Capstone Project Submission

Team Member's Name, Email and Contribution:

1. AKSHAY FASALE(aksfasale99@gmail.com)
   - Data Wrangling
     - Loading
     - Structuring data
     - Enriching data
     - Data Validation

   - Data Analysis
     - Hotel and Its Type
     - Preferred and its type
     - Outlier

   - Visualizations
     - Bar graphs and Pie charts
     - Line Chart

   - Debugging
   - Observations
   - Summarization
   - Conclusions

2. Shubham Joshi(shubhkjoshi5@gmail.com)
   - Data wrangling
     - Preprocessing
     - Data Cleaning
     - Summarizing data
     - Enriching Data

   - Data Analysis
     - Average Daily Rate and Hotel
     - Stay Length in Hotel
     - Cancellation Rates
   - Visualizations
     - Line Plot and ScatterPlot
     - Heat Map(Correlation Graph)
   - Segmentation
   - Summarization
   - Observations
   - Conclusions

3. Kanika Kakra(kostubikakra11@gmail.com)
   - Data wrangling
     - Loading and Discovering Data
     - Data Classification
     - Data Validation

   - Code Evaluation

   - Data Analysis
     - Bookings – Month/Year/Daily

- ➢ Distribution Channel and Booking %
  - ➢ Waiting time

- • Visualizations
  - ➢ Box Plot and Horizontal Bars
  - ➢ Scatter Plot

- • Debugging
- • Summarization
- • Observations
- • Conclusions

4. Rishikesh Damale(rishikesh.13021999@gmail.com)
- • Data wrangling
  - ➢ Loading and Discovering Data
  - ➢ Preprocessing
  - ➢ Summarizing Data
  - ➢ Enhancing Data

- • Code Evaluation

- • Data Analysis
  - ➢ Booking Agents
  - ➢ Number of Countries
  - ➢ Special Request
  - ➢
- • Visualizations
  - ➢ Bar Graph and Pie Chart

- • Segmentation
- • Observations
- • Conclusions

Please paste the GitHub Repo link.

Github link→ https://github.com/11-Kani/Hotel_Booking_Analysis__Project_1-
Colab link→
https://colab.research.google.com/drive/1ILKG5raRUP7CtVjDL580rOauQOkVNybZ#scrollTo=s38ey0k9wAPZ

<u>Summary:-</u>

In today's era data is the assets for every organisation, Previously when there were not enough sources available for maintain data then people used to maintain their data in handwritten format and based on that they used do over all analysis.
So this method is time consuming and some times due to excess of data it becomes difficult to maintain .Eventually with time the evolution technology has helped to find an appropriate solution of maintain these data sheet and also helps in visualizing the possible outcomes .

Here in we are dealing with Hotel_Booking_Analysis on to which factors booking,cancellation,profits are decided.

When we briefly analyze the data sheet we observe some columns with null values which are taken care of.We also remove duplicate rows,then we move next target hat is outliers [the exceptional value for particular column which are not relevant for data sheet].Now that our data sheet is void of null values, outliers we can proceed with analysis.

We observe sheet contains data for two types of hotels→City Hotel & Resort Hotel.We would create a dataframe subset of each hotel so that we can analyze there inputs separately.

Our observations:

<u>1.For Hotel :-</u>

City Hotel shares 61% out of 100 than Resort Hotel.BB stands for Bed and Breakfast. And 78% of people prefer 'BB' type meal. 'A' is the most preferred room type reserved by guests. . Most of guests visting fall under Transient Type[it can be individual or group who make booking prior 1-2 days of arrival and their stay length vary from 1-2 days]. Only 8% guests require parking spaces.

<u>2.Bookings and Cancellation:-</u>

Bookings for City hotels are higher than Resort hotels over the years and in year 2016 the bookings for both the hotels were maximum. Most bookings were done in the month of May-August. Most guests visited the hotels where from Portugal and other Europian contries.So we need to advertize more in order countries to gather guests from all over the globe. Only 4% of guests are repeated. This shows industry should encourage honest feedback provided by guest and should create changes the packages plans and should improvise their services.Mainly a pair of adults vists the hotel mostly than the family with children. So we can think more of attractive packages for family of 4-5 in offer to increase their engagements. City hotels have more number of stays irrespective of week or weekend stays.

We observed rate of cancellation is higher in City hotel.In year 2015 rate of cancellation was low. As expected , Most Bookings are done with 'No deposit' and most cancellations are also in 'no deposit' bookings. It is a surprise to see cancellations with 'Non-refundable' bookings. City hotel has significantly longer waiting time, hence City Hotel is much busier than Resort Hotel.

<u>3.Average daily Rate:-</u>
We observed: For resort hotels, the average daily rate is more expensive during August-September.For city hotels, the average daily rate is more expensive from May-August .Prices of resort hotel are much higher. Prices of city hotel do not fluctuate that much.

Conclusion

Basically,hotels can understand the habits of guests, which makes it possible to predict their decisions and understand their choices. With proper use and processing of data, hoteliers can get immense knowledge on how they can improve their hotel operations.Data must also be the main focus in the hospitality besides guest satisfaction. Hoteliers must systematically collect data and understand what actions they must take to help them deliver unique customer experience.