

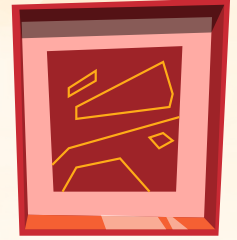
# INVESTIGATE HOTEL BUSINESS USING DATA VISUALIZATION

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# OVERVIEW

Measuring business performance is crucial for a company. Track, monitor, and assess various business processes successes or failures of several business processes.

Therefore, in this report, I will analyze the business performance in the hospitality sector, focusing on how customers behave on making hotel bookings and how this relates to the cancellation rate of hotel bookings.

The dataset is a hotel bookings history of several hotels from July 2017 to August 2019.



01

# DATA PREPROCESSING

Transform raw data into ready-to-use data

# DATA PREPROCESSING



## Handle Null Values

Some columns have null values, **city**, **children**, **agent**, and **company**. I decided to fill them with some value rather than drop it. The city column is filled with *No City*, while the others will be filled with 0.

## Replace Similar Values

On the **meal** column, there is an *Undefined* value. We didn't know whether these clients had requested a meal or not, so I decided to replace this value with *No Meal*.

## Drop Unused Values

I created a **guest** column to count the total of the guest. Then I dropped the **adults**, **children**, and **babies** columns because these columns were already represented by the **guest** column.



# 02

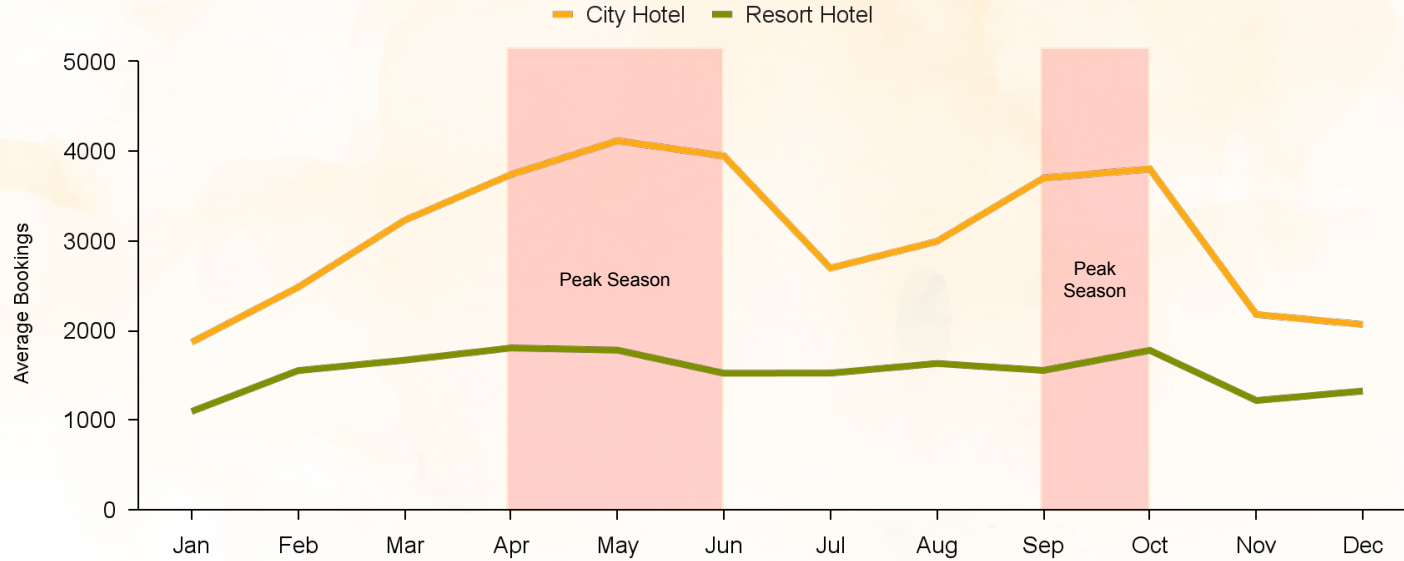
## **MONTHLY HOTEL BOOKING ANALYSIS BASED ON HOTEL TYPE**

Which month or season the hotel booking will increase for each type of hotel?



# MONTHLY HOTEL BOOKING ANALYSIS

## BASED ON HOTEL TYPE

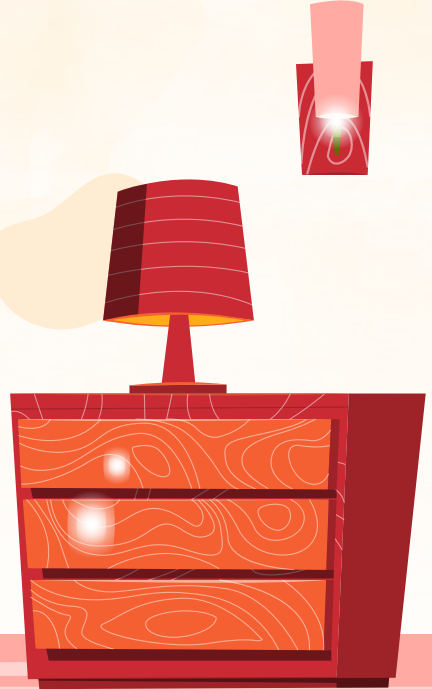
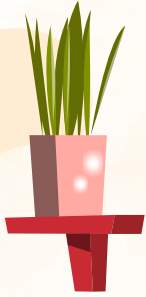


Overall, the City Hotel has more average bookings than the Resort Hotel, especially **during peak season**. The peak season in both hotels is **from April to May** and **September to October**. It's probably because, in Indonesia, these months are between the dry and wet seasons. So, the weather is not too hot to explore the tourist destination. Further analysis can be carried out to confirm this.

# 03

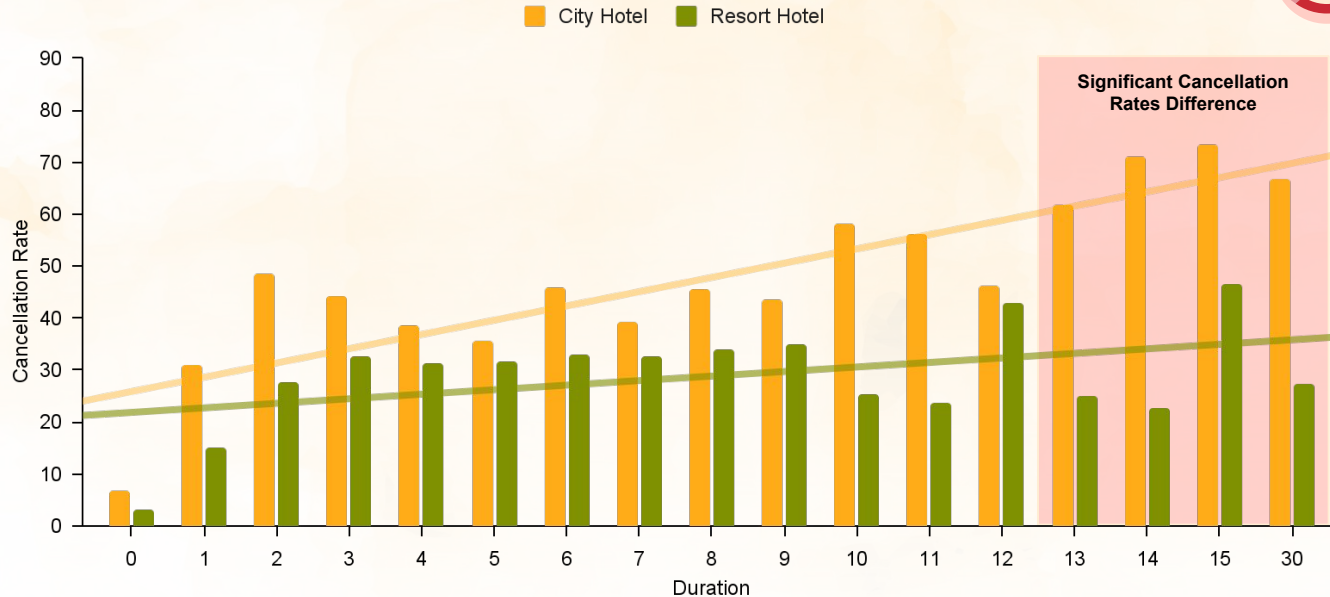
## **IMPACT ANALYSIS OF STAY DURATION ON HOTEL BOOKINGS CANCELLATION RATES**

Is there any correlation between the duration of stay and the rate of cancellation of hotel bookings?





# IMPACT ANALYSIS OF STAY DURATION ON HOTEL BOOKINGS CANCELLATION RATES

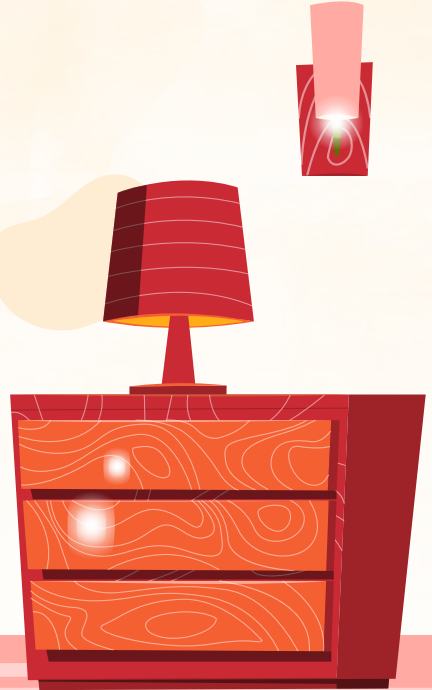
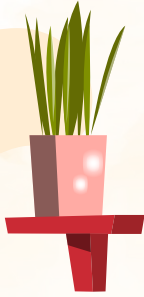


Based on the trendline, the longer the customer booked, the higher the cancellation rates. We can see that City Hotel has a higher cancellation rate than Resort Hotel. Guest who booked 10 days or more in City Hotel has more than 50% cancellation rates. Meanwhile, in Resort Hotel, the customer that booked for 10 days or more has only about 20% cancellation rates.

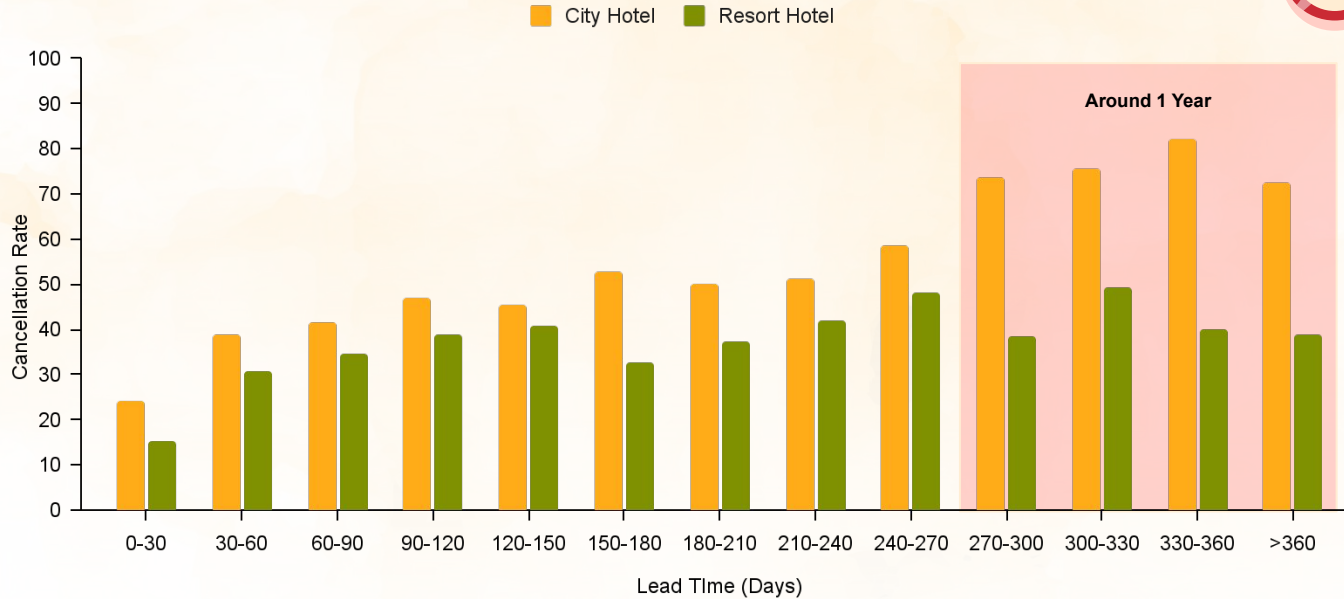
04

## **IMPACT ANALYSIS OF LEAD TIME ON HOTEL BOOKINGS CANCELLATION RATE**

Is there any correlation between the time interval of hotel bookings and the cancellation rate of hotel bookings?



# IMPACT ANALYSIS OF LEAD TIME ON HOTEL BOOKINGS CANCELLATION RATE



Generally, City Hotel has higher cancellation rates than Resort Hotel. Especially when customers who booked in City Hotel 10 months or later have more than 70% cancellation rates. On the other hand, in Resort Hotel, customers who booked 10 months or later only have about 40% cancellation rates. Meanwhile, customers who booked less than 1 month have the lowest cancellation rates.