

# Challenges with Hotel Bookings

Over the past few years, both City Hotel and Resort Hotel have had many people cancel their bookings. This has caused problems for the hotels, like making less money and not using their rooms as much as they want. So, the main goal for both hotels is to reduce the number of cancellations. This will help them make more money and operate better.

To help with this issue, we'll look into why people cancel bookings and other things that don't directly affect how much money the hotels make each year.

## Exploring Factors Impacting Hotel Reservation Cancellations

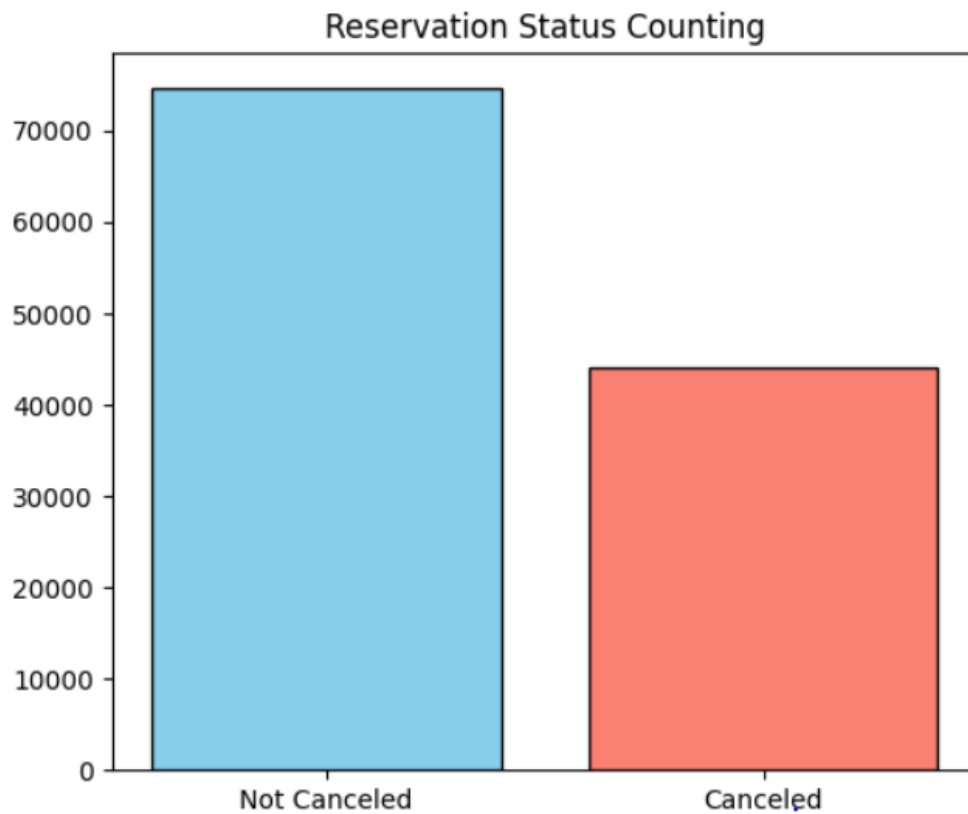
- What factors influence the cancellation of hotel reservations?
- What strategies can improve the management of hotel reservation cancellations?
- How can hotels be supported in making pricing and promotional decisions to reduce cancellations?

## Hypothesis

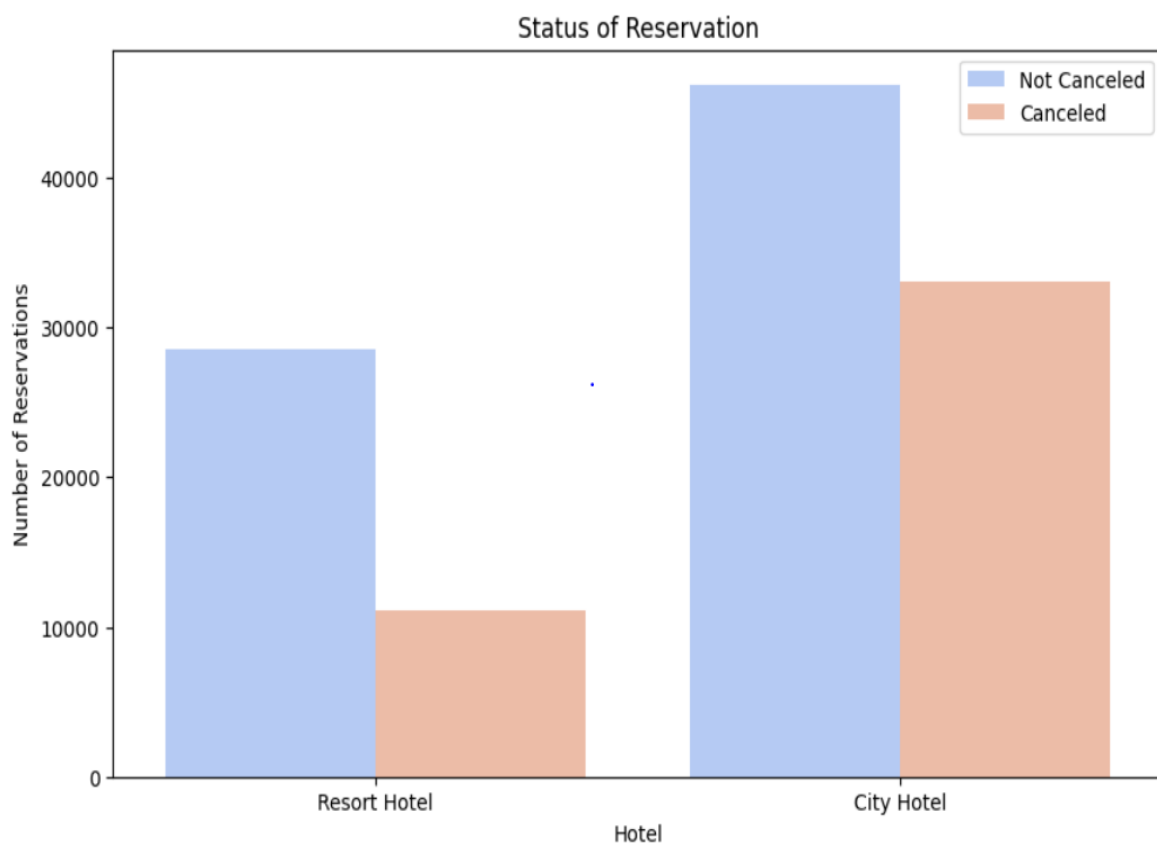
- Most cancellations occurred when the pricing was high
- Majority of clients are coming from the reference of online Travelling Agents.

## Analysis and Findings of the Data

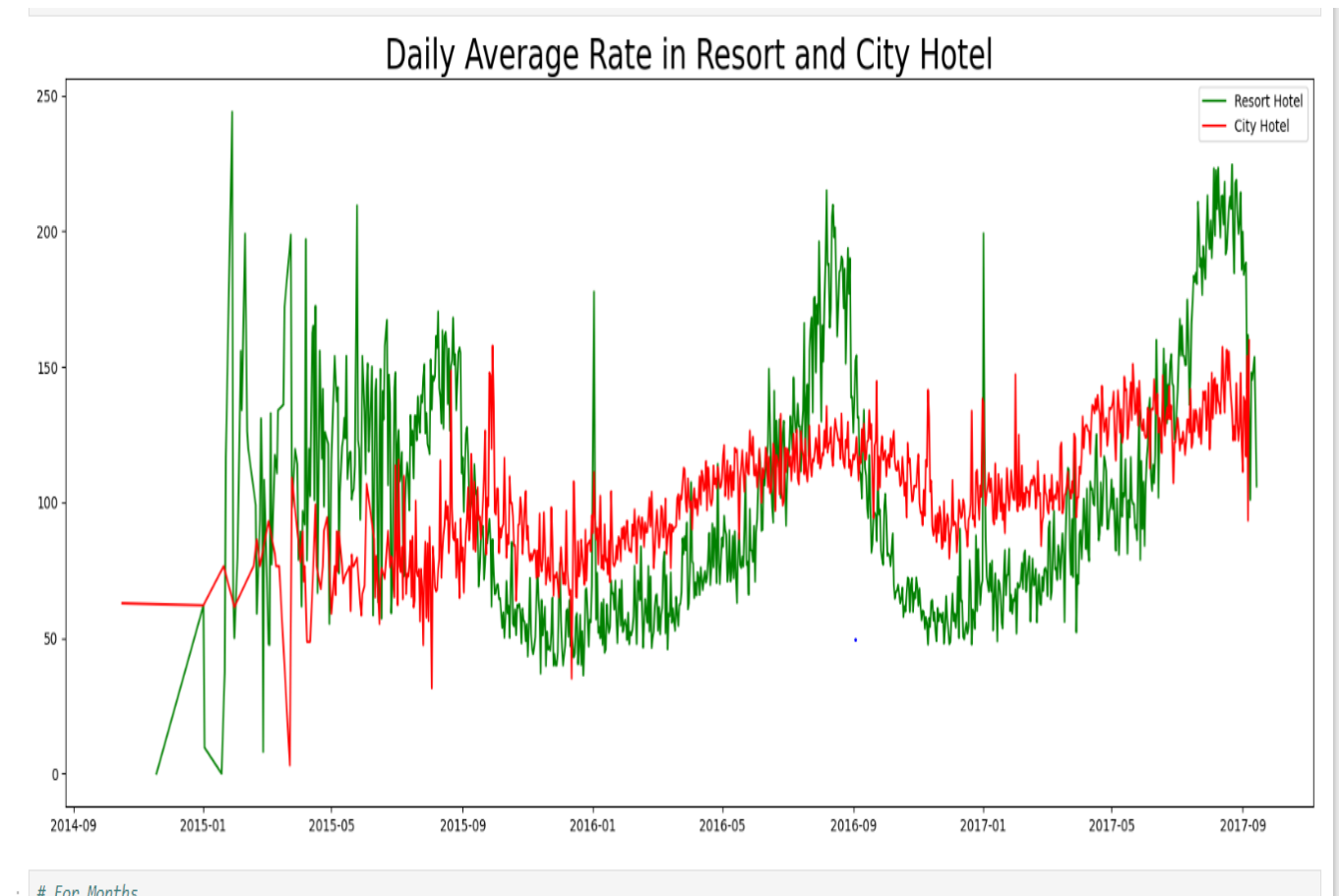
Beginning with a count of the number of reservations that have been canceled and those that have not been canceled provides an idea of the ratio. Despite the canceled ratio being only 37 percent, it still has a significant impact on the hotel's earnings.



Next, we analyze the reservation status in both the resort hotel and city hotel. From the visualization, it is evident that the city hotel has the highest number of reservations and, consequently, the highest cancellation rates.

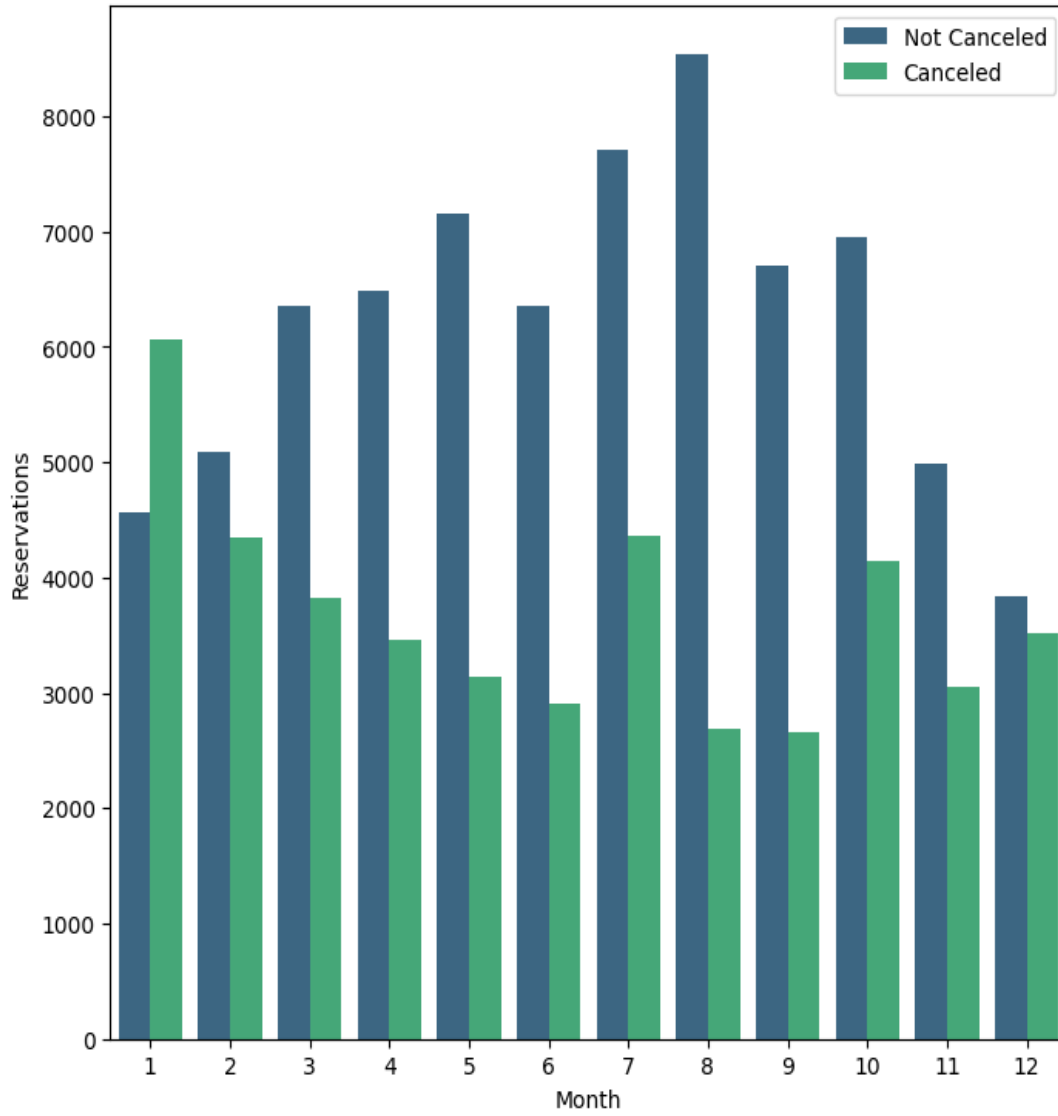


Next, based on the visualization, we can observe that prices for the resort are significantly higher compared to city hotels. This difference in pricing may be the reason for the lowest reservations at the resort and the high rate of cancellations.

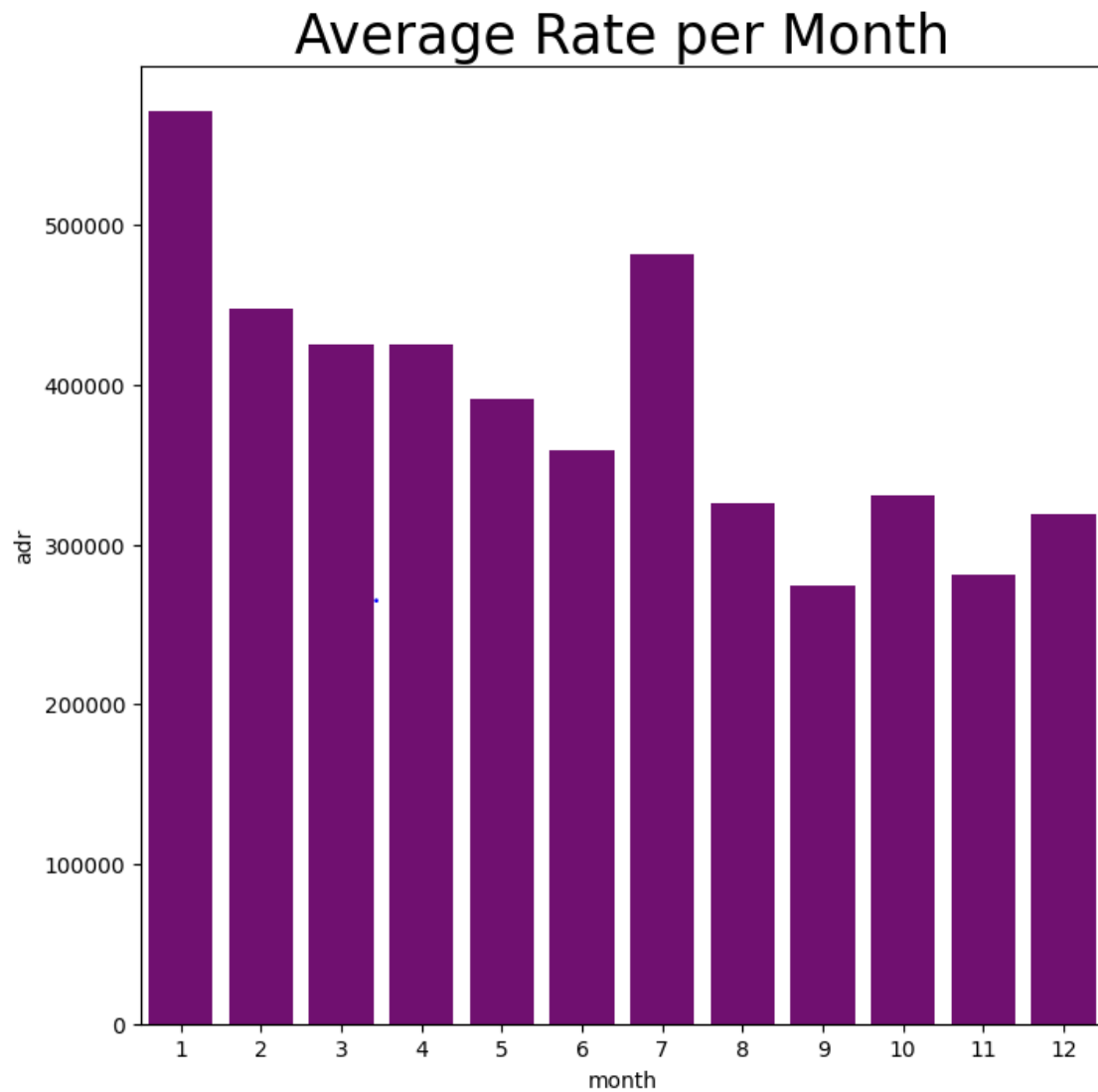


Here we observe that reservations are high in the month of August, and the cancellation rate is also lower. Next, we will investigate the reasons for this trend.

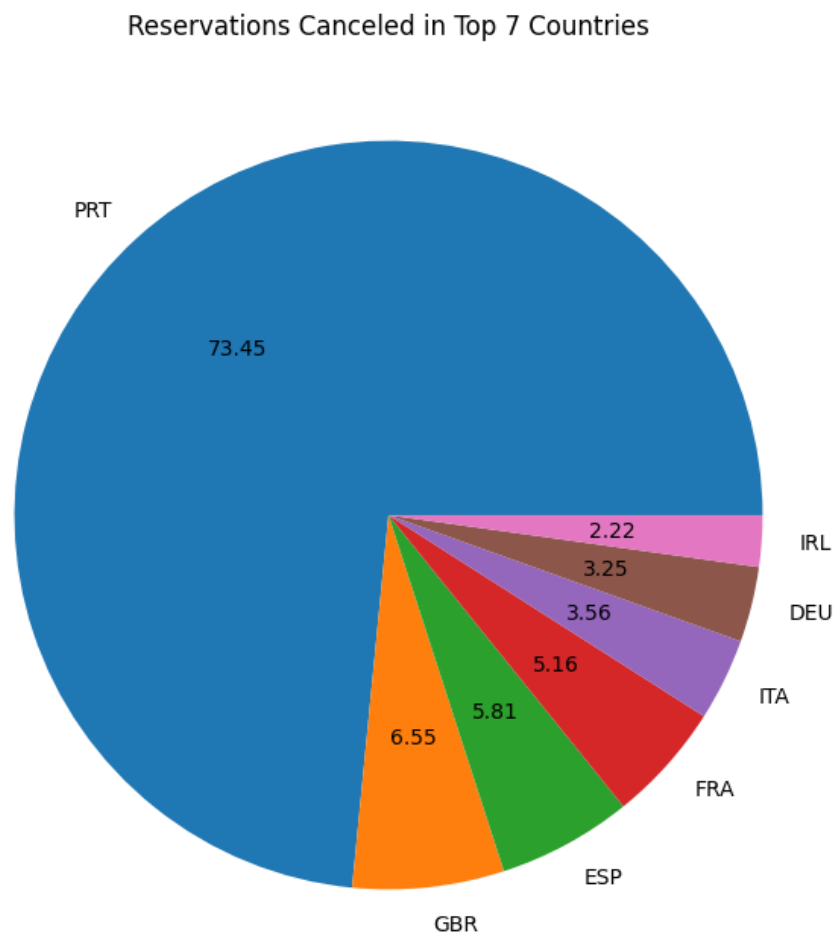
# Reservation Status Per Month



The reason for high reservations in August and high cancellation rates in January was indeed due to high pricing. As shown in the graph below, pricing was high in January and lower in August.



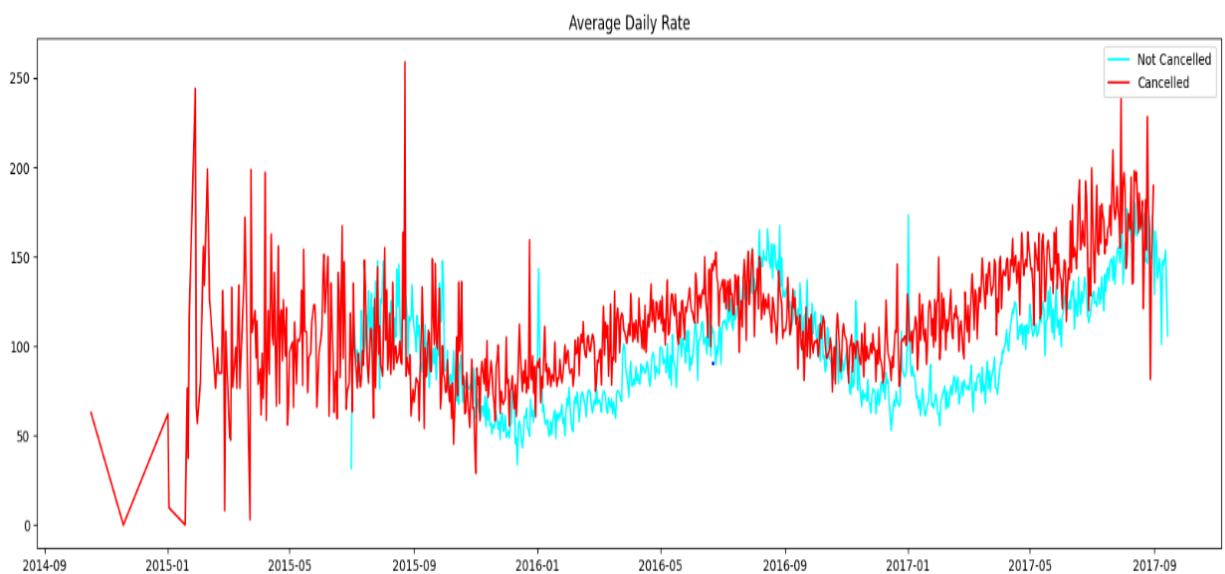
We have also identified the number of canceled reservations in the top seven countries, with Portugal having the largest number of cancellations.



Another hypothesis is that more reservations were made through online travel agents, and the reason for cancellations may be the disparity between the actual hotel and the online images shown to clients, with pricing also being a major concern.

```
df['market_segment'].value_counts()
```

```
[29]: market_segment
      Online TA      56402
      Offline TA/TO  24159
      Groups        19806
      Direct        12448
      Corporate      5111
      Complementary   734
      Aviation       237
      Name: count, dtype: int64
```



## Suggestions to Hotel Management

Maintain lower prices during months with fewer reservations and implement an effective marketing strategy.



Portugal should employ an effective marketing strategy and adjust pricing to encourage more reservations and reduce cancellations.