

# 1 BUSINESS PROBLEM

---

In recent times, City Hotel and Resort Hotel have grappled with a significant surge in cancellation rates, posing considerable challenges to their operational and financial landscapes. This surge has resulted in a notable downturn in revenues and suboptimal usage of hotel rooms. Recognizing the critical need to address and minimize these cancellation rates, both hotels are strategically focused on enhancing their revenue-generating efficiency. This report delves into the specific issues faced by City Hotel and Resort Hotel, outlining the imperative to mitigate cancellations and optimize their business performance.

## 1.1 CHALLENGES FACED IN BUSINESS:

- Surging cancellation rates affecting both City Hotel and Resort Hotel
- Revenue reduction challenges arising from increased cancellations
- Suboptimal utilization of hotel rooms due to elevated cancellation rates
- Impaired revenue generation efficiency requiring strategic interventions for enhancement

My data analysis goal is to furnish comprehensive business advice aimed at effectively addressing the above challenges in both City Hotel and Resort Hotel. By examining hotel booking cancellations and relevant factors influencing their business and annual revenue generation, the aim is to contribute insights that will assist in minimizing cancellations and optimizing revenue generation efficiency.

# 2 REPORT INSIGHTS

---

Through my comprehensive data analysis, I have identified key insights to address the challenge of high cancellation rates at City Hotel and Resort Hotel. By delving into large datasets, I pinpointed revenue anomalies, trends, and risks, meticulously ensuring the accuracy and integrity of revenue streams. Implementing data-driven solutions. My approach involves thorough Exploratory Data Analysis (EDA), Root Cause Analysis, leading to actionable recommendations for corrective actions. I developed and maintained reporting dashboards and metrics, enabling the tracking of revenue assurance performance. By discerning patterns, correlations, and trends in the data, I provided detailed insights and recommendations for each

investigation result, guiding strategic decision-making. This data analysis can play a key role in developing and implementing revenue forecasting models, conducting statistical analysis, and collaborating on performance configuration changes, contributing to optimized revenue recovery. This comprehensive and proactive approach has equipped the organization to effectively tackle the business problem at hand.

### **3 ASSUMPTIONS**

---

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

### **4 RESEARCH QUESTION**

---

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?

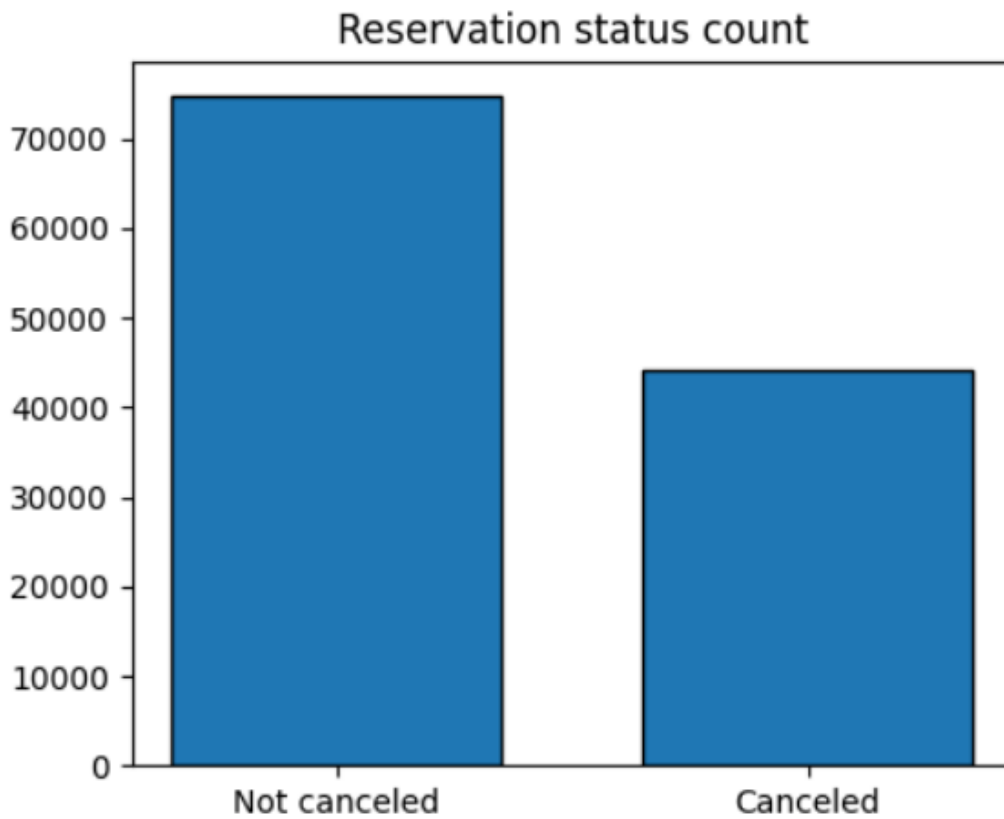
### **5 HYPOTHESIS**

---

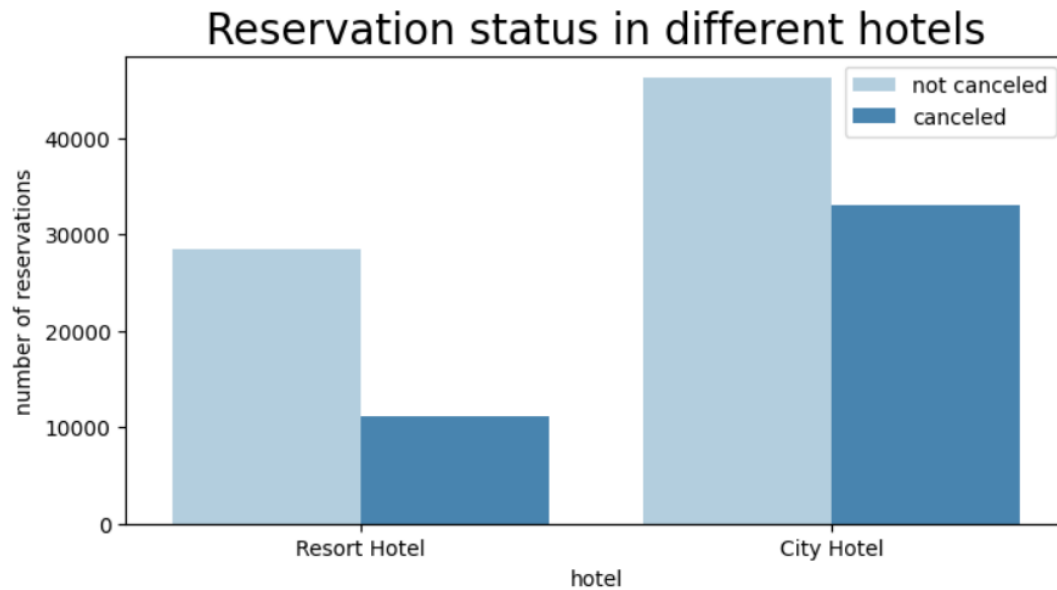
1. More cancellations occur when prices are higher.
2. When there is a longer waiting list, customers tend to cancel more frequently.
3. Most clients come from offline travel agents to make their reservations.

## 6 ANALYSIS & FINDINGS

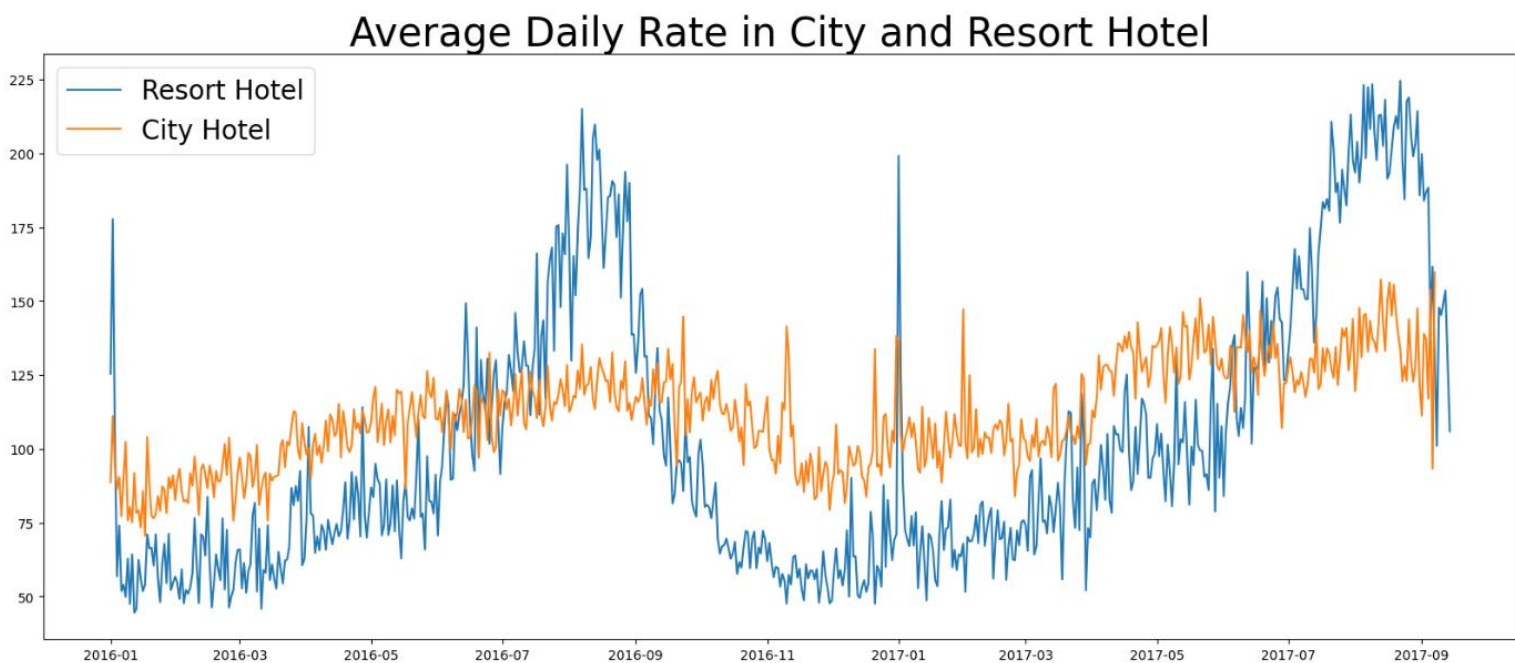
---



The accompanying bar graph shows the percentage of reservations that are canceled and those that are not. It is obvious that there are still a significant number of reservations that have not been canceled. There are still 37% of clients who canceled their reservation, which has a significant impact on the hotels' earnings.

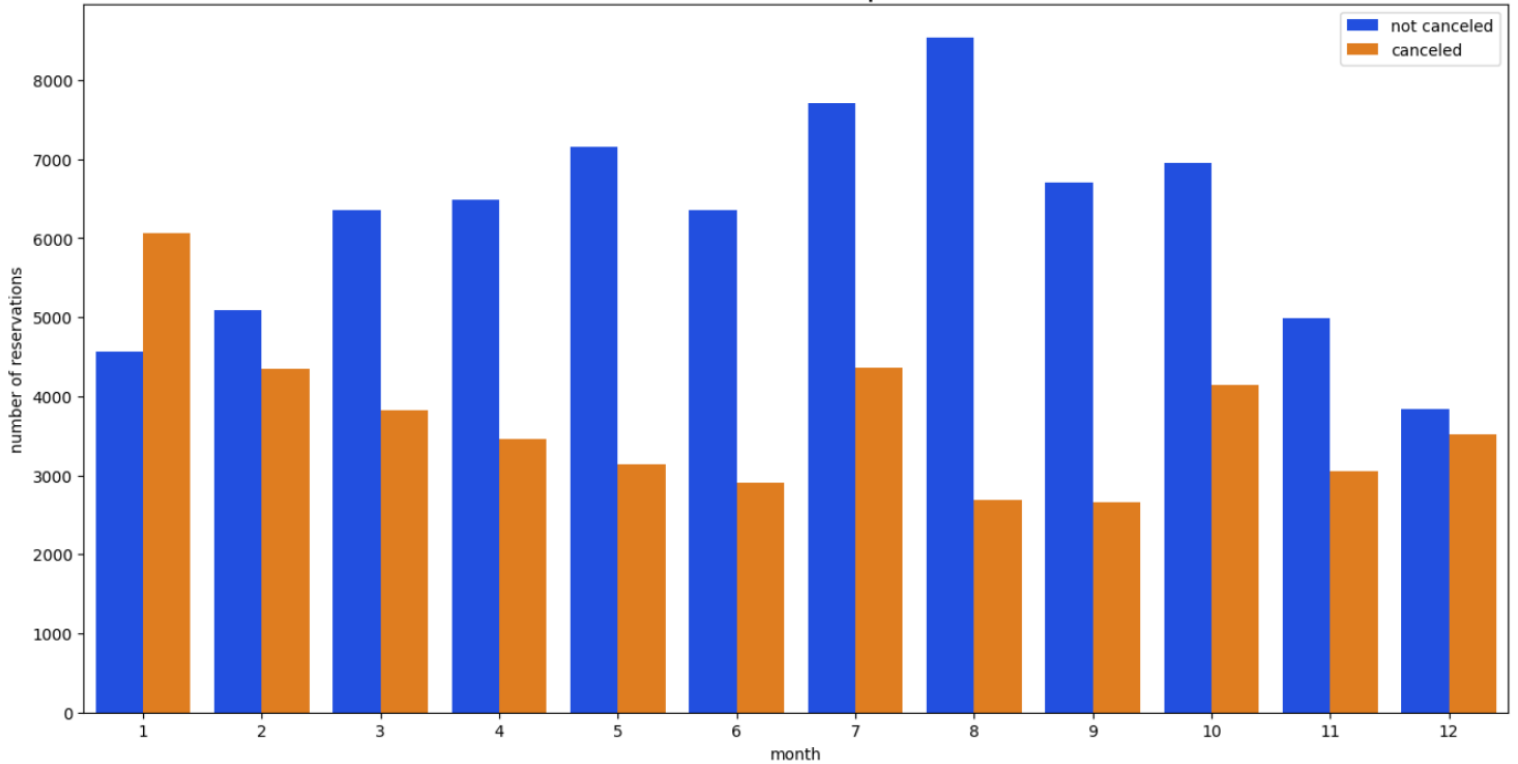


In comparison to resort hotels, city hotels have more bookings. It's possible that resort hotels are more expensive than those in cities.



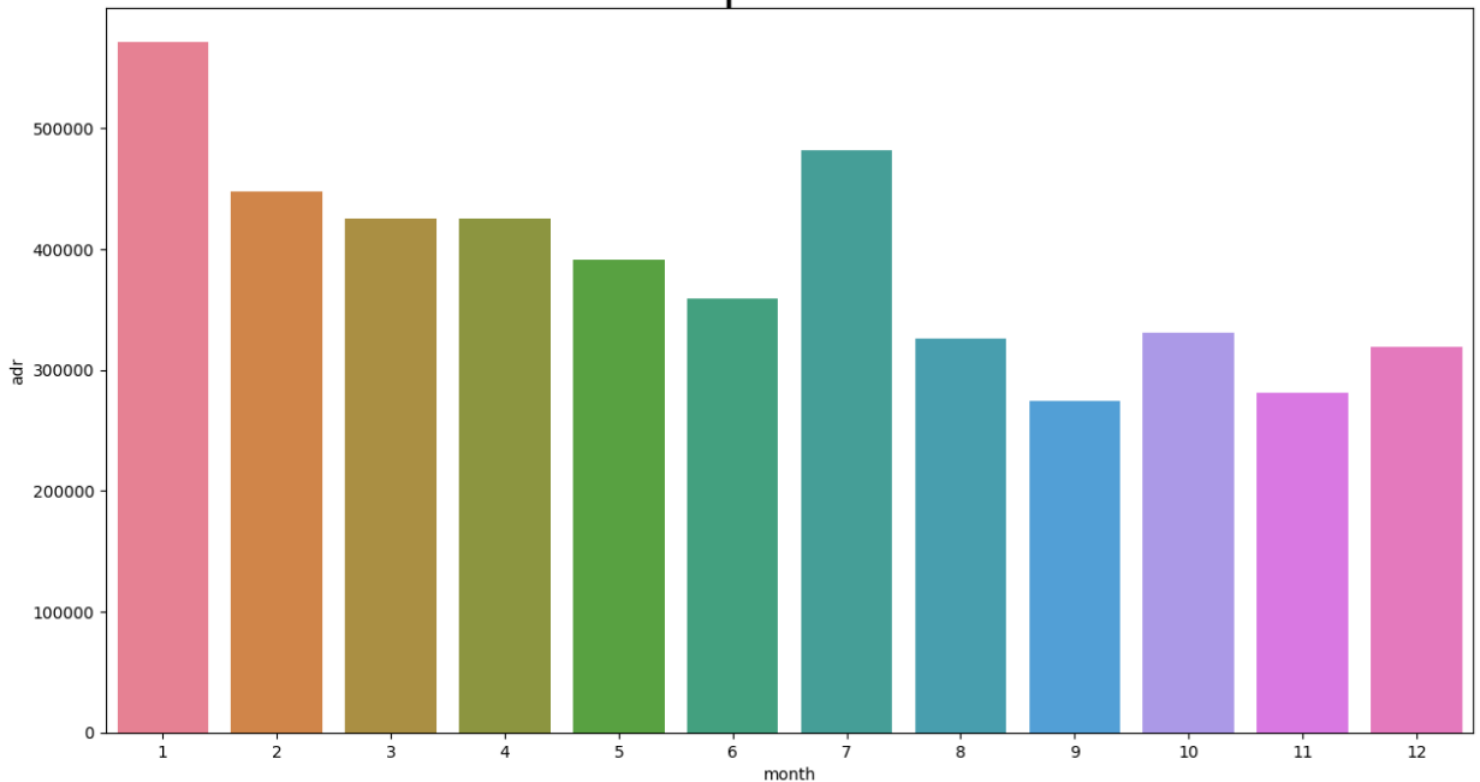
The line graph above shows that, on certain days, the average daily rate for a city hotel is less than that of a resort hotel, and on other days, it is even less. It goes without saying that weekends and holidays may see a rise in resort hotel rates.

Reservation status per month



Developed a 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 is largest in the month of August. Whereas January is the month with the most canceled reservations.

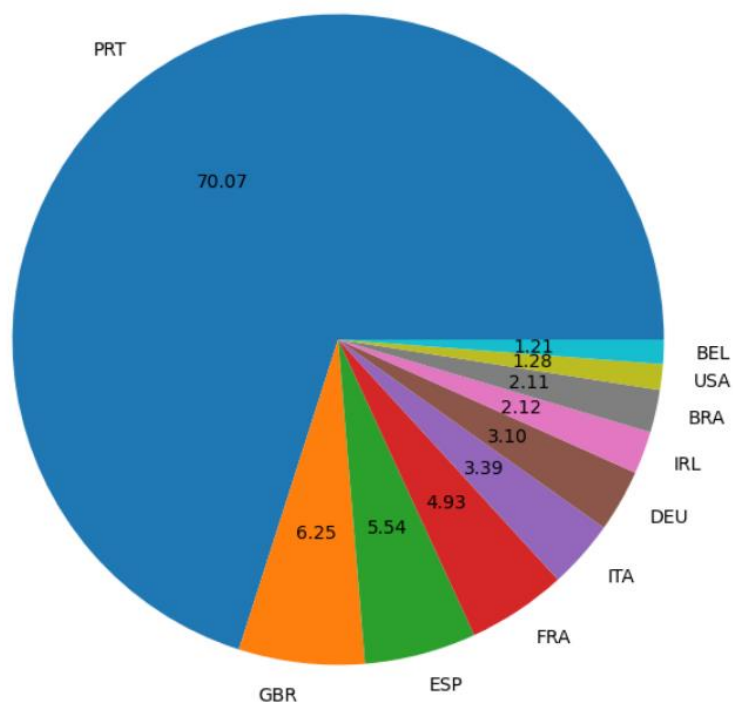
## ADR per month



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 canceled. The top country is Portugal with the highest number of cancellations.

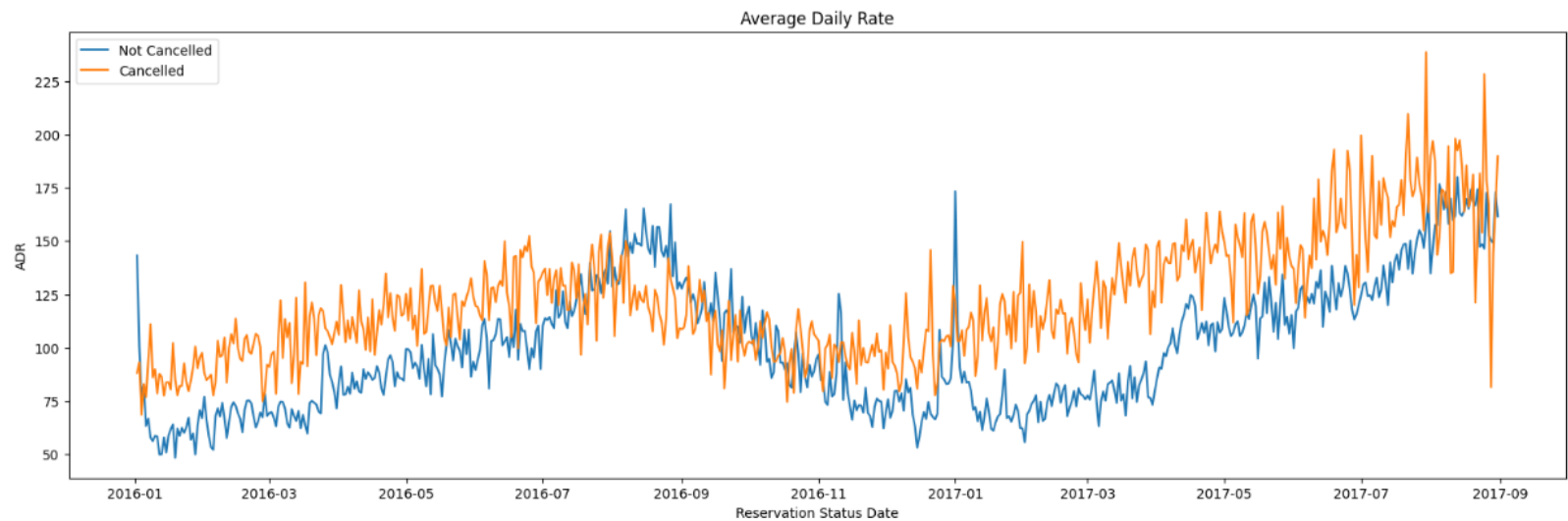
Top 10 countries with reservation canceled



Let's check the area from where guests are visiting the hotels and making reservations.

Is it coming from Direct or Groups, Online or Offline Travel Agents?

Around 46% of the clients come from online travel agencies, whereas 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 when the average daily rate is higher than when it is not canceled. It clearly proves all the above analysis, that the higher price leads to higher cancellation.

## 7 SUGGESTIONS

---

1. Cancellation rates rise as the price does. To prevent cancellations of reservations, hotel 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 cancellation and not cancellation of the resort 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.