

# Business Problem

In recent years, City Hotel and Resort Hotel have experienced high cancellation rates. As a result, each hotel is now facing several issues, including reduced revenue and suboptimal hotel room utilization. Consequently, reducing cancellation rates is the primary goal for both hotels to enhance their efficiency in generating revenue. Our objective is to provide comprehensive business advice to address this problem.

This report focuses on analyzing hotel booking cancellations as well as other factors that may impact their business and annual revenue generation.



## Assumptions

1. No unusual occurrences 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 efficiently.
3. There are no unanticipated negatives to the hotel employing any advised techniques.
4. The hotels are not currently using any of the suggested solutions.
5. The biggest factor affecting the effectiveness of earning income is booking cancellations.
6. Cancellations result in vacant rooms for the booked length of time.
7. Clients make hotel reservations the same year they make cancellations.

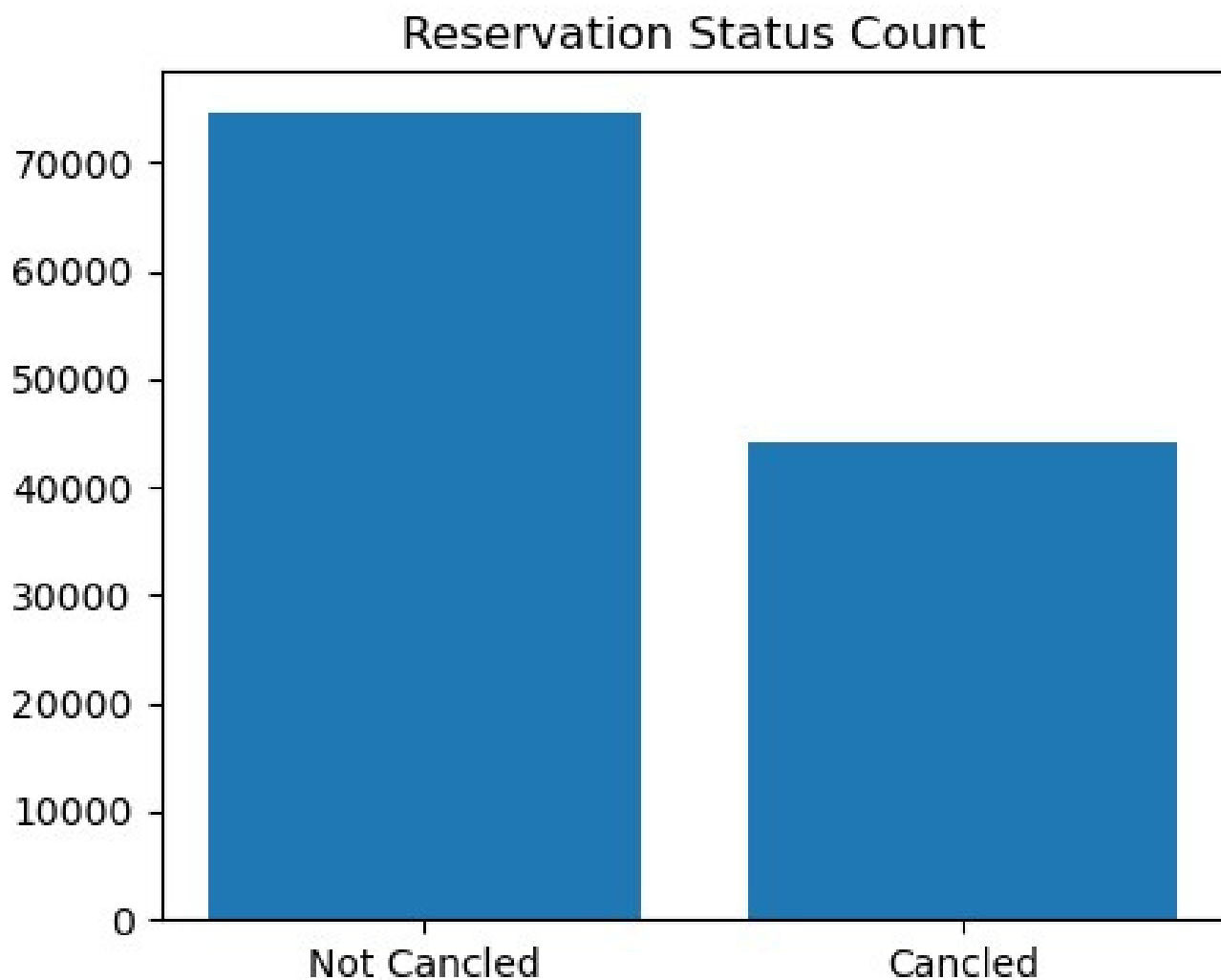
## Research Questions

1. What are the variables that affect hotel reservation cancellations?

2. How can hotel reservation cancellations be reduced?
3. How can hotels be assisted in making pricing and promotional decisions?

# Hypotheses

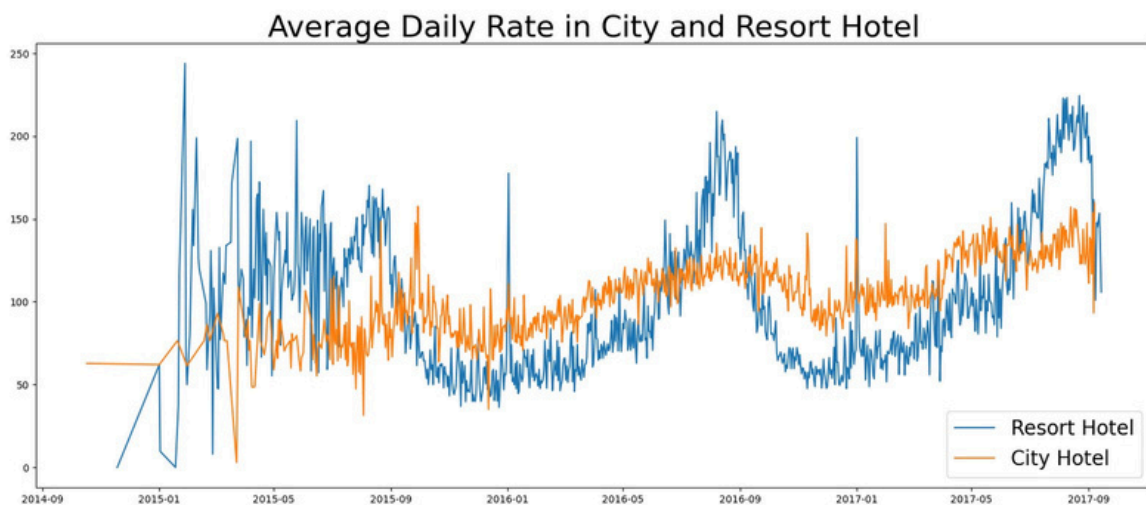
1. More cancellations occur when prices are higher.
2. When there is a longer waiting list, customers tend to cancel more frequently.
3. The majority of clients make their reservations through offline travel agents.



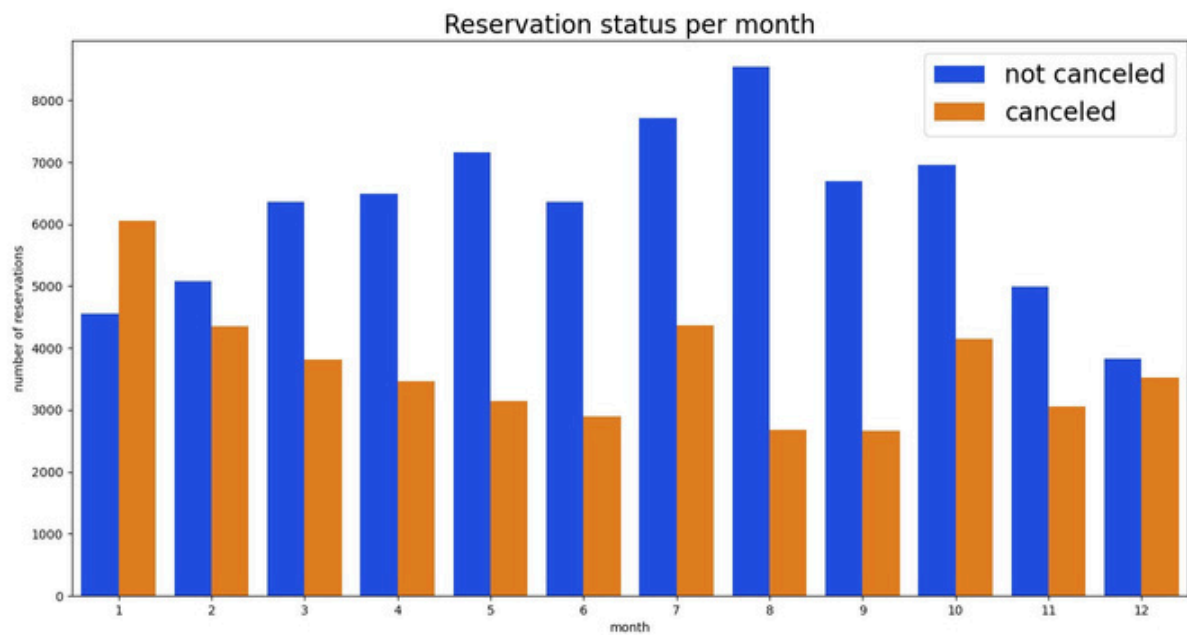
The accompanying bar graph shows the percentage of reservations that are canceled and those that are not. It is evident that a significant number of reservations remain uncanceled. Notably, 37% of clients canceled their reservations, which significantly impacts the hotels' earnings.



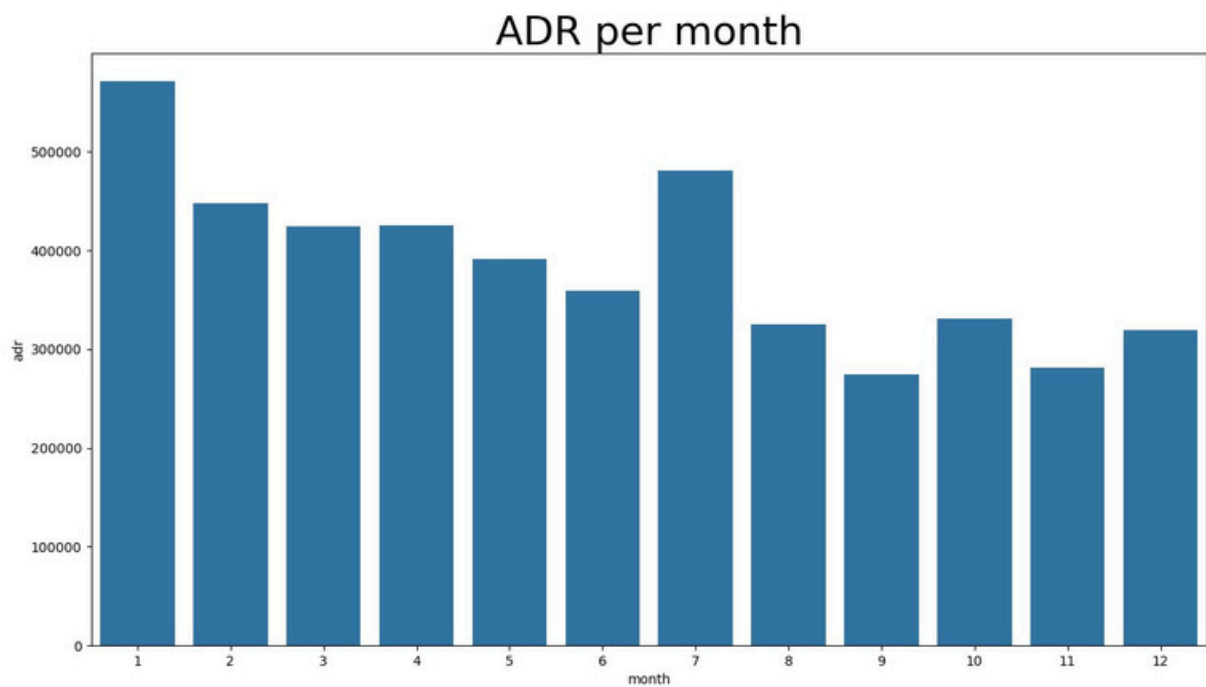
In comparison to resort hotels, city hotels have more bookings. It is possible that resort hotels are more expensive than city hotels.



The line graph above shows that, on certain days, the average daily rate for a city hotel is lower than that 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 resort hotel rates.



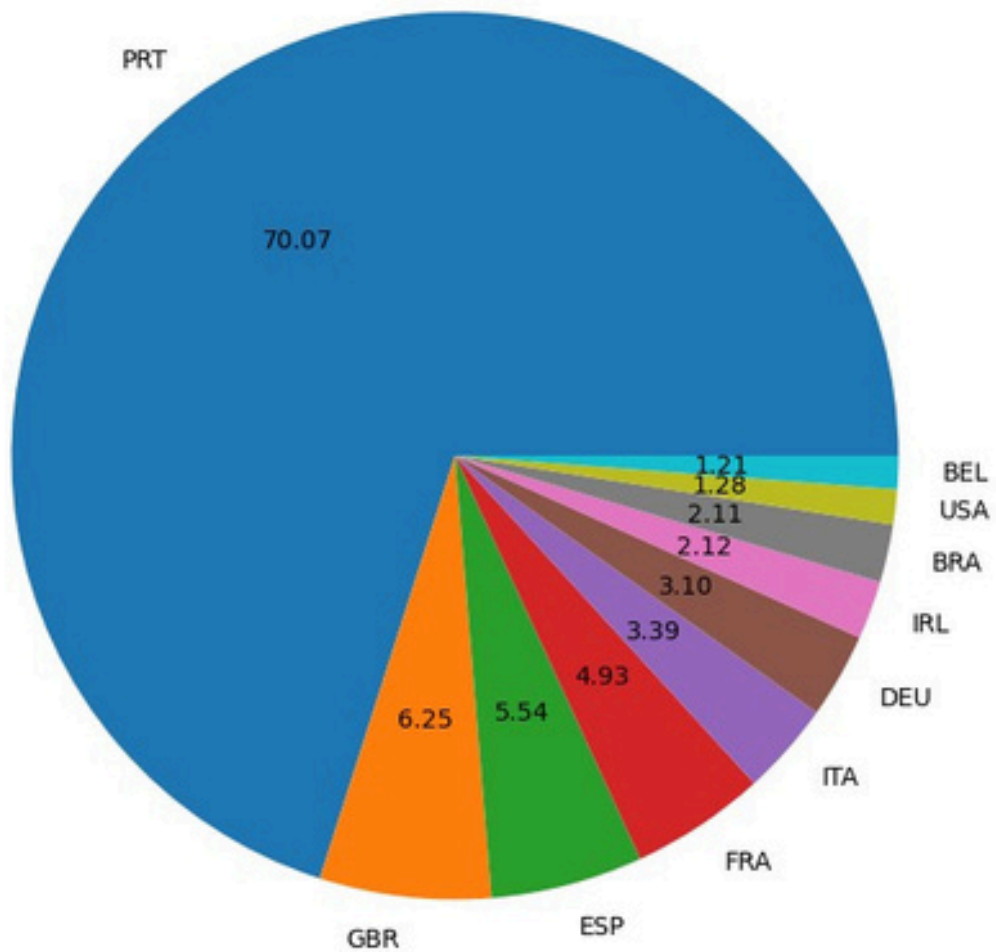
We have developed the grouped bar graph to analyze the months with the highest and lowest reservation levels according to reservation status. As can be seen, both the number of confirmed reservations and the number of canceled reservations are largest in the month of August, whereas January is the month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



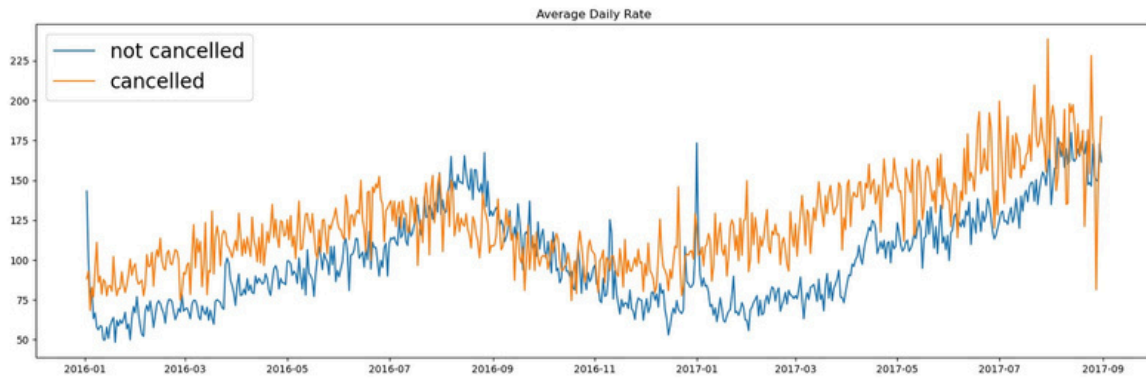
This bar graph demonstrates that cancellations are most common when prices are highest and least common when they are lowest. Therefore, the cost of accommodation is solely responsible for the cancellations.

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

Top 10 countries with reservation canceled



Let's examine the sources from which guests are visiting the hotels and making reservations. Are they coming directly or through groups, online travel agencies, or offline travel agents? Around 46% of the clients come from online travel agencies, while 27% come from groups. Only 4% of clients book hotels directly by visiting them and making reservations.



As seen in the graph, reservations are canceled more often when the average daily rate is higher compared to when it is not canceled. This clearly supports the above analysis that higher prices lead to higher cancellations.

## Suggestions:

1. Cancellation rates rise as the price increases. To prevent reservation cancellations, hotels could work on their pricing strategies and consider lowering rates for specific hotels based on locations. They can also offer discounts to consumers.
2. The ratio of cancellations to non-cancellations is higher in resort hotels than in city hotels. Therefore, hotels should consider providing reasonable discounts on room prices during weekends or holidays.
3. In January, hotels can launch campaigns or marketing initiatives with reasonable budgets to increase revenue, as cancellations are highest during this month.
4. Hotels could also improve the quality of their facilities and services, particularly in Portugal, to reduce the cancellation rate.