

Business Problem Statement:

In recent years, both City Hotels and Resort Hotels have encountered significantly high cancellation rates, leading to a series of operational challenges. These challenges include reduced revenue generation and suboptimal utilization of hotel rooms. Consequently, minimizing cancellations has become a primary objective for both hotel types in order to enhance their efficiency and improve their overall revenue potential.

This report aims to thoroughly analyze hotel booking cancellations, as well as investigate other factors that may not directly affect the hotels' business or annual revenue generation. By understanding these dynamics, we seek to provide actionable business recommendations that will help mitigate the impact of cancellations, optimize room occupancy, and increase overall profitability for both City and Resort Hotels.



Research Questions :

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

Assumptions:

1. The data is current and can be effectively used to analyze a hotel's potential plans.
2. There were no significant unusual occurrences between 2015 and 2017 that would impact the data.
3. There are no unanticipated negative outcomes related to implementing the suggested techniques for the hotel.
4. The hotel has not yet implemented any of the recommended solutions.
5. Booking cancellations are the primary factor affecting a hotel's revenue potential.
6. Cancellations lead to vacant rooms during the reserved time period.
7. Clients tend to make reservations and cancellations in the same year.

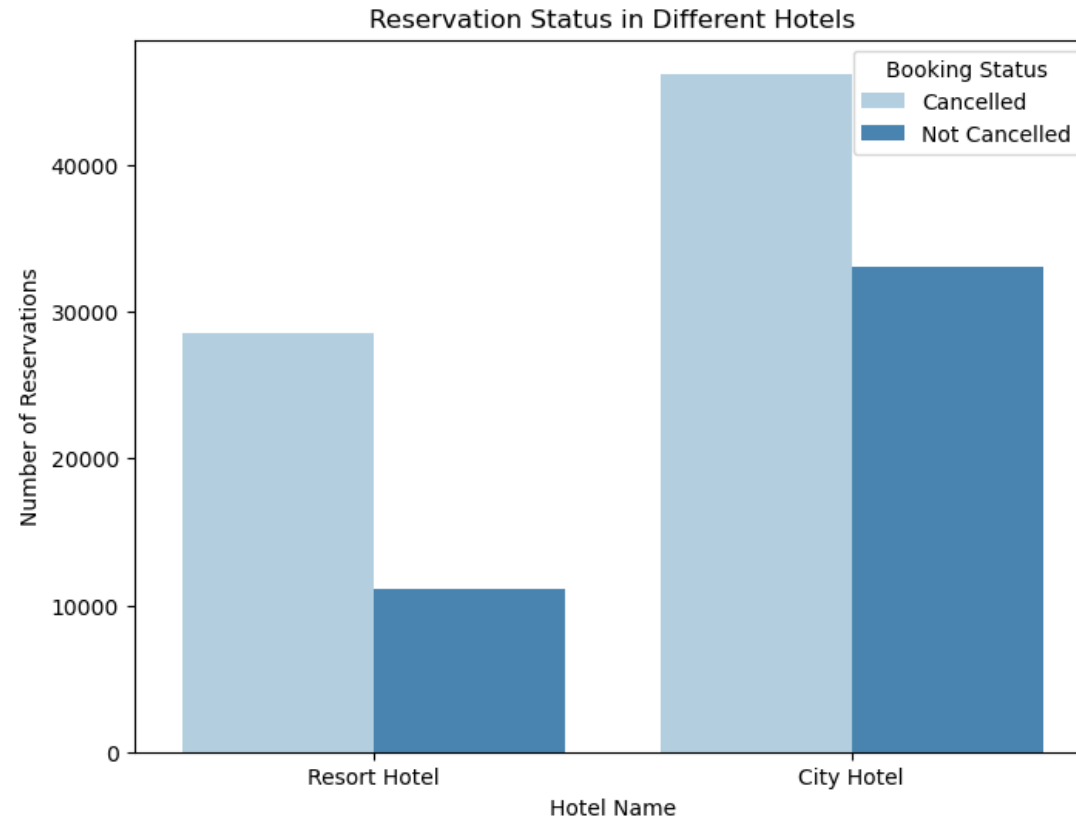
Hypothesis:

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 are coming from offline travel agents to make their reservations

Analysis and Findings:

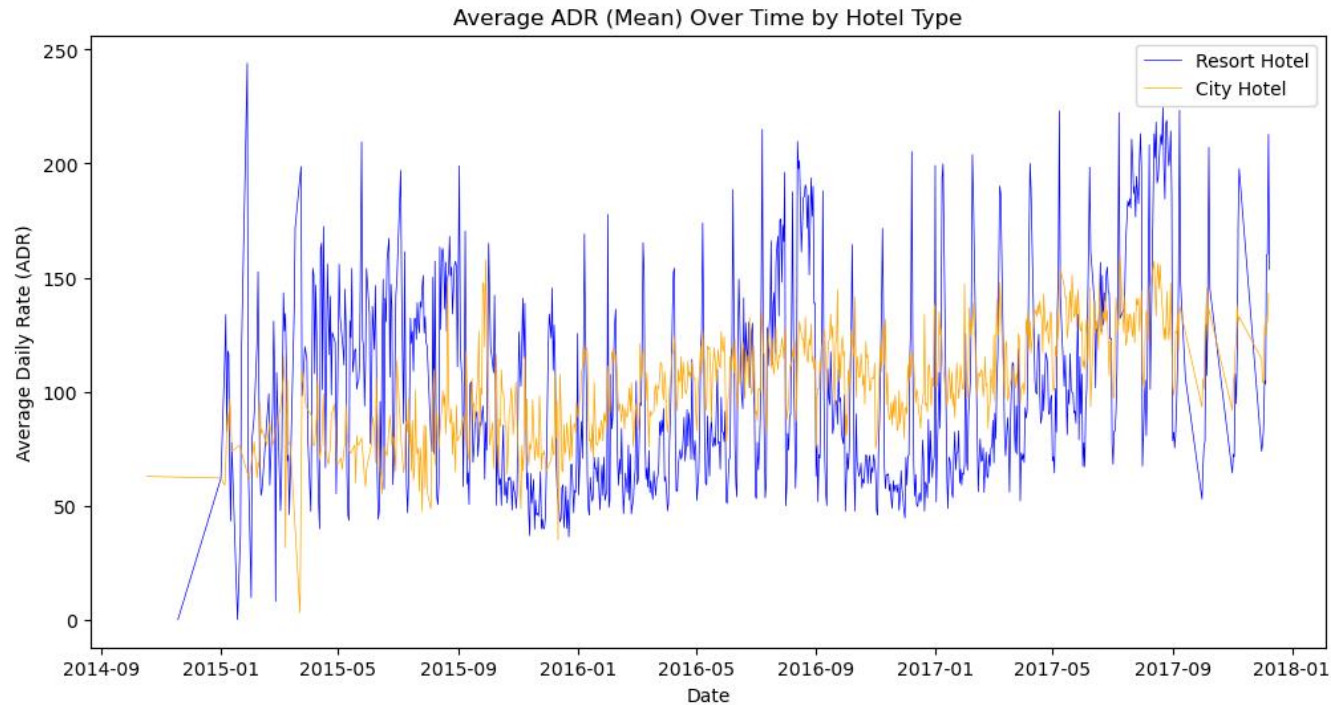


The accompanying bar graph shows the percentage of reservations that are canceled, and it is evident that a significant number of reservations are not canceled. However, 37% of clients have canceled their reservations, which has a substantial impact on the hotel’s earnings. This highlights the importance of addressing cancellation rates to improve revenue stability.

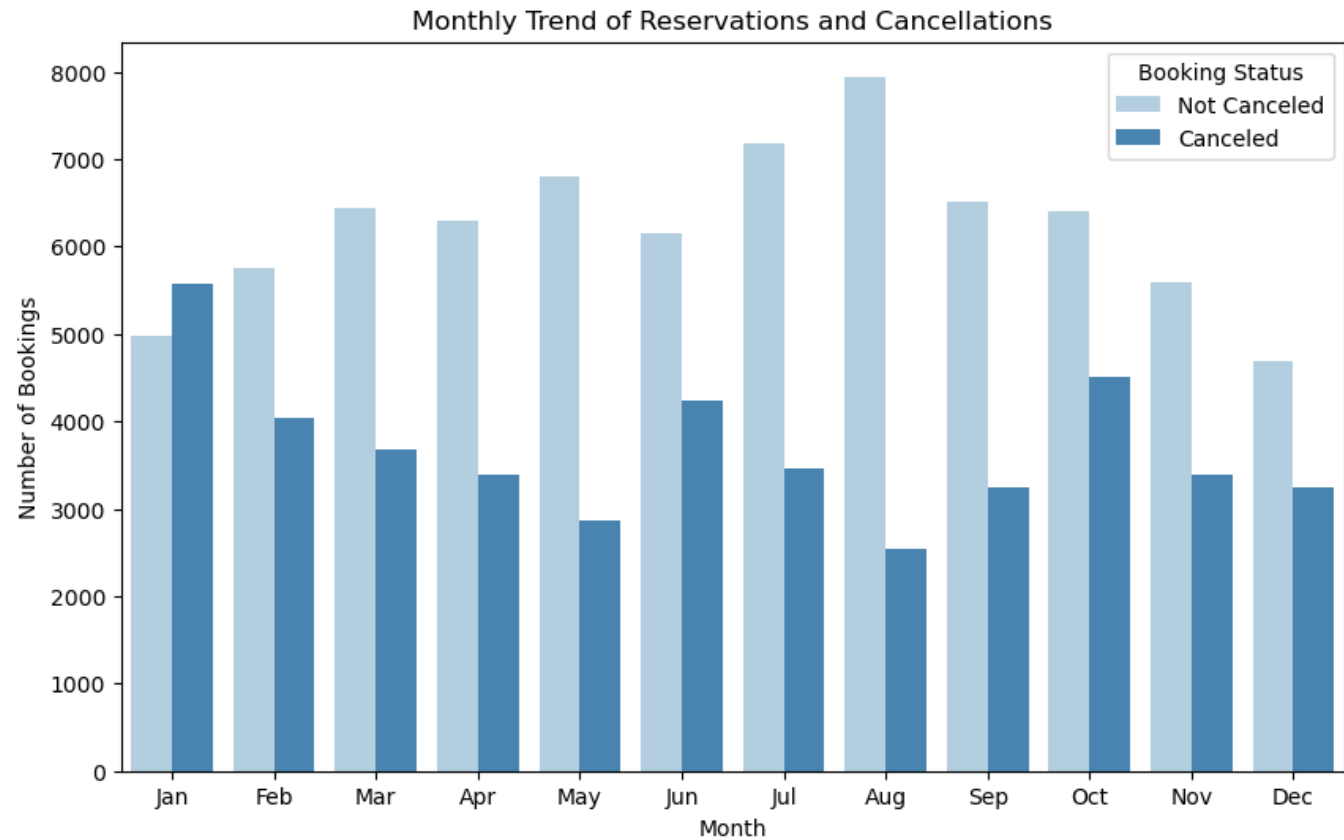


In comparison to resort hotels, city hotels have more bookings. It is possible that resort hotels are more expensive.

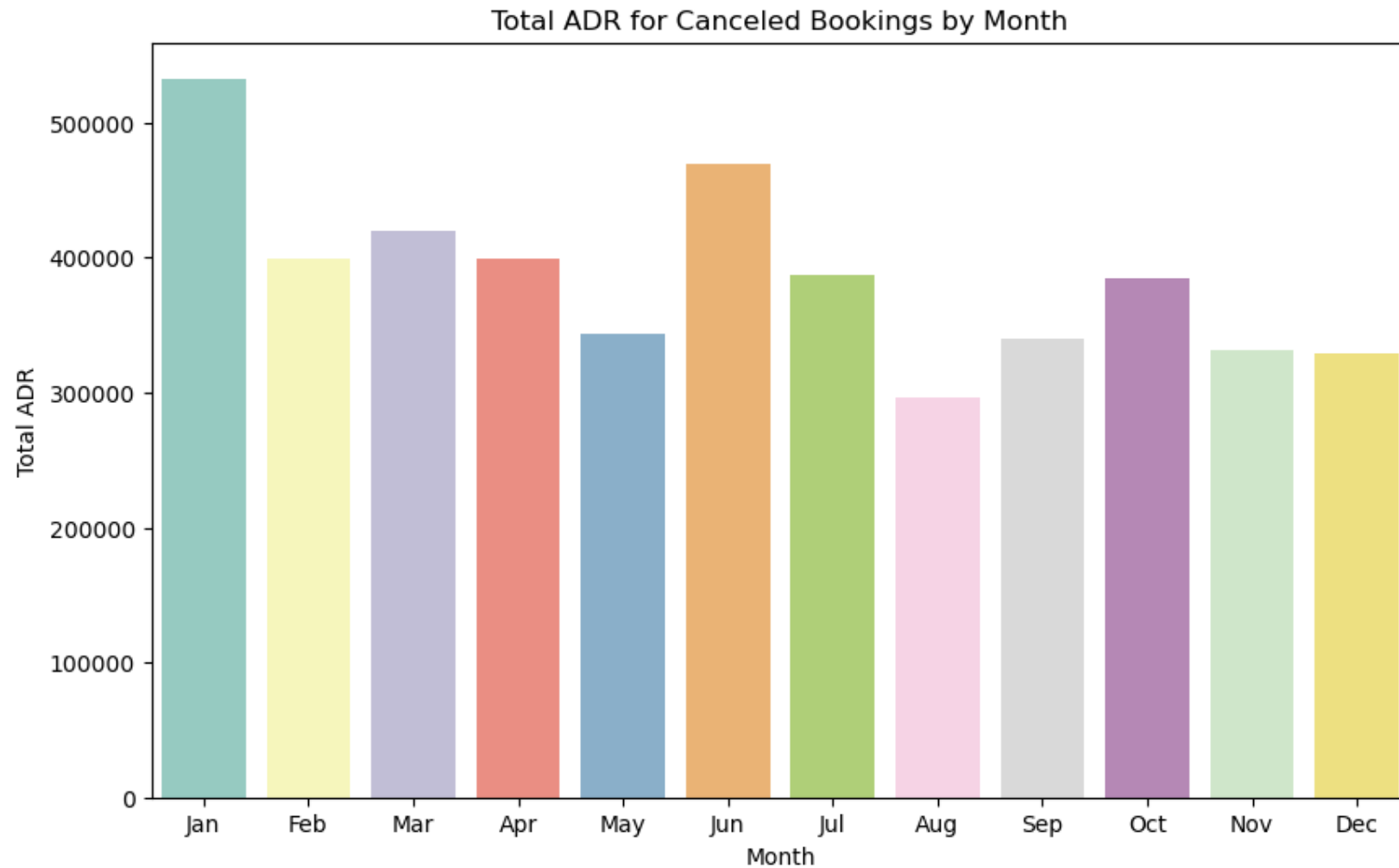
Average Daily Rate in City and Resort Hotel:



The line graph illustrates that on certain days, the average daily rate (ADR) for city hotels is lower than that of resort hotels, while on other days, it is even lower. It is evident that during weekends and holidays, resort hotel rates tend to rise.

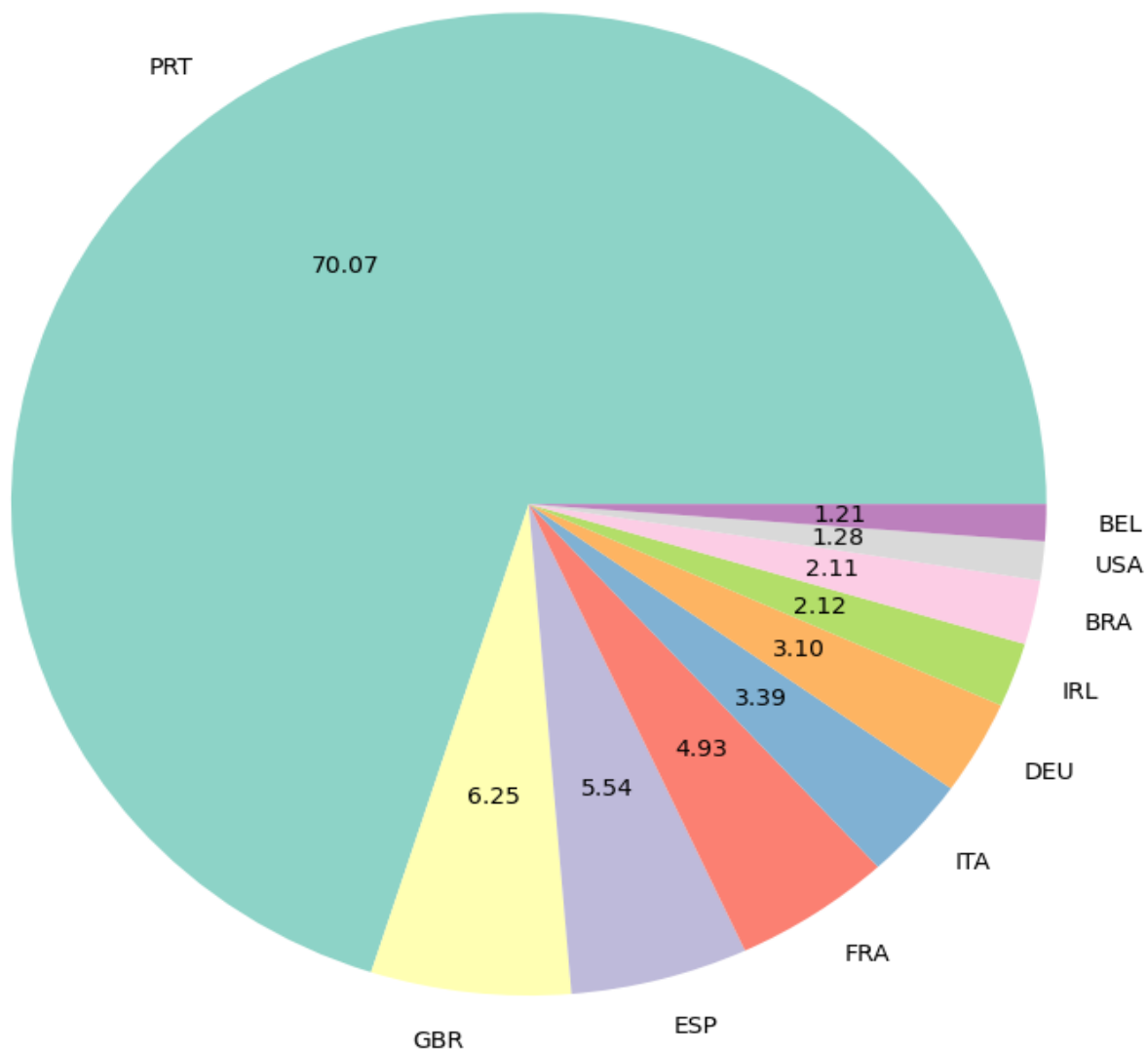


We created a grouped bar graph to analyse monthly trends in reservation status, highlighting the months with the highest and lowest reservation counts. The analysis reveals that August recorded the highest number of both confirmed reservations, while January stands out as the month with the most cancellations overall."



The above graph demonstrates that cancellations are most common when accommodation prices are highest and least frequent when prices are lower. This trend suggests that accommodation costs play a significant role in cancellation rates.

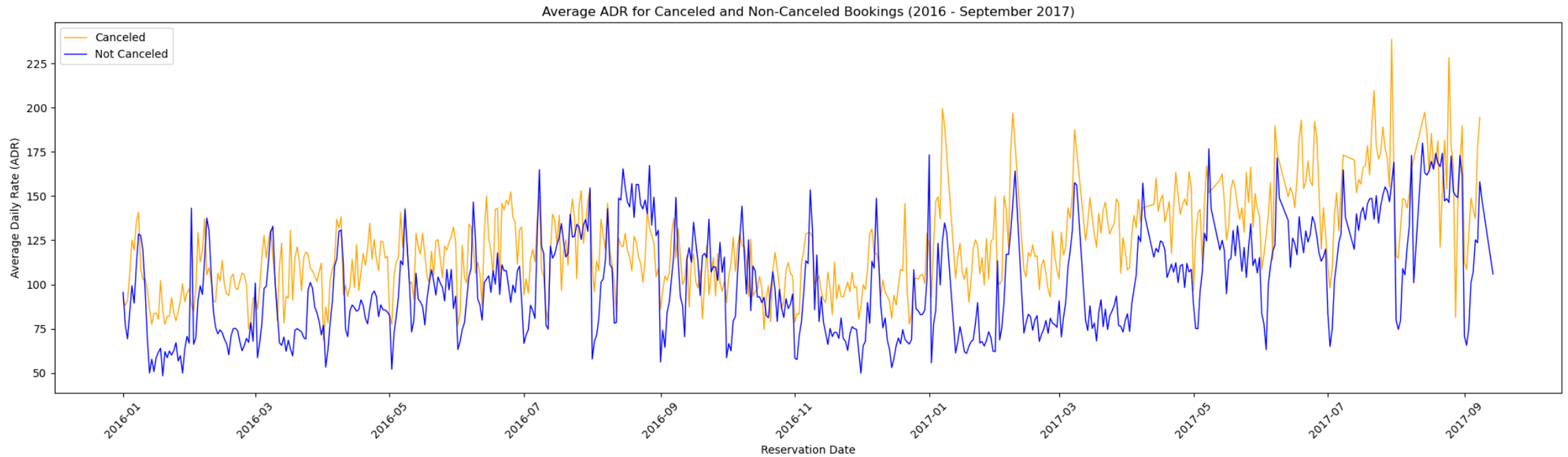
Top 10 Countries with Reservation Cancellations



The pie chart illustrates the top 10 countries with the highest number of reservation cancellations. Notably, Portugal accounts for the majority, with 70% of cancellations among these top countries, indicating a significant concentration of cancellations originating from this region.

Let's examine the sources of these cancelled reservations. Are they coming directly from the clients, through group bookings, or from online or offline agents?

Our analysis revealed that approximately 46% of bookings are made through travel agencies, highlighting their significant role in driving hotel reservations. In comparison, 27% of clients book as part of group reservations, indicating a strong demand for group travel arrangements. Interestingly, only 4% of clients book directly by visiting the hotel and making a reservation, suggesting that direct bookings remain relatively uncommon compared to other channels.



As shown in the graph, reservations are more likely to be cancelled when the average daily rate (ADR) is higher, compared to when the ADR is lower. This observation reinforces the findings from our previous analysis, clearly indicating that higher prices contribute to an increase in cancellations.

Suggestions:

Cancellation rates tend to rise as prices increase. To reduce cancellations, hotels should focus on refining their pricing strategies, such as adjusting rates based on the location of the hotel. Offering targeted discounts could also help mitigate cancellations.

The cancellation ratio is higher for resort hotels compared to city hotels. Therefore, it would be beneficial for resorts to offer reasonable discounts on room prices, especially during weekends or holidays, to attract more bookings and reduce cancellations.

Given that January has the highest number of cancellations, hotels should consider launching marketing campaigns or special offers in this month to boost revenue and minimize booking losses.

Additionally, hotels, particularly in Portugal, could focus on enhancing the quality of their services and the overall guest experience to help reduce cancellation rates and improve customer satisfaction.