Task 2: Tableau

In this task, you will utilize Tableau to analyze Airbnb data and create a data-driven story through multiple interactive dashboards. The objective is to build a well-structured narrative using several dashboards, each focusing on different aspects of the data.

Dataset Details

1. **Airbnb_Listings.xls** - contains information about Airbnb listings, including:
    - Neighbourhood – The specific area where the listing is located.
    - Price – Cost per night for each listing.
    - Availability 365 – Number of days a listing is available for booking per year.
    - Calculated Host Listings Count – The total number of listings a host has.
    - Host Id – Unique identifier for the host.
    - Host Name – Name of the host.
    - Id – Unique identifier for the listing.
    - Last Review – Date of the most recent review for the listing.
    - Minimum Nights – Minimum number of nights required per booking.
    - Name – Name of the Airbnb listing.
    - Number Of Reviews – Total number of reviews received for the listing.
    - Reviews Per Month – Average number of reviews per month.
    - Room Type – Type of room (e.g., Entire home/apt, Private room, Shared room).
2. **`Neighborhood_Locations.xlsx`** – Provides latitude, longitude, and neighborhood group classifications for mapping.
    - Neighbourhood: The specific area where the Airbnb listing is located.
    - Neighbourhood Group: A broader classification of neighbourhoods.
    - Latitude: The geographical latitude of the listing.
    - Longitude: The geographical longitude of the listing.

Assignment Requirements

1. Data Preparation

- Import both datasets into Tableau.
- Join the datasets properly using neighborhood information to enable location-based analysis. After joining, each location must have longitude and latitude.Handle null values if needed.

2. Multiple Dashboards & Storytelling

Instead of creating just one dashboard, create multiple dashboards that work together to tell a clear and structured story about Airbnb trends.

- At least three dashboards, each focusing on different aspects of the data.
- Include interactive elements such as filters or parameters to enable dynamic exploration.
- Use KPIs effectively to highlight key performance metrics in the analysis.

3. Insights & Storytelling Structure

Your story should be structured as:

- Introduction: Define the key focus of the analysis.
- Findings across multiple dashboards:
    - Each dashboard should highlight different aspects of the story.
    - Example insights: seasonal trends, Geographic Price Distribution.
- Conclusion: Summarize the main findings and patterns seen in all the dashboards.

If meaningful insights are found, highlight them. If not, summarize the main trends in a structured way. You do not need to prove the only one relationship, in addition to the lack of an event that is logical.

4. Design Best Practices

- Follow **Gestalt Principles** to keep the dashboards structured and easy to read.
- Use **preattentive attributes** like color, size, and position to highlight key insights.

Presentation & Submission

- Upload your dashboards to Tableau Public.
- Upload a PDF document that includes:
    - The Tableau Public link to your dashboards.
    - A short written summary explaining the story behind your dashboards.

    - Screenshots of all worksheets and dashboards.
    - A structured narrative highlighting key insights and trends.
    - A list of parameters, filters and KPIs used in the dashboards.
- On presentation day, all group members must be prepared to answer questions about their dashboards and how they contribute to the overall story.

Evaluation Criteria

- Data Integration – Properly joining and preparing datasets.
- Dashboard Quality – Well-structured, interactive, and connected dashboards.
- Visualization Variety – At least three dashboards with multiple types of visualizations.
- Storytelling – A single, structured narrative that connects all dashboards.
- Use of Interactivity – Meaningful filters, parameters, KPIs and dashboard actions.
- Design Principles – Applying Gestalt principles and preattentive attributes.
- Group Participation – Everyone should be able to explain their work.

Notes

- Upload your work as a zip file in this format on the website: DS_CA1_[Std number].zip. If the project is done in a group, include all of the group members' student numbers in the name.
- If the project is done in a group, only one member must upload the work.
- We will run your code during the project delivery, so make sure your results are reproducible.
- We will also use your public Tableau dashboard, so ensure it remains available and is not deleted.