***Project Summary:***

*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 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 Agent made the most no. bookings?

# 2) What is the Percentage of repeated guests?

# 3) What is the percentage of cancellation?

# 4) Which months have cheaper booking rates?

# 5) Which countries should be targetted for promotion?

# 6) No. of customers repeated their bookings.

# 7) Does people with children have a particular preference for the type of hotel?

# 8) Which month is the most occupied and which is the least occupied?

# 9) Which type of hotel is mostly prefered by the guests?

# 10) What is the percentage of booking changes made by the customer?

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

# 12) What is the percentage distribution of required\_car\_parking\_spaces?

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

*We tried to answer following questions*

# 1) Which hotel type has the highest ADR

# 2) Which hotel has longer waiting time?

# 3) Which hotel type has the more lead time?

# 4) What is the Optimal stay length in both types of hotels ?

# 5) Do the guests alloted the same room type which was reserved by them?

# 6) Which Market Segment has the higest cancellation rate?

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

# 8) ADR across the different months.

# 9) Which Hotels have the most repeat guests?

# 10) Which hotel has highest the percentage of booking cancellation?

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