## Executive Summary:
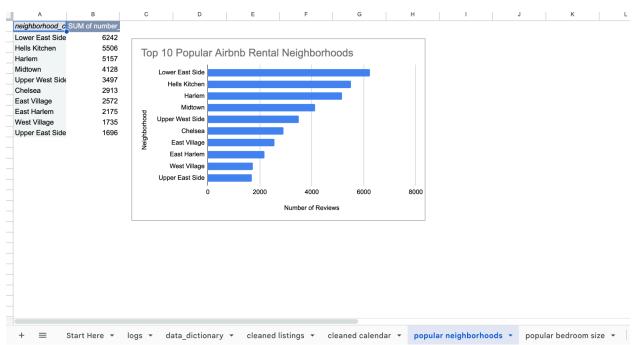
The goal of this analysis was to analyze and give recommendations on investments in Manhattan's airbnb rental market. The focus was to identify:

The most attractive neighborhoods and property sizes for vacation rentals.

The revenue potential of the most attractive listings.

1-Bedrooms are the most popular bedroom size.

Midtown has a preference for studio apartments.

The calendar data was used to calculate daily revenue (revenue_earned) for rented nights.

Annual revenue was estimated by multiplying 30-day revenue totals by 12.

30-Day Revenue: $29,940

Estimated Annual Revenue: $359,280

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## Assumptions Log:

The number of reviews in the past year is a good reflection of rental popularity.
Different neighborhoods have different preferences for property sizes.

## Change Log:

Created a new column called neighborhood_clean and used standardized capitalization and removed empty spaces.
Created a new column called bedrooms_clean and replaced empty cells with 0
Used pivot tables to analyze the relationship between neighborhoods and property sizes.
Created a cleaned listings sheet.
Created a cleaned calendar sheet.
Hid unneccasary columns.

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# Data Dictionary for Listings

| Field | Type | Calculated | Description |
|---|---|---|---|
| id | integer | | Airbnb's unique identifier for the listing |
| listing_url | text | y | |
| scrape_id | bigint | y | Inside Airbnb "Scrape" this was part of |
| last_scraped | datetime | y | UTC. The date and time this listing was "scraped". |
| source | text | | One of "neighbourhood search" or "previous scrape". "neighbourhood search" means that the listing was found by searching the city, while "previous scrape" means that the listing was seen in another scrape performed in the last 65 days, and the listing was confirmed to be still available on the Airbnb site. |
| name | text | | Name of the listing |
| description | text | | Detailed description of the listing |
| neighborhood_overview | text | | Host's description of the neighbourhood |
| picture_url | text | | URL to the Airbnb hosted regular sized image for the listing |
| host_id | integer | | Airbnb's unique identifier for the host/user |
| host_url | text | y | The Airbnb page for the host |
| host_name | text | | Name of the host. Usually just the first name(s). |
| host_since | date | | The date the host/user was created. For hosts that are Airbnb guests this could be the date they registered as a guest. |
| host_location | text | | The host's self reported location |
| host_about | text | | Description about the host |
| host_response_time | | | |
| host_response_rate | | | |
| host_acceptance_rate | | | That rate at which a host accepts booking requests. |
| host_is_superhost | boolean [t=true; f=false] | | |
| host_thumbnail_url | text | | |
| host_picture_url | text | | |
| host_neighborhood | text | | |

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| id | neighborhood_o | neighborhood | neighborhood_c | neighborhood_g | property_type | room_type | bedrooms | bedrooms_clean | price | number_of_revie | number_of_revie | number_of_revie la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 82638 | The East Village | East Village | East Village | Manhattan | Entire rental unit | Entire home/apt | 1 | 1 | $169.00 | 276 | 3 | 0 |
| 9357 | Quiet residential | Hells Kitchen | Hells Kitchen | Manhattan | Entire rental unit | Entire home/apt | | 0 | $175.00 | 58 | 0 | 0 |
| 57618 | | hells kitchen | Hells Kitchen | Manhattan | Entire rental unit | Entire home/apt | 1 | 1 | $250.00 | 122 | 7 | 0 |
| 57754 | It's safe, and the | Flatiron District | Flatiron District | Manhattan | Entire loft | Entire home/apt | 1 | 1 | $330.00 | 170 | 28 | 2 |
| 57874 | Fantastic and vit | East Harlem | East Harlem | Manhattan | Entire rental unit | Entire home/apt | 1 | 1 | $160.00 | 340 | 55 | 3 |
| 15341 | This 1-bedroom | LOWER EAST S | Lower East Side | Manhattan | Entire condo | Entire home/apt | 1 | 1 | $206.00 | 32 | 6 | 0 |
| 59014 | NEIGHBORHOC | Lower East Side | Lower East Side | Manhattan | Entire rental unit | Entire home/apt | 1 | 1 | $250.00 | 58 | 1 | 0 |
| 59709 | Our neighborhoc | chinatown | Chinatown | Manhattan | Entire rental unit | Entire home/apt | 2 | 2 | $300.00 | 53 | 23 | 2 |
| 60164 | Great Neighborh | Tribeca | Tribeca | Manhattan | Entire loft | Entire home/apt | 3 | 3 | $500.00 | 109 | 3 | 0 |
| 16974 | | East Harlem | East Harlem | Manhattan | Entire loft | Entire home/apt | 4 | 4 | $300.00 | 254 | 26 | 0 |
| 60611 | Our neighborhoc | East Harlem | East Harlem | Manhattan | Entire rental unit | Entire home/apt | 1 | 1 | $110.00 | 192 | 1 | 1 |
| 107895 | | Upper West Side | Upper West Side | Manhattan | Entire rental unit | Entire home/apt | | 0 | $166.00 | 63 | 2 | 0 |
| 17037 | The neighborhoc | East Village | East Village | Manhattan | Entire rental unit | Entire home/apt | 1 | 1 | $220.00 | 53 | 0 | 0 |
| 60680 | My neighborhoo | East Village | East Village | Manhattan | Entire rental unit | Entire home/apt | 1 | 1 | $160.00 | 165 | 2 | 0 |
| 61509 | It is located step | Midtown | Midtown | Manhattan | Entire rental unit | Entire home/apt | 1 | 1 | $110.00 | 92 | 0 | 0 |
| 62427 | | East Village | East Village | Manhattan | Entire rental unit | Entire home/apt | 1 | 1 | $130.00 | 62 | 1 | 1 |
| 19159 | After walking all | Harlem | Harlem | Manhattan | Entire rental unit | Entire home/apt | 2 | 2 | $110.00 | 58 | 0 | 0 |
| 62891 | | East Village | East Village | Manhattan | Entire home | Entire home/apt | | 0 | $175.00 | 215 | 9 | 2 |
| 116551 | | Harlem | Harlem | Manhattan | Entire rental unit | Entire home/apt | | 0 | $70.00 | 173 | 2 | 0 |
| 63693 | | east village | East Village | Manhattan | Entire home | Entire home/apt | 2 | 2 | $390.00 | 153 | 0 | 0 |
| 23686 | Restaurants: <b | West Village | West Village | Manhattan | Entire home | Entire home/apt | 3 | 3 | $600.00 | 55 | 3 | 0 |
| 123784 | The new restaur | Harlem | Harlem | Manhattan | Entire rental unit | Entire home/apt | | 0 | $102.00 | 223 | 33 | 1 |
| 126443 | This is East Villa | east village | East Village | Manhattan | Entire townhous | Entire home/apt | 2 | 2 | $459.00 | 516 | 60 | 4 |
| 27644 | I love the diversi | Harlem | Harlem | Manhattan | Entire rental unit | Entire home/apt | 1 | 1 | $190.00 | 232 | 18 | 4 |
| 65425 | | Nolita | Nolita | Manhattan | Entire rental unit | Entire home/apt | 2 | 2 | $568.00 | 11 | 10 | 3 |
| 29683 | NoHo is perfecth | Lower East Side | Lower East Side | Manhattan | Entire rental unit | Entire home/apt | 1 | 1 | $185.00 | 118 | 2 | 0 |

Sheet tabs: + ☰ | Start Here ▾ | logs ▾ | data_dictionary ▾ | **cleaned listings** ▾ | cleaned calendar ▾ | popular neighborhoods ▾ | popular bedroom size ▾ | ‹ ›

| | A | B | C | D | E ◂ ▸ | H |
|---|---|---|---|---|---|---|
| | listing_id | date | available | price | adjusted_price | revenue_earned |
| | 9357 | 2022-09-07 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-09-08 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-09-09 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-09-10 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-09-11 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-09-12 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-09-13 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-09-14 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-09-15 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-09-16 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-09-17 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-09-18 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-09-19 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-09-20 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-09-21 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-09-22 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-09-23 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-09-24 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-09-25 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-09-26 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-09-27 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-09-28 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-09-29 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-09-30 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-10-01 | f | $175.00 | $175.00 | $175.00 |
| | 9357 | 2022-10-02 | f | $175.00 | $175.00 | $175.00 |

Start Here ▾   logs ▾   data_dictionary ▾   cleaned listings ▾   **cleaned calendar** ▾   popular neighborhoods ▾   popular bedroom size ▾

| | A | B |
|---|---|---|
| | *neighborhood_c* | SUM of number_ |
| | Lower East Side | 6242 |
| | Hells Kitchen | 5506 |
| | Harlem | 5157 |
| | Midtown | 4128 |
| | Upper West Side | 3497 |
| | Chelsea | 2913 |
| | East Village | 2572 |
| | East Harlem | 2175 |
| | West Village | 1735 |
| | Upper East Side | 1696 |



Top 10 Popular Airbnb Rental Neighborhoods

Start Here ▾   logs ▾   data_dictionary ▾   cleaned listings ▾   cleaned calendar ▾   **popular neighborhoods** ▾   popular bedroom size ▾

| neighborhood_c | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Chelsea | 26.81% | 37.59% | 32.89% | 2.61% | | | 0.10% | | | 100.00% |
| East Harlem | 18.62% | 41.33% | 29.38% | 4.64% | 6.02% | | | | | 100.00% |
| East Village | 16.95% | 51.79% | 24.34% | 4.28% | 2.64% | | | | | 100.00% |
| Harlem | 15.98% | 41.23% | 25.60% | 9.58% | 4.42% | 3.20% | | | | 100.00% |
| Hells Kitchen | 7.34% | 40.03% | 44.86% | 7.16% | 0.13% | | | 0.49% | | 100.00% |
| Lower East Side | 5.50% | 86.49% | 6.87% | 0.03% | 0.29% | | 0.82% | | | 100.00% |
| Midtown | 63.69% | 22.00% | 11.82% | 1.26% | 1.24% | | | | | 100.00% |
| Upper East Side | 11.44% | 52.18% | 24.00% | 3.60% | 5.01% | 2.42% | | | 1.36% | 100.00% |
| Upper West Side | 11.50% | 46.87% | 24.22% | 14.90% | 0.94% | 1.57% | | | | 100.00% |
| West Village | 12.16% | 52.28% | 23.17% | 9.34% | 3.05% | | | | | 100.00% |
| **Grand Total** | **18.61%** | **48.83%** | **24.10%** | **5.54%** | **1.89%** | **0.73%** | **0.15%** | **0.08%** | **0.06%** | **100.00%** |

| id | AVERAGE of rev | ESTIMATED annual revenue |
|---|---|---|
| 49946551 | $29,940.00 | $359,280.00 |
| 44267714 | $26,100.00 | $313,200.00 |
| 6833395 | $22,800.00 | $273,600.00 |
| 46432776 | $20,300.00 | $243,600.00 |
| 41295029 | $15,600.00 | $187,200.00 |
| 53057804 | $15,300.00 | $183,600.00 |
| 53058987 | $14,425.00 | $173,100.00 |
| 4859903 | $14,233.00 | $170,796.00 |
| 43118961 | $13,601.00 | $163,212.00 |
| 4967114 | $13,500.00 | $162,000.00 |
| 289665 | $13,500.00 | $162,000.00 |
| 50618605 | $13,050.00 | $156,600.00 |
| 1060019 | $13,021.00 | $156,252.00 |
| 5800130148099 | $12,930.00 | $155,160.00 |
| 30087377 | $12,810.00 | $153,720.00 |
| 25313748 | $12,785.00 | $153,420.00 |
| 34384453 | $12,609.00 | $151,308.00 |
| 49928900 | $12,236.00 | $146,832.00 |
| 53167175 | $12,225.00 | $146,700.00 |
| 53602040 | $12,135.00 | $145,620.00 |
| 41890621 | $11,970.00 | $143,640.00 |
| 37251520 | $11,850.00 | $142,200.00 |
| 48374098 | $11,610.00 | $139,320.00 |
| 52755593 | $11,600.00 | $139,200.00 |
| 52336155 | $11,600.00 | $139,200.00 |
| 39225271 | $11,575.00 | $138,900.00 |
| 29687597 | $11,571.00 | $138,852.00 |