# Research Question

1. What factors contribute to hotel reservation cancellations?

2. How can cancellation rates be minimized for hotel reservations?

3. How can hotels optimize pricing and promotions based on reservation data?

Hypothesis

1. Higher prices lead to an increase in cancellations.

2. Customers are more likely to cancel when there is a longer waiting list.

3. The majority of clients book through offline travel agencies.

Analysis and Findings

Reservation status count
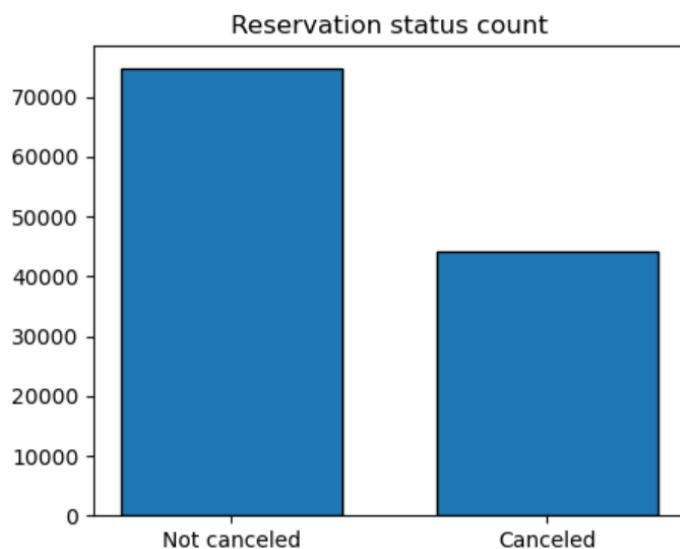
From the bar chart, it is evident that a considerable number of bookings remain uncanceled, though about **37% of clients cancel their reservations**, impacting hotel revenue significantly.

Reservation status in different hotels
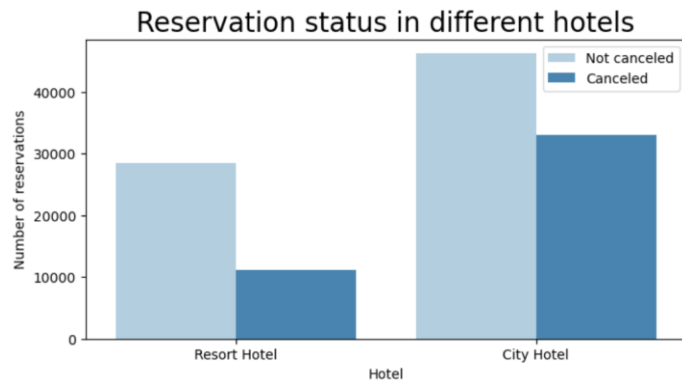
When comparing city and resort hotels, city hotels receive more bookings, potentially because resort hotels are often more expensive.

Average Daily Rate in City and Resort Hotel
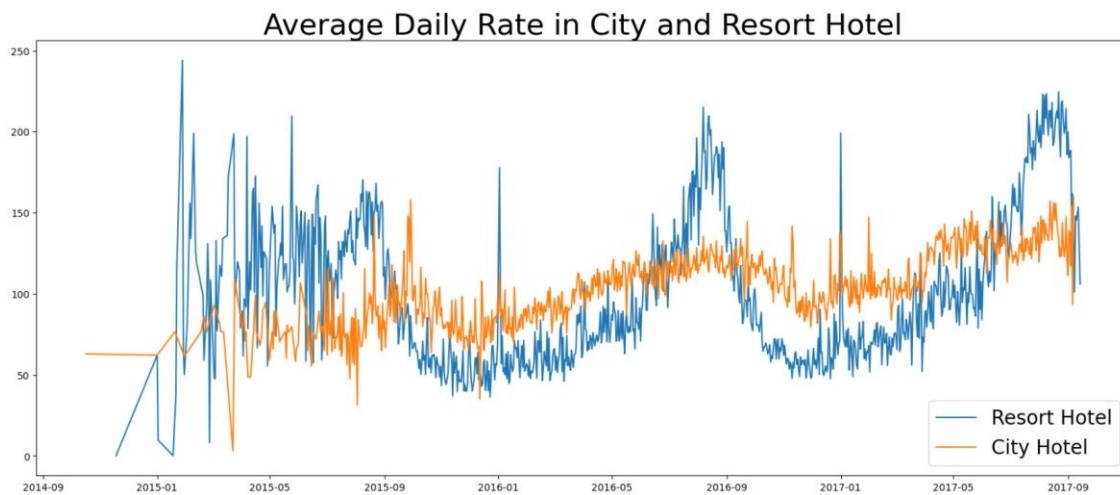
The line graph reveals that on certain days, the **average daily rate for city hotels is lower** than for resort hotels. This trend fluctuates, with weekends and holidays often resulting in higher rates for resort hotels.

Reservation Status per month
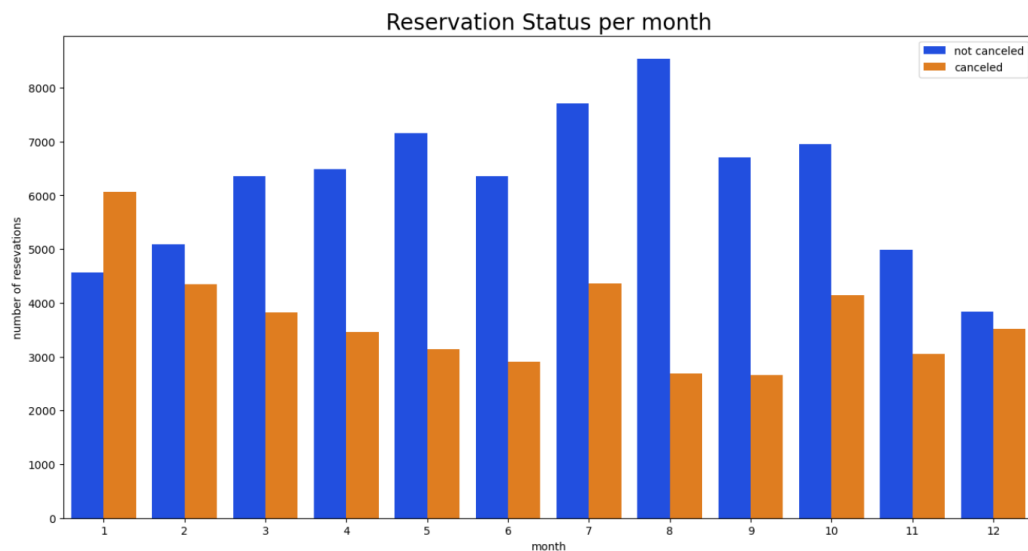
The grouped bar chart indicates that **August sees the highest number of reservations, both confirmed and cancelled**, while **January** has the most cancelled reservations, suggesting a pattern for cancellations during specific months.


ADR per month
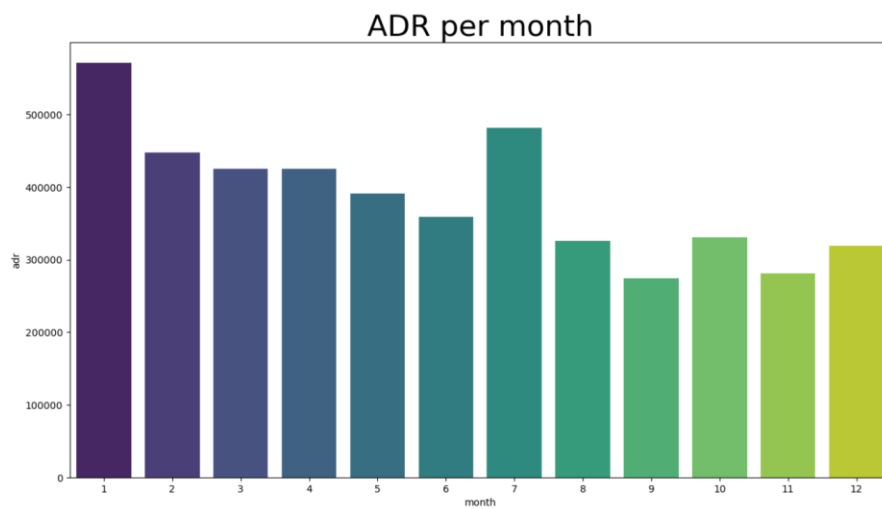
Analysis shows that cancellations are most frequent when prices are higher and less frequent when prices are lower. This suggests that pricing directly influences cancellation rates.

Now, let's see which country has the highest reservation canceled.

A country-wise analysis shows **Portugal** leading in cancellations

Top 10 countries with reservation canceled
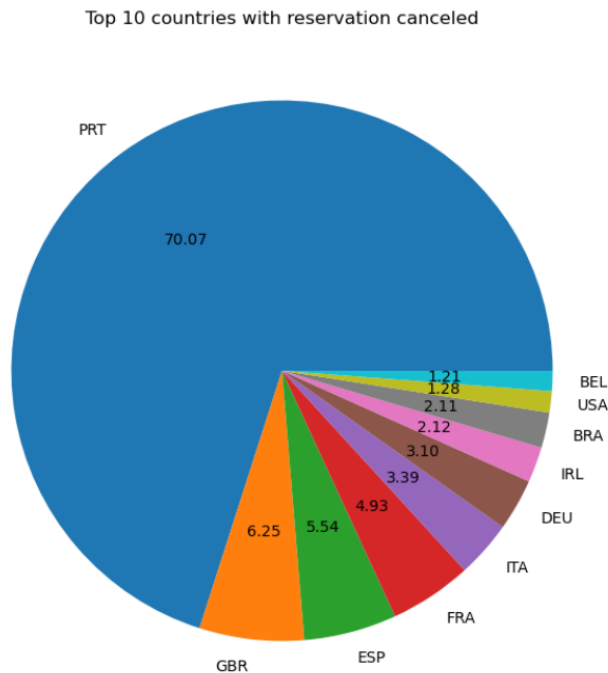
Booking sources also reveal interesting trends. **46% of bookings** come from online travel agencies, while **27% come from group bookings**, and only **4% of clients book directly at the hotel**.
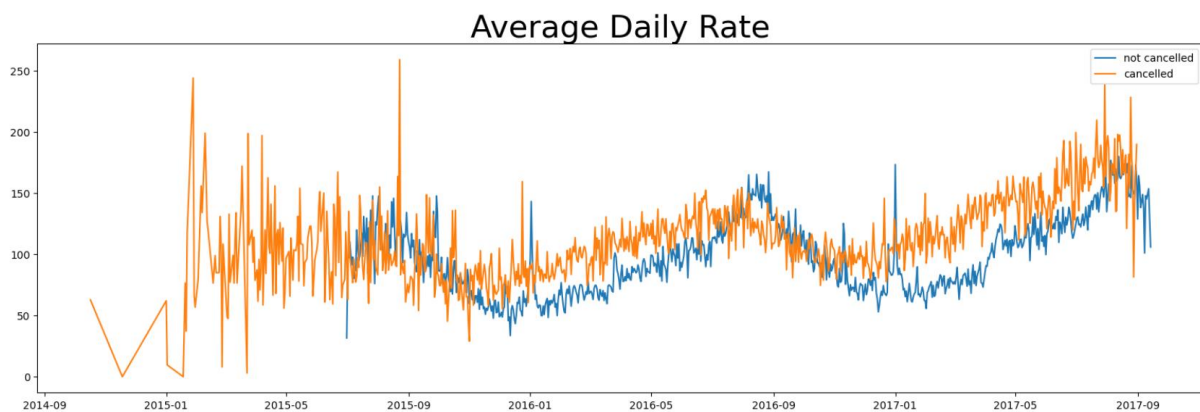
Average Daily Rate

Further analysis of the average daily rate supports the earlier finding that **higher prices correlate with increased cancellations**

Suggestions

1. Reevaluate pricing strategies: To reduce cancellations, hotels could explore more competitive pricing based on location and offer discounts during peak periods.

2. Resort vs. city hotels: Since resort hotels experience more cancellations, especially during weekends and holidays, offering **discounts during these times** may help mitigate cancellations.

3. Focus on January: Given the high cancellation rates in January, hotels could launch **targeted marketing campaigns** to boost occupancy during this period.

4. Improve services in Portugal: Since Portugal has the highest cancellation rate, improving hotel quality and services in that region may reduce cancellations.