

REPORT :

Problem Statements:

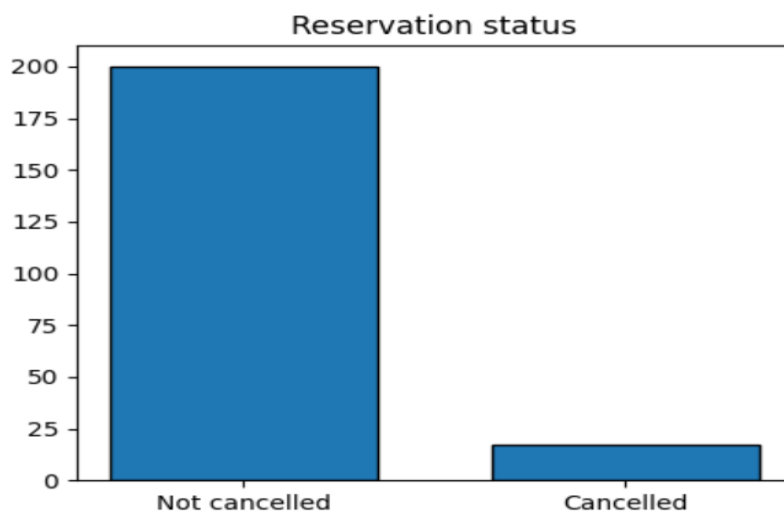
- 1) What are the factors that affect hotel reservation?
- 2) How can hotel reservations be increased?
- 3) How to assist hotels in terms of pricing and promotional decisions?

Assumptions:

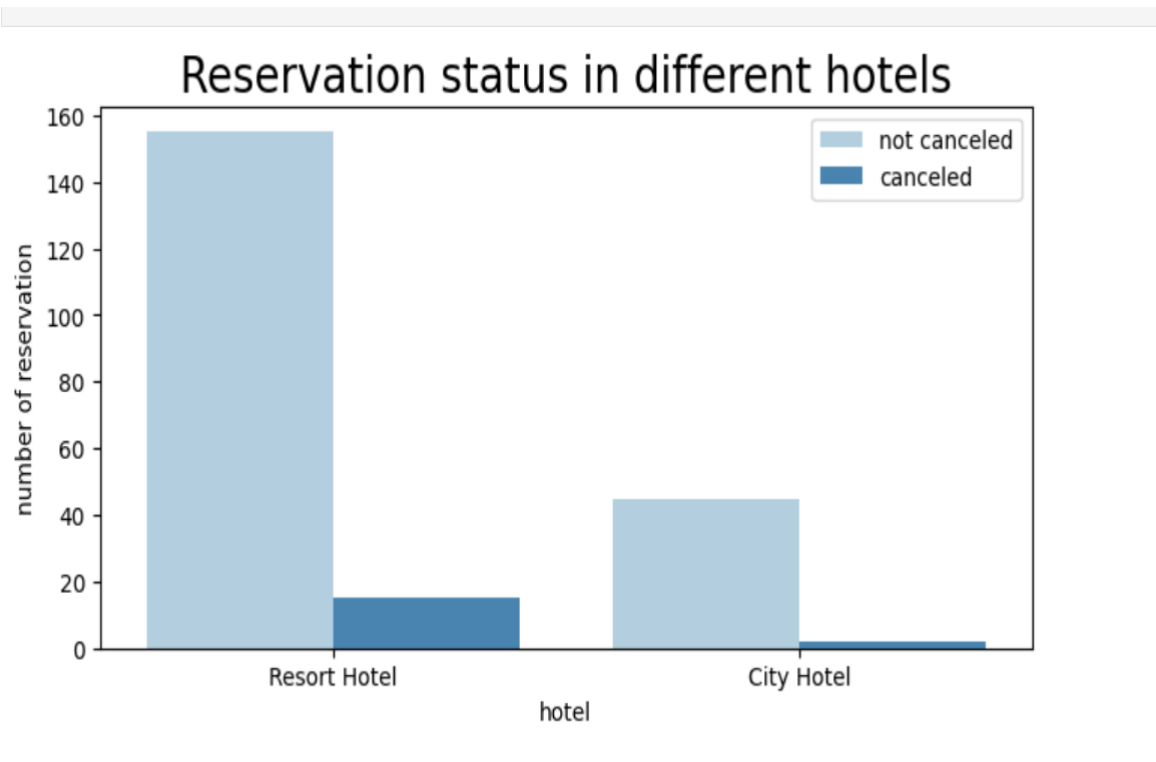
- 1) Cancellations increase due to higher prices.
- 2) Majority of tourists uses offline travel agents for reservations.
- 3) Due to longer waiting list, customers tend to cancel.

Analysis:

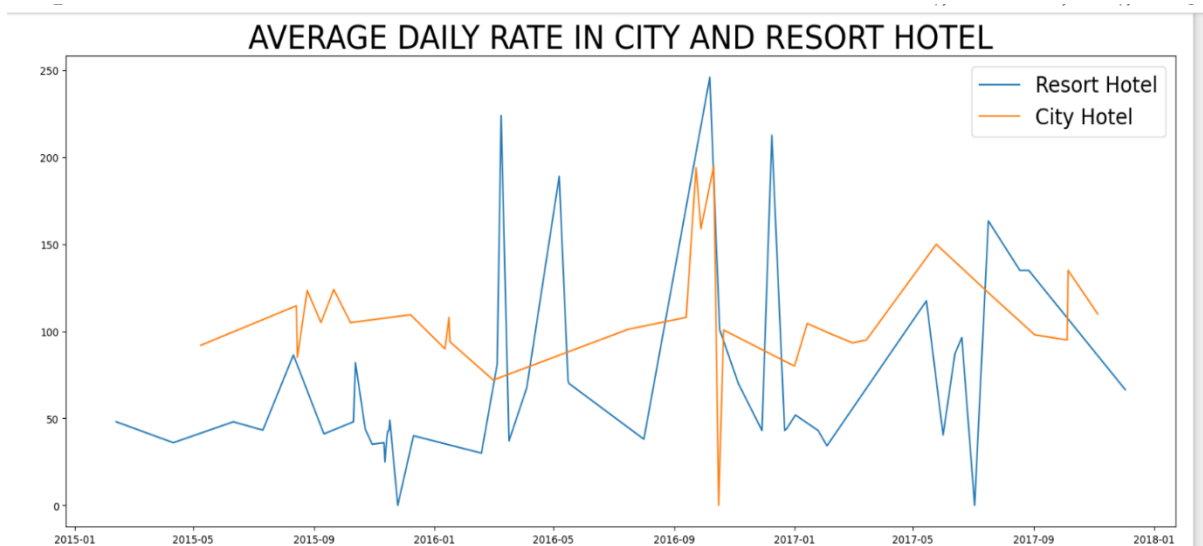
```
is_canceled
0    0.921659
1    0.078341
Name: proportion, dtype: float64
```



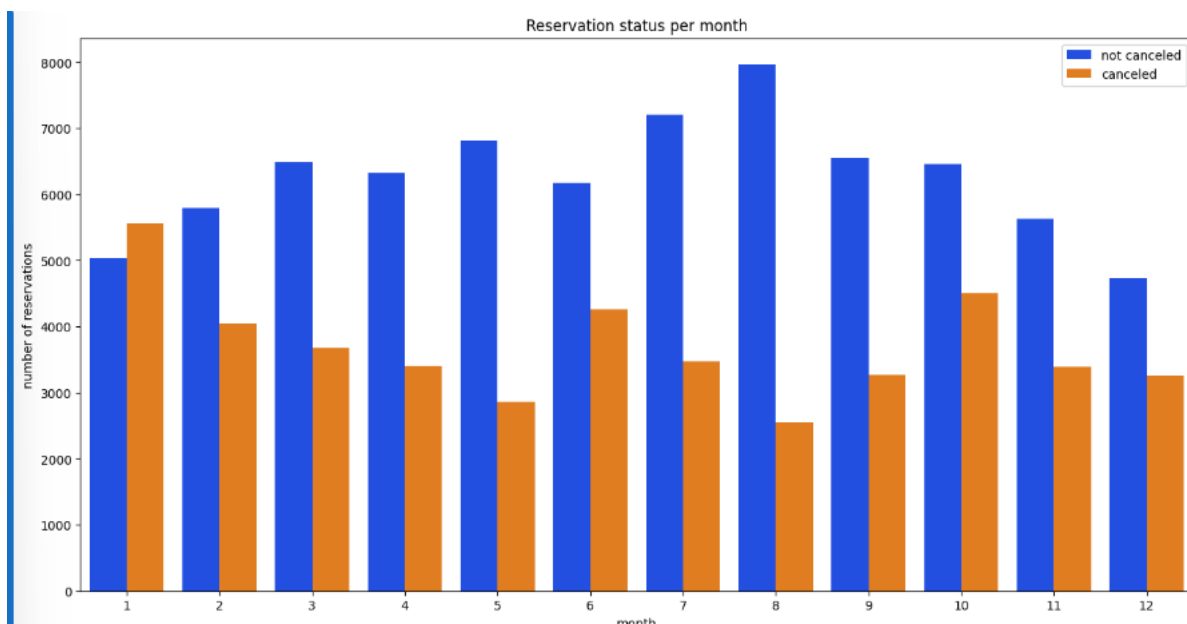
The above bar graph shows the percentage of the reservations that are cancelled and the percentage of reservations that are not cancelled. It is visible that there is a significant number of reservations that are not cancelled, almost 0,07% of the tourists are cancelling the reservations that needs to be taken care of.



The above graph shows the comparison of reservations between city and resort hotel. It is seen that reservations in resort hotels are more as compared to city hotels which could be due to cheaper prices of the resort hotels.

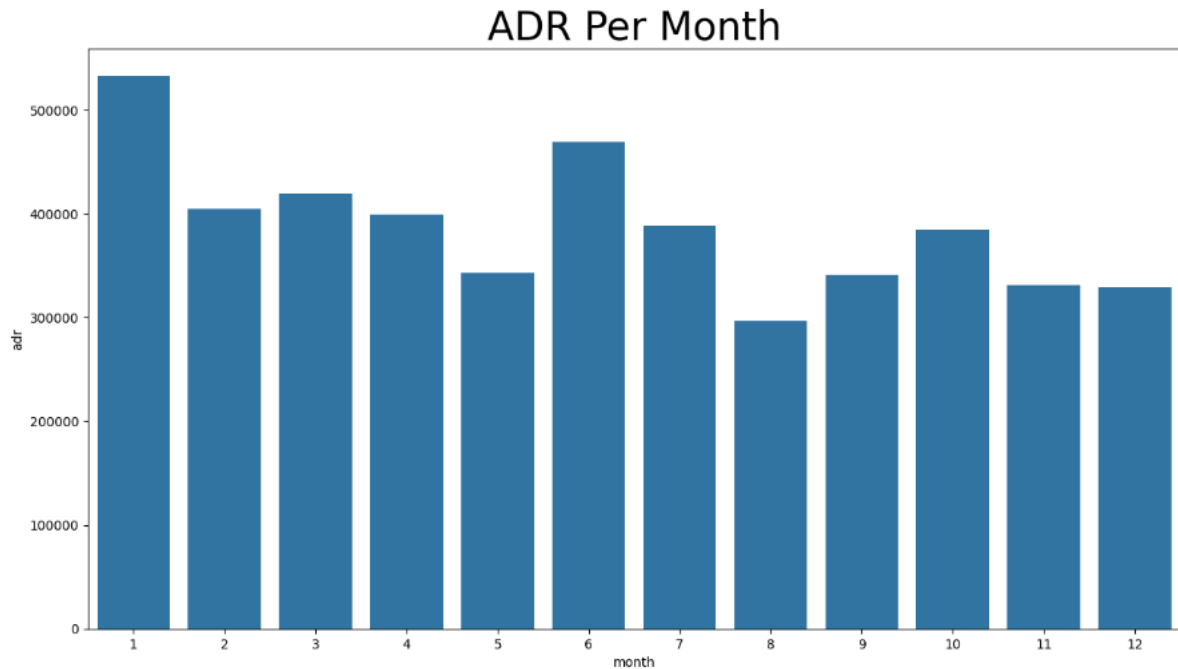


The above line graph shows that on certain days, the average daily rate for a city hotel is less than the resort hotel, the weekends and holidays may see a rise in resort hotels.



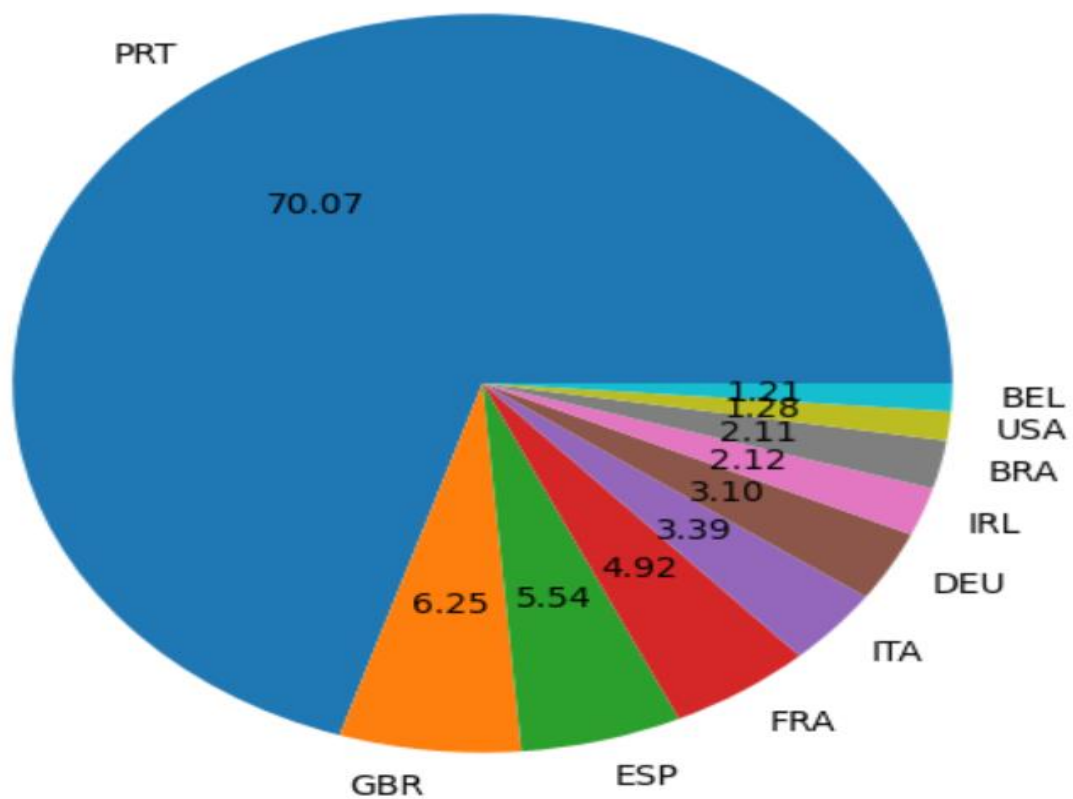
The above bar graph is used to analyze the months with the highest and lowest reservation levels according to reservation status. It shows that the maximum number of not cancelled reservations are in the

month of august and the number of maximum cancelled reservations were in the month of January.



The above bar graph shows that the average daily rate per month is maximum in the month of January and least in the month of august. The cancellations might be more when prices are greatest.

TOP 10 COUNTRIES WITH RESERVATIONS CANCELLED

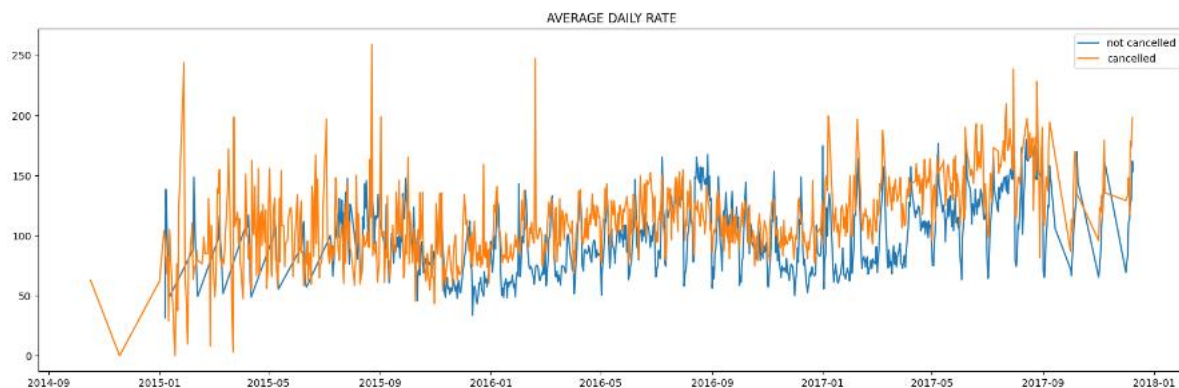


The above pie chart shows the top 10 countries with maximum reservation cancellation.

Portugal is the country with the maximum number of cancellations.

```
market_segment
Online TA      0.473046
Offline TA/TO  0.202856
Groups         0.165935
Direct         0.105587
Corporate      0.044350
Complementary  0.006223
Aviation       0.001985
Undefined      0.000017
Name: proportion, dtype: float64
```

The above image demonstrates the percentage of the mode of reservations among Online, Offline, Direct, Groups, Corporate, Complementary, Aviation and undefined. It shows that maximum reservations are made online with a percentage of almost 47%.



The above line graph shows that the reservations are cancelled when average daily rate is high.

Therefore, higher prices leads to more cancellation.

Suggestions:

- 1) The chances of cancellations increases with increase in the prices. Henceforth hotels should work on their costs and should provide occasional discounts to attract more tourists.
- 2) The number of reservations in city hotels are more as compared to resort hotels, therefore resort hotels should enhance their accessibility to the clients.
- 3) The average daily rate is more in January as compared to other months, so hotels so promote themselves more in that particular month to increase the number of reservations.
- 4) As Portugal has maximum number of cancellations, so the hotels at the country should increase the number of facilities and decrease the prices to gain more attraction.

