

Advanced Spreadsheets: NYC Rental Market

Requirements:

- Identify which neighborhoods and property sizes i.e. number of bedrooms are most attractive for vacation rentals
- Identify how much money did the most attractive listings generate
- Ensure that formatting is consistent and the spreadsheet has all the necessary elements

Data Source:

- Nyc_airbnb_data_v2.xls File

Tools Used:

- Google Sheets / Excel

Steps:

Question 1: Which neighborhoods and property sizes i.e. number of bedrooms are most attractive for vacation rentals?

- Cleaned the neighborhood column labels. Made sure to remove inconsistent capitalization and trailing spaces. Cleaned values stored in a separate column called neighborhood_clean
- Using number_of_reviews_ltm as a criterion of attractiveness, built a pivot table to answer this question: Which 10 neighborhoods are most attractive for vacation rentals?
- Added a bar chart displaying the number of reviews for the top 10 listings to the analysis
- Cleaned the bedrooms column of any empty cells (the empty cells represent listings with zero bedrooms (i.e. studio apartments)). Stored the clean values in a new column called bedrooms_clean using the IF function.
- Built another pivot table to determine the number of bedrooms that are most popular for rentals.
- Updated the pivot table to recommend specific property sizes for each of the top 10 neighborhoods.

Question 2: How much money did the most attractive listings generate?

- Added a new column in *listings* called top_listing that has a value of 1 if a listing matches these criteria, else 0.
- Added a new column to the calendar data called revenue_earned, representing the revenue earned each night. If available was "f" (indicating the property was rented), set revenue_earned to the adjusted_price; otherwise, set it to \$0.

- In the *listings* data, created a new column also called revenue_earned. Used the SUMIF() function to bring over the total revenue_earned from the 30-day *calendar* data.
- Created a pivot table that orders all our top listings according to revenue. Made sure to use top_listing as a filter.
- Highlighted how much these recommended listings could earn in a year by multiplying the revenue by 12.

Final formatting:

- Hid unnecessary columns
- Added an executive summary and table of contents
- Noted data cleaning steps in the change log
- Clearly documented assumptions
- Formatting, borders, cell background colors, font styles and sizes made consistent across the analysis.

Results and conclusions:

10 neighborhoods are most attractive for vacation rentals:

- Lower East Side
- Hell's Kitchen
- Harlem
- Midtown
- Upper West Side
- Chelsea
- East Village
- East Harlem
- West Village
- Upper East Side

3 most popular property sizes (number of bedrooms):

- Studios
- 1-bedrooms
- 2-bedrooms

Top 10 Listings by Revenue:

- 49946551
- 44267714
- 6833395
- 46432776

- 41295029
- 53057804
- 53058987
- 4859903
- 43118961
- 4967114