

HOTEL RESERVATION ANALYSIS IN SQL AND TABLEAU

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Introduction

- In this project, I explored a hotel reservation dataset to identify interesting patterns and trends that could inform business strategies and decision-making.
- The aim of this project was to work with a hotel reservation dataset that contains information about reservations at two types of hotels: Resort Hotels (H1) and City Hotels (H2) using SQL for data manipulation and Tableau for visualization to gain insights and create impactful visualizations.

Data Importation & Preparation

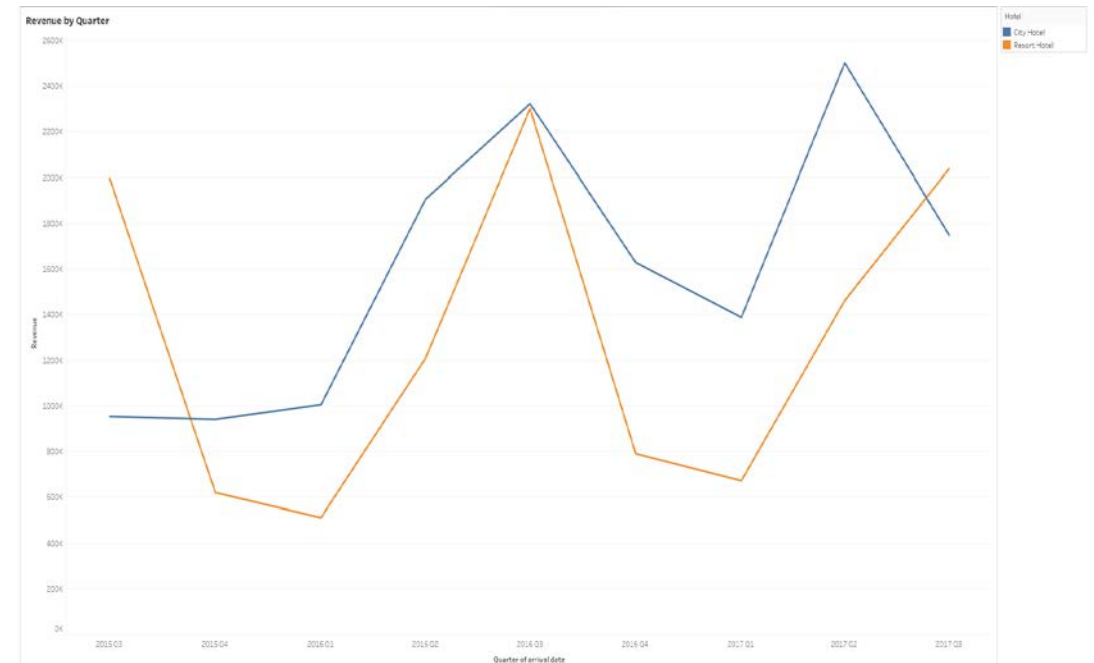
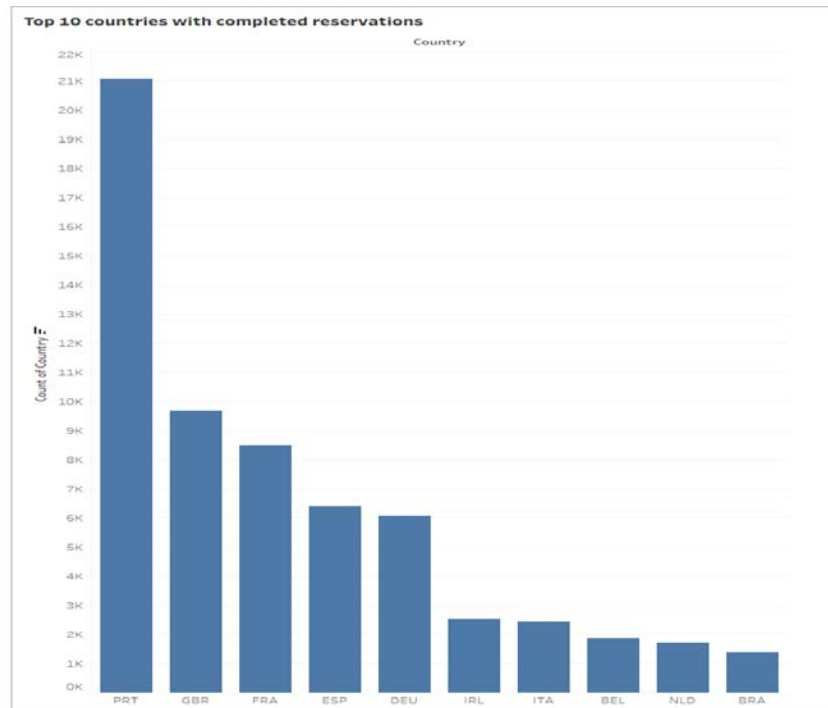
- The hotel reservation dataset in Excel format that contained information about hotel bookings. This dataset included details such as customer information, booking dates, room types, cancellations, and more.
- I imported the hotel reservation dataset into MySQL environment.
- I performed data cleaning tasks to handle missing values, duplicate records, and outliers, ensuring the dataset's integrity.

Exploratory Data Analysis

- I explored the dataset to understand the variables and the relationships between them.
- I created calculated columns to help answer EDA questions (arrival date, revenue, total length of stay)
- I used SQL queries to extract relevant information from the database, including SELECT, JOIN, GROUP BY, and aggregation functions to generate meaningful insights.

Tableau visualization

- To make the results more accessible and actionable, I visualized the data using Tableau to create informative charts and graphs. These visuals highlighted the trends, outliers, and patterns discovered during the analysis.



Key Insights - Bookings

- Investigating trends in the number of bookings over time to identify peak booking seasons.
- The City Hotel had significantly larger (98% more) reservations made than the Resort Hotel.
- More than half (52%) of the reservations were made from just 3 countries - Portugal, Great Britain and France.
- The average number of nights stayed by a guest was higher at the Resort Hotel by over 40%.

Key Insights - Cancellations

- 37% of all the reservations made were cancelled.
- Cancellation rate was significantly higher at the City Hotel (75% of all cancellations) than at the Resort Hotel (25% of cancellations)
- Cancellations were fewer during the holidays – November to January and peaked in May 2017.
- Clients who did not make any deposits at the time of booking were the most likely to cancel (67%), those who made; 33% of clients who paid in full while booking cancelled, and less than 1% of those who made a partial deposit cancelled their reservations.
- Only 1% of the cancellations were done by repeat guests, while 99% of the cancellations were by new guests.

Key Insights - Revenue

- Revenue Analysis: Calculating revenue based on room types and lengths of stay.
- The total revenue for the period reviewed was just under \$26M, 45% of which was made by the Resort Hotel and 55% by the City Hotel.
- The Resort Hotel had a higher revenue per completed booking (\$400/booking) compared to the City Hotel (\$311/booking). The overall revenue per completed booking was \$345.

Recommendations

- Ads or promotions targeting prospective clients from top 10 countries
- Optimize deposit options and room allocation to reduce cancellation and maximize revenue during peak seasons
- The City Hotel should do a deep dive into their high cancellation rate and possible measures to increase length of stay.

THANK YOU