HOTEL BOOKING

Data Analysis Project Steps :-

1) Create a Problem Statement
2) Identify the data you want to analyze
3) Explore and clean the data
4) Analyze the data to get useful things
5) Present the data in the terms of reports or Dashboards using Visualization

Business Problem :-

In recent years, City Hotel and Resort Hotel have seen high cancellation rates. Each hotel in now dealing with a number of issues as a result, including fewer revenues and less than ideal hotel room use. Consequently, Lowering cancellation rates in 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 cancellation as well as other factors that have no bearing on their business and yearly revenue generation are the main topic of this report.

Assumption :-

1) No unsusual occurences between 2015 and 2017 will have a substantial impact on the data used.
2) The information is still current and can be used to analyze a hotel's possible plans in an efficient manner
3) There is no unanticipated negatives to the hotel employing any advised technique
4) The hotels are not currently using any of the suggested solutions.
5) The biggest factor affecting the effectiveness of earning income of booking cancellations.
6) Cancellations result in vacant rooms for the booked length of time.
7) Clients make a hotel reservation the same year they make cancellations

Research Questions :-

1) What are the variables that affect hotel reservation cancellations ?
2) How can we make hotel reservation cancellation better ?
3) How will hotels be assisted in making pricing and promotional decisions ?

Hypothesis :-

1) More cancellation occur when prices are higher
2) When there is a longer waiting list, customers tend to cancel more frequently.
3) The majority of clients are coming from offline travel agents to make their reservations

Analysis and Findings :-

Reservation Status Count
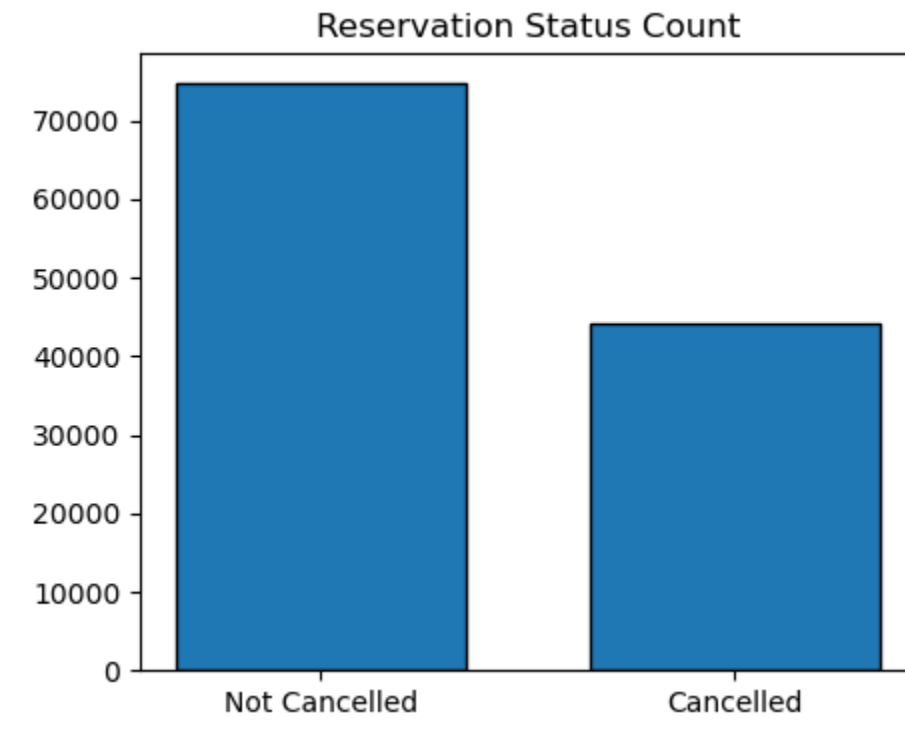
The Accompanying bar graph shows the percentage of reservations that are cancelled and those that are not. It is obvious that there are still significant number of reservations that have not been cancelled. There are still 37% of clients who cancelled their reservation, which has a significant impact on the hotel's earnings.

Reservation Status in Different Hotels
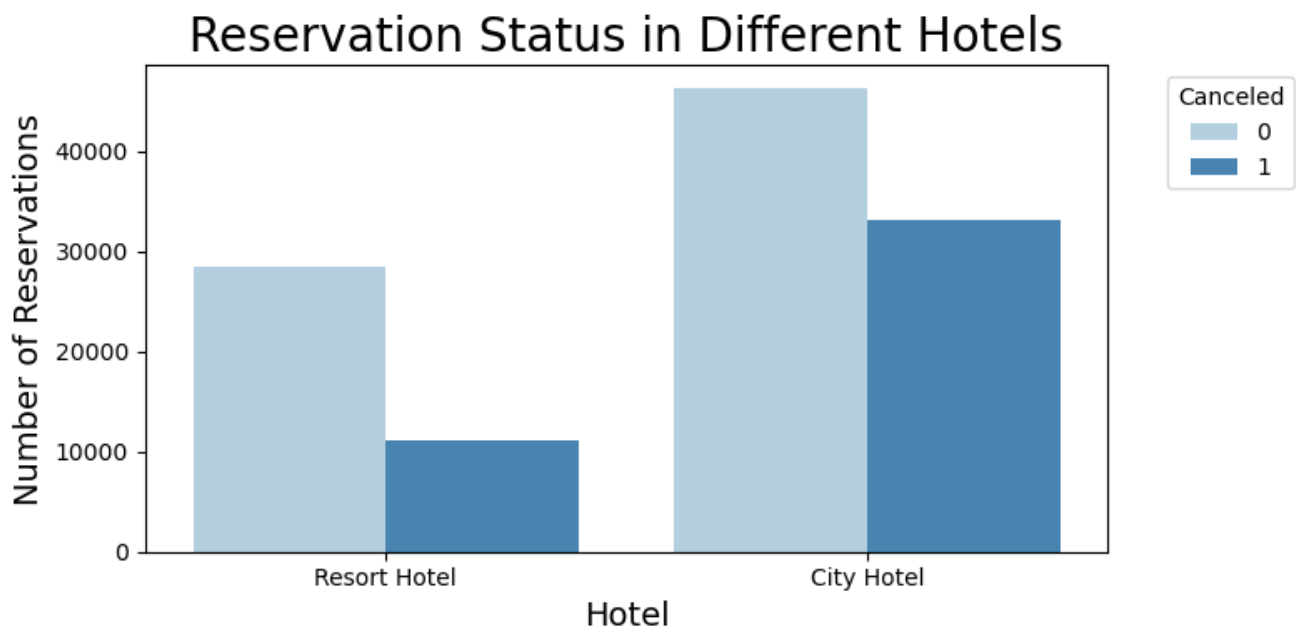
In comparison to resort hotels, city hotels have more bookings. It's possible that report hotels are more expensive than those in cities

## Average Daily Rate in city and Resort Hotel
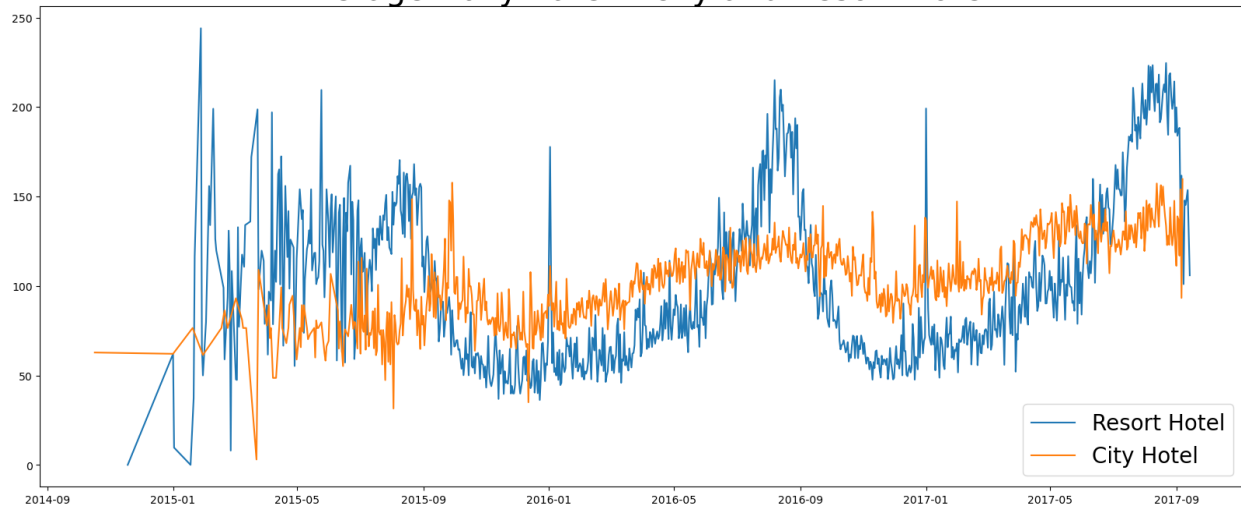
The line graph above shows that, on certain days, the average daily rate for a city hotel is less than of a resort hotel and on other days. It is even less. It goes without saying that weekends and holidays may see a rise in report hotel rates.

Reservation Status per month
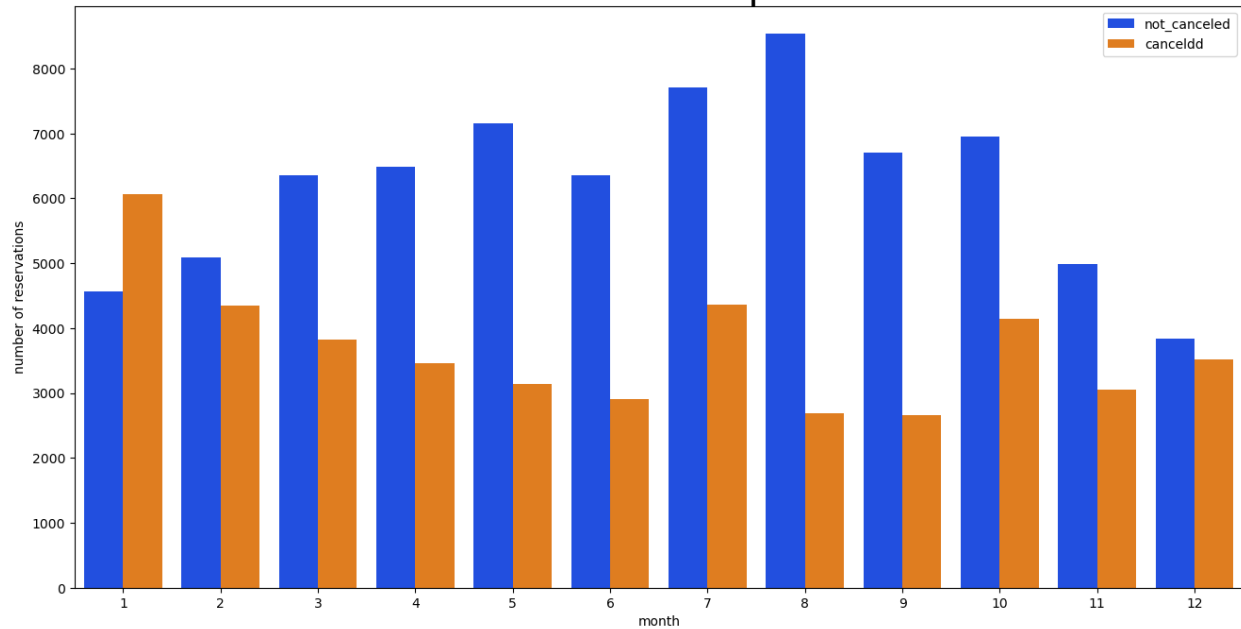
We have developed the grouped bar graph to analyze the months with the highest and lowest reservation levels according to reservation status. As can be seen, both the number of confirmed reservation and the number of cancelled reservations are largest in the month of August. Whereas January is the month with the most cancelled reservations.

ADR per Month
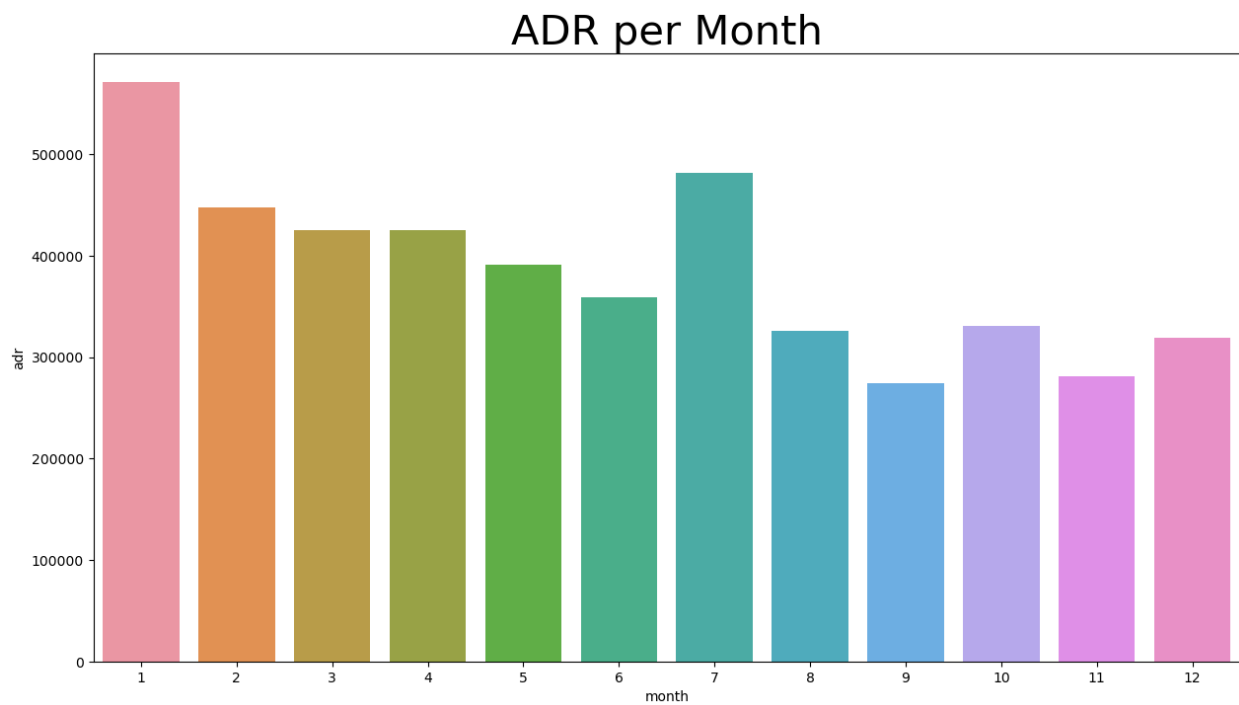
This Bar graph demonstrates that cancellations are most common when prices are greatest and are least common when they are lowest. Therefore, the cost of the accommodation is solely responsible for the cancellation.

Now, let's see which country has the highest reservation cancelled. The top country is Portugal with the highest number of cancellations.

Top 10 country with reservation canceled
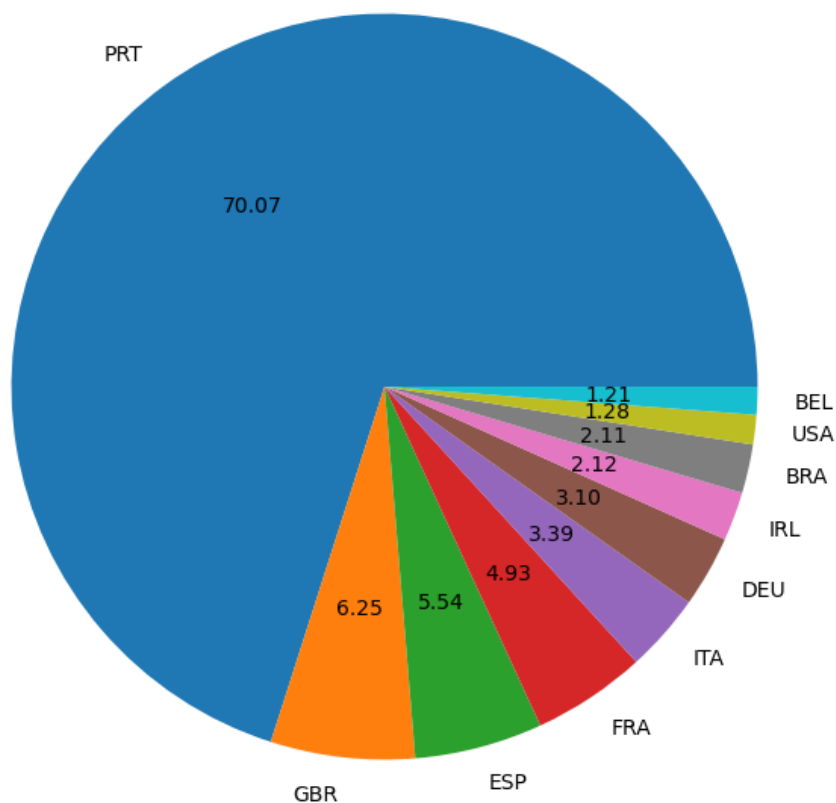
Let's check the area from where guests are visiting the hotels and making reservations. Is it coming form Direct or groups. Online or Offline Travel Agents ? Around 46% of the clients come from online travel agencies, Whereas 27% come from group . Only 4% of the clients book hotels directly by visiting them and making reservations.
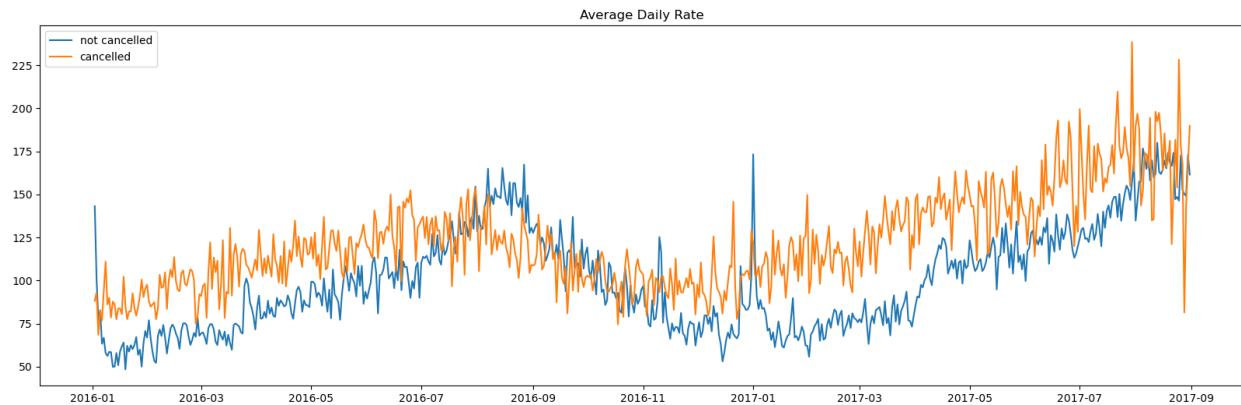
Average Daily Rate

As seen in the graph, reservation are cancelled when the average daily rate is higher than when it is not cancelled. It clearly proves all the above analysis, that higher price leads to higher cancellations.

Suggestions :-

1. Cancellation rates rises as the price does. In order to prevent cancellation of reservation, hotels could work on their pricing strategies and try to lower the rates for specific hotels on locations. They can also provide some discounts to the consumers.
2. As the ratio of the cancellation and not cancellation of the resort hotel is higher in the resort hotel than the city hotel. So the hotels should provide a reasonable discounts 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 rates.