plan II.. Minimum work length
- III. Based area / Location IV. facilities

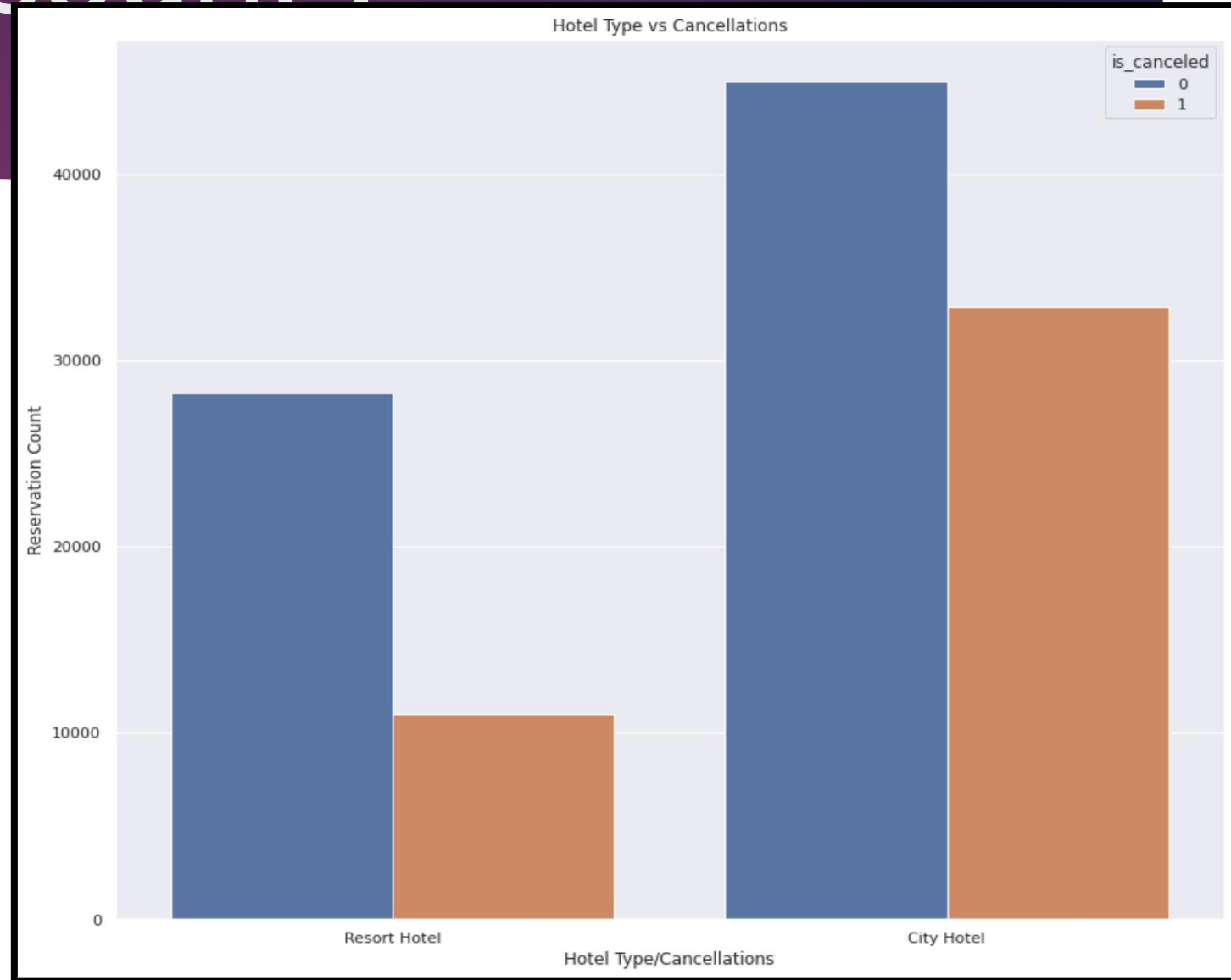
Reservation count :

City hotel has more reservation compared to Resort hotel

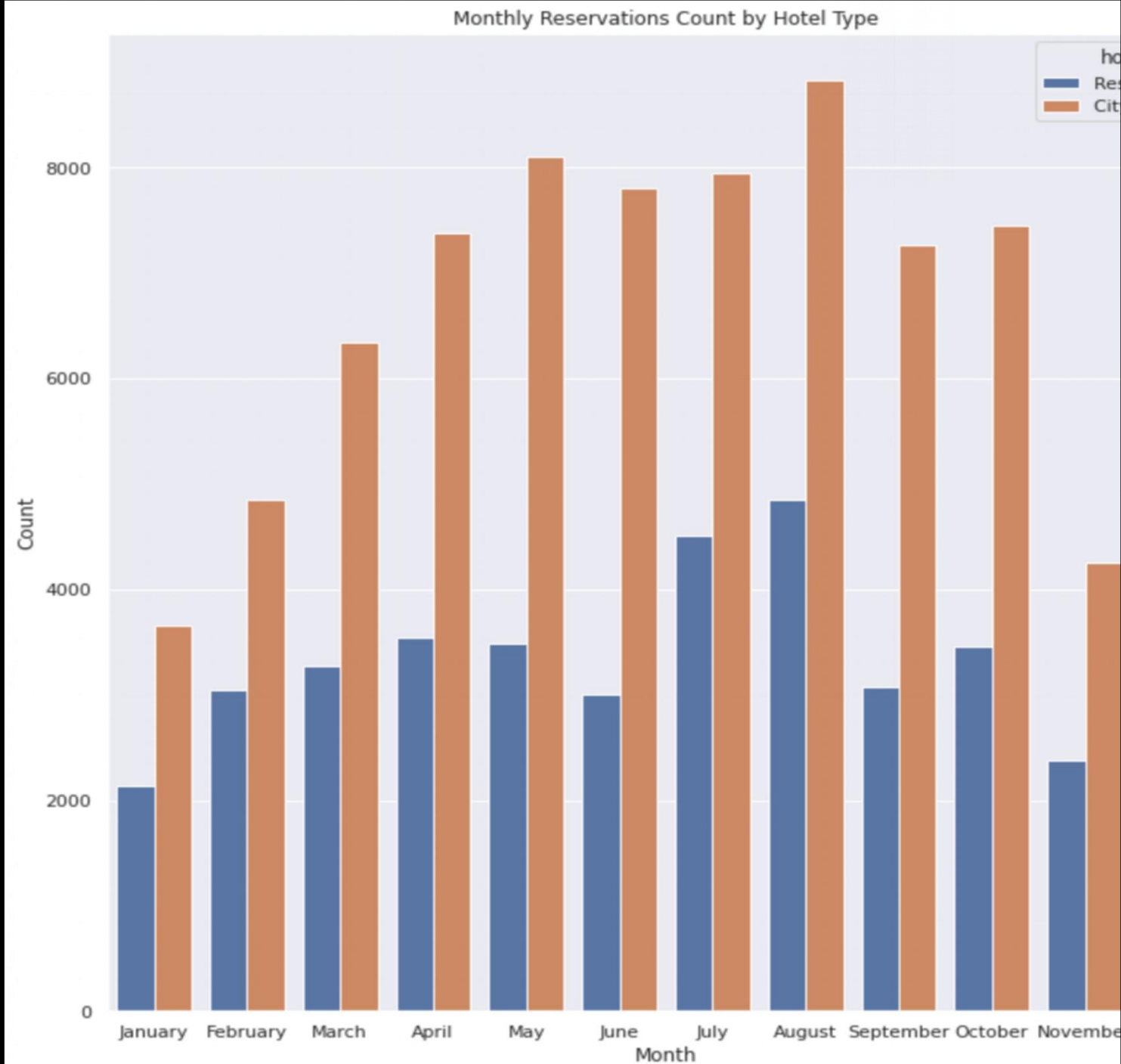


Cancellation count :-

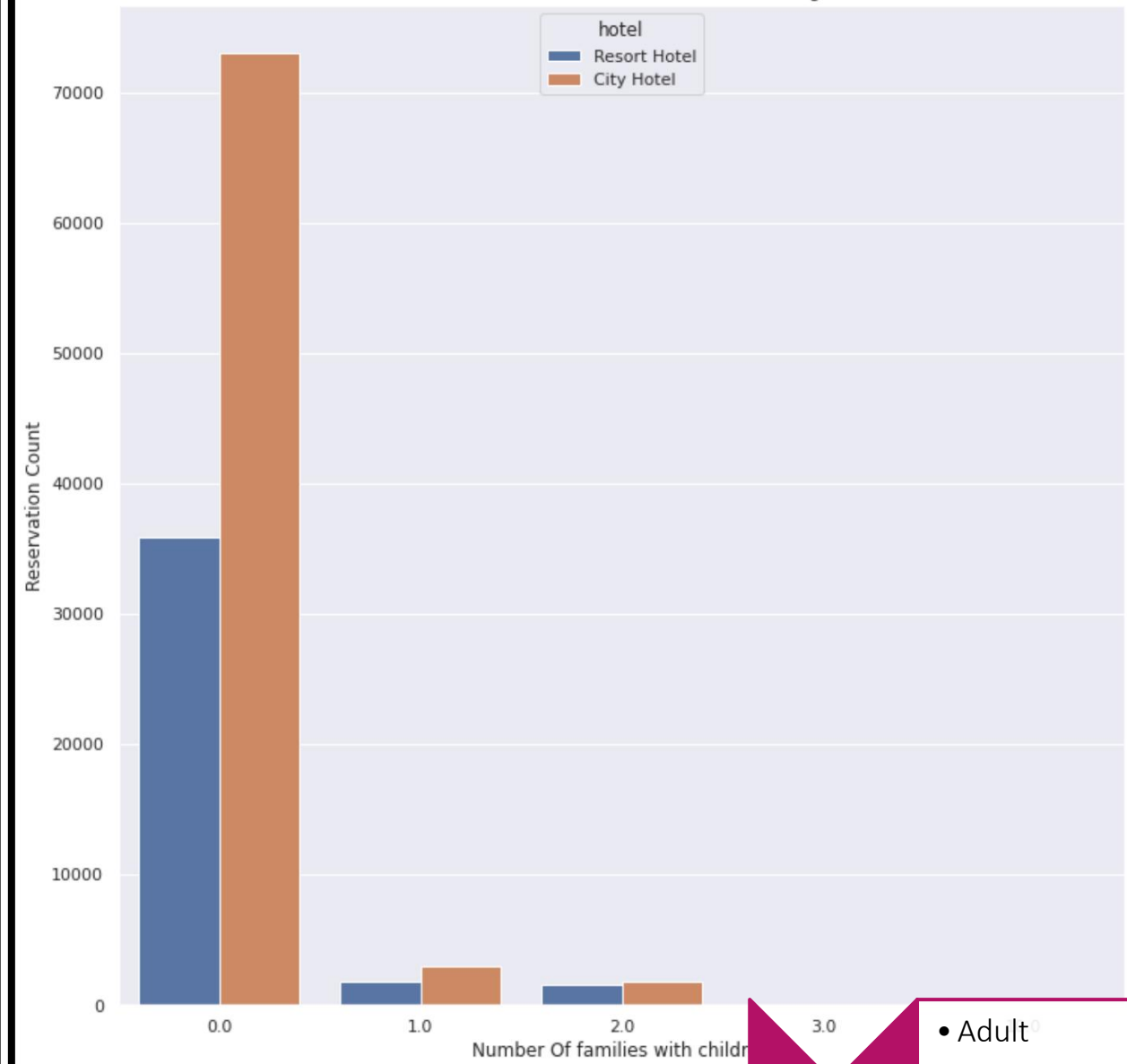
City hotel has more cancellations compare to Resort hotel.



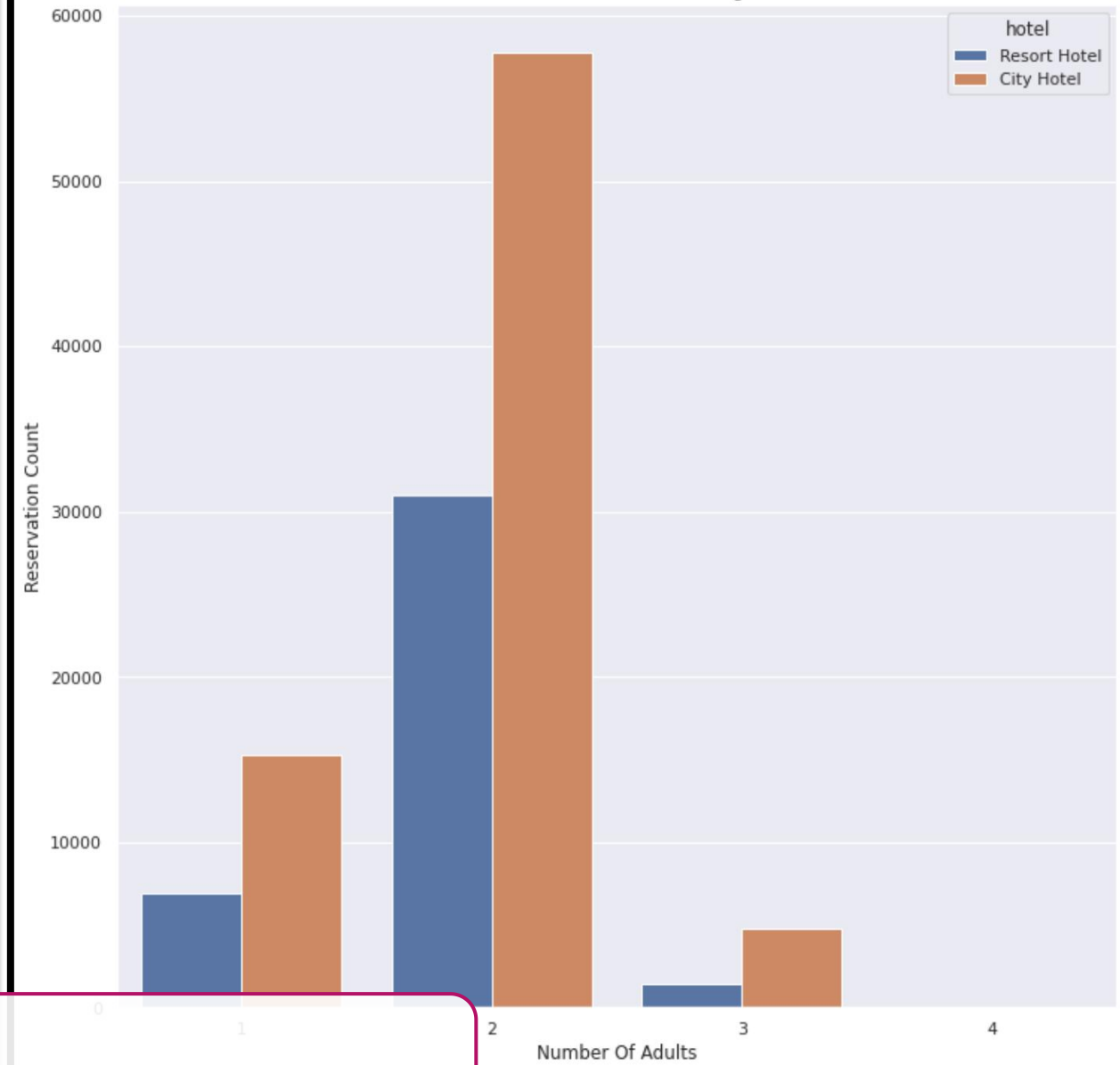
Monthly Reservation Count



Number Of families with Children Reserving



Number Of Adults Reserving



Number of

- Adult
- Children
- Families

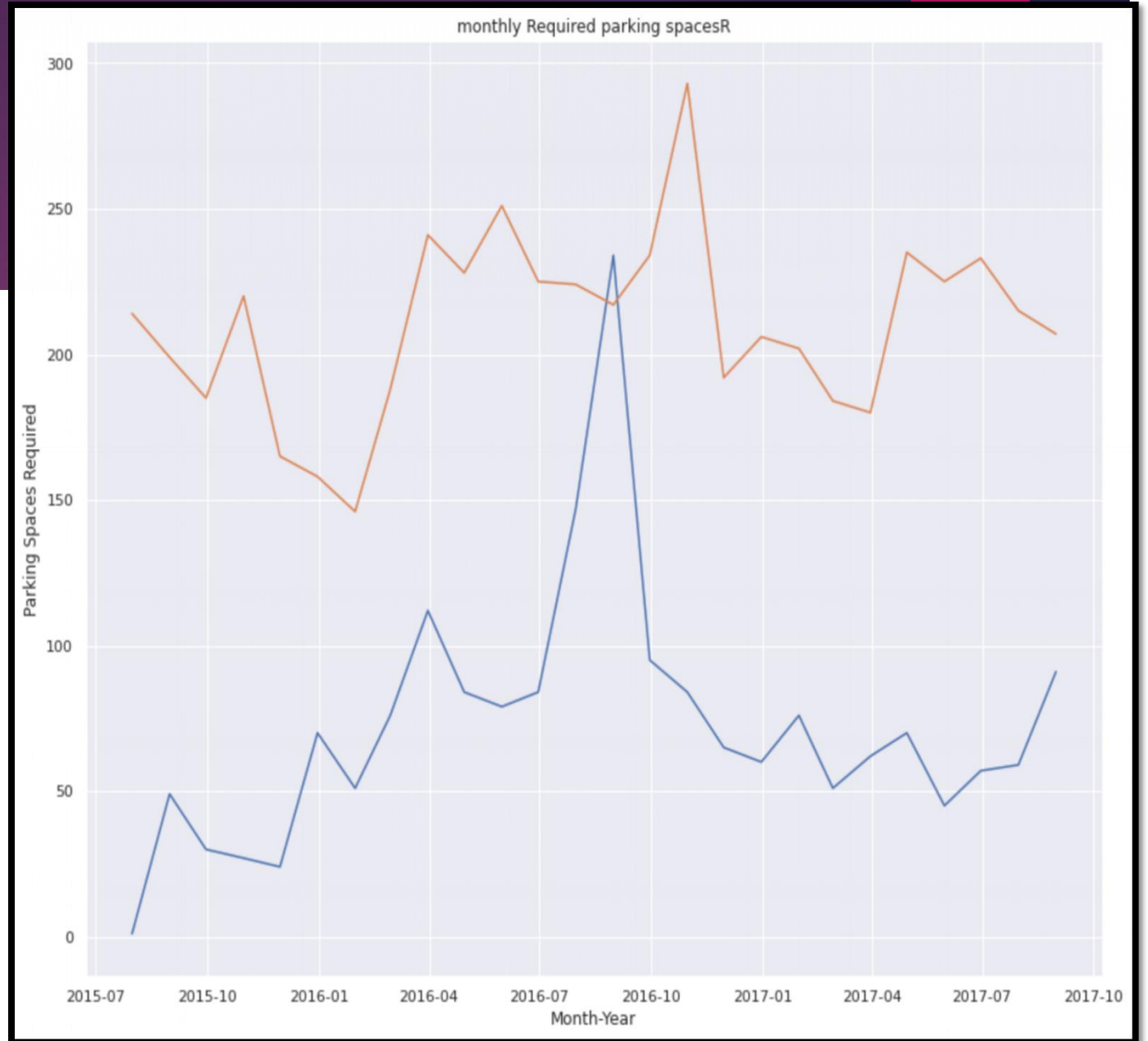
Month wise customer frequency.

- Resort Hotel have more quantum as a families compared to city hotel.
- wise versa city hotel have more customers/quantum as a single entity resulting more customers with less quantum frequency.



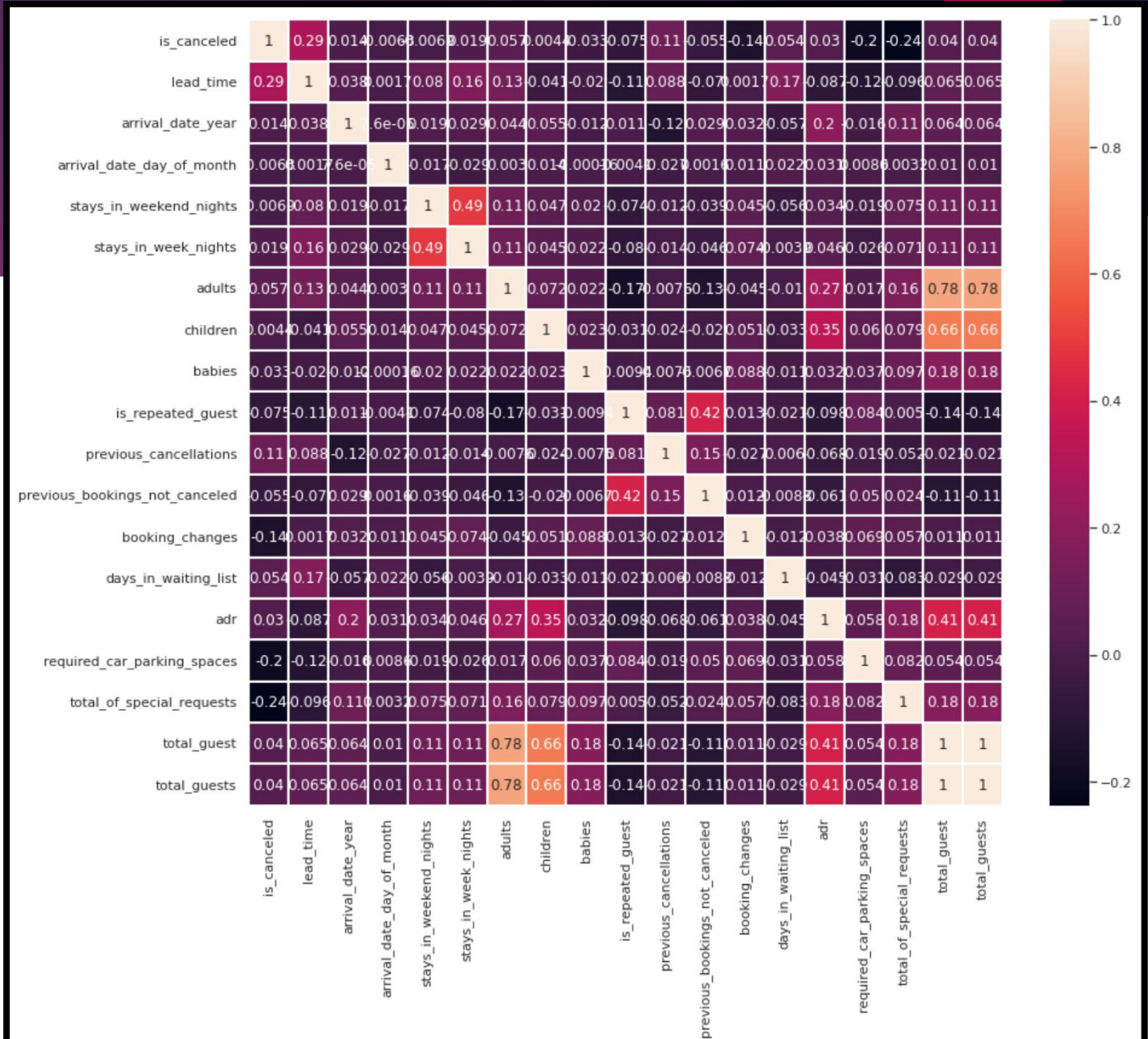
Car parking spaces.

Due to maximum booking City hotel must have more parking spaces compare to resorts.



Heatmap.

- I. Lead time and total stay is similar .
- II. Repeated guests are more.
- III. Previous booking not cancelled is similar with repeated guests because not more likely to cancel their bookings.



V.Challenges.

- Huge chunk of data was to be handled keeping in mind not to miss anything which is even of little relevance.
- Computation time.
- Feature selection quite challenges.

VI . Conclusion

This project contains the data records of city hotel and resort hotel details like booking , cancellations guests details etc. From 2015 to 2017.

1) **City hotel has more reservation** than resort hotel.

2) **City hotel has more cancellations** compared to resort hotel.

```
df.info()
```

```
<class 'pandas.core.frame.DataFrame':  
Int64Index: 117182 entries, 2 to 119:  
Data columns (total 32 columns):  
#   Column  
---  ---  
0   hotel  
1   is_canceled  
2   lead_time  
3   arrival_date_year  
4   arrival_date_month  
5   arrival_date_week_number  
6   arrival_date_day_of_month  
7   stays_in_weekend_nights  
8   stays_in_week_nights  
9   adults  
10  children  
11  babies  
12  meal  
13  country  
14  market_segment  
15  distribution_channel  
16  is_repeated_guest  
17  previous_cancellations  
18  previous_bookings_not_canceled  
19  reserved_room_type
```

Continue....

- 3) Resort hotels are choice for **large groups / families.**
- 4) City hotel has **more guests in August** and **resort hotel also** has more guests in August.
- 5) **High business** - March to October
- 6) **Low business** - November to January.



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7) More number of people in guests results in more number of **special requests**.

8) In 2016 city hotel **parking reached 300** and resort hotel has surge parking.

***THANK
YOU...***