Capstone Project

Hotel Booking Analysis

By Ayush Kumar

Points for Discussion

- Data Summary
- Hotel Types
- Bookings (Monthly/Yearly/Country/Market Segment/Distribution Channel)
- Daily Rate by Hotel Type
- Daily Rate Trend (Monthly/Yearly/3 Years)
- Lead Time
- Lead Time vs Daily Rate
- Meals
- Special Request (Country/Customer Type/Monthly)
- Cancellations(Monthly/Market Segment)
- Car Parking Space
- Room Type (Reserved/Denied)

Data Summary

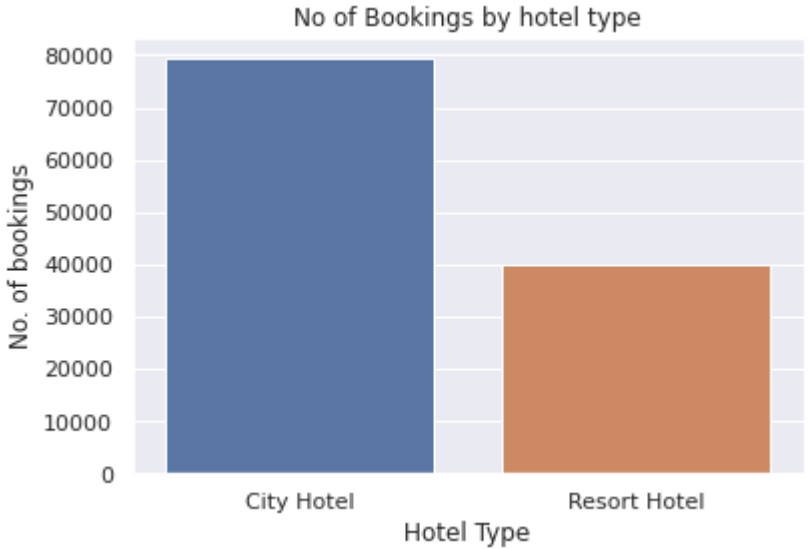
The **Hotel Booking Dataset** contains booking information for city and resort type hotels mainly in the years 2014, 2015 and 2016. It includes information like when the booking was made, length of stay, the number of adults, children and babies, and the number of available parking spaces, meals etc. This dataset contains more than 100,000 rows of data.

Hotel Types

There are two types of hotels:

- City Hotel
- Resort Hotel

Total number of bookings made in City Hotels is almost twice the number of bookings made in Resort Hotels.



Yearly Bookings

Total number of bookings made in the year 2016 was the highest and lowest in the year 2015.

Each year bookings are made in almost same ratio (i.e., 1:2) in Resort and City type hotels.

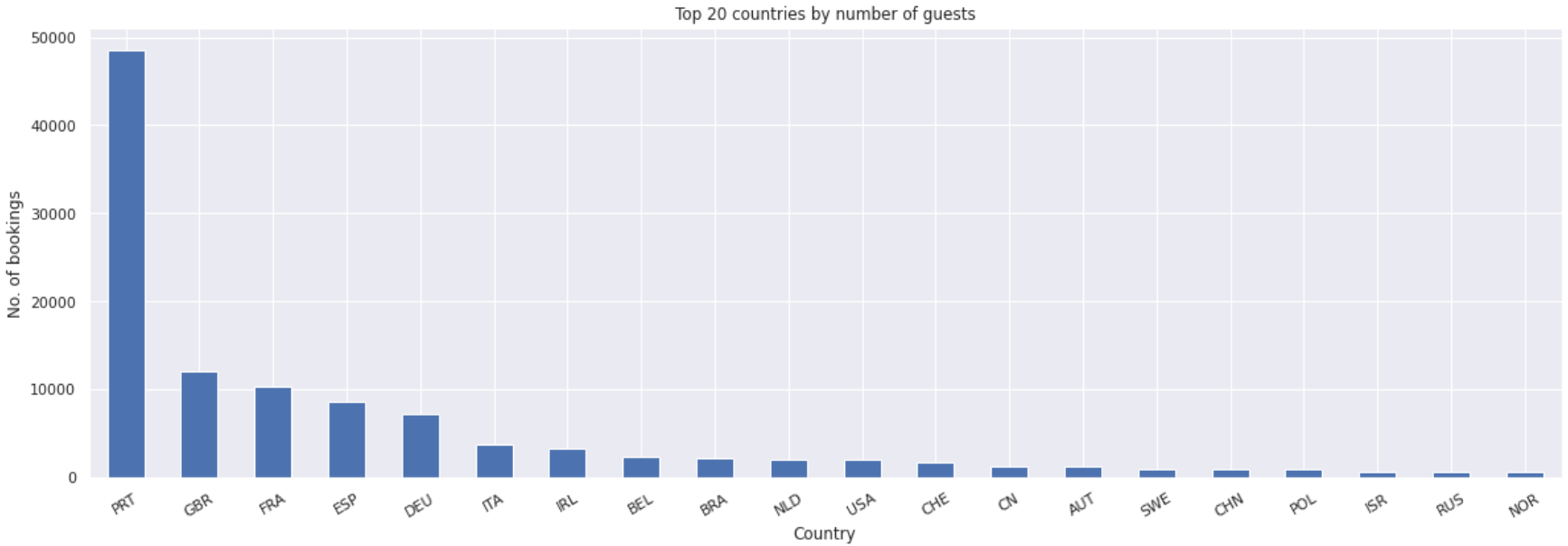
Monthly Bookings

On an average 9949 bookings are made per month.

More bookings are made during mid-year months around May to August, compared to other months.

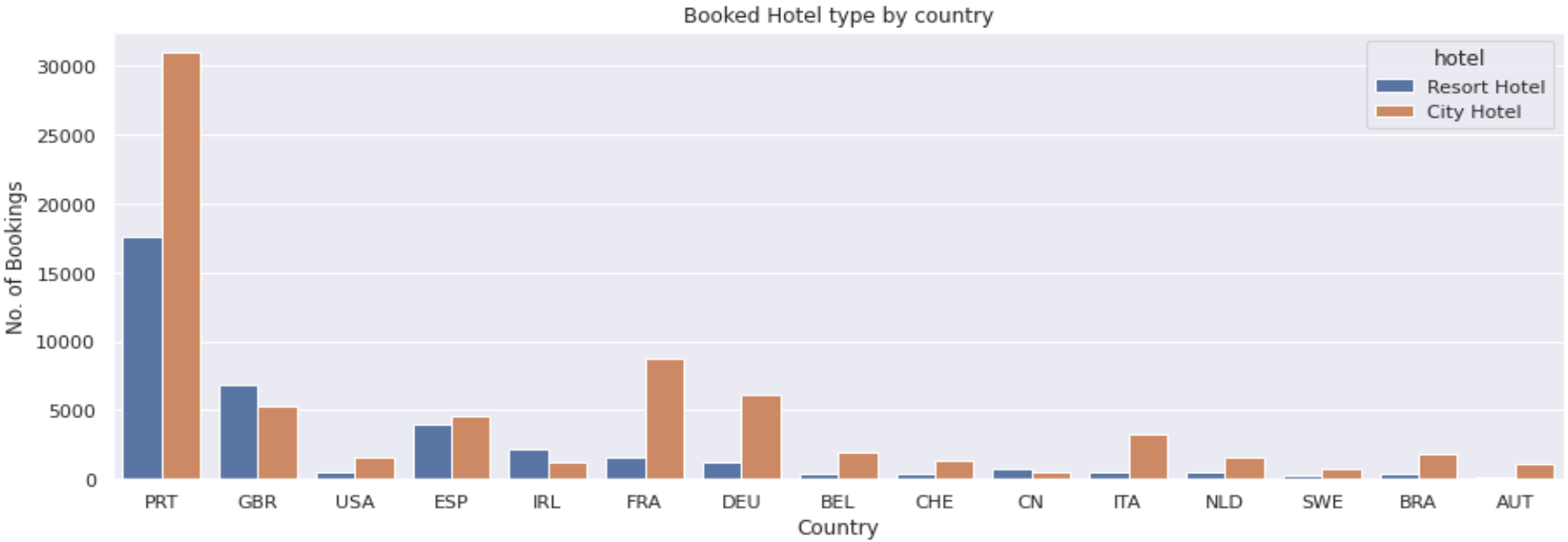
Bookings by Country

There are a total of 178 countries from where bookings were made in the hotels.



Booking Types by Country

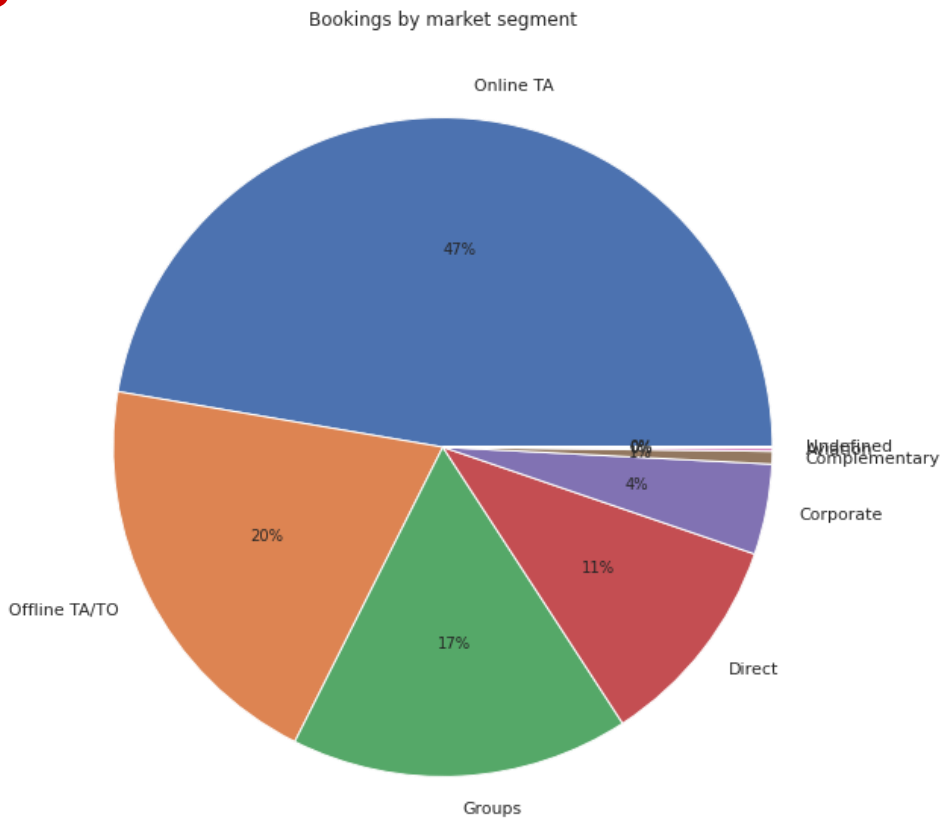
Unlike other countries, Britain & Ireland have more bookings for Resort hotels compared to City hotels.



Bookings by Market Segment

Online Travel Agents has the highest share of overall bookings i.e., 47%.

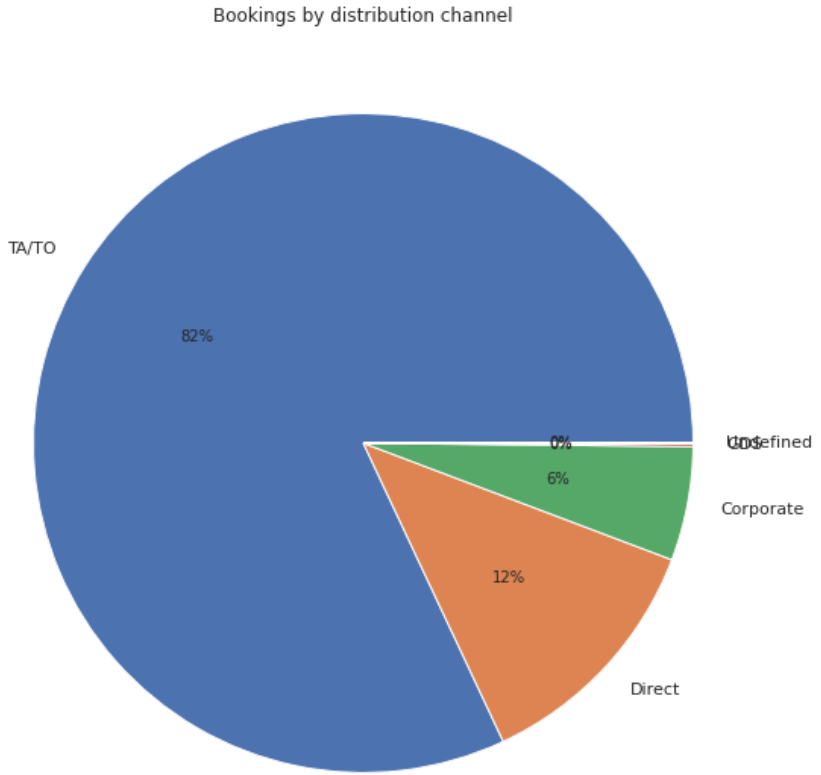
Almost 67% of bookings are done through Travel Agents & Tour Operators (Online/Offline)



Bookings by Distribution Channel

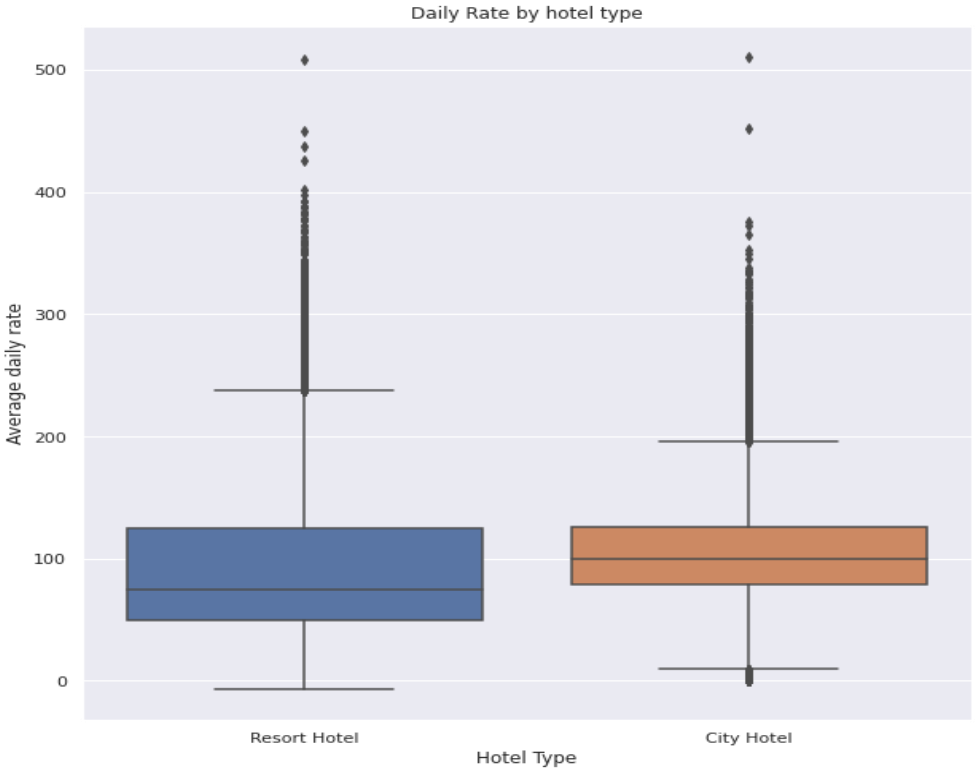
More than 80% of bookings are done through TA/TO distribution channel.

Other major distribution channels are Direct and Corporate.



Daily Rate by Hotel Type

The average daily rate for Resort Hotels are more spread compared to City Hotels although have lesser median rate.



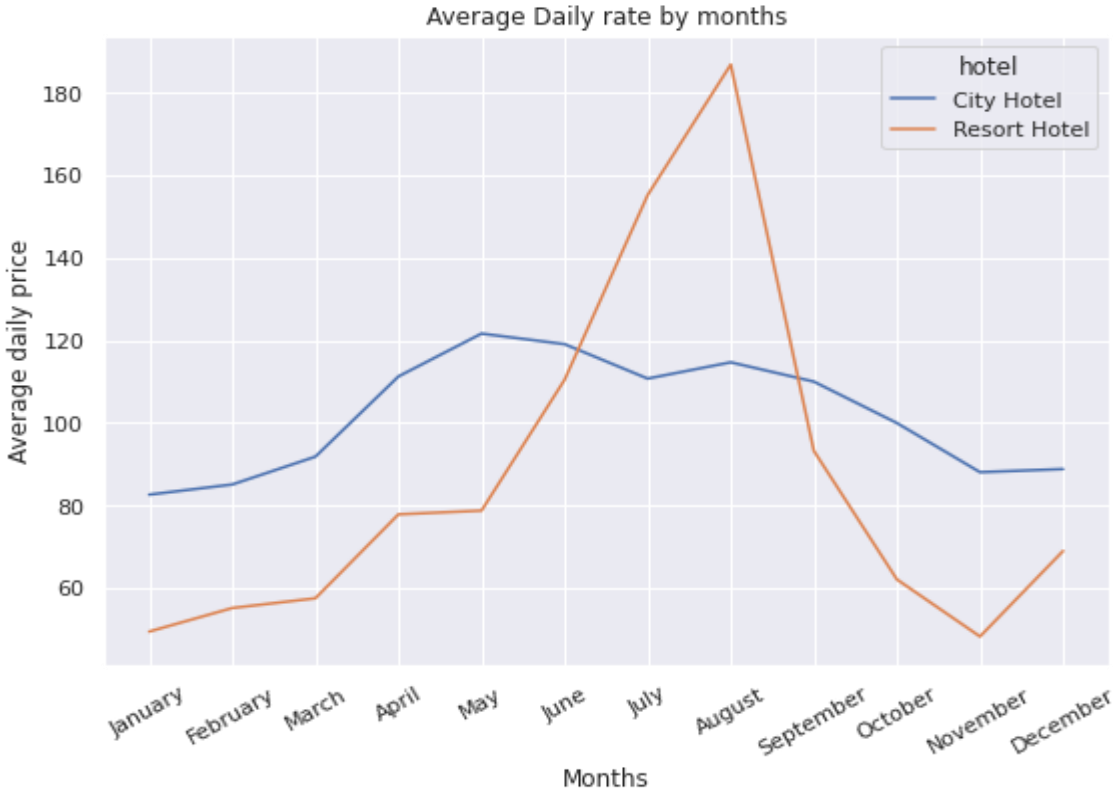
Daily Rate by Hotel Type

Most bookings for Resort hotels ranges from 30 to 100,

Whereas most bookings for City hotels ranges from 60 to 150.

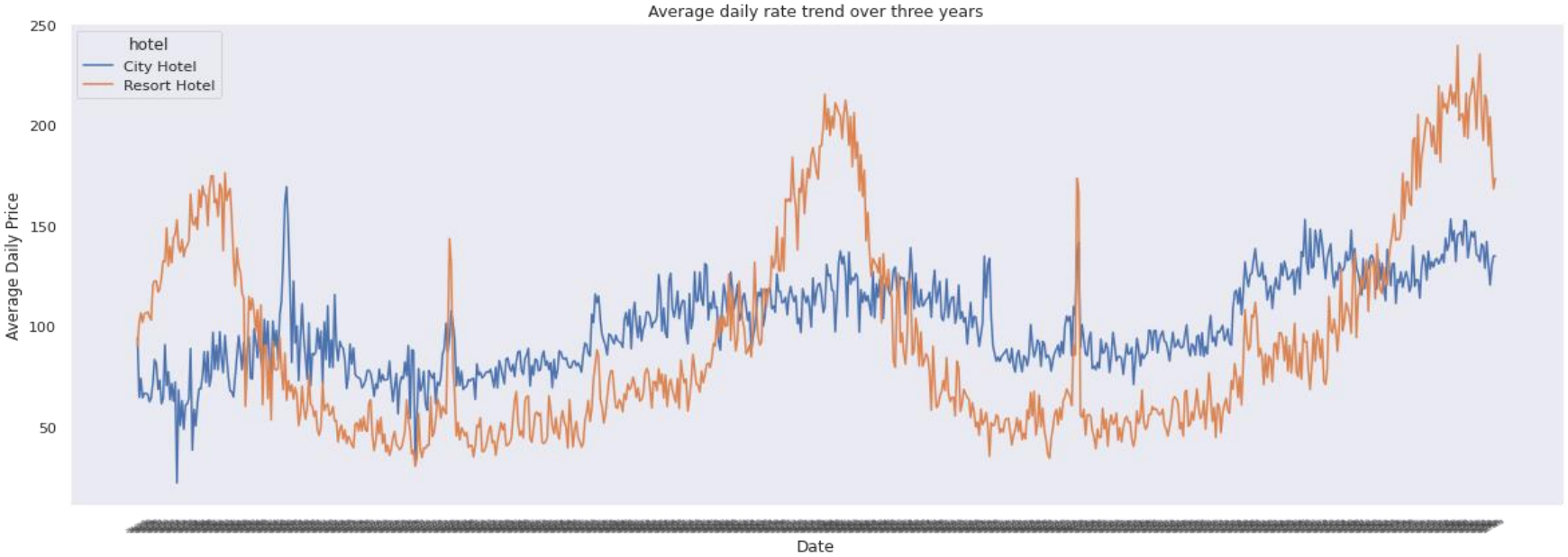
Daily Rates by Months

Mid-year months have higher daily rates which is obvious as No. of bookings for mid-year months are higher compared to end and starting months of the year.



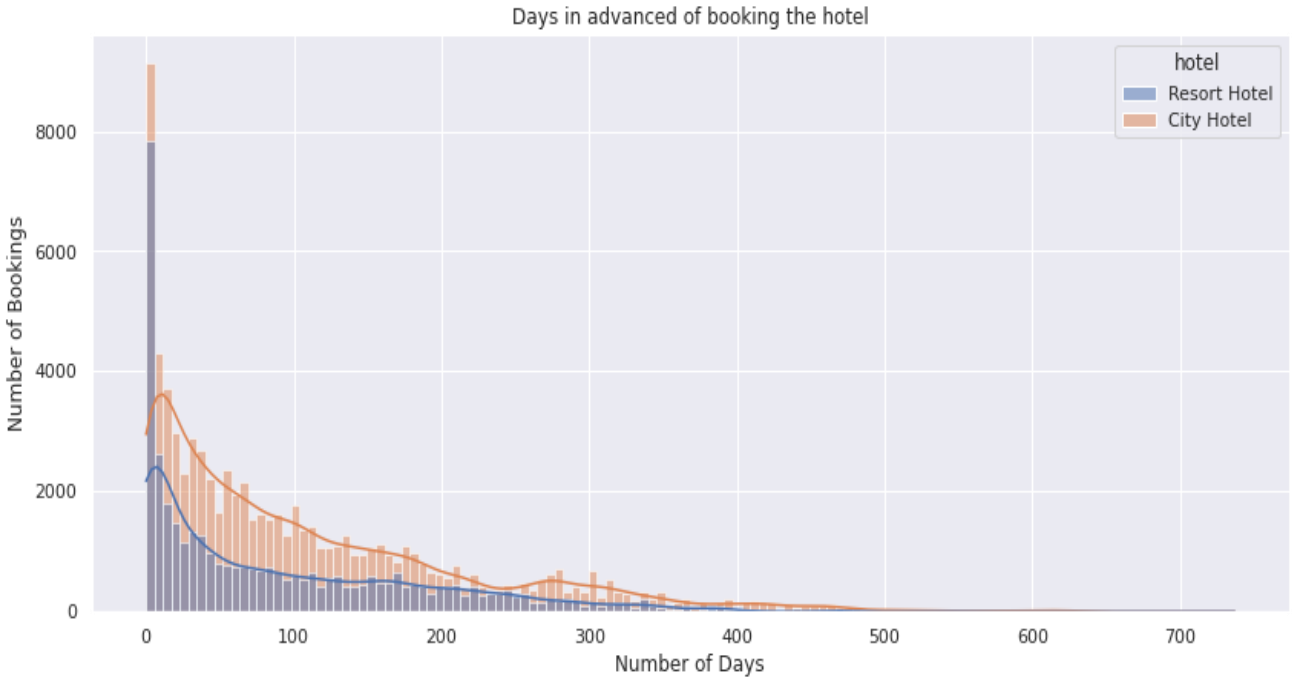
Daily Rates over three years

Highest daily price (for each year) is increasing every year for both types of hotels.



Lead Time

Majority of the bookings are done within 100 days of check-in date to the hotel.



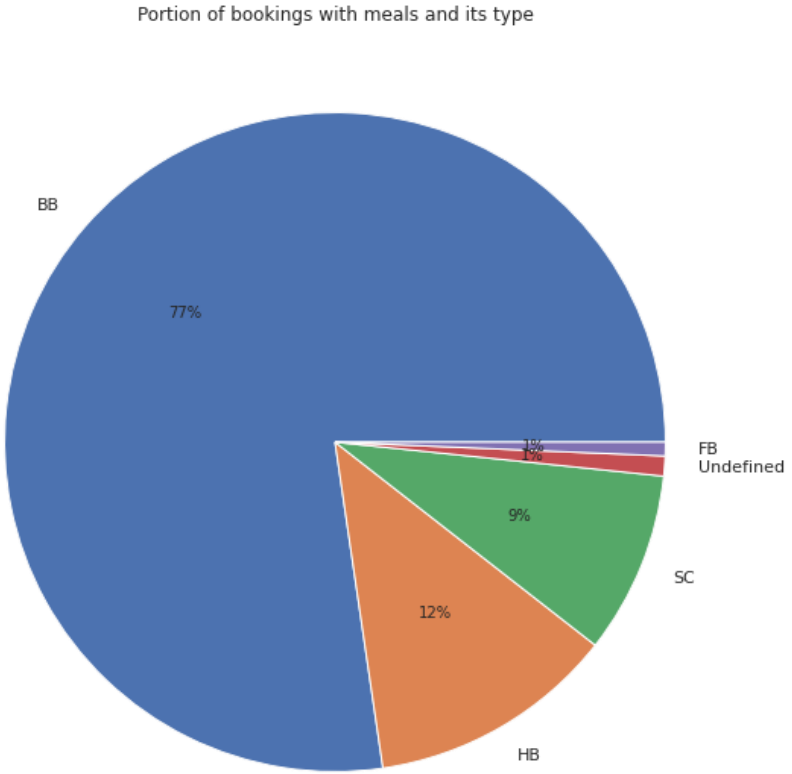
Lead Time vs Daily Rate

Not very strong but there is a downward trend that longer lead time have less daily rate in both hotel types.

Meals

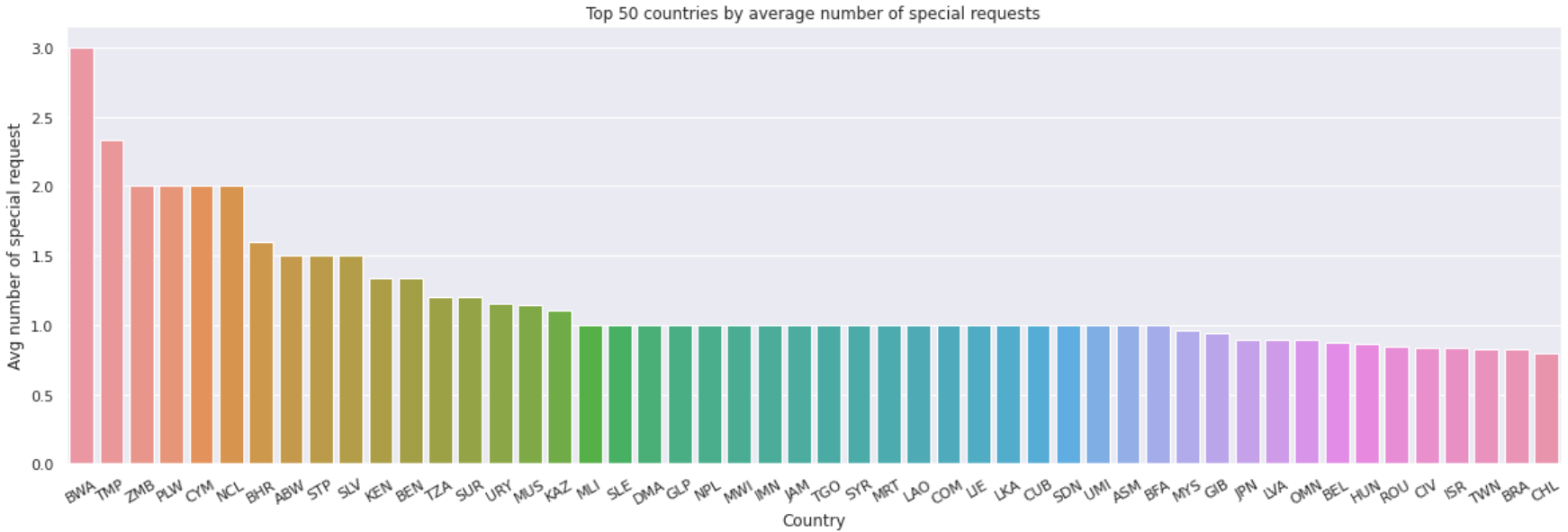
Almost 90% of total guests books meal in their bookings, among which majority books meal of type BB.

Undefined/SC – No meals



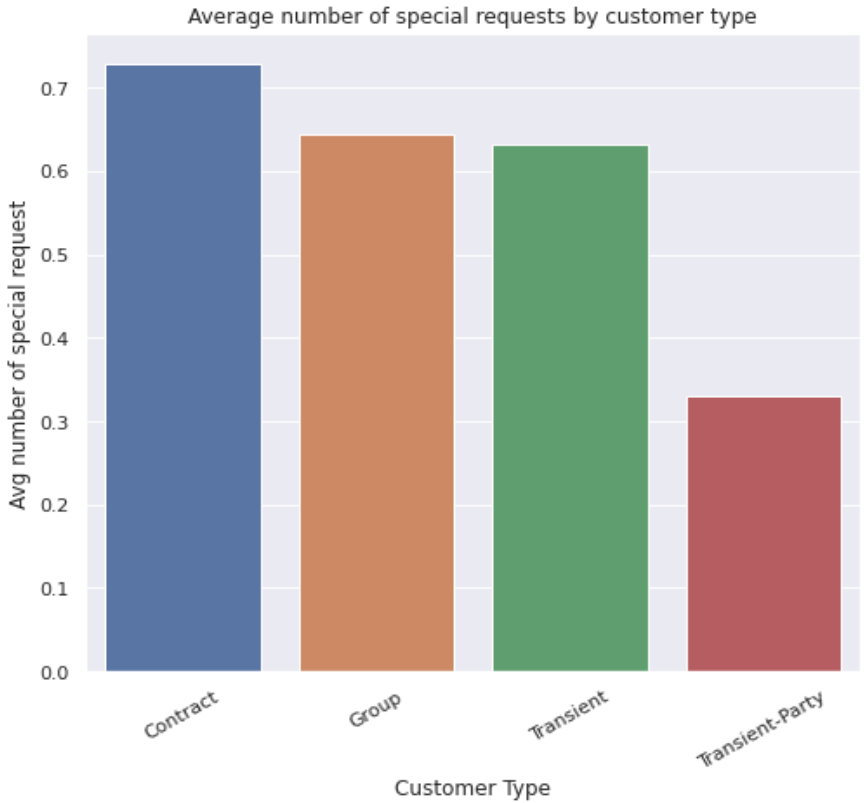
Special Requests by Country

Botswana, East Timor, Zambia are some countries with highest number of special requests.



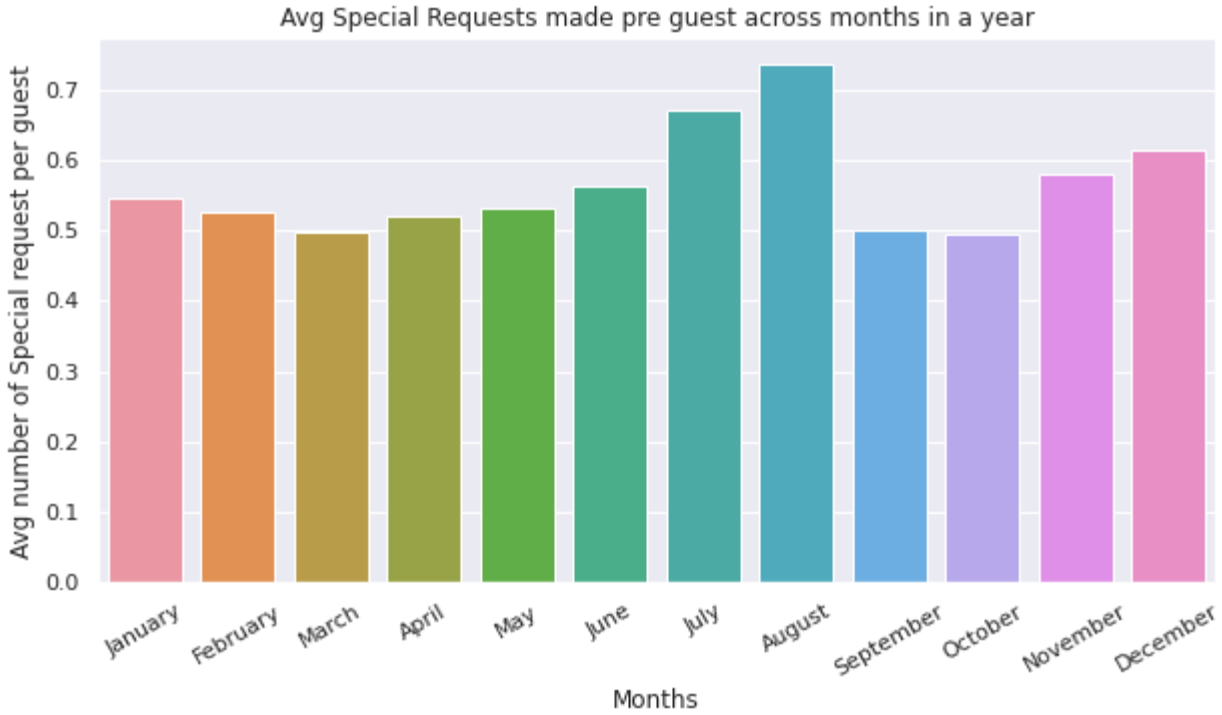
Special Requests by Customer Type

On an average Contract based customers makes most special requests,
Whereas Transient-Party makes least special requests.



Monthly Special Requests

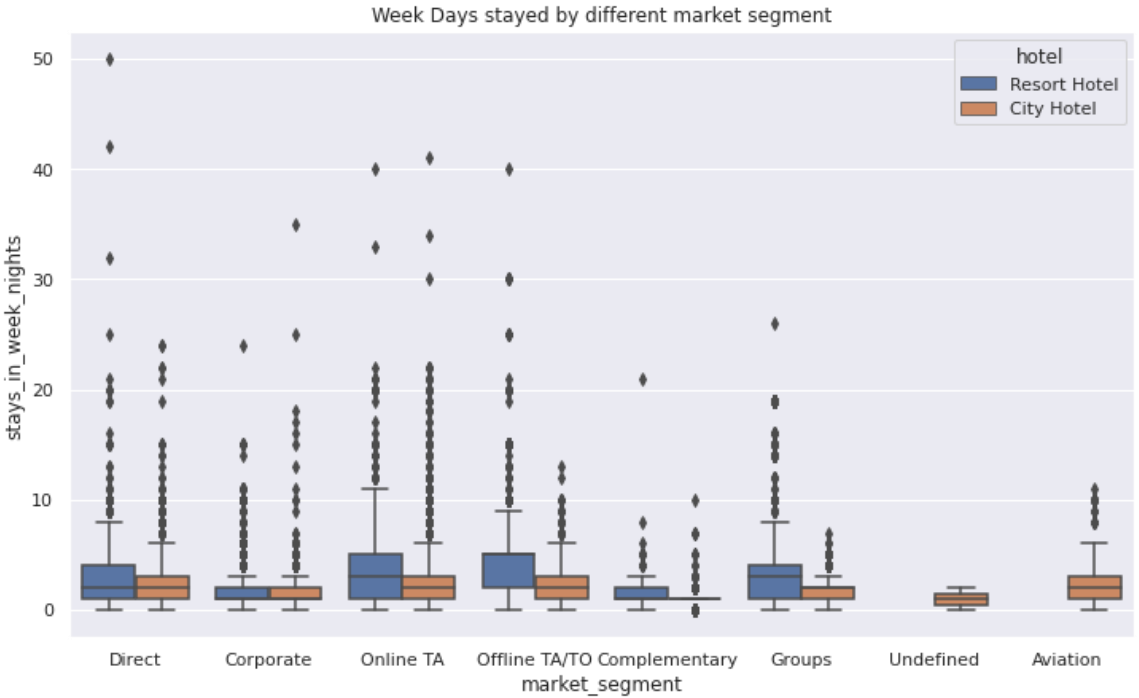
Almost similar number of special request per guest throughout the year with slightly more in July, August & December.



Days stayed by Market Segment

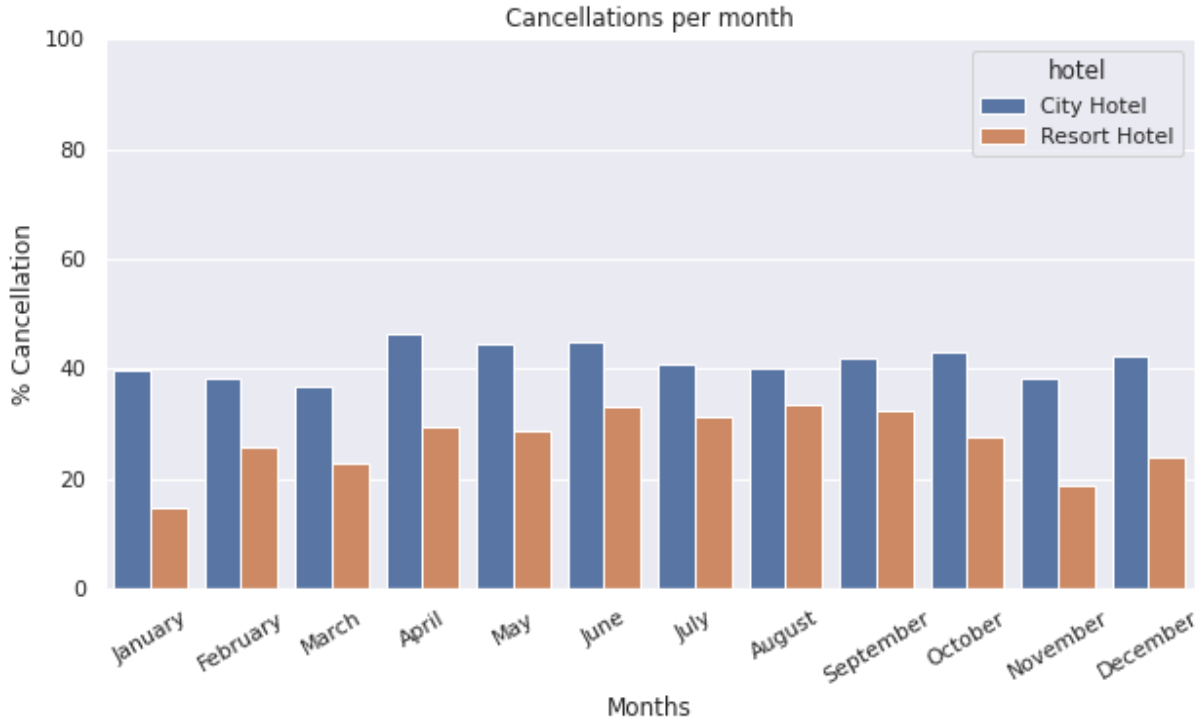
Most people do not seem to stay at the city hotel for more than a week.

But it seems normal to stay in resort hotels for more than a week.



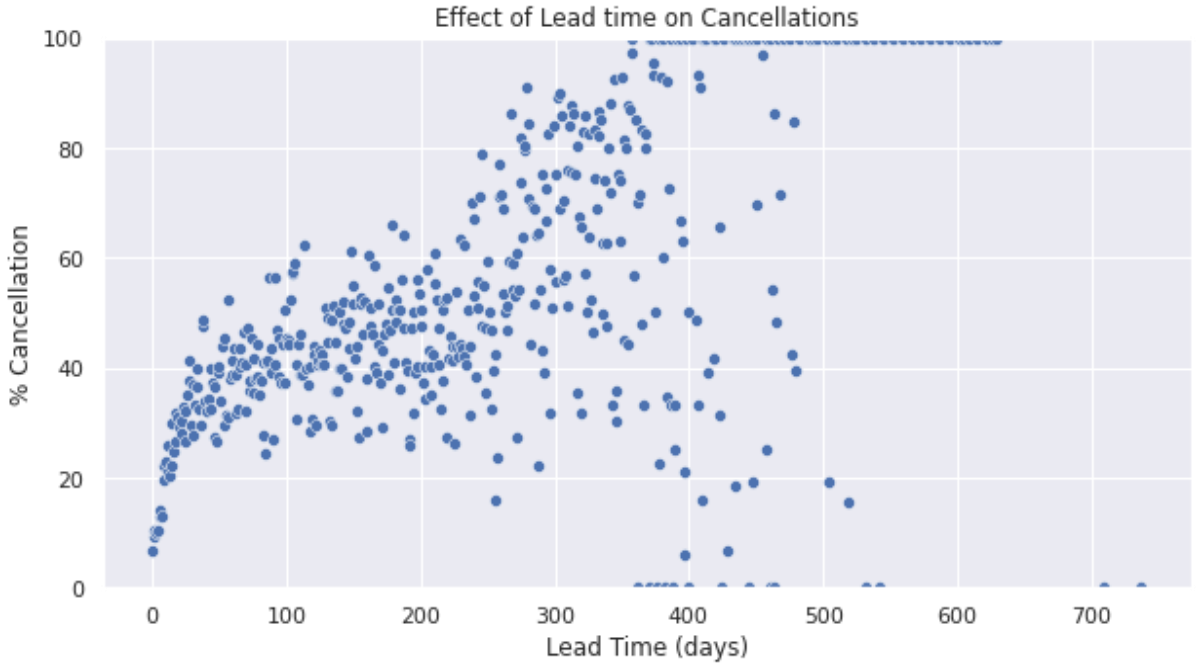
Monthly Cancellations

For city hotels the percentage cancellations are similar across all months whereas for resort hotels there are more cancellations during mid-year months of the year.



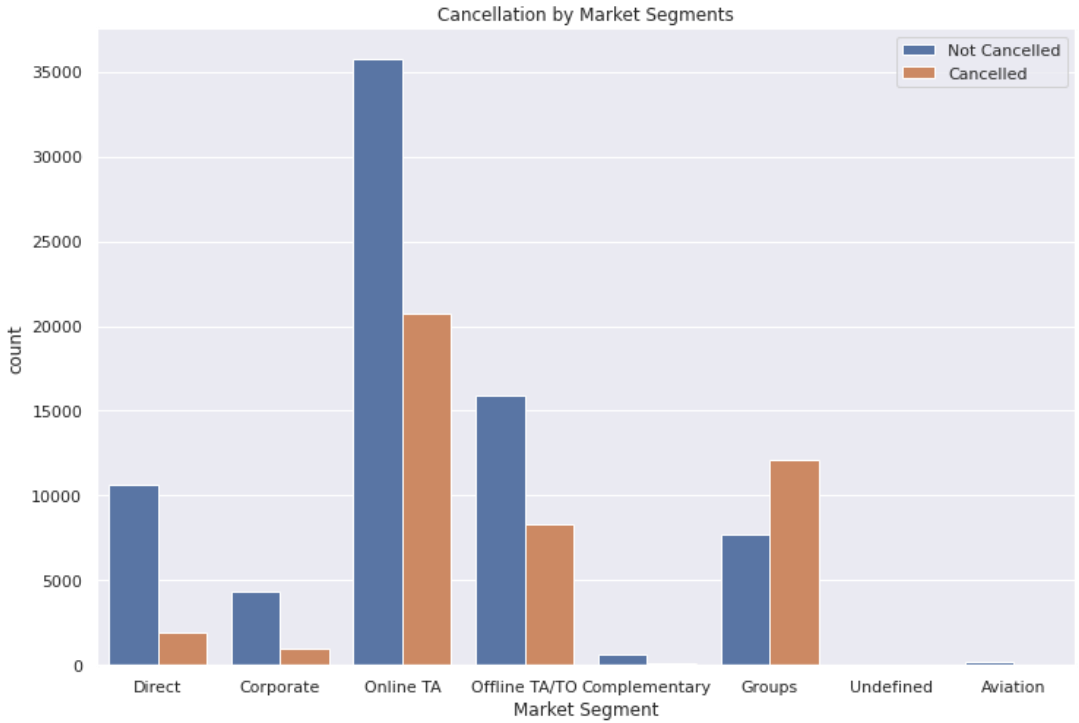
Lead Time vs Cancellations

Bookings having less lead time are less often cancelled whereas high lead time bookings are more often cancelled. It shows positive correlation.



Cancellations by Market Segment

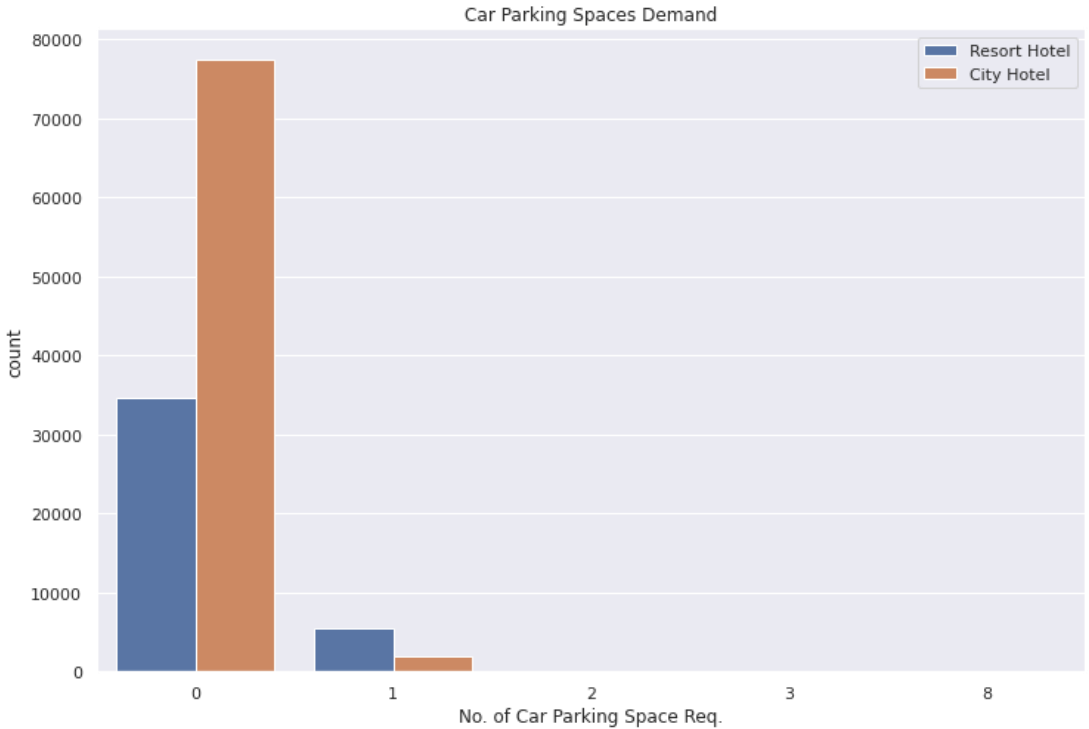
Group Bookings gets cancelled more often. Direct segment has quite low cancellation rate compared to total number of bookings. For Offline TA/TO & Online TA have almost 50% cancellation rates.



Car Parking Space

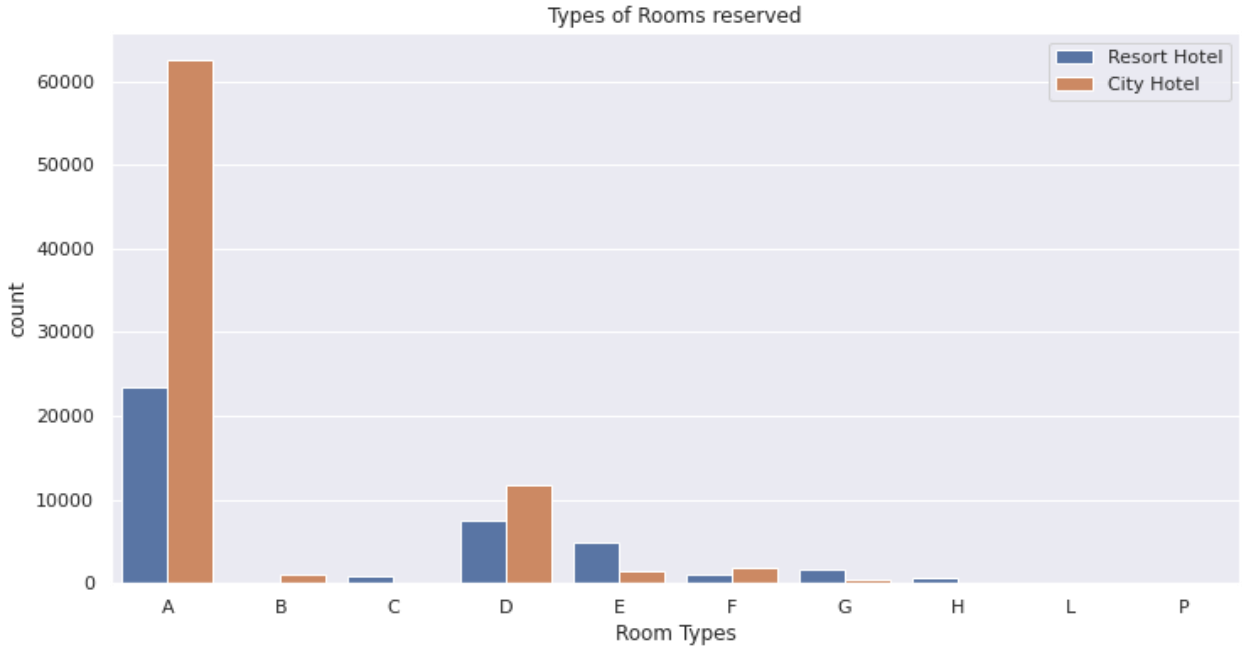
More than 93% guests don't need parking space.

Approx. 6% guests need parking space for 1 car.



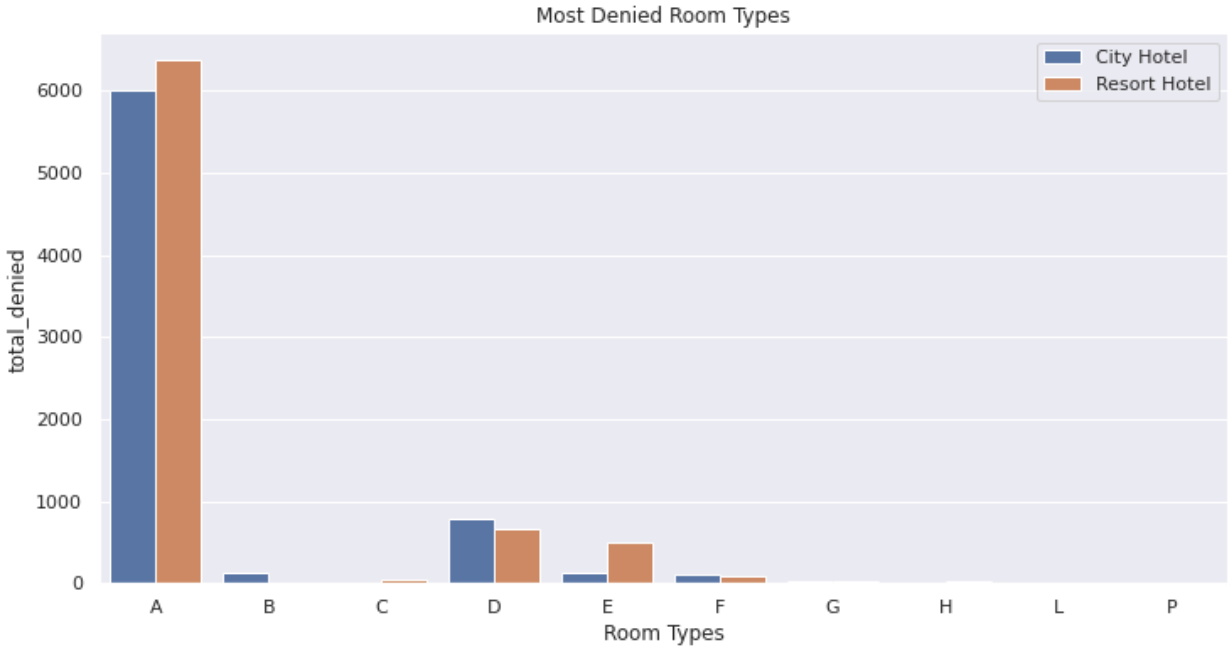
Room Types

Most of guests reserves rooms of type 'A', also significant number of guests also reserves room type 'D' & 'E'. Demand for rest types are very minimal.



Denied Room Types

Obviously, Room types A, D and E have more demand hence more denials.



Thank You!