

**INT 217**

**( Introduction to data management )**

**“Dashboard Creation”**

**On**

**“ Airbnb Insights Hub ”**

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**Student Declaration**

I, **Satish Raut**, hereby declare that the work done and presented in this report is solely completed by me.

**🔍Project Summary: Dashboard Creation in Excel**

To create a dynamic and interactive dashboard summarizing **Airbnb listings** using Excel. The dashboard includes visual insights such as room type distribution, availability, pricing trends, and review activity using PivotTables and various chart types.

**Steps to Build the Dashboard:**

**1. Imported and Cleaned the Dataset**

* Loaded the Airbnb dataset into Excel.
* Cleaned null values and verified column headers.
* Removed any outliers in columns like price or minimum\_nights.

**2. Created Pivot Tables**

* Built multiple PivotTables to summarize data across fields such as room\_type, neighbourhood, availability\_365, calculated\_host\_listings\_count, etc.

**3. Constructed Visual Charts**

* Inserted charts like:
  + **Bar Charts** for listings per host and availability.
  + **Pie/Doughnut Charts** for room type and availability groupings.
  + **Bar Chart** for check Top 10 Hosts with the Highest Number of Listings.
  + **Area Charts** to display different variations, trends over years.

**4. Dashboard Assembly**

* Created a dedicated **Dashboard sheet** in Excel.
* Arranged all visualizations neatly with proper titles and slicers.
* Linked slicers to allow dynamic filtering by year, room type, and month.

**5. Final Touches**

* Applied formatting, titles, and colour themes.
* Protected raw data and created interactive summaries.

**Objectives of the Dashboard Project**

1. To analyze and visualize Airbnb data in a structured and interactive format.
2. To identify trends across room types, availability, pricing, and reviews.
3. To allow filtering and dynamic insights using slicers and PivotTables.
4. To create reusable, easy-to-understand visuals for presentation and decision-making.
5. To highlight top-performing hosts, neighborhoods, and pricing zones.
6. To monitor listing availability trends across different room types to assess hosting patterns and seasonal supply.
7. To compare host activity levels and identify top contributors by using calculated host listing counts.
8. To analyze affordability and popularity using a funnel chart to understand how many listings meet desirable booking conditions.
9. To enable decision-making for guests and hosts by providing a clear visual breakdown of pricing, reviews, and availability.
10. To enhance user interactivity by using slicers and filters, allowing dynamic exploration of Airbnb data based on selected year, room type, and price range.

**🎯 Explanation of All Insights and Charts in the Dashboard – Q&A Format**

**1. Q: What is the average price of Airbnb listings?**  
**A:** The average price of Airbnb listings is **$141.23**, as displayed in the top left of the dashboard.

**2. Q: How many total hosts are there in the dataset?**  
**A:** There are **20,374** hosts listed on the platform.

**3. Q: How does availability vary month by month for listings available all 365 days?**  
**A:** The highest number of listings available all year is in **June (100)** and **May (96)**, while **February (10)** and **March (14)** have the lowest availability.

**4. Q: What is the maximum number of reviews received in a month?**  
**A:** The highest number of reviews received in any month is **629**, as shown by the monthly reviews line chart.

**5. Q: What is the total number of Airbnb listings available?**  
**A:** The total number of listings shown is **24,935**.

**6. Q: What are the minimum nights required to book different types of rooms?**  
**A:**

* Entire home/apt: **109,841 nights**
* Private room: **52,469 nights**
* Shared room: **2,311 nights**

**7. Q: Who are the top 10 hosts with the highest number of listings?**  
**A:**

* **Mike** leads with **52 listings**, followed by
* Michael (19),
* John (13),
* Jessica (11),
* David (10),
* Others (below 10).

**8. Q: What is the total number of reviews for each room type?**  
**A:**

* Entire home/apt: **497,795 reviews**
* Private room: **448,309 reviews**
* Shared room: **13,600 reviews**

**9. Q: What is the total number of listings by neighbourhood group?**  
**A:**

* Manhattan: **10,986 listings**
* Brooklyn: **10,845 listings**
* Queens: **2,492 listings**
* Bronx: **450 listings**
* Staten Island: **162 listings**

**10. Q: What are the average prices and total reviews for different room types?**  
**A:**

* **Average price:** $189.77
* **Total reviews:** 13,505
* **Total booking days:** 366

**Link:**

1. LinkedIn Link:

2. GitHub Link: