**Please write a short summary of your Capstone project and its components. Describe the problem statement, your approaches and your conclusions. (200-400 words)**

Hotel industry is a very volatile industry and the bookings depend on variety of factors such as type of hotels, seasonality, days of week and many more. This makes analyzing the patterns available in the past data more important to help the hotels plan better. Using the historical data hotels can perform various campaigns to boost the business. We can use the patterns to predict the future bookings using decision trees.

We will be using the data available to analyze the factors affecting the hotel bookings. These factors can be used for reporting the trends and predict the future bookings.

We will be analyzing this problem statement in following three stages:

1. We have been analyzed some missing values and some key metrics for hotel bookings like:

\* Number of missing values from hotel booking dataset.

\* Check if our dataset contains any null values.

\* Replace null values with some value.

\* Find number of rows having zero values.

\* Dropped All those rows that contain null values.

**Key Metrics for Hotel bookings like:**

\* Bookings ratio between City and Resort Hotel.

\* The number of cancellations.

\* Number of bookings on weekday weekends.

\* Month & Year wise bookings.

\* Country wise bookings.

\* Type of food Items mostly Preferred by customer. (From meal column).

\* Type of rooms preferred by customer.

\* Booking types.

\* Hotel available for booking.

\* The revenue of the hotel.

\* Finally, we will also try to predict the future bookings.

**Contributor Roles:**

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1. Data Wrangling

* Hotel bookings dataset

1. Data Cleaning
2. Replace missing values with some values
3. City and Resort hotel booking ratio
4. Number of cancelled and booked requests.
5. Max Booking analysis on months, years and country
6. Time wise analysis
7. Most Preferred meal by customer.
8. Type of rooms preferred by customer.
9. Hotel Wise Analysis
10. Distribution Channel wise Analysis
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1. Data Wrangling

* Hotel Bookings dataset

1. Market segment analysis.
2. Price per guest.
3. Stay in week nights, weekend nights.
4. Lead time comparison amongst hotel.
5. Effect of room type and meal type on price per guest.
6. Months, years, and country wise booking analysis
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1. Data Wrangling

* Hotel Bookings dataset

1. Data cleaning
2. Max booking analysis on months, years, and country
3. Most preferred meal by customer
4. The number of cancellations
5. Market segment analysis

**GitHub Repositor Link:**