

Case-Study: Power BI – Advanced

The following is a graded assessment where you will need to:

- Use the data to work on along with the data dictionary containing the description of each feature/column, and submit the solution in the below mentioned format

Case Study Number & Title	1. Airbnb Data Analysis
Introduction	Airbnb based in San Francisco, California, operates an online marketplace focused on short-term homestays and experiences. The company acts as a broker and charges a commission from each booking. It was founded in 2008 by Brian Chesky, Nathan Blecharczyk, and Joe Gebbia. Airbnb is a shortened version of its original name, AirBedandBreakfast.com.
Learning Outcomes	<ul style="list-style-type: none"> • Analyze Airbnb data using PowerBI to draw meaningful insights on the customer review scores and satisfaction with the various rentals and stays • Use an end-to-end BI platform to create a single source of truth, uncover more powerful insights, and translate them into the impact
Background Information	An analytics firm has been approached with data related to the listings and reviewer scores for Airbnb(s) all over the world to understand and draw meaningful insights regarding their operations.
Scenario	You are a BI Analyst working at the firm in question and have been tasked with creating insightful reports by carrying out analysis of the data using resourceful tools such as Power BI.
Problem Statement/ Business objectives	Analyze the Airbnb data to uncover the user experience and satisfaction with the numerous listed stays using Power BI.
Data, Information for case analysis	<p>Data and data dictionaries are provided as CSV files. Below is the source information.</p> <p>Source Link: https://www.mavenanalytics.io/data-playground?search=airbnb</p> <p>The “Reviews” dataset has information about the reviews left for the Airbnb listings whereas “Listings” contain all the relevant details of the listed stays.</p>

	Detailed intel on each column is provided in the respective data dictionary files.
Questions	<p>Import the data in your PowerBI Desktop and solve the following.</p> <ol style="list-style-type: none"> 1. Which district has the least location score in New York City? 2. What may be deducted from the host response time and the overall rating received by a listing situated in Hong Kong? 3. Visualize the city-wise price of the Airbnb listings and note down the observations, using a chart of your choice. 4. Create a composite score of check-in experience and host communication, and analyze this for the stays in New York city districts. (Hint: Use DAX) 5. Calculate the age of the listings in years (as of now) as a new column and determine the hosts who have been in the business for over 10 years in Rio de Janeiro. 6. Create a tree map that details out the average price for each room and property type for all the listings in Mexico City. What kind of property has the highest price where an entire place can be rented out? 7. Construct a report which depicts the following: <ul style="list-style-type: none"> • Price for the listings in each city • Accuracy, cleanliness, and overall scores given by the guests for each city • Monthly trend in the visitors across all the cities. What may be inferred about this trend in the year 2020 in contrast to the previous years? <p>You may publish this report on the Power BI Service and play around with the dashboard. (Optional)</p>
Deliverables for Solution and Rubric	<p>Graded assessment:</p> <ul style="list-style-type: none"> • Required deliverables – A pbix workbook with each report/sheet dedicated to the solution of each question; the inferences, if applicable, are to be included in the respective sheets. • Submission templates – pbix workbook • Student facing and faculty rubrics – Total of 20 points where: <ul style="list-style-type: none"> - Questions 1 to 4 carry 2 points each – 8 points cumulative - Questions 5 to 6 carry 3 points each – 6 points cumulative - Question 7 carries 6 points
Key Takeaways/Results	Analyzing data using Power BI to derive meaningful insights that aid in efficient decision-making.