

MENTORNESS PROJECT: HOTEL RESERVATION ANALYSIS

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BATCH: MIP_DA_04

DATA SOURCE: MENTORNESS

INTRODUCTION

Analyzing hotel reservations is essential to maximize profits and streamline hotel operations. Hotels can make well-informed decisions to enhance overall performance by examining reservation data to obtain insights into client preferences, revenue trends, and bookings patterns. Hotel reservation analysis is critical to guiding strategic decision-making, improving visitor experiences, and attaining long term commercial success in the hospitality sector.

Objectives

- This analysis helps in the improvement of customer satisfaction
- The operations of the hotel will be enhanced efficiency
- This analysis identifies booking patterns and demands to optimize pricing strategies and maximize revenue generation

DATASET OVERVIEW

The dataset for hotel reservations consists of 12 columns and 700 bookings. Two column was used for reservations both on the weekends and during the nights of the workweek. Meals plans are included with some reservations, but not with others. Prior to the arrival date, some reservations were cancelled.

There were split bookings: some were made offline, some online, and some were done for corporate purposes and some were complimentary. Prior to the clients arriving at he hotel, there is a lead time. A number of room kinds are available for reservations and the dataset contains the average price for each type of room. Numbers of guests who will be staying at the hotel were recorded in the dataset, some of which included children.

```
select Booking_ID, no_of_adults, no_of_children, avg_price_per_room, room_type_reserved
from [Hotel Reservation].[dbo].[Hotel Reservation Dataset]
where no_of_children >0
```

Results Messages

Booking_ID	no_of_adults	no_of_children	avg_price_per_room	room_type_reserved
INN00033	0	2	82.44	Room_Type 2
INN00061	2	2	258	Room_Type 6
INN00081	2	2	159.3	Room_Type 6
INN00096	2	1	130.5	Room_Type 1
INN00100	2	2	156.9	Room_Type 6
INN00115	2	2	184.24	Room_Type 2
INN00118	2	1	102.83	Room_Type 1
INN00128	2	2	190.8	Room_Type 6
INN00137	2	1	121.5	Room_Type 1
INN00170	2	1	87.4	Room_Type 1
INN00175	2	1	150	Room_Type 1

SQL QUERIES FOR DATA RETRIEVAL

SQL query used to obtain average price per room for reservations involving children

```
select top 1 room_type_reserved, count(room_type_reserved) as no_of_times_booked  
from [Hotel Reservation].[dbo].[Hotel Reservation Dataset]  
group by room_type_reserved  
order by no_of_times_booked desc
```

Results Messages

room_type_reserved	no_of_times_booked
Room_Type 1	534

SQL QUERIES FOR DATA RETRIEVAL

SQL query used to retrieve the most common booked room type

DATA EXPLORATION

- ▶ The likely key questions for this analysis;
 - The total numbers of reservations?.
 - How many reservations were made in 2018?.
 - How many reservations were booked confirmed?.
 - Which market segment generate the highest average price per room?.
 - Which meal plan is the most popular among guests?.

ANALYSIS FOR RESERVASATION BASED ON HIGHEST AND LOWEST LEAD TIME

```
select top 1 lead_time  
from [Hotel Reservation].[dbo].[Hotel Reservation Dataset]  
order by lead_time desc
```

Results Messages Client Statistics

lead_time
443

```
select top 1 lead_time  
from [Hotel Reservation].[dbo].[Hotel Reservation Dataset]  
order by lead_time
```

Results Messages

lead_time
0

```
select top 1 type_of_meal_plan, count(type_of_meal_plan) as no_of_times_used  
from [Hotel Reservation].[dbo].[Hotel Reservation Dataset]  
group by type_of_meal_plan  
order by no_of_times_used desc
```

Results Messages Client Statistics

type_of_meal_plan	no_of_times_used
Meal Plan 1	527

CUSTOMER SEGMENTATION

SQL query used to retrieve the most popular meal plan by guests

CONCLUSION

- ▶ In summary, this analysis is an essential tool for the hospitality industry's revenue optimization, guest enhancement and operational efficiency improvement. This enables the hotel management to make well-informed decisions that propel corporate success. By analyzing reservation data, hotels can gain valuable insights into the booking patterns and guest preferences.

THANK YOU