

Hotel Booking Cancellations Analysis Report

Business Problem

A hotel is losing a lot of money and time because too many guests are canceling their bookings. The management wants to know when and why people cancel so they can plan better and avoid empty rooms.

Assumptions

- The data captured all bookings, not just canceled ones.
- Every row in the data truly represents a booking made by a real customer.
- Prices shown (ADR - Average Daily Rate) really reflect what customers would pay if they stayed.
- External factors like weather or huge events are not included.

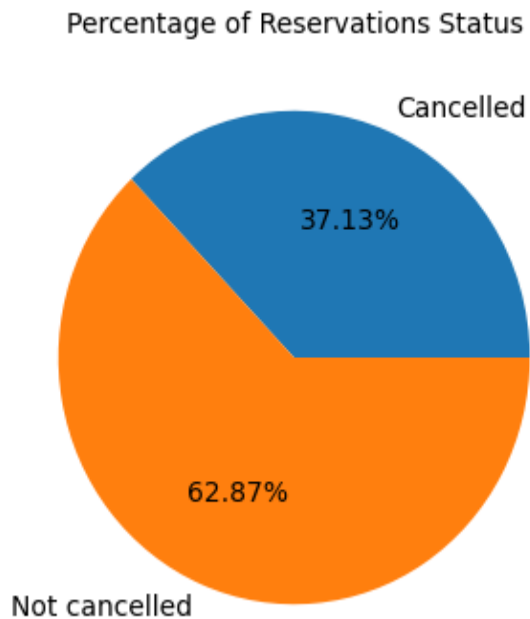
Research Questions

- When do most guests book and cancel their reservations?
- Are prices a reason for cancellations?
- Do new guests cancel more than repeat guests?
- Does the country of the guest matter?
- Which channels (online, groups, direct) are most active?
- How long do guests wait on the waiting list before canceling?

Hypothesis

- Most cancellations happen in busy/expensive seasons.
- New guests are more likely to cancel compared to folks who return.
- Bookings made through travel agents or in groups see more cancellations than direct bookings.
- Guests booking at the last minute (zero waiting list days) are more prone to cancel.

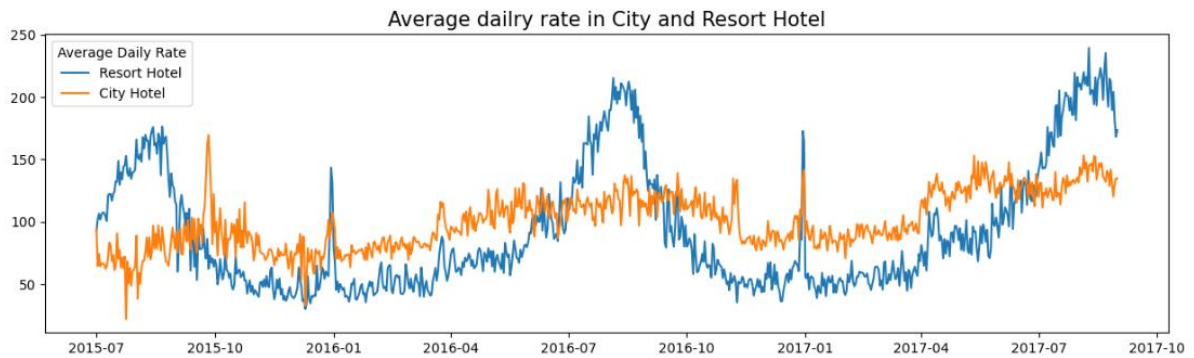
Analysis Findings



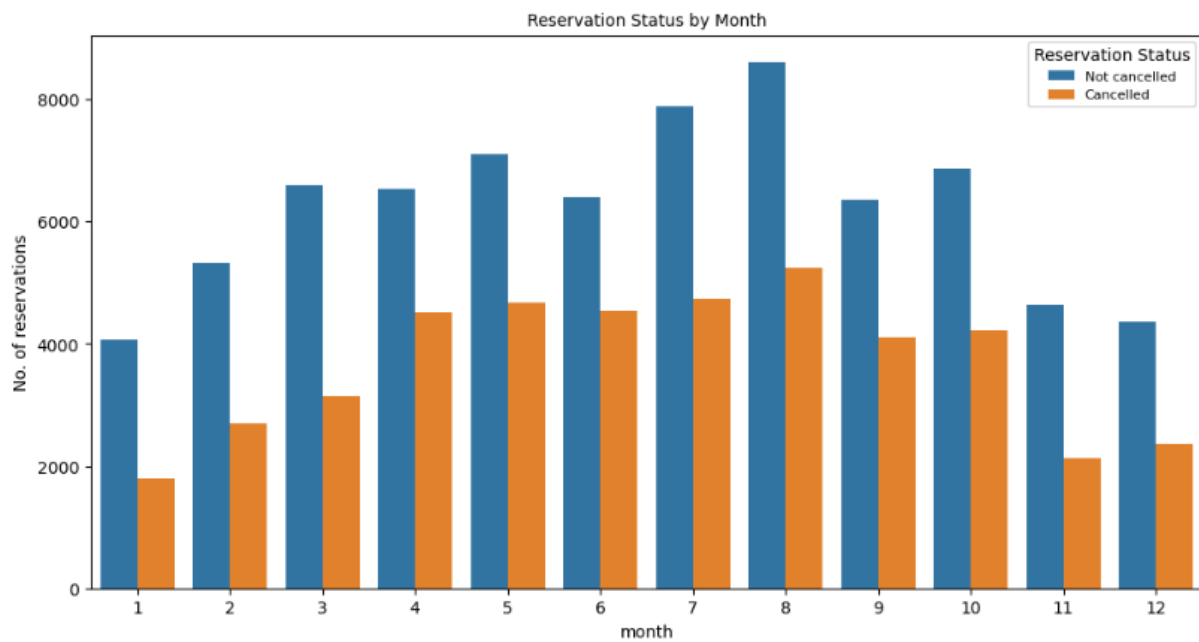
- This pie chart keeps it simple: almost 37% of all bookings are canceled, while about 63% actually result in guests staying.
- **Takeaway:**
More than 1 in 3 bookings are lost before the guest even walks in the door.



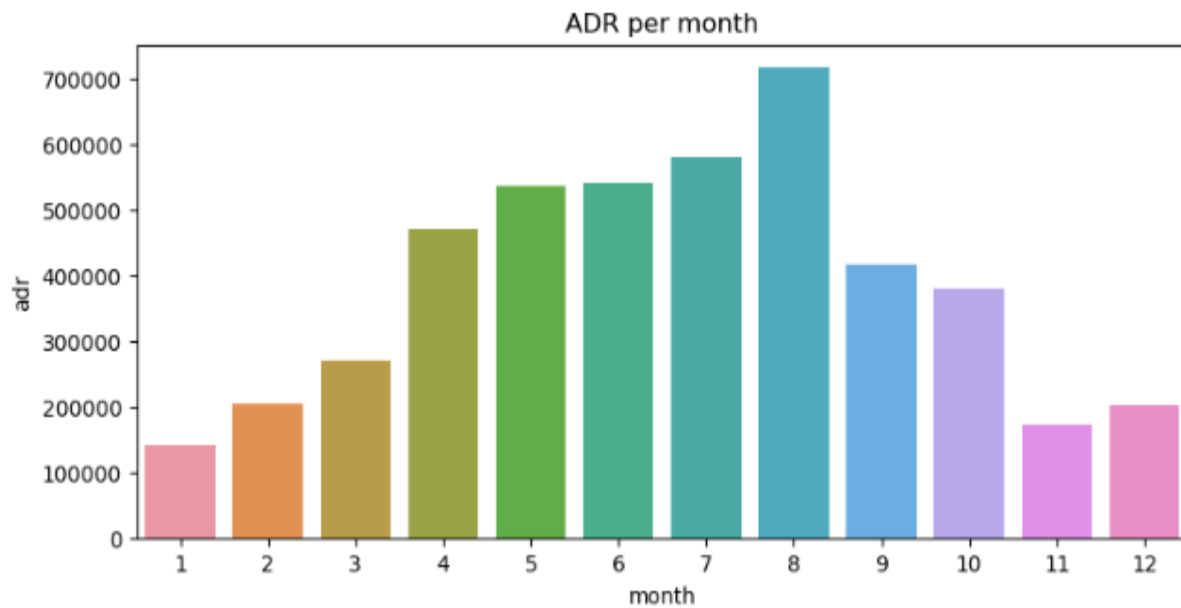
- This bar chart compares city hotels and resort hotels. City hotels see both more bookings and more cancellations compared to resorts—which tells us city locations are busier and riskier.
- **Takeaway:**
City hotels bring in a bigger crowd, but also deal with more cancellations.



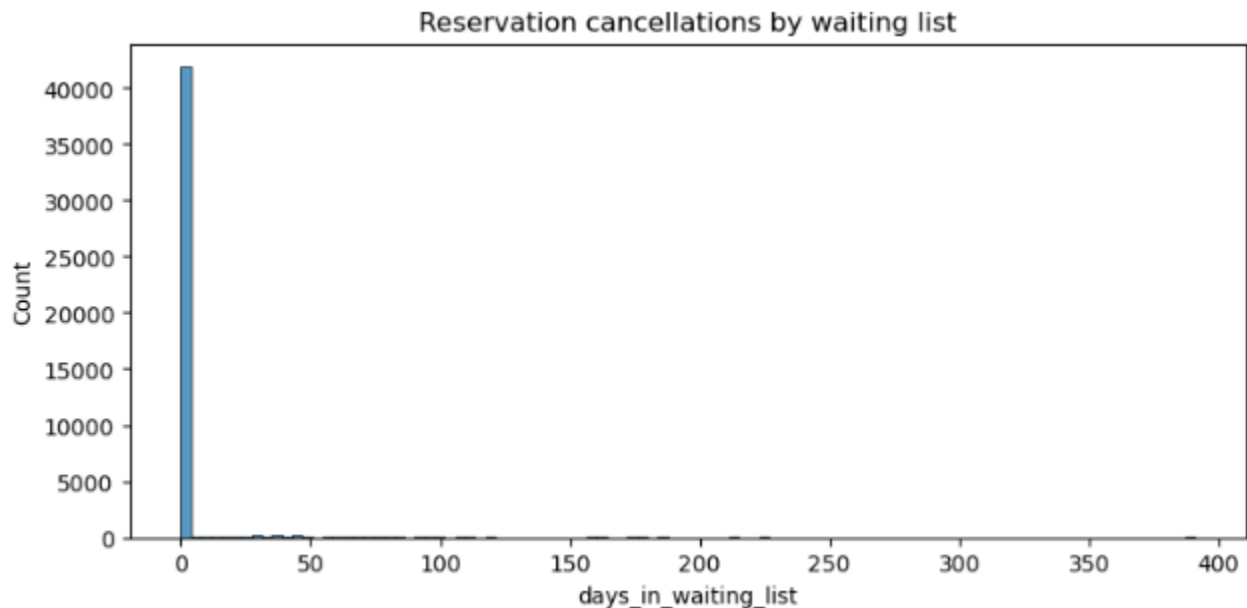
- Here we see how city hotels and resort hotels charge differently over time. City hotels are more stable but tend to be more expensive overall, especially when the city is buzzing. Resort hotel prices rise and fall with the seasons—when the holiday rush comes in, prices spike!
- **Takeaway:**
City hotels charge more on average, but both hotel types see price jumps during busy seasons.



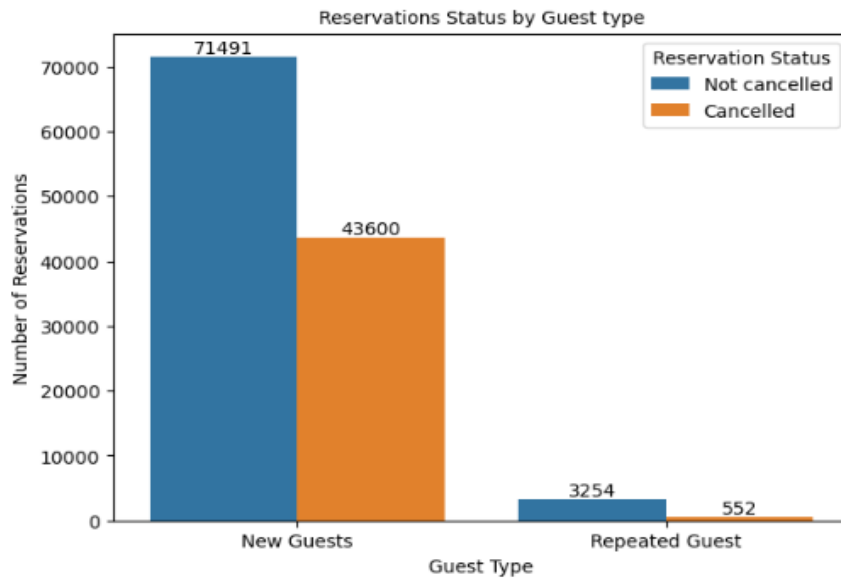
- See those bars rising in the middle of the year? That's when most bookings and cancellations happen. Both drop off towards the colder months.
- **Takeaway:**
Summer is the hotel's busiest—and riskiest—time for cancellations.



- This colorful bar plot shows us how much money, on average, guests pay per room each month. The prices (ADR) steadily climb from January, hitting a peak in August. That's when staying at the hotel costs the most for everyone.
- **Takeaway:**
Hotel prices are highest in the summer, so this is when both risk and potential loss from a cancellation are the greatest.

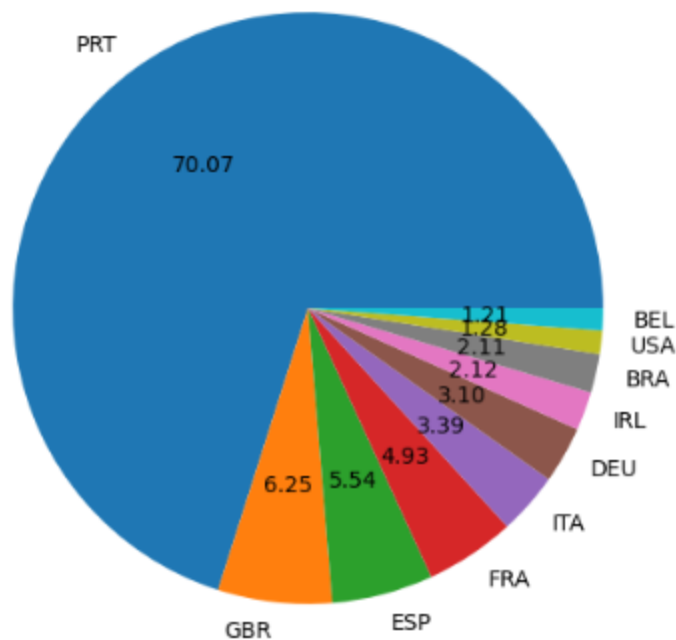


- This mighty spike at zero on the histogram tells us one thing: if someone's on the waiting list, almost always it's for zero days before the booking gets canceled. People don't wait—they bail!
- **Takeaway:**
Guests who are told to "wait" almost never bother to stick around, especially if the wait is even a single day.

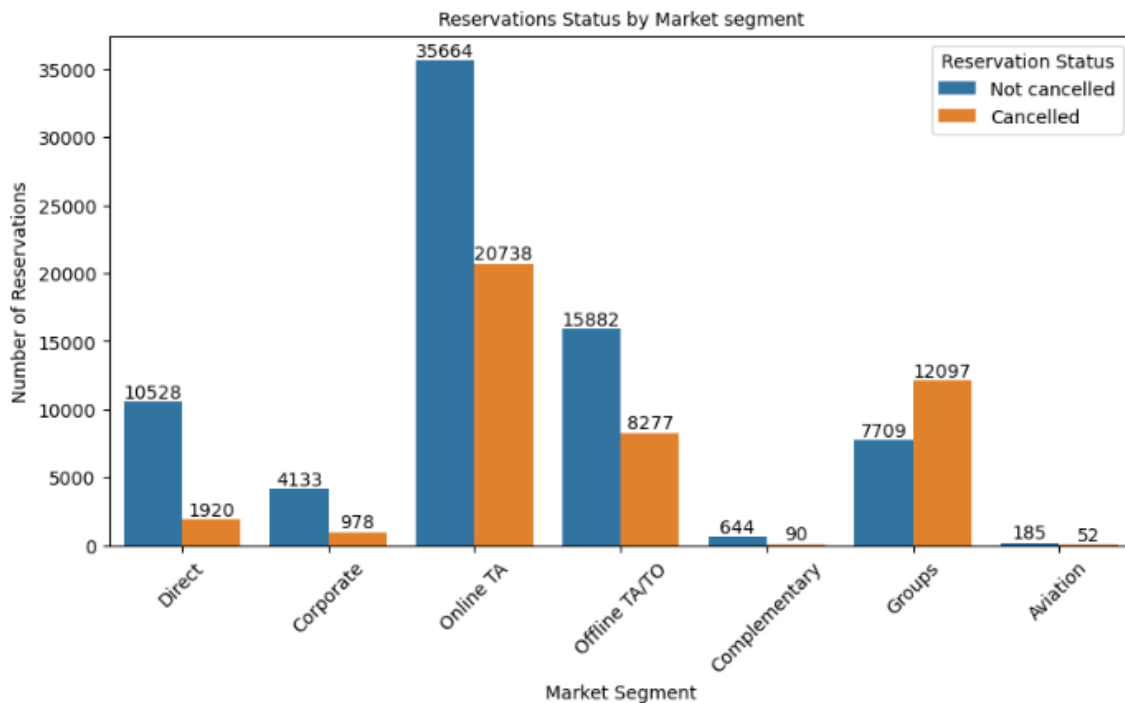


- Looking at the bar chart, it's clear that most of the hotel's guests are new faces. But here's the twist: new guests cancel way more often than returning ones. Out of all bookings, only a tiny group are repeat guests—and they're less likely to back out.
- Takeaway:**
If a guest is booking for the first time, there's a much bigger risk they might not show up.

Top 10 Countries with Reservations Cancelled



- The big blue chunk here is Portugal—most cancellations come from there. Guests from a few other countries (like the UK, Spain, and France) make up much smaller slices.
- Takeaway:**
Most cancellation problems the hotel faces are from one main country.



- This bar graph breaks guests down by how they booked: Online travel agencies (like travel websites) and group bookings bring in tons of business, but also more cancellations. Direct and corporate bookings are much steadier.
- **Takeaway:**
The same segments that help fill up rooms (online agencies, groups) are also the ones causing the most headaches with cancellations.

Recommendations

Here's what the hotel should consider doing, based on this analysis:

- **Manage summer prices:** Don't let prices climb too high during busy periods or offer special deals that require some up-front commitment.
- **Give incentives to new guests:** Encourage first-timers to stick with their bookings, maybe through discounts or flexible cancellation.
- **Build customer loyalty:** Guests who come back are less likely to cancel, so loyalty programs could help.
- **Pay extra attention to online and group bookings:** Since these segments bring in the most business and cancellations, focus extra confirmation and reminders for them.
- **Adjust waiting list strategies:** If someone is put on a waiting list, act quickly — otherwise, expect a likely cancellation.