***Project Summary:***

*Hotel industry is a very volatile industry and the bookings depend on a 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 time series or 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 tackling this problem statement in following stages*:

***Univariate Analysis:***

*1) Which type of hotel is mostly preferred by the guests?*

*2) Which Agent made the most bookings?*

*3) What is the percentage of cancellation?*

*4) What is the Percentage of repeated guests?*

*5) What is the percentage distribution of "Customer Type"?*

*6) What is the percentage distribution of required\_car\_parking\_spaces?*

*7) What is the percentage of booking changes made by the customer?*

*8) What is Percentage distribution of Deposit type?*

*9) Which type of food is mostly preferred by the guests?*

*10) Which is the most preferred room type by the customers?*

*11) In which month most of the bookings happened?*

*12) Which Distribution channel is mostly used for hotel bookings?*

***Bivariate and Multivariate Analysis****:*

*1) Which Hotel type has the highest ADR?*

*2) Which hotel type has the more lead time?*

*3) Which hotel has the highest percentage of booking cancellation?*

*4) Which hotel has a longer waiting time?*

*5) Which Hotels have the most repeat guests?*

*6) ADR across the different months.*

*7) Which distribution channel has the highest cancellation rate?*

*8) Which Market Segment has the highest cancellation rate?*

*9) Do the guest’s allotted the same room type which was reserved by them?*

*10) What is the optimal stay length in both types of hotel?*

***Using the results from the above analysis, business can make key decisions regarding the customer experience they desire to deliver.***

***Github link:- https://github.com/kapilsingh25121996/capstone-project-1***