

An aerial photograph of the New York City skyline during the "golden hour" of sunset. The sky is a warm, hazy orange, and the city's numerous skyscrapers are silhouetted against the light. The Chrysler Building is prominent on the left, and the Empire State Building stands tall on the right. The Hudson River is visible in the distance on the left side.

NEW YORK AIRBNB

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ABOUT THE DATASET

The dataset includes hosts, geographical, availability, pricing, and ratings of airbnbs in New York.

Features of Interest : *Property name, Neighborhood Groups, Neighborhood Areas, Review Scores, Availability, Price, Room Type, Latitude, Longitude*

Total number of records

38277

Link to the source

<http://insideairbnb.com/get-the-data.html>

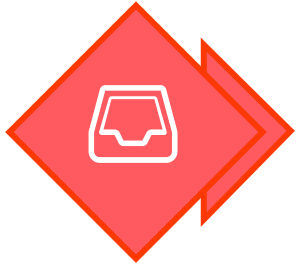
(New York City, New York, United States - 04 December,2021)



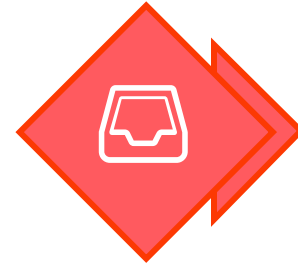
MOTIVATION

- ❖ Exhaustive data about AirBnB listings
- ❖ Latest data (Upto December-end 2021)
- ❖ Availability of Geospatial data allows us to create further robust visualizations

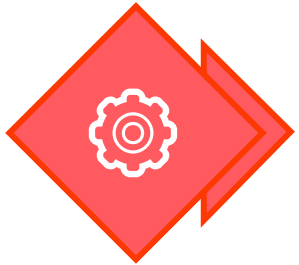
DATA QUALITY ISSUES & TRANSFORMATIONS



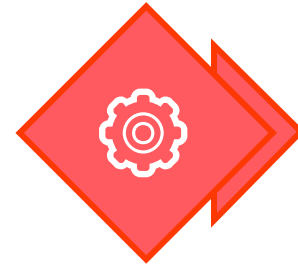
- ❖ Large number of missing data - review scores



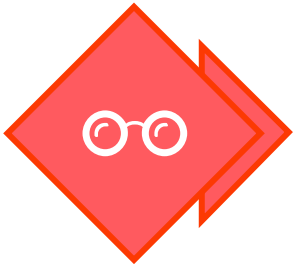
- ❖ Data consisted of a lot of categorical variables
 - Plotted categorical against ordinal for visualization



- ❖ Erroneous values in Price (0\$)
 - Used Average of Price instead of actual values



- ❖ Boroughs were not linked to neighborhood areas
 - Linked the two fields to help users find airbnb's from their preferred area in each borough

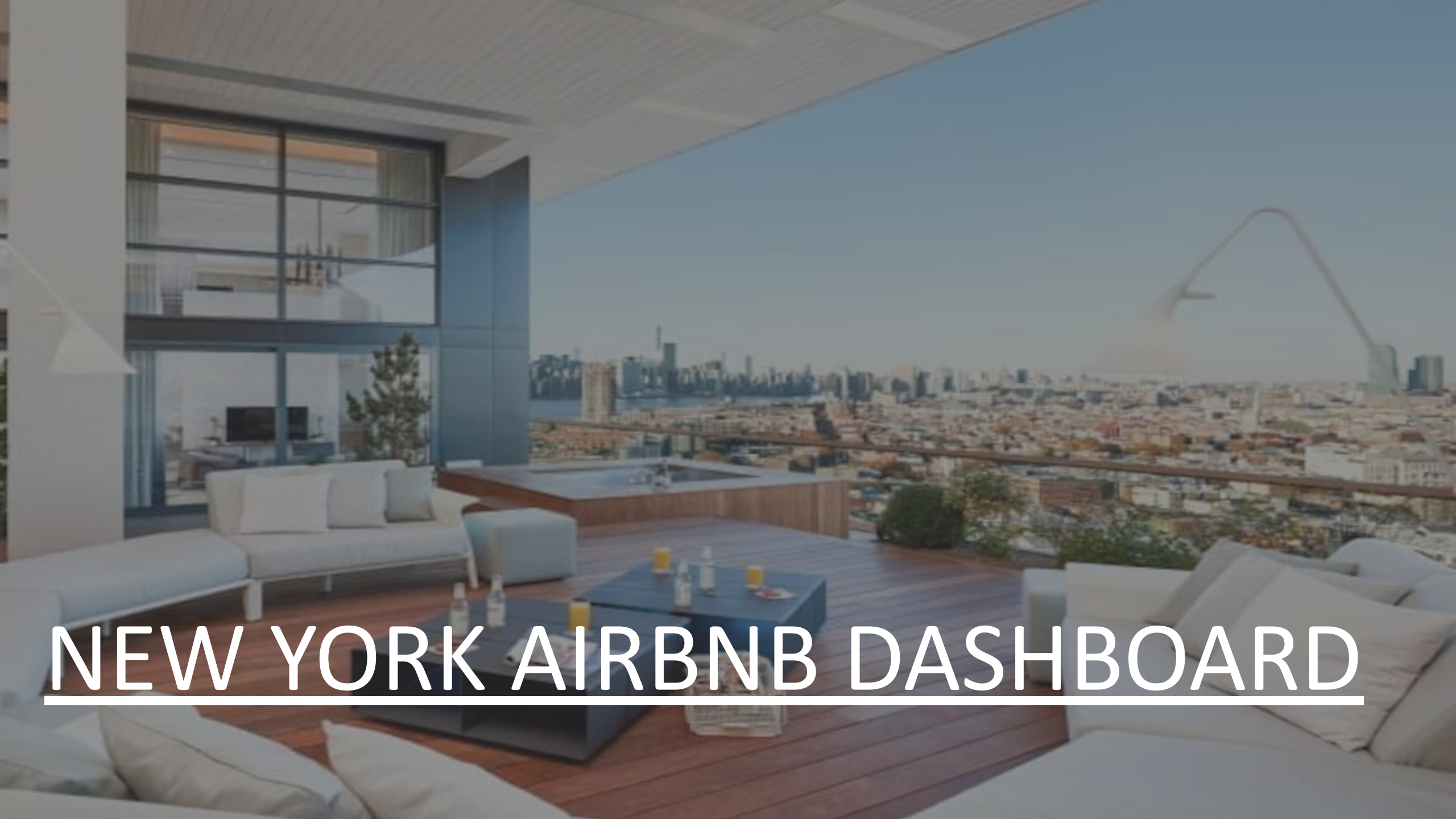


- ❖ Wide range of values for Price & Availability
 - Normalized the values in both columns

EDA QUESTIONS



- ❖ Which properties have highest or lowest availability in each neighborhood?
- ❖ Which neighborhood has the expensive or cheapest property?
- ❖ Which are the highest rated AirBnB listings in a particular neighborhood?
- ❖ How many properties are available within a cluster for each attribute (Price, Availability, and Rating)?
- ❖ What is the distribution of properties in each neighborhood for different attributes (Price, Availability, and Rating)?



NEW YORK AIRBNB DASHBOARD

USABILITY TEST (Approach)



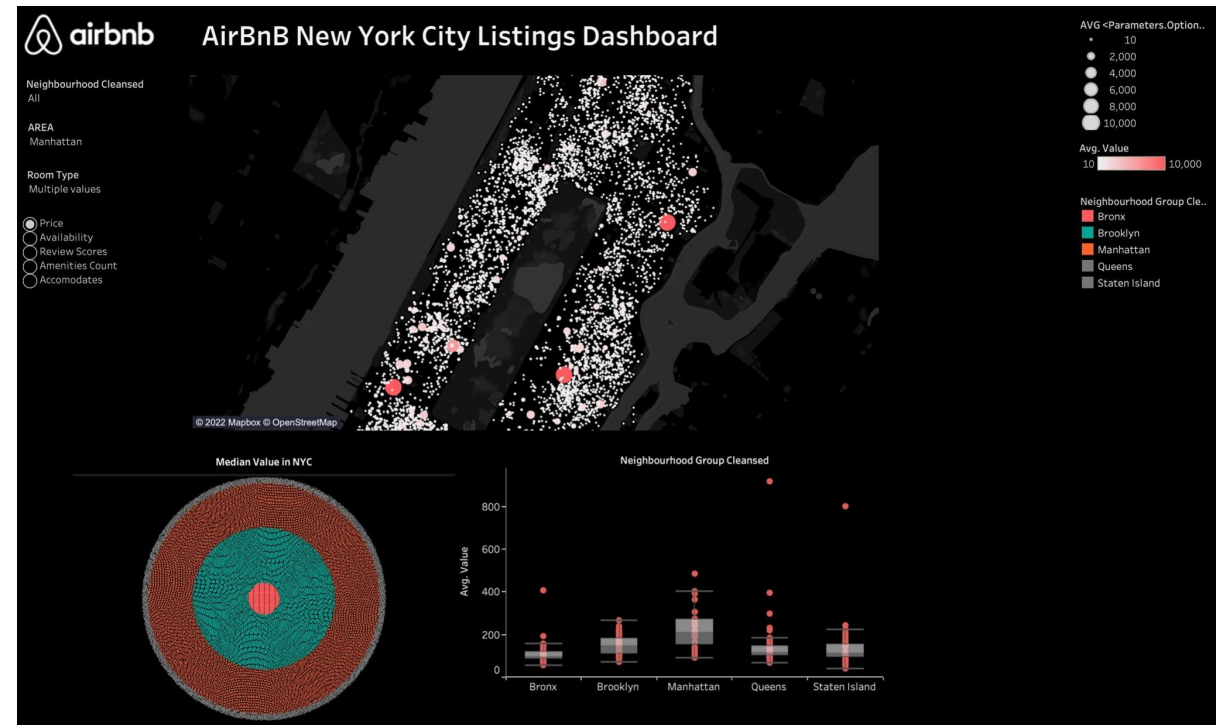
- Total of 6 Participants
- Primary Objective: Walk through the multiple elements of the dashboard and the visualization.
- Parameters Tested: Usefulness, Completeness, Intuitiveness,, Perception and Aesthetics.
- Questions Involved:
 - ◆ Primary type of questions involved the first thoughts, showing the five -sheet design and the dashboard.
 - ◆ Questions involving trying to find answers to the EDA questions by the users.

1	Demographics
2	Name
3	Age
4	Gender
5	
6	Initial Questions about the Dashboard
7	Initital thoughts on the dashboard
8	Color Coding
9	Opinion about the filters on the left pane
10	Opinion on mapping the legend to the appopriate map
11	
12	Tasks
13	Which borough had highest Airbnb sales?
14	Which borough had highest availability?
15	Which neighborhood has expensive Airbnb listings?
16	How much of ease do you feel locating the listings on the map? (Scale: 1-5)
17	What do you think of the Attributes pane on the left?
18	Do you think we need to add any other atributes?
19	Would you prefer dynamic text additional to a map?
20	Is there a visualization you're confused about? What is it?
21	Given a chance, what would you change about the dashboard?
22	Any other feedback on the dashboard?

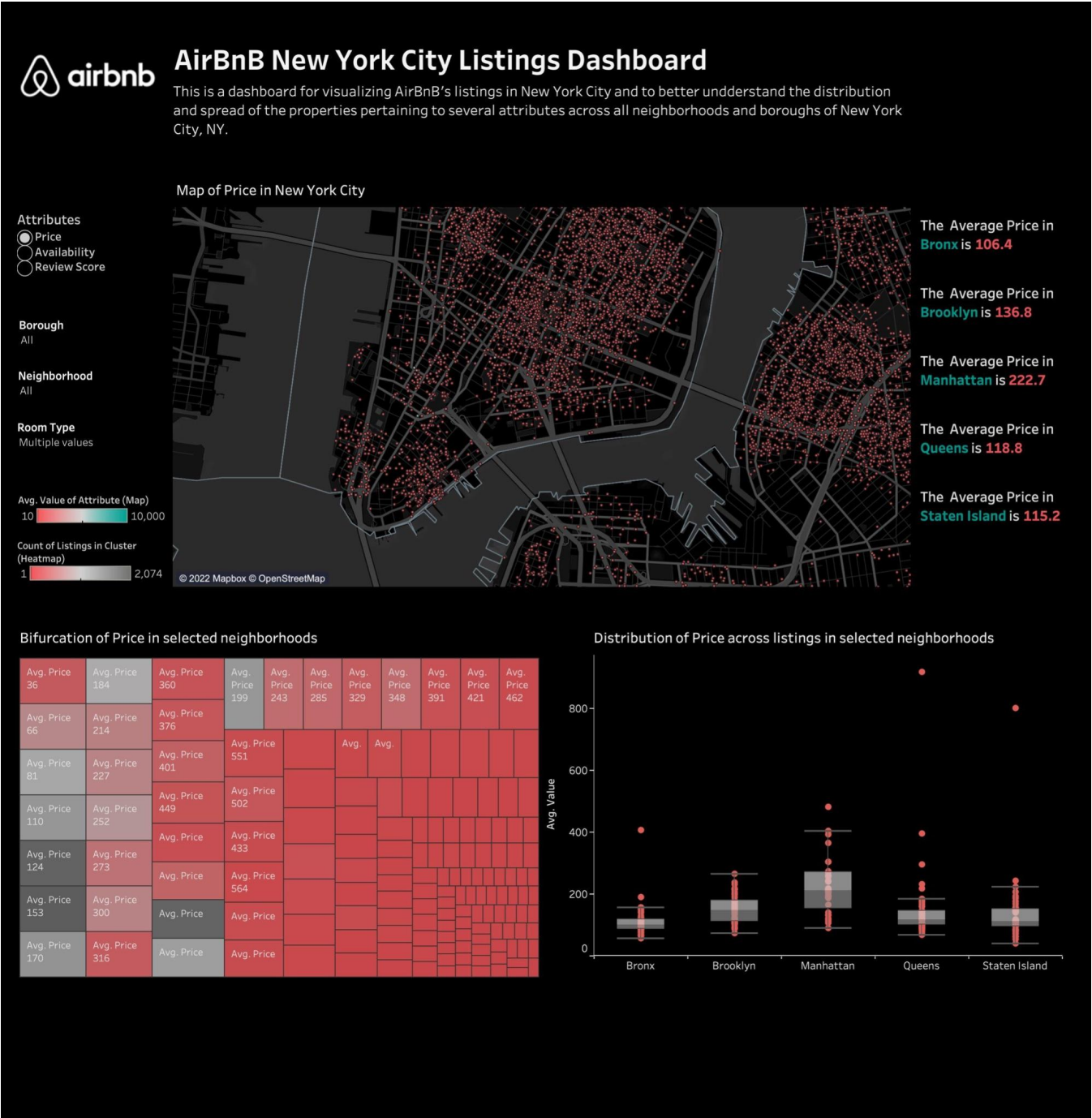
USABILITY TEST RESULTS



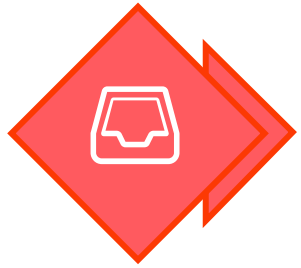
- Ease of Working with Dashboard: 3.3
- Complexity in interpreting the violin chart and subsequent prediction/forecasting trend
- AirBnB listings on the map are overlapped.
- Uninformative/Ambiguous visualizations.
- Changes made:
 - ◆ Improvement on five sheet design. Incorporation of area chart to show the bifurcation of various attributes
 - ◆ Correcting the data points on the map (Non-overlapping and opacity)
 - ◆ Revised Ease of Working: 4.3



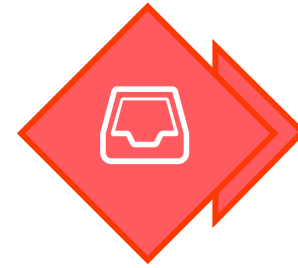
FINAL
DASHBOARD



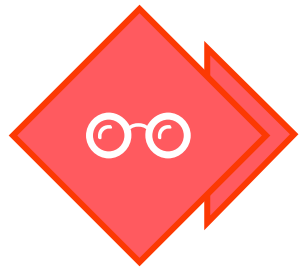
SUMMARY & KEY TAKEAWAYS



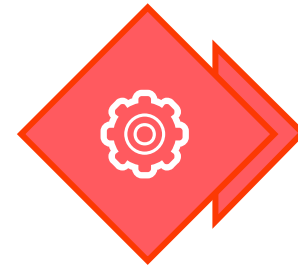
Manhattan is the **most expensive** of all boroughs.



Staten Island has the **highest review score** Airbnb listings.



Brooklyn has the **least availability** of listings likely due to the proximity to Manhattan and lot of things to do.



Manhattan has the **highest density of listings**. This can be due to the access to tourist spots

A background image of a forest at night. On the left, a wooden Adirondack chair sits on a stone patio. In the center, a large red diagonal shape covers the middle of the image. On the right, a small dark cabin with a glowing window is visible, with string lights hanging above it. The text "THANK YOU!" is centered in white on the red background.

THANK YOU!