## Business Problem

In recent years, City Hotel and Resort Hotel have seen high cancelation rates. Each hotel is now dealing with a number of issues as a result, including fewer revenues and less than ideal hotel room use. Consequently, lowering cancellation rates is both hotels' primary goal in order to increase their efficiency in generating revenue, and for us to offer thorough business advice to address this problem.

The analysis of hotel booking cancellations as well as other factors that have no bearing on their business and yearly revenue generation are the main topics of this report.

## About Dataset

This dataset contains 119390 observations for a City Hotel and a Resort Hotel. Each observation represents a hotel booking between the 1st of July 2015 and 31st of August 2017, including booking that effectively arrived and booking that were cancelled.

## Hypothesis

More cancellations occur when prices are higher.

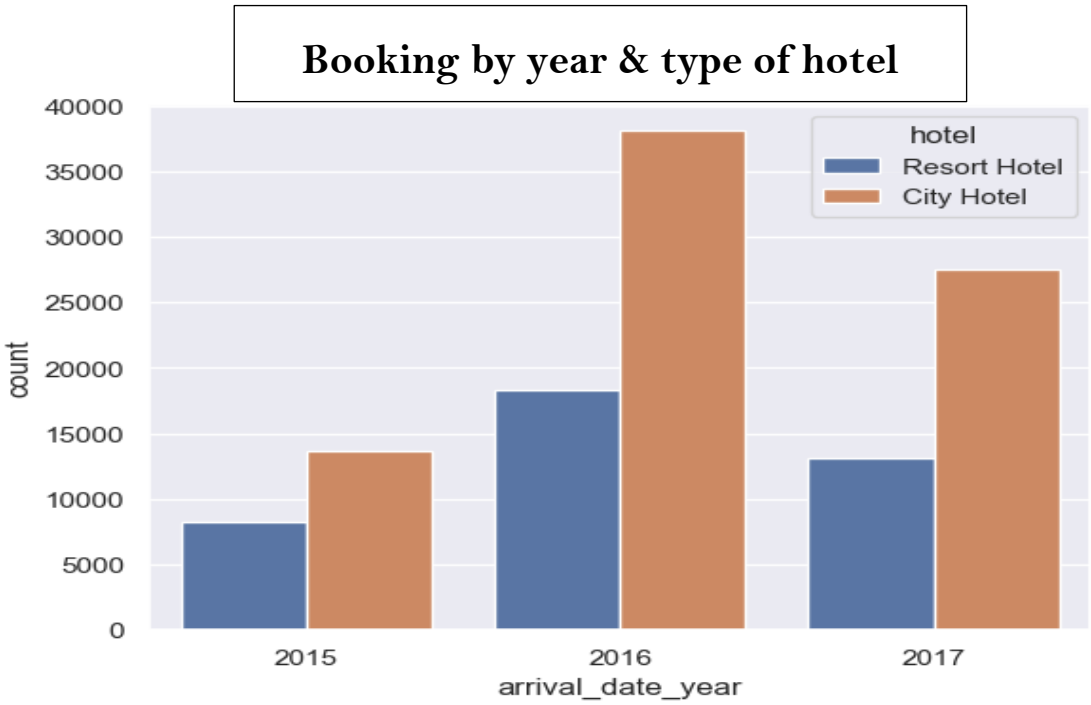
When there is a longer waiting list, customers tend to cancel more frequently.

The majority of clients are coming from offline travel agents to make their reservations.

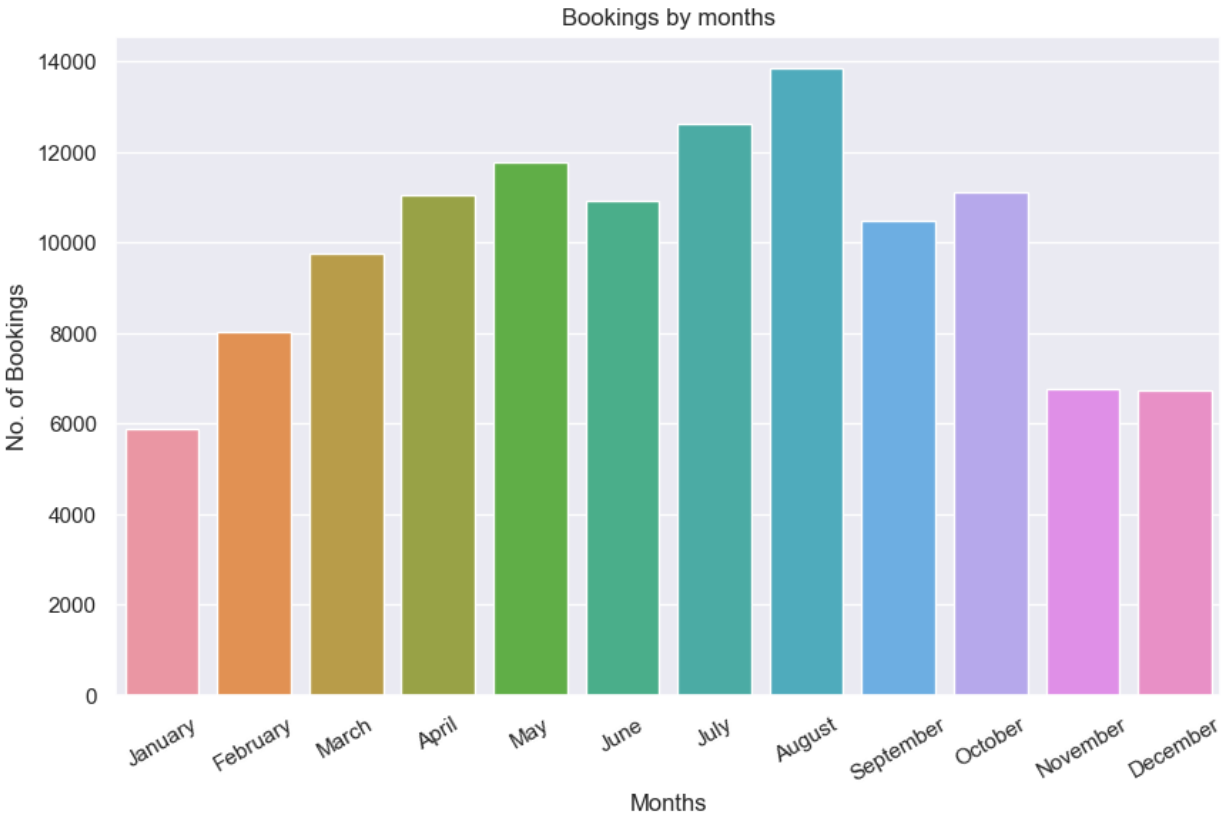
## Analysis and Finding

In this above graph we can see booking of hotels. We can see City hotel bookings are more than Resort hotel.

In comparison in these two hotels non-cancelled status of city hotel is higher than resort hotel and cancelled status is more in city hotel compare to resort hotel. It's possible that resort hotel is more expensive than other hotels in cities.

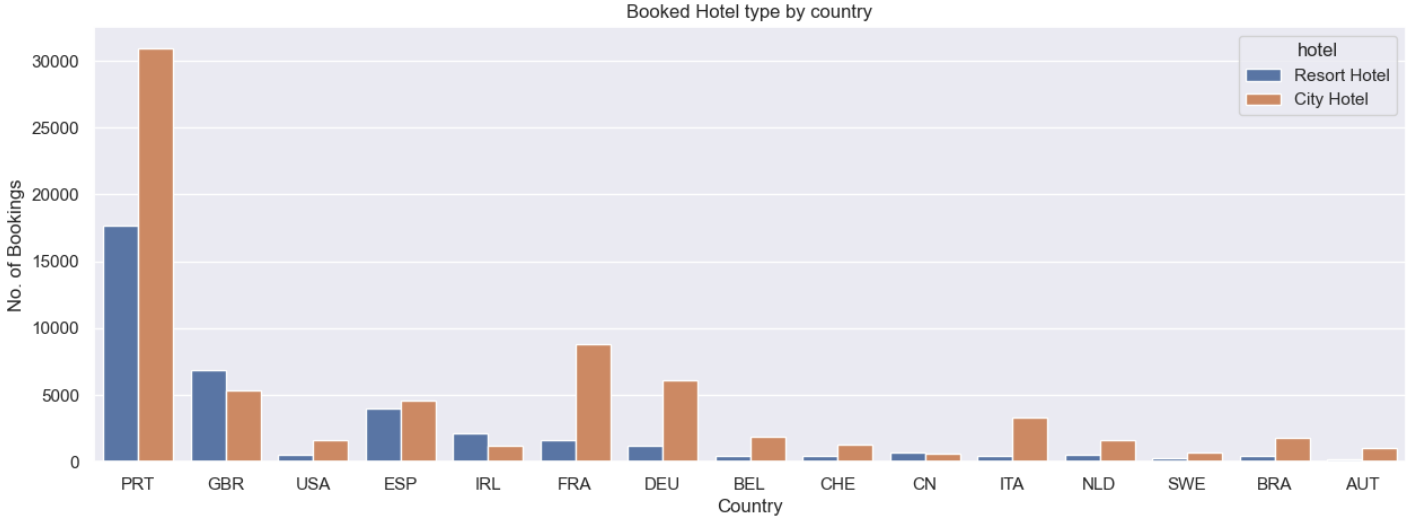


In the above graph, in 2015 the booking of city hotel and resort hotel was less but in year 2016 the booking rate was much higher but again in 2017 the booking rate came down. In comparison to both the hotels city hotel booking rate was higher than resort hotel.



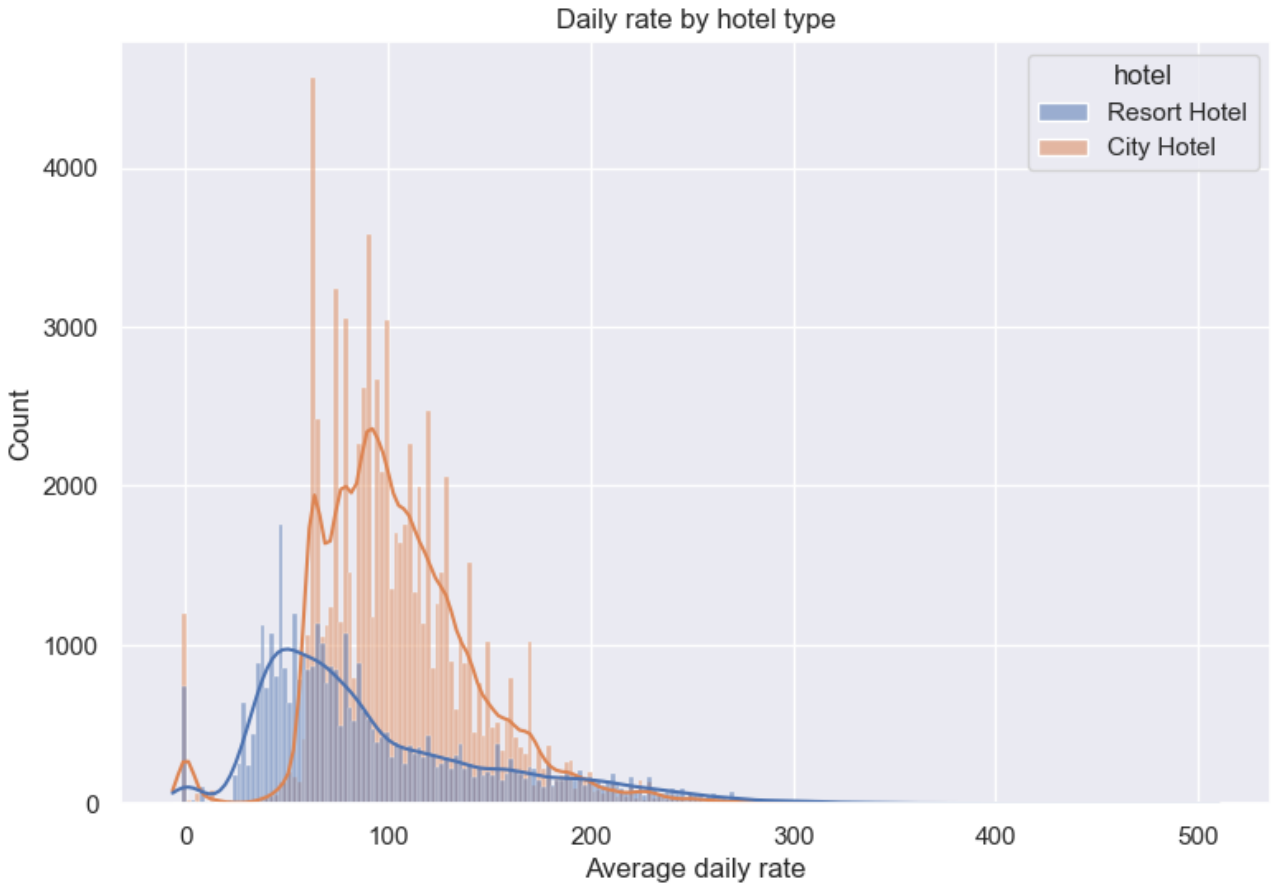

August, July and May are months having most bookings and November, December and January are months having least bookings.

**Countries by number of guests**



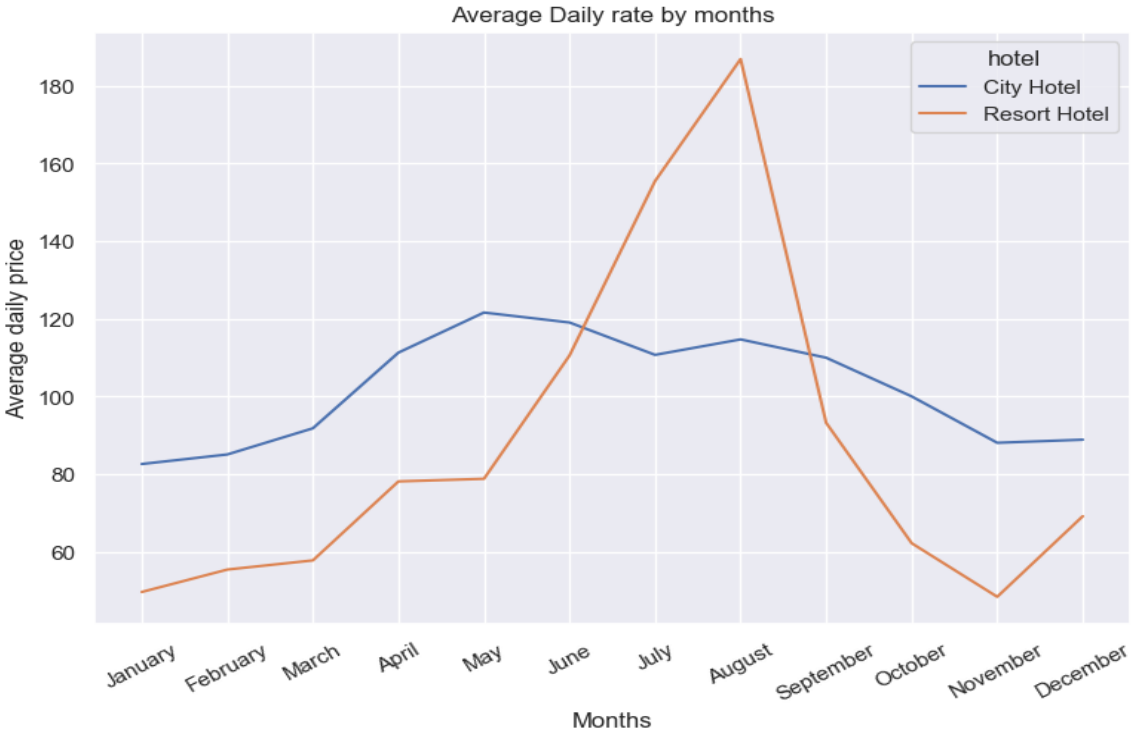
The country of Portugal (PRT) has significantly higher number of bookings compared to any other countries. We can see that Portugal's booking rate in city hotel is much higher than resort hotel. As well as we can see that in other countries booking rate of city hotel is more than resort hotel.

Daily rate



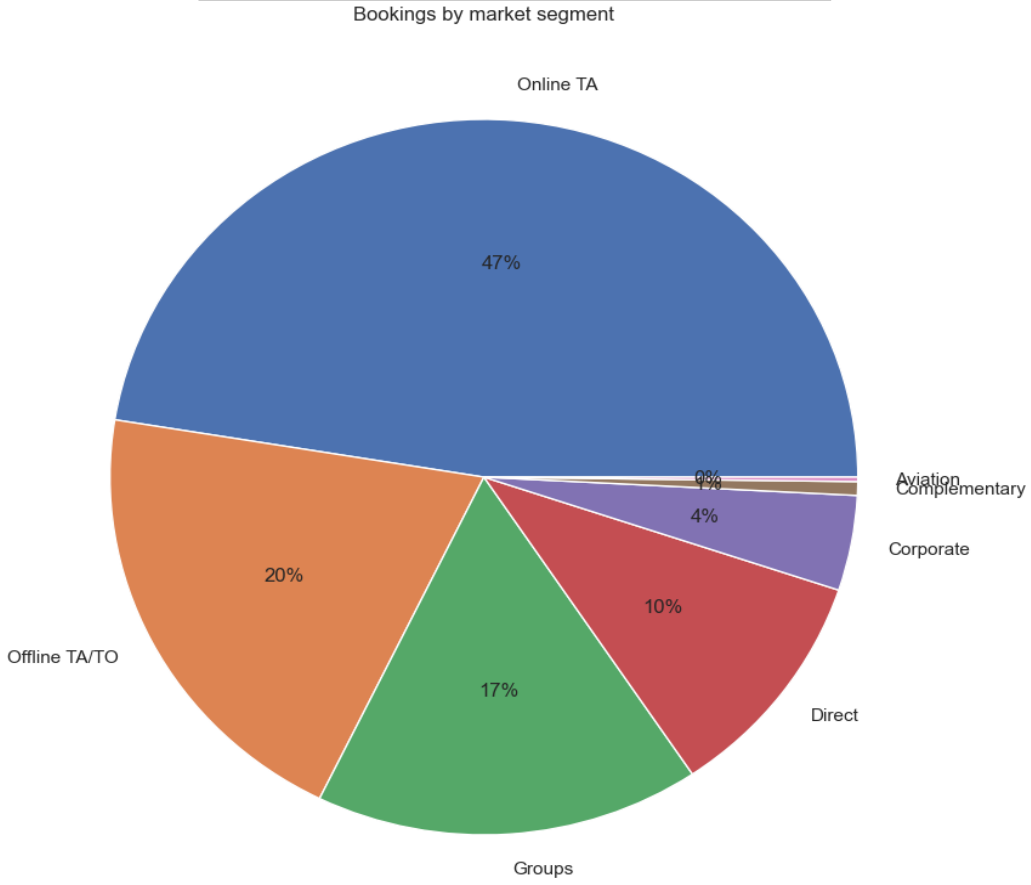

Average daily rate of resort hotel is less than city hotel.

## Average daily rate by months



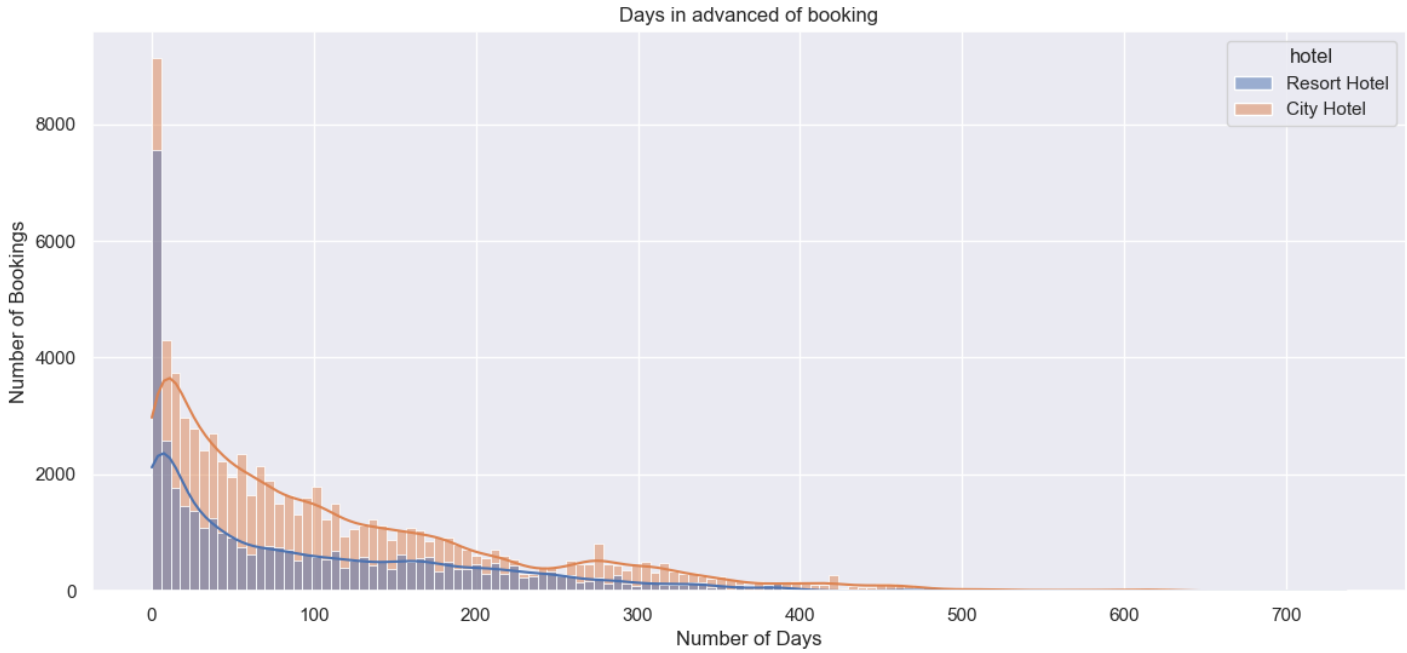

We can see mid-year months have higher daily prices which is obvious that No. of bookings of mid-year months are higher than the rest of the months.

## Bookings by market segment



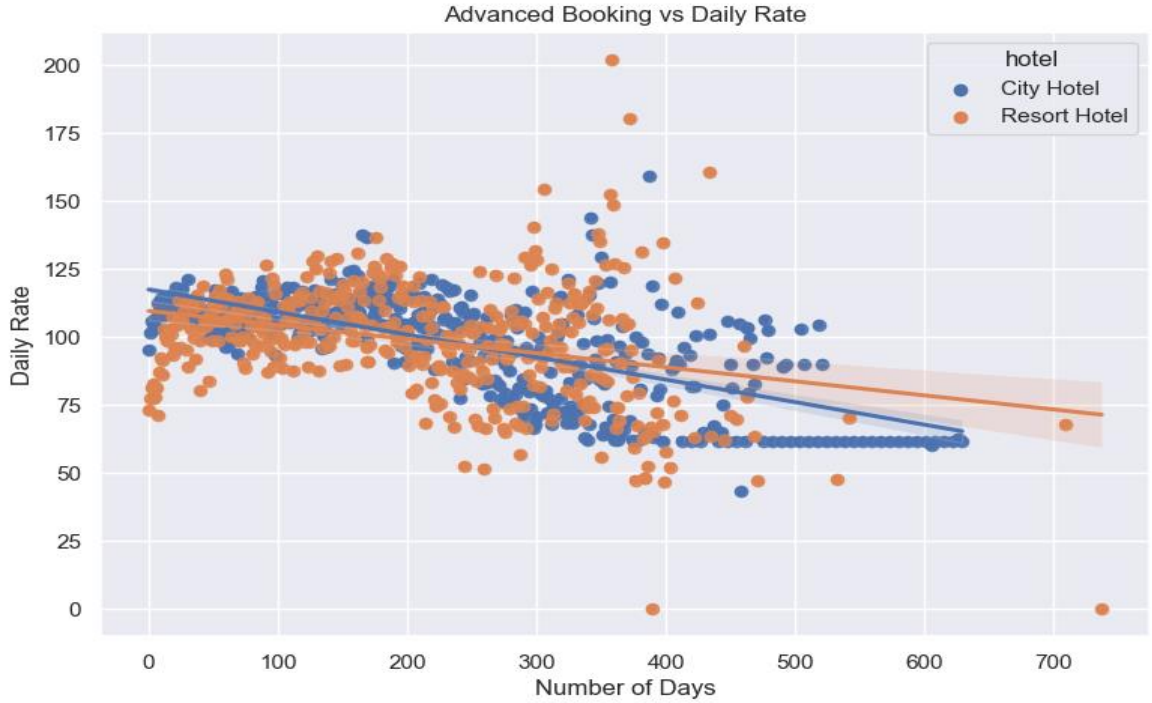
Almost half of bookings was done through Online Travel Agents (TA). More than 90% bookings was done by Online TA, Offline TA/TO, Groups & Direct.

## Days in advanced for bookings



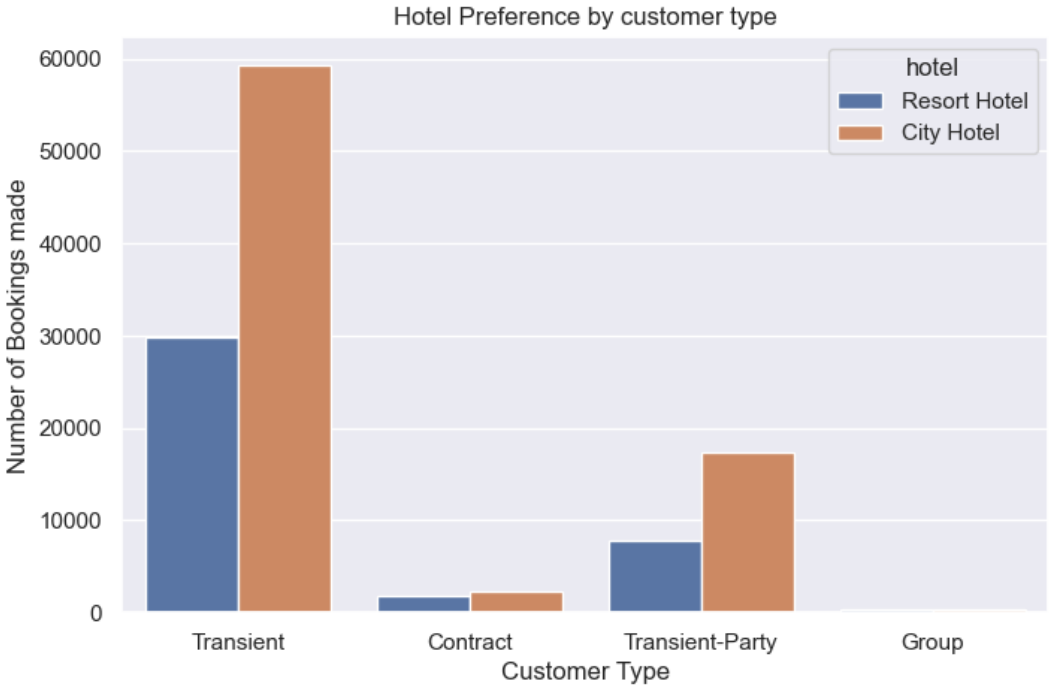

As we can see in graph most bookings are done within 100 days of check-in date to hotel.

## Advanced booking vs daily rate



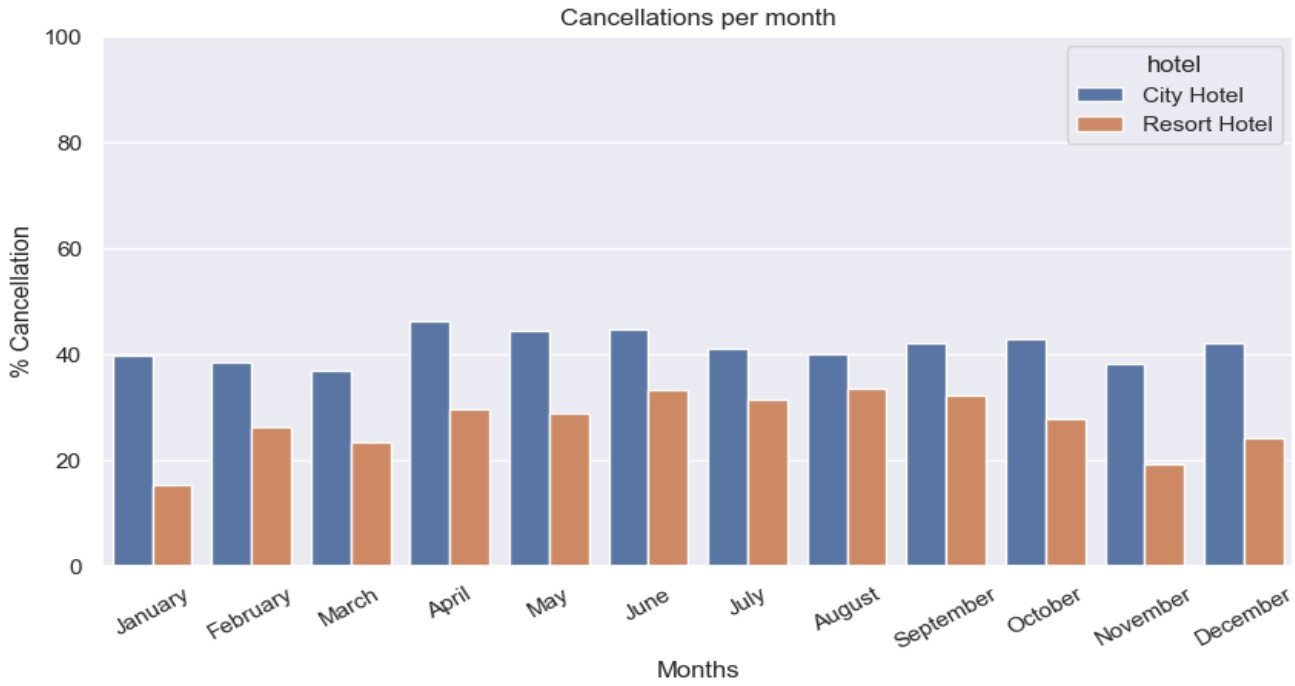
Not very strong but there is a downward trend that longer lead time have less daily rate.

Hotel preference by customer type



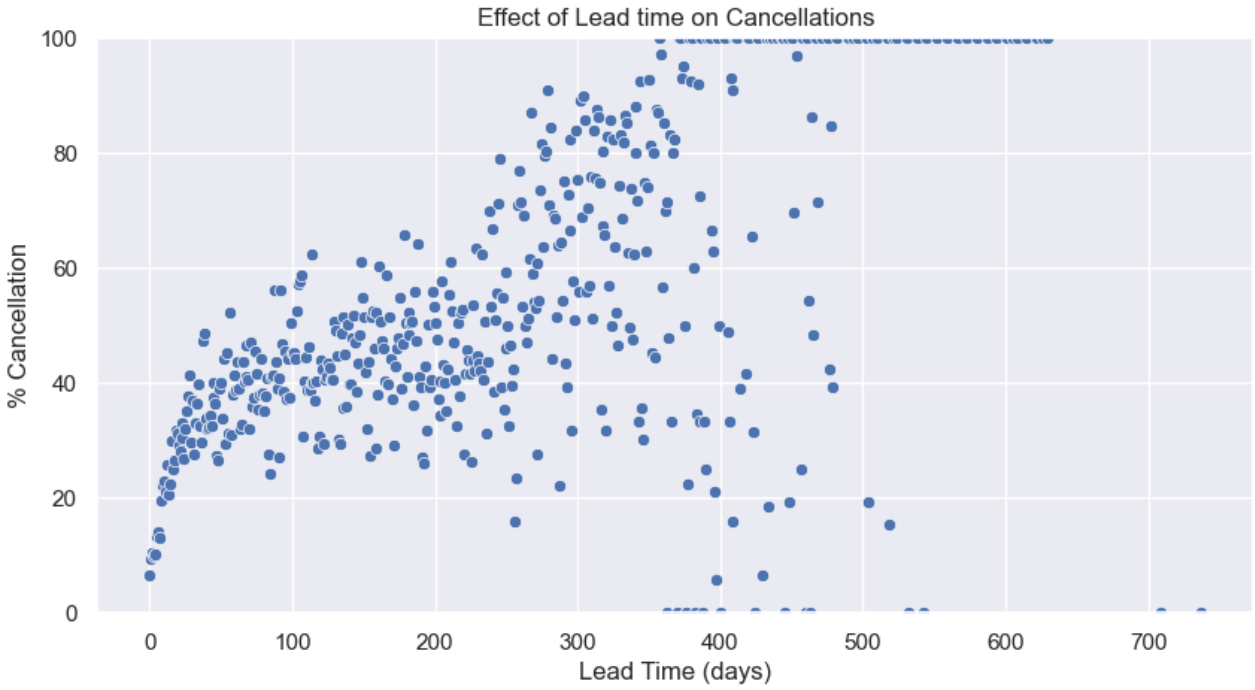

Almost every customer type makes more bookings in City Hotels compared to Resort Hotel.

Cancellation per month



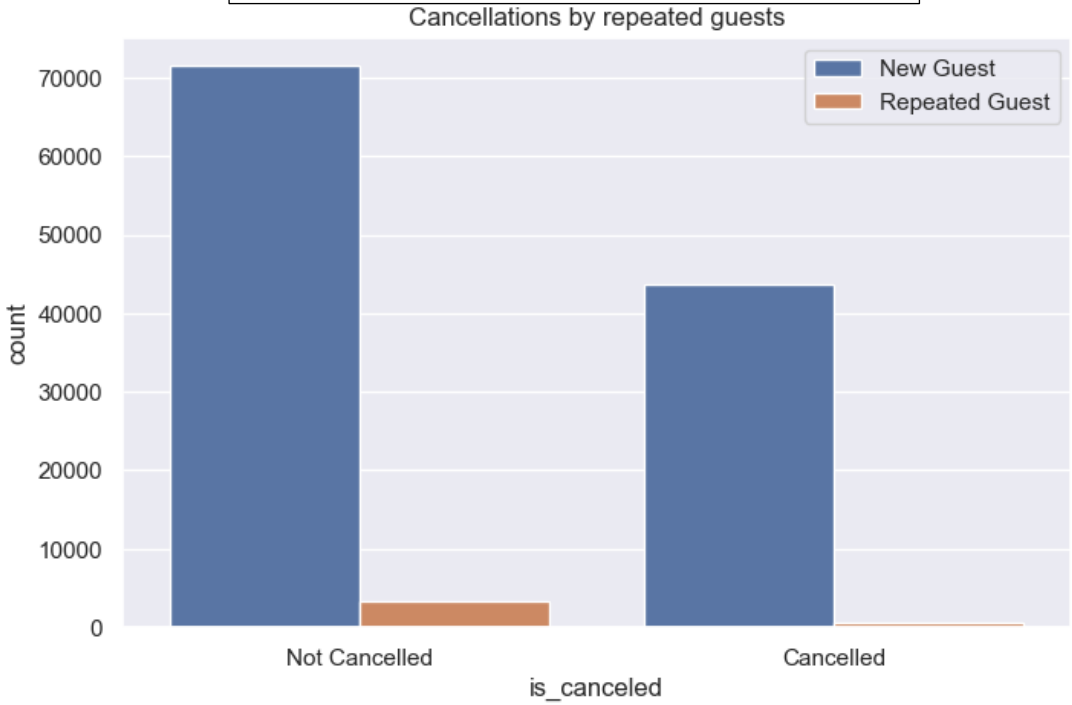
For City Hotels the percentage cancellations are similar across all months whereas for resort Hotels there are more cancellations during mid-year months of the year.

Lead time cancellation



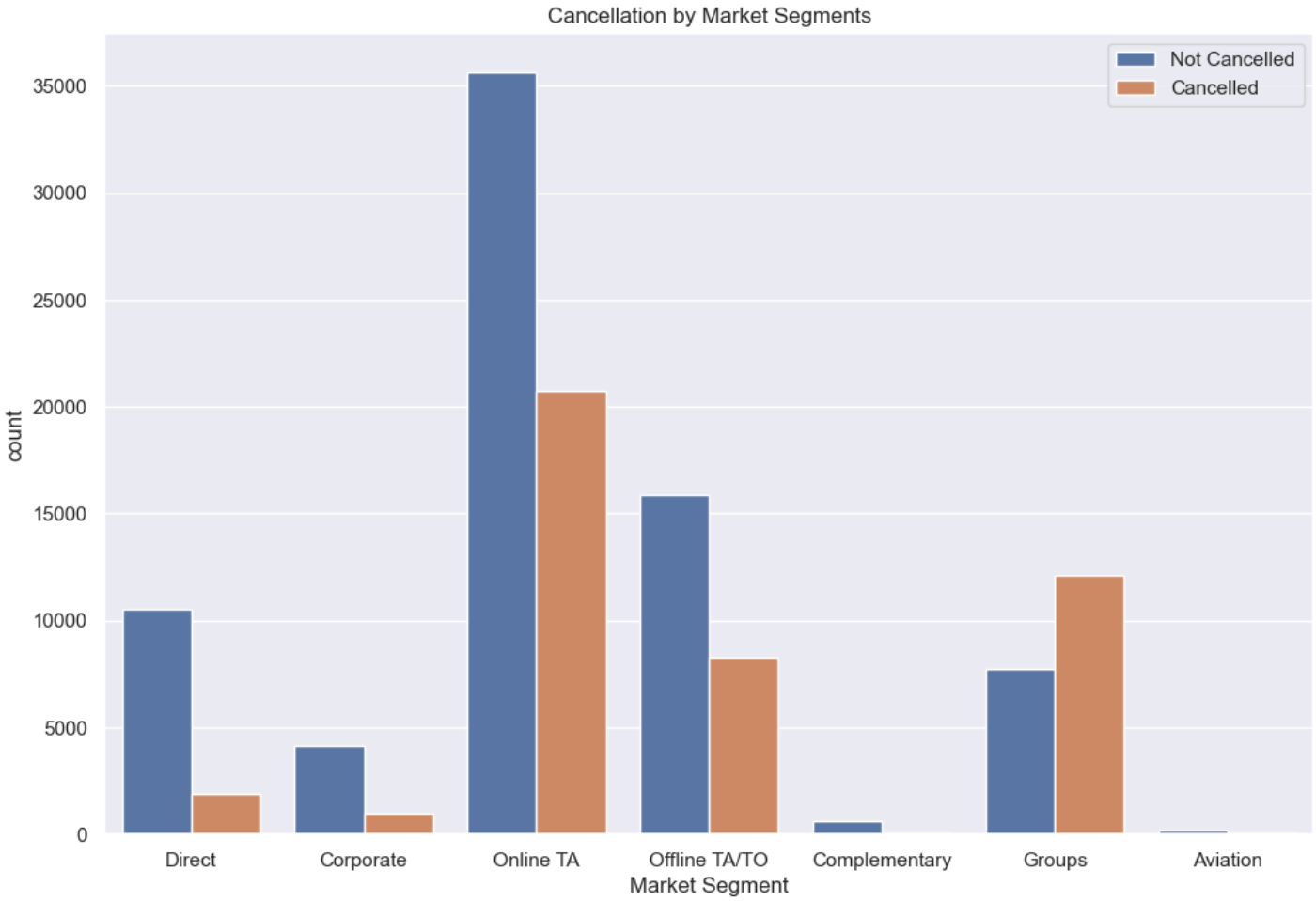

Bookings having less lead time are less often cancelled whereas high lead time bookings are more often cancelled. It shows positive correlation.

Cancellation by repeated guests



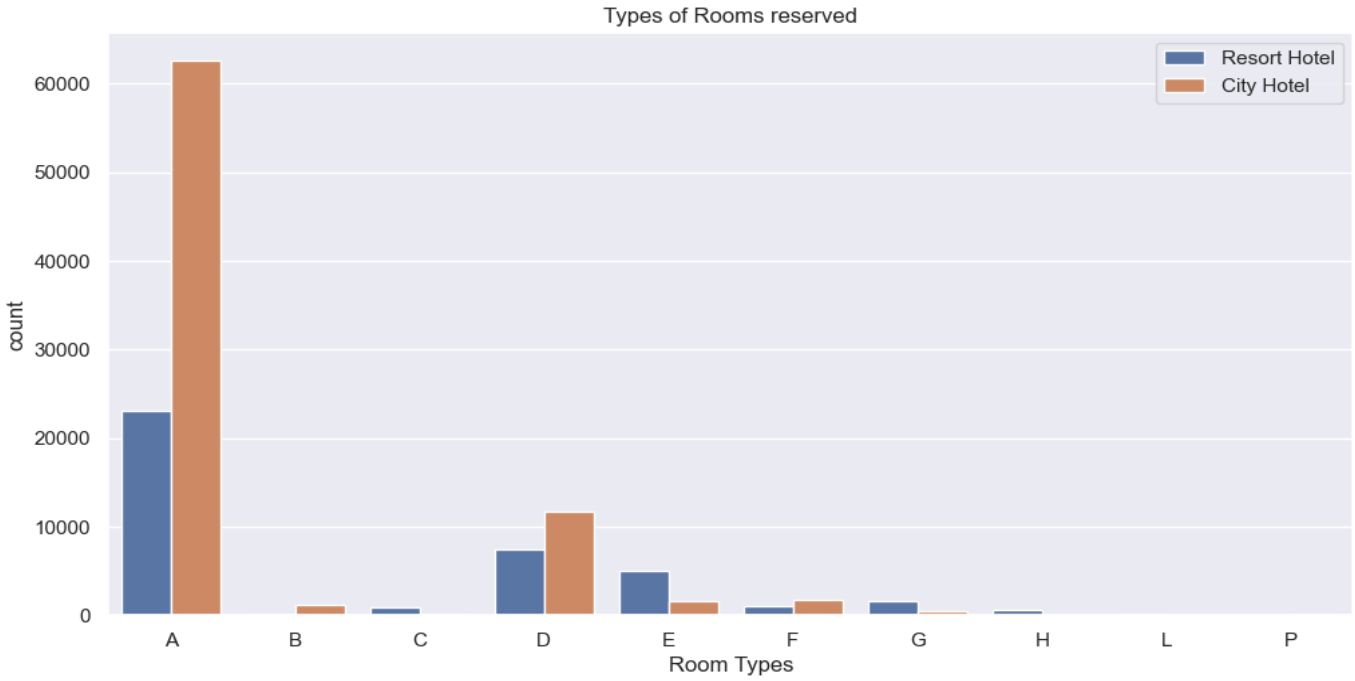
We observe that repeated guests cancel their bookings less often than new guests.

Cancellation by different market




We can see that 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.

Types of room reserved




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

## Suggestions

1. Cancellation rates rise as the price does. In order to prevent cancellations of reservations, hotels could work on their pricing strategies and try to lower the rates for specific hotels based on locations. They can also provide some discounts to the consumers.
2. As the ratio of the cancellation and not cancellation of the hotel is higher in the resort hotel than the city hotels. So, the hotels should provide a reasonable discount on the room prices on weekends or on holidays.
3. In the month of January, hotels can start campaigns or marketing with a reasonable amount to increase their revenue as the cancellation is the highest in this month.
4. They can also increase the quality of their hotels and their services mainly in Portugal to reduce the cancellation rate.