Hotel Data Analysis

Overview:

Our "Hotel Data Analysis" project focuses on understanding user behavior and industry trends within the hotel sector, with a specific emphasis on our establishment. Through rigorous data analysis, we aim to uncover insights into user preferences, revenue streams, and engagement patterns. This analysis will provide actionable intelligence to inform strategic decisions and enhance operational efficiency.

Technologies Used:

- MySQL Workbench: MySQL was used to store and manage the structured data, making it accessible for analysis and reporting.
- Power BI: Power BI was used to generate interactive reports and dashboards, enabling stakeholders to explore the project's findings.

Project Highlights:

- Data Preparation: Describe any significant data preprocessing steps, such as data cleaning, transformation, or feature engineering.
- SQL Queries: Highlight key SQL queries or operations performed on the database.
- Visualization: Mention the main visualizations created using Power BI, and how they contribute to the project's objectives.
- Insights: Summarize the key insights or findings derived from the analysis.

Folder Structure:

- DataBase : This folder contains the data of different years and Tables.
- Power Bi Dashboard: This folder contains the ‘POWER BI Dashboard’ for visualizations.
- SQL Work : This folder contains the ‘SQL WORK’ .

SQL WORKS (Some of SQL Queries) –

- TO JOIN ALL THE TABLES

```
create table hotels as (
(select * from eighteen)
union
(select * from ninteen)
union
(select * from twenty));
```

Note: Here I assigned the name of all tables as their number of the year. Like 2018 as ‘eighteen’ and 2019 as ‘ninteen’.

- TO GET REVENUE(TOTAL NIGHT STAYS*ADR) AS PER YEARS AND HOTELS.

```
select
arrival_date_year, hotel,
round(sum((stays_in_week_nights+stays_in_weekend_nights)*adr),2) as revenue
from hotels
group by arrival_date_year,hotel;
```

For reference-

```
10 •  select
11    arrival_date_year, hotel,
12    round(sum((stays_in_week_nights+stays_in_weekend_nights)*adr),2) as revenue
13    from hotels
14    group by arrival_date_year,hotel;
15
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

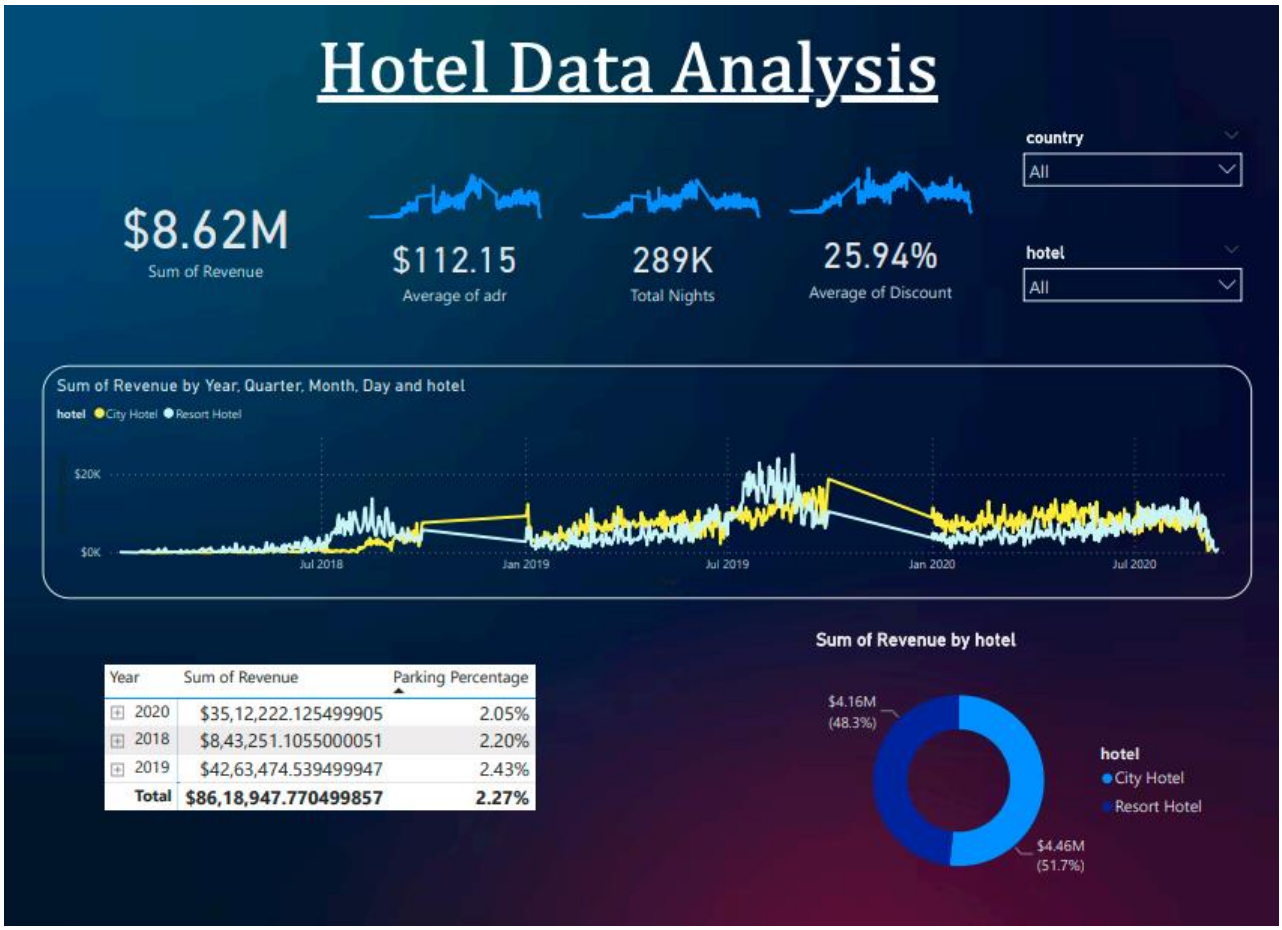
arrival_date_year	hotel	revenue
2018	Resort Hotel	3120849.49
2018	City Hotel	1764060.07
2019	Resort Hotel	9432430.29
2019	City Hotel	10755371.61
2020	Resort Hotel	6266123.81
2020	City Hotel	8018122.43

Result Grid | Form Editor

- <u>TO JOIN LEFTOUT TABLES ON THE BASIS OF SIMILAR COLUMN</u>

```
select * from hotels
left join project.market_segment
on hotels.market_segment=market_segment.market_segment
left join project.meal_cost
on meal_cost.meal=hotels.meal;
```

POWER BI DASHBOARD

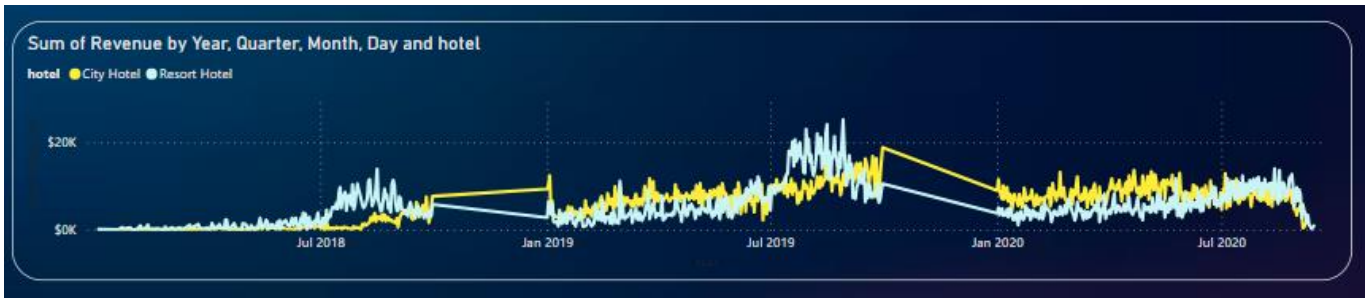


It’s a Dynamic Dashboard

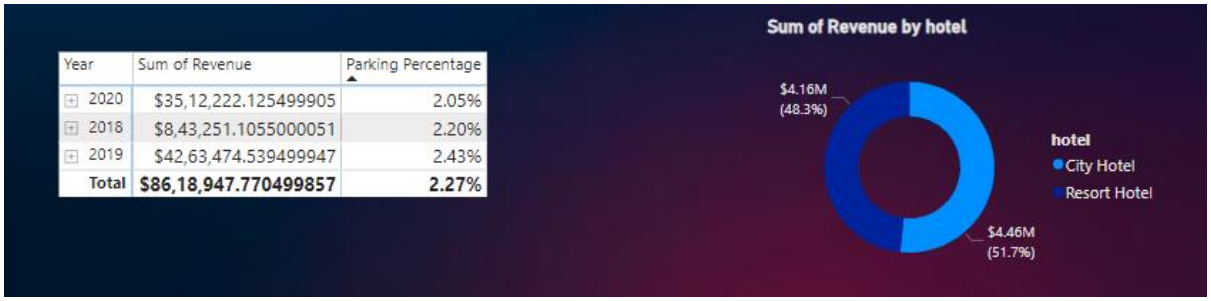
I used Number Cards to represent Sum of Revenue, Average of ADR(Average Daily Rate), Total nights and Average of Discount.

I have taken use of different Line charts to represent the graphical presentation of Number Cards.

This is a Line Chart to analyse the Revenue throughout the years.



I analysed 'REVENUE WITH PARKING PERCENTAGE' and 'REVENUE BY HOTELS' with the help of 'MATRIX TABLE' and 'DONUT CHART'.



Year	Sum of Revenue	Parking Percentage
2020	$35,12,222.125499905	2.05%
2018	$8,43,251.1055000051	2.20%
2019	$42,63,474.539499947	2.43%
Total	$86,18,947.770499857	2.27%