




HOTEL RESERVATION ANALYSIS

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OBJECTIVE

- Explore the significant findings within the dataset to gain a deeper understanding of guest preferences and pricing trends.
 - Make informed and strategic decisions based on the insights derived from “ Hotel Reservation ” data.
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DATASET DETAILS

The dataset includes the following columns:

- **Booking_ID:** A unique identifier for each hotel reservation.
- **no_of_adults:** The number of adults in the reservation.
- **no_of_children:** The number of children in the reservation.
- **no_of_weekend_nights:** The number of nights in the reservation that fall on weekends.
- **no_of_week_nights:** The number of nights in the reservation that fall on weekdays.
- **type_of_meal_plan:** The meal plan chosen by the guests.
- **room_type_reserved:** The type of room reserved by the guests.
- **lead_time:** The number of days between booking and arrival.
- **arrival_date:** The date of arrival.
- **market_segment_type:** The market segment to which the reservation belongs.
- **avg_price_per_room:** The average price per room in the reservation.
- **booking_status:** The status of the booking.



1. What is the total number of reservations in the dataset?

QUERY

```
SELECT COUNT(*) AS TOTAL_RESERVATIONS  
FROM HOTEL_RESERVATION;
```

OUTPUT

TOTAL_RESERVATIONS

▶ 700

2. Which meal plan is the most popular among guests?

QUERY

```
SELECT type_of_meal_plan, COUNT(type_of_meal_plan) AS MEAL_PLAN_COUNT  
FROM HOTEL_RESERVATION  
GROUP BY type_of_meal_plan  
ORDER BY MEAL_PLAN_COUNT DESC  
LIMIT 1 ;
```

OUTPUT

	type_of_meal_plan	MEAL_PLAN_COUNT
▶	Meal Plan 1	527


3. What is the average price per room for reservations involving children?

QUERY

```
SELECT AVG(avg_price_per_room) AS AVG_PRICE_PER_ROOM  
FROM HOTEL_RESERVATION  
WHERE no_of_children > 0;
```

OUTPUT

	AVG_PRICE_PER_ROOM
▶	144.56833333333336



4. How many reservations were made for the year 20XX
(replace XX with the desired year)?

QUERY

```
SELECT YEAR(arrival_date) AS YEARS,COUNT(*) AS RESERVATIONS  
FROM HOTEL_RESERVATION  
GROUP BY YEAR(arrival_date);
```

OUTPUT

	YEARS	RESERVATIONS
▶	2017	123
	2018	577

5. What is the most commonly booked room type?

QUERY

```
SELECT room_type_reserved, COUNT(*) AS TOTAL_RESERVATION  
FROM HOTEL_RESERVATION  
GROUP BY room_type_reserved  
ORDER BY TOTAL_RESERVATION DESC  
LIMIT 1;
```

OUTPUT

	room_type_reserved	TOTAL_RESERVATION
▶	Room_Type 1	534

6. How many reservations fall on a weekend (no_of_weekend_nights > 0)?

QUERY

```
SELECT COUNT(*) AS WEEKEND_RESERVATIONS  
FROM HOTEL_RESERVATION  
WHERE no_of_weekend_nights > 0;
```

OUTPUT

	WEEKEND_RESERVATIONS
▶	383

7. What is the highest and lowest lead time for reservations?

QUERY

```
SELECT MAX(lead_time) AS HIGHEST_LEADTIME, MIN(lead_time) AS LOWEST_LEADTIME  
FROM HOTEL_RESERVATION;
```

OUTPUT

	HIGHEST_LEADTIME	LOWEST_LEADTIME
▶	443	0

8. What is the most common market segment type for reservations?

QUERY

```
SELECT market_segment_type, COUNT(*) AS MARKET_SEGMENT_COUNT  
FROM HOTEL_RESERVATION  
GROUP BY market_segment_type  
ORDER BY COUNT(*) DESC  
LIMIT 1;
```

OUTPUT

	market_segment_type	MARKET_SEGMENT_COUNT
▶	Online	518

9. How many reservations have a booking status of "Confirmed"?

QUERY

```
SELECT COUNT(*) AS BOOKING_STATUS  
FROM HOTEL_RESERVATION  
WHERE booking_status = "CONFIRMED";
```

OUTPUT

	BOOKING_STATUS
▶	0

10. What is the total number of adults and children across all reservations?

QUERY

```
SELECT SUM(no_of_adults) AS TOTAL_ADULTS, SUM(no_of_children) AS TOTAL_CHILDREN  
FROM HOTEL_RESERVATION;
```

OUTPUT

	TOTAL_ADULTS	TOTAL_CHILDREN
▶	1316	69

11. What is the average number of weekend nights for reservations involving children?

QUERY

```
SELECT AVG(no_of_weekend_nights) AS AVG_WEEKEND_NIGHTS  
FROM HOTEL_RESERVATION  
WHERE no_of_children > 0;
```

OUTPUT

	AVG_WEEKEND_NIGHTS
▶	1.0000

12. How many reservations were made in each month of the year?

QUERY

```
SELECT MONTH(arrival_date) AS MONTHS, COUNT(*) AS RESERVATIONS
FROM HOTEL_RESERVATION
GROUP BY MONTH(arrival_date)
ORDER BY MONTHS;
```

OUTPUT

	MONTHS	RESERVATIONS
▶	1	11
	2	28
	3	52
	4	67
	5	55
	6	84
	7	44
	8	70
	9	80
	10	103
	11	54
	12	52

13. What is the average number of nights (both weekend and weekday) spent by guests for each room type?

QUERY

```
SELECT room_type_reserved, AVG(no_of_weekend_nights + no_of_week_nights) AS AVG_NIGHTS
FROM HOTEL_RESERVATION
GROUP BY room_type_reserved
ORDER BY room_type_reserved ;
```

OUTPUT

	room_type_reserved	AVG_NIGHTS
▶	Room_Type 1	2.8783
	Room_Type 2	3.0000
	Room_Type 4	3.8000
	Room_Type 5	2.5000
	Room_Type 6	3.6111
	Room_Type 7	2.6667

14. For reservations involving children, what is the most common room type, and what is the average price for that room type?

QUERY

```
SELECT room_type_reserved, AVG(avg_price_per_room) AS AVG_PRICE_ROOMS, COUNT(*) AS ROOM_TYPE_COUNT
FROM HOTEL_RESERVATION
WHERE no_of_children > 0
GROUP BY room_type_reserved
ORDER BY COUNT(*) DESC
LIMIT 1;
```

OUTPUT

	room_type_reserved	AVG_PRICE_ROOMS	ROOM_TYPE_COUNT
►	Room_Type 1	123.12291666666665	24

15. Find the market segment type that generates the highest average price per room.

QUERY

```
SELECT market_segment_type, AVG(avg_price_per_room) AS HIGHEST_AVG_PRICE  
FROM HOTEL_RESERVATION  
GROUP BY market_segment_type  
ORDER BY HIGHEST_AVG_PRICE DESC  
LIMIT 1;
```

OUTPUT

	market_segment_type	HIGHEST_AVG_PRICE
▶	Online	112.45521235521232



CONCLUSION

- Meal_plan 1 was a hit among guests, and Room_type 1 was the top choice for bookings.
- The average price per room for reservations with children was 144.56, and the online market segment was the most common.
- It's interesting that none of the reservations had a “Confirmed” booking status.
- Additionally, it's good to know the details about the lead times, the number of adults and children, and the popular room types.