



# Hotel Aggregator Analysis

*Data Analysis Project with Tableau*

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Batch: MIP-DA-07

# Problem Statement:

- This internship project aims to Analyse a dataset of hotel aggregator listings using Power BI/ Tableau.
- The dataset comprises various attributes related to listings, hosts, reviews, and availability.
- The objective is to create comprehensive visualizations and insights that shed light on trends, patterns, and factors influencing the performance of listings.
- Through Power BI/ Tableau, interns will explore key metrics such as pricing, availability, host characteristics, and review scores to derive actionable insights for improving the overall quality and competitiveness of the listings.





# Dataset Description:

1. **id**: Unique identifier for each listing.
2. **listing\_url**: URL of the listing on the hotel aggregator platform.
3. **scrape\_id**: Identifier for the data scraping event.
4. **last\_scraped**: Date of the last data scrape.
5. **source**: Source of the listing information.
6. **name**: Name of the listing.
7. **description**: Description of the listing.
8. **neighborhood\_overview**: Overview of the neighborhood where the listing is located.
9. **picture\_url**: URL of the listing's picture.
10. **host\_id**: Unique identifier for the host.
11. ... (and many more columns capturing details about hosts, location, property type, room details, amenities, pricing, availability, reviews, and other relevant information)

# Project Objectives:

## **1. Geographical Insights:**

- Visualize the distribution of listings on a map to identify popular neighborhoods.
- Explore the geographical concentration of listings and host locations.

## **2. Pricing and Availability Analysis:**

- Analyze pricing trends based on property types, room types, and accommodation capacity.
- Investigate the availability of listings over time and identify peak periods.

## **3. Host Performance:**

- Evaluate host characteristics, including superhost status, response times, and verification methods.
- Explore correlations between host attributes and listing performance.



# Project Objectives:

## **4. Review Scores and Guest Satisfaction:**

- Examine review scores and their impact on overall listing performance.
- Identify areas for improvement based on specific review categories.

## **5. Property Type and Room Analysis:**

- Analyse the distribution of property types and room types.
- Explore trends in the popularity of specific accommodation setups.



# Dataset Table :

Firstly I need to clean this and handle the blanks or null values and then upload it to the Tableau to make a dashboard from using this dataset.

This is the Dataset given to me.

The screenshot shows the Tableau Public Desktop interface. The title bar reads "Tableau Public - Book1". The main area displays a data preview titled "View Data: 5f2231d1e86df73691186597bf8f803". The preview shows a table with 10,000 rows and 75 fields. The columns include "amenities", "bathrooms", "bathrooms\_text", "calendar\_last\_scraped", "calendar\_updated", and "description". The data contains various hotel amenities like "Microwave", "Hot water ket...", and "Stainless steel gas stove". The "description" column includes descriptive text such as "A large air cond...", "RIGHT IN THE H...", "No children un...", "Easy to travel f...", "Architect-renov...", "Located on a qu...", "Well appointed...", "Edna Walling cc...", "Stunning, spaci...", "Light filled priv...", "Caldera , a new...", "<b>The space<...", "Professional sur...", and "city scri...". The bottom of the preview shows a footer with various links and metrics. On the left, the sidebar shows "Connections" (Hotel Aggregator data, Microsoft Excel) and "Sheets" (5f2231d1e86df73691186597bf8f803, New Union, New Table Extension). On the right, there are "Filters" (6 | Edit) and a "Rows" dropdown.

amenities	bathrooms	bathrooms_text	calendar_last_scraped	calendar_updated	description
["Microwave", "Hot water ket..."]	NULL	1 shared bath	05-09-2023	NULL	A large air cond...
["Microwave", "Lockbox", "Ho..."]	NULL	1 bath	05-09-2023	NULL	RIGHT IN THE H...
["Microwave", "Hot water ket..."]	NULL	1 bath	04-09-2023	NULL	No children un...
["Smoking allowed", "Smoke ..."]	NULL	1 shared bath	05-09-2023	NULL	Easy to travel f...
["Stainless steel gas stove", "..."]	NULL	1 bath	04-09-2023	NULL	N...
["Smoke alarm", "Wifi", "Kitc..."]	NULL	2 baths	05-09-2023	NULL	Architect-renov...
["Drying rack for clothing", "F..."]	NULL	2 baths	05-09-2023	NULL	Located on a qu...
["Private living room", "Carb..."]	NULL	1 shared bath	05-09-2023	NULL	Well appointed...
["Microwave", "Hot water ket..."]	NULL	1 bath	04-09-2023	NULL	Edna Walling cc...
["Microwave", "Coffee maker..."]	NULL	2 baths	05-09-2023	NULL	Stunning, spaci...
["Clothing storage: closet", "..."]	NULL	1.5 shared baths	04-09-2023	NULL	Light filled priv...
["Microwave", "Hot water ket..."]	NULL	3.5 baths	05-09-2023	NULL	Caldera , a new...
["Kitchen", "Washer", "TV", "..."]	NULL	1 bath	05-09-2023	NULL	<b>The space<...
["Microwave", "Hot water ket..."]	NULL	2 baths	05-09-2023	NULL	Professional sur...

# Dataset:

Tableau Public - Book1

File Data Window Help

Tableau Public Desktop Upgrade

Connections Add

Hotel Aggregator dataset 4 Microsoft Excel

Sheets

Use Data Interpreter  
Data Interpreter might be able to clean your Microsoft Excel workbook.

5f2231d1e86df73691186597bf8f803

New Union

New Table Extension

5f2231d1e86df73691186597bf8f803... 78 fields 14158 rows

100 → rows

Name: 5f2231d1e86df73691186597bf8f803

Fields

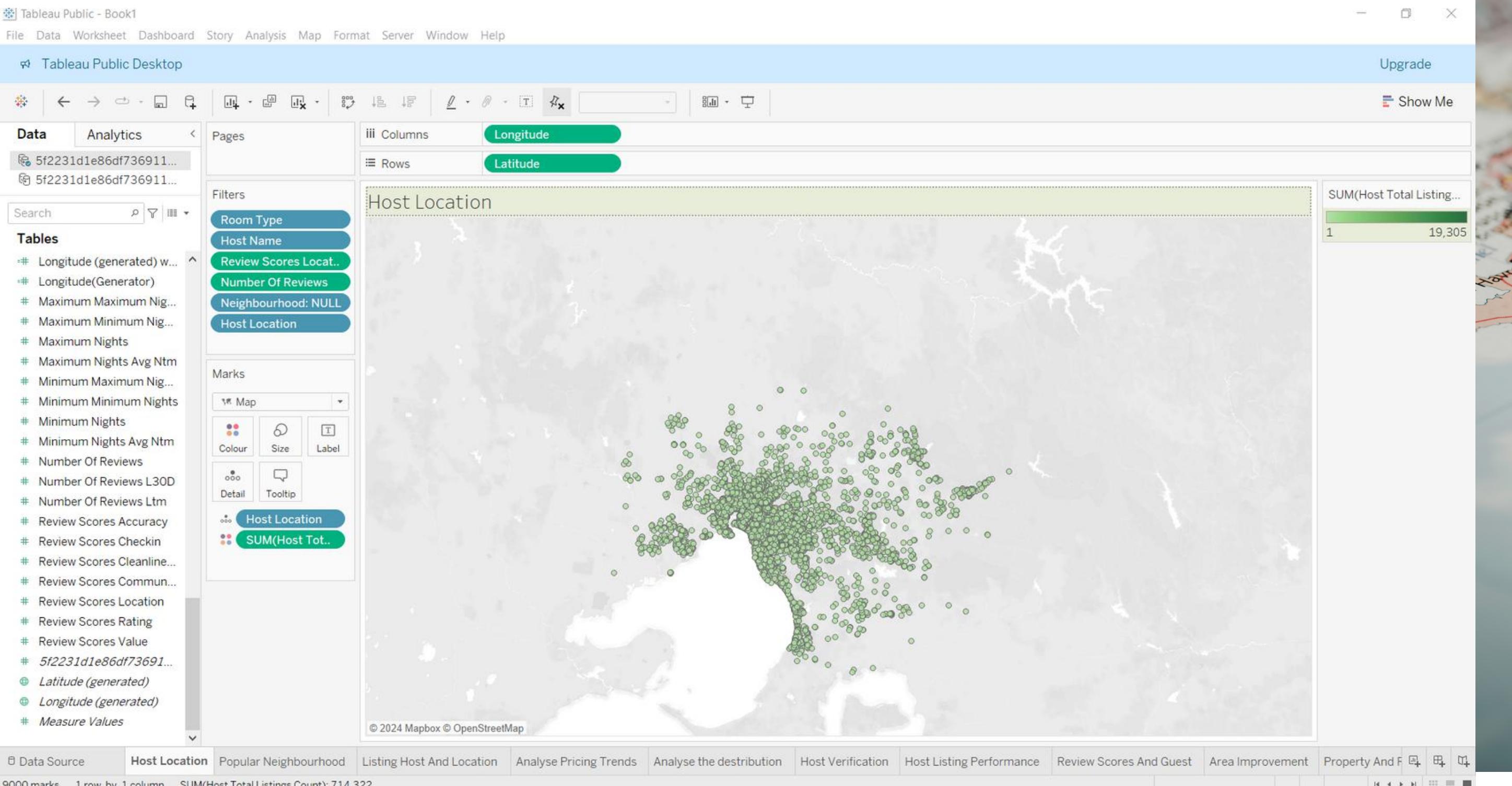
Type	Field Name	Physical Ta...	Rem...
#	Id	5f2231d1e8...	id
Abc	Listing Url	5f2231d1e8...	listing...

#	Abc	#	Abc	Abc
Id	Listing Url	Scrape Id	Last Scrapped	Source
10803	https://www.airbnb.com/roo...	5f2231d1e86df73691186597bf8f803	20230904181306	city scr...
12936	https://www.airbnb.com/roo...	5f2231d1e86df73691186597bf8f803	20230904181306	previou...
38271	https://www.airbnb.com/roo...	5f2231d1e86df73691186597bf8f803	20230904181306	city scr...
41836	https://www.airbnb.com/roo...	5f2231d1e86df73691186597bf8f803	20230904181306	previou...
43429	https://www.airbnb.com/roo...	5f2231d1e86df73691186597bf8f803	20230904181306	city scr...
603007	https://www.airbnb.com/roo...	5f2231d1e86df73691186597bf8f803	20230904181306	previou...

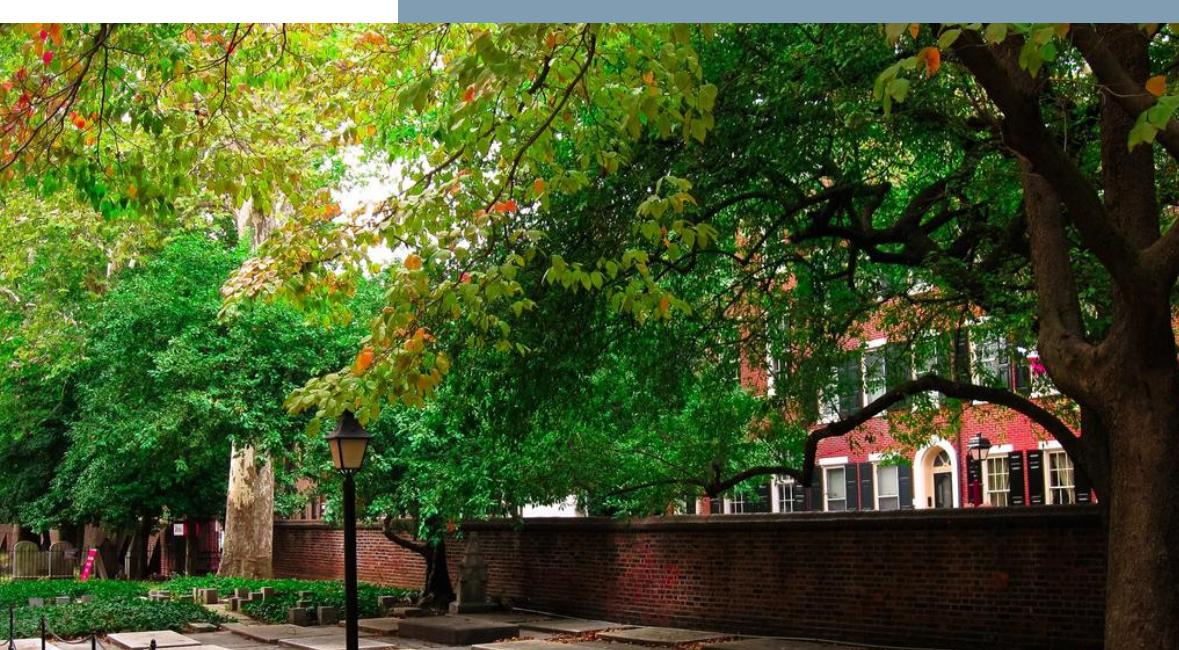
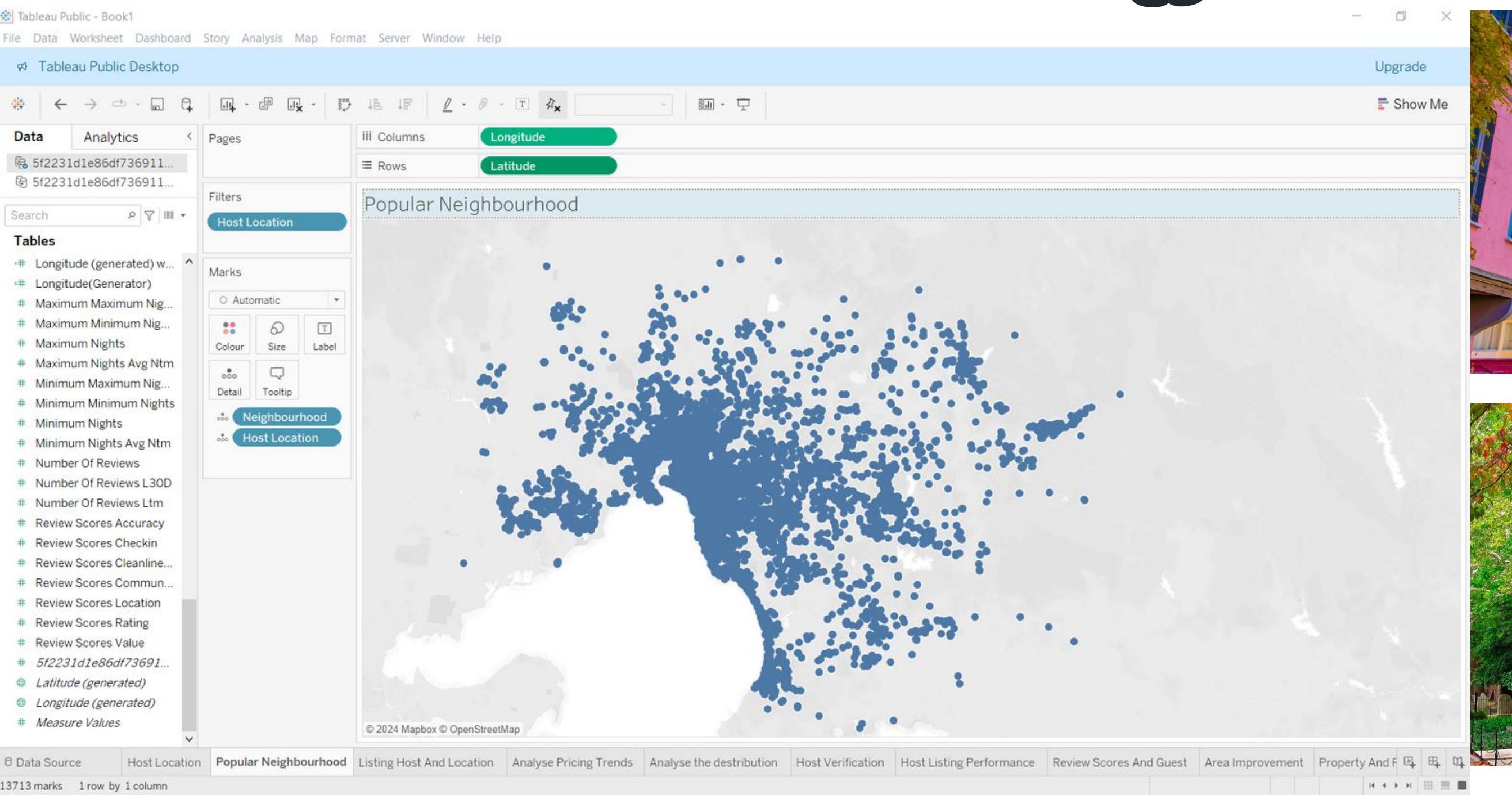
Data Source Host Location Popular Neighbourhood Listing Host And Location Analyse Pricing Trends Analyse the distribution Host Verification Host Listing Performance Review Scores And Guest Area Improvement Property And F...

After  
converting  
.csv file to  
.xlsx I have  
Uploaded  
the  
dataset in  
Tableau.

# Host Location:

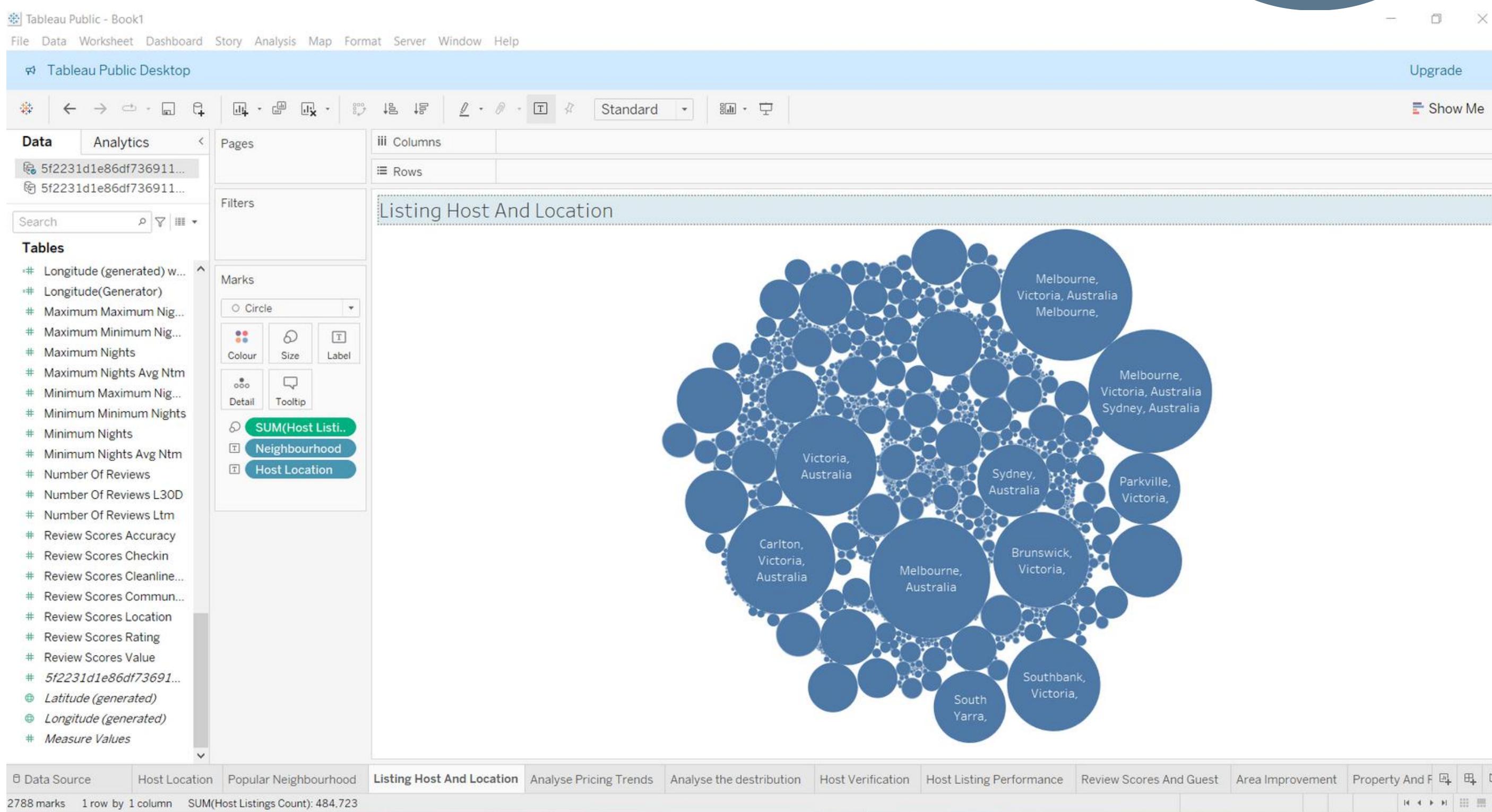


# Popular Neighborhood:



# Listing Host &

## Location:



# Analyse Pricing Trends:

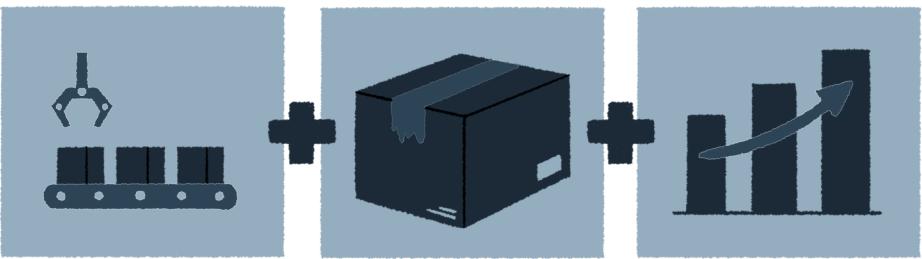


Tableau Public - Book1

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Tableau Public Desktop Upgrade Show Me

Data Analytics

5f2231d1e86df736911... 5f2231d1e86df736911...

Pages Columns Rows

Filters Accommodates Price

Search

Tables

- # Longitude (generated) w...
- # Longitude(Generator)
- # Maximum Maximum Nig...
- # Maximum Minimum Nig...
- # Maximum Nights
- # Maximum Nights Avg Ntm
- # Minimum Maximum Nig...
- # Minimum Minimum Nights
- # Minimum Nights
- # Minimum Nights Avg Ntm
- # Number Of Reviews
- # Number Of Reviews L30D
- # Number Of Reviews Ltm
- # Review Scores Accuracy
- # Review Scores Checkin
- # Review Scores Cleanline...
- # Review Scores Commun...
- # Review Scores Location
- # Review Scores Rating
- # Review Scores Value
- # 5f2231d1e86df73691...
- # Latitude (generated)
- # Longitude (generated)
- # Measure Values

Marks Automatic

Colour Size Label

Detail Tooltip

SUM(Accomm...) ATTR(Price) Room Type Property Type Price Has Availability

Analyse Pricing Trends

Entire Entire Entire Entire Entire

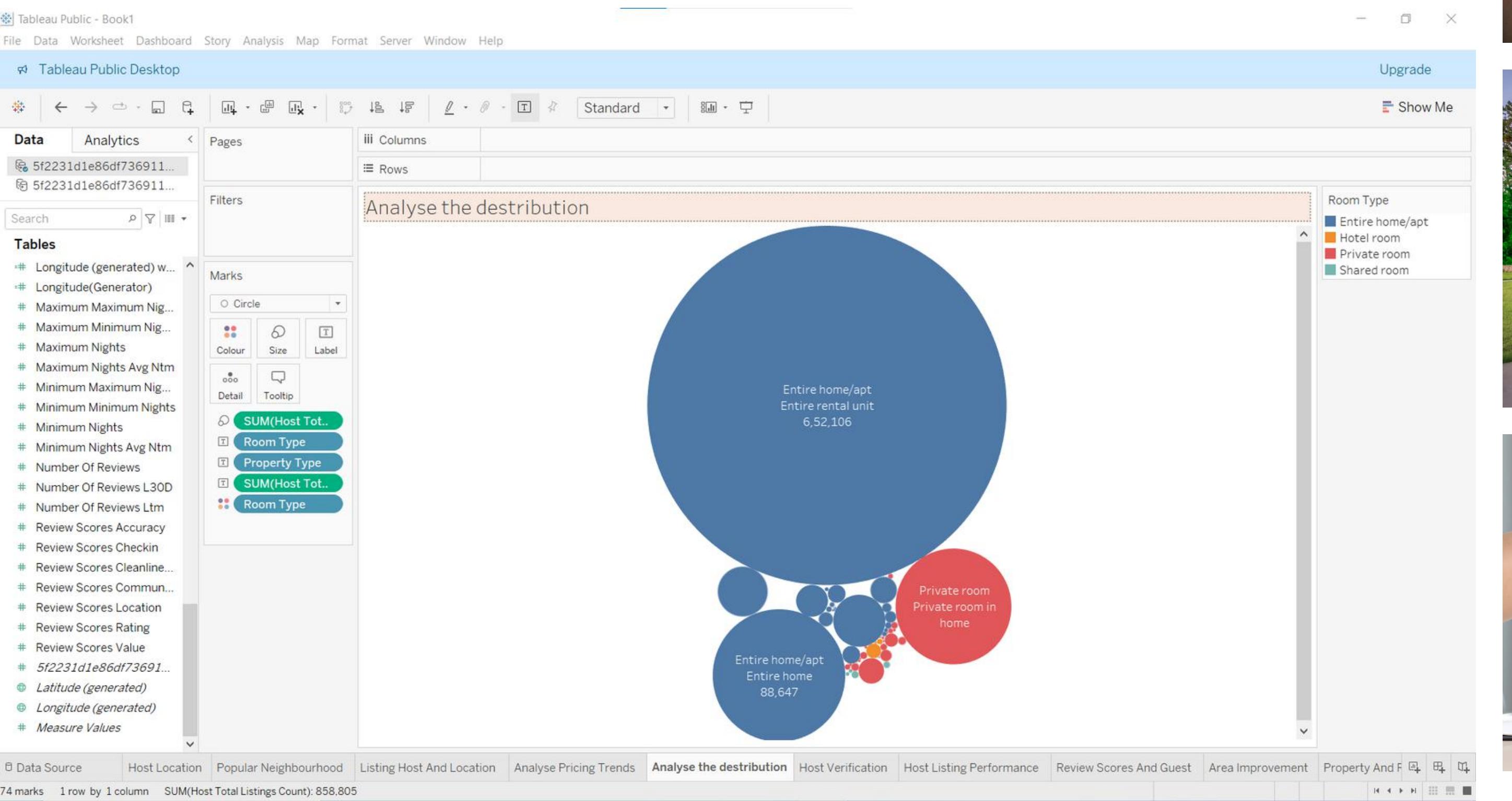
Entire

Data Source Host Location Popular Neighbourhood Listing Host And Location Analyse Pricing Trends Analyse the distribution Host Verification Host Listing Performance Review Scores And Guest Area Improvement Property And F

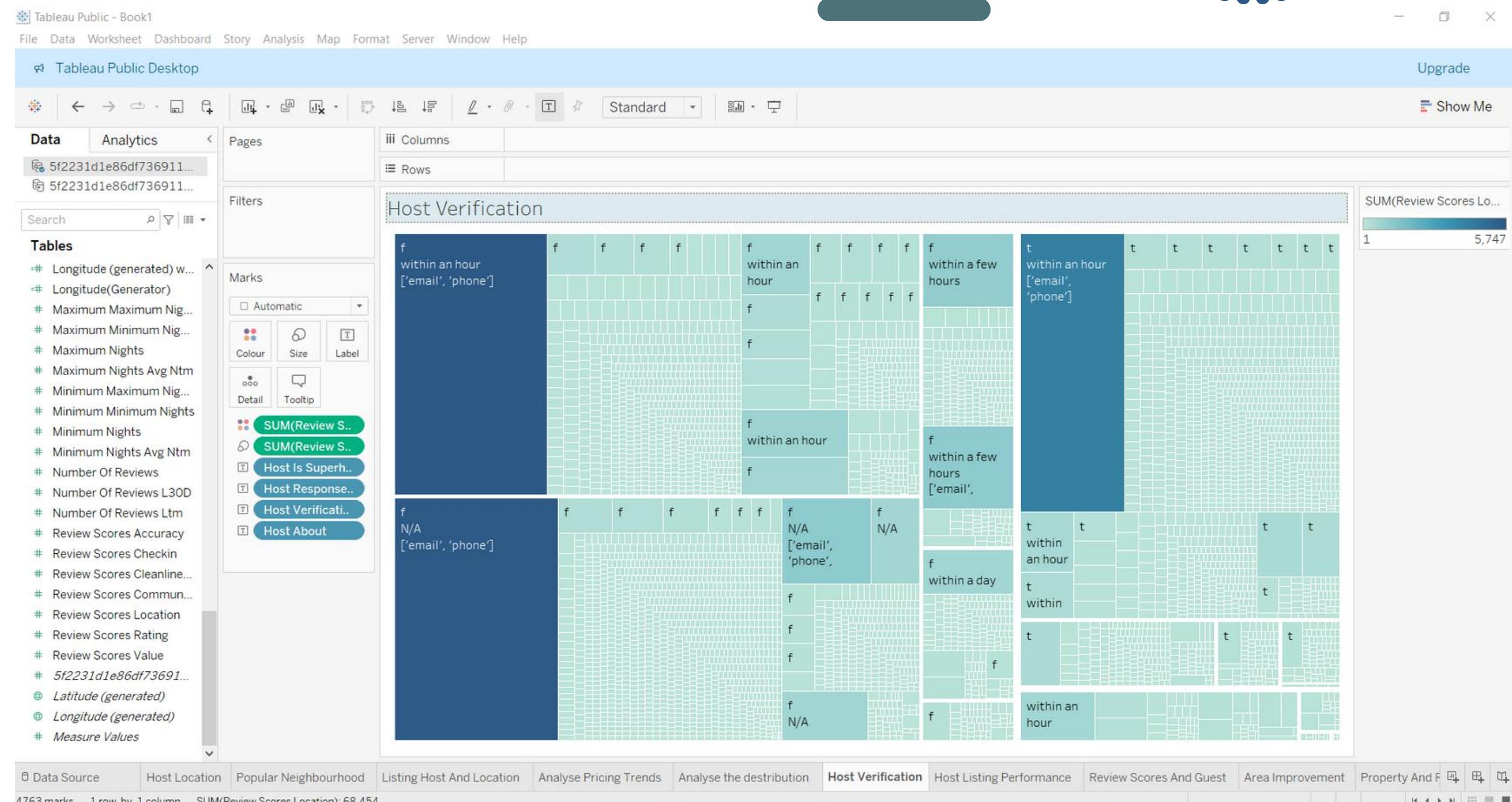
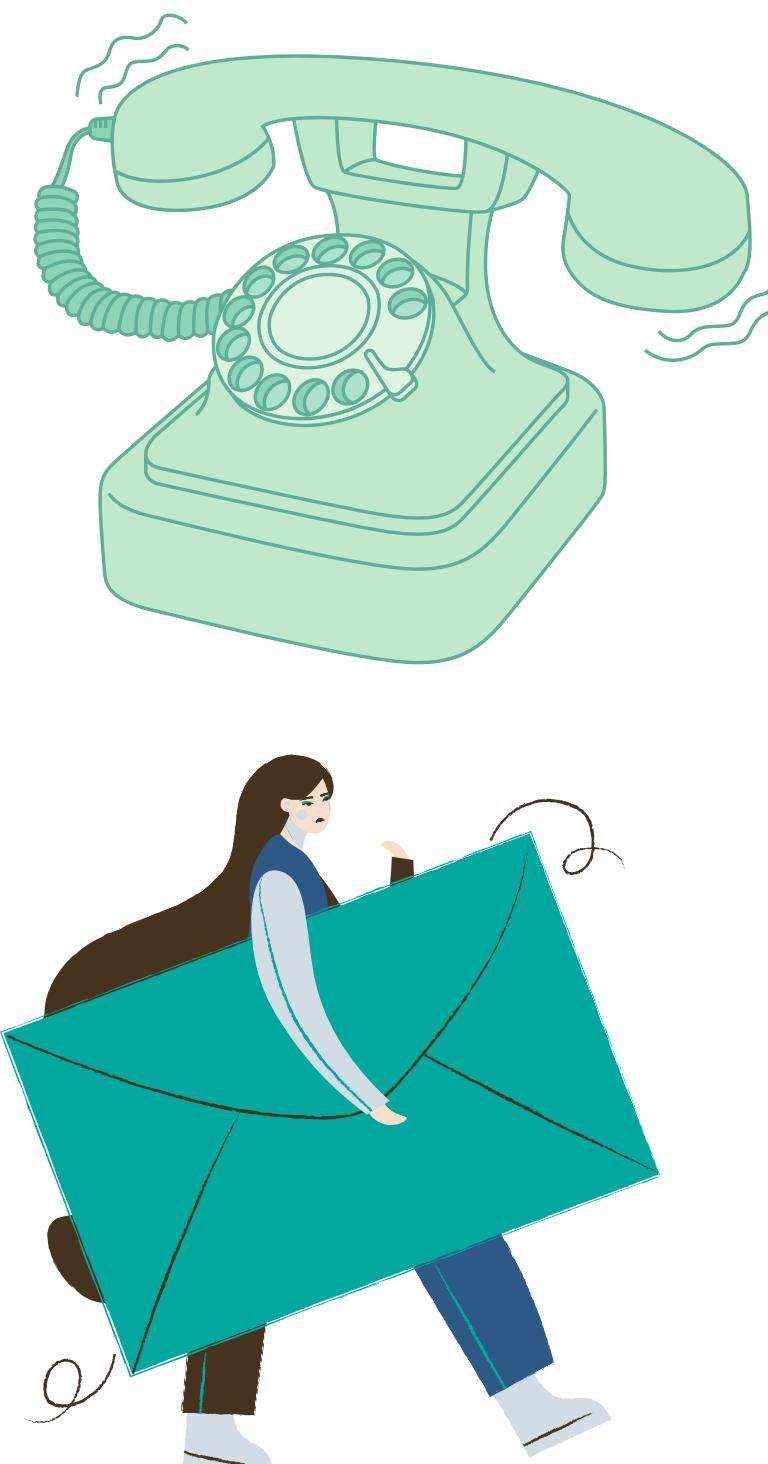
3430 marks 1 row by 1 column SUM(Accommodates): 53.203

This screenshot shows a Tableau dashboard titled "Analyse Pricing Trends". The interface includes a top navigation bar with various menu items like File, Data, Worksheet, Dashboard, Story, Analysis, Map, Format, Server, Window, and Help. Below the menu is a toolbar with standard icons. The main workspace is titled "Analyze Pricing Trends" and contains a complex treemap visualization. The treemap is composed of numerous small blue rectangles of varying sizes, representing data at different levels of hierarchy. On the left side, there's a sidebar with sections for Data, Analytics, and Tables, along with a Marks shelf and a Filters shelf. The Tables section lists numerous fields such as Longitude, Latitude, and various review scores. The Marks shelf shows settings for automatic marks, color, size, and label, along with specific measures like SUM(Accomm...), ATTR(Price), and Room Type. At the bottom, there are tabs for different analyses and a footer with various metrics and links.

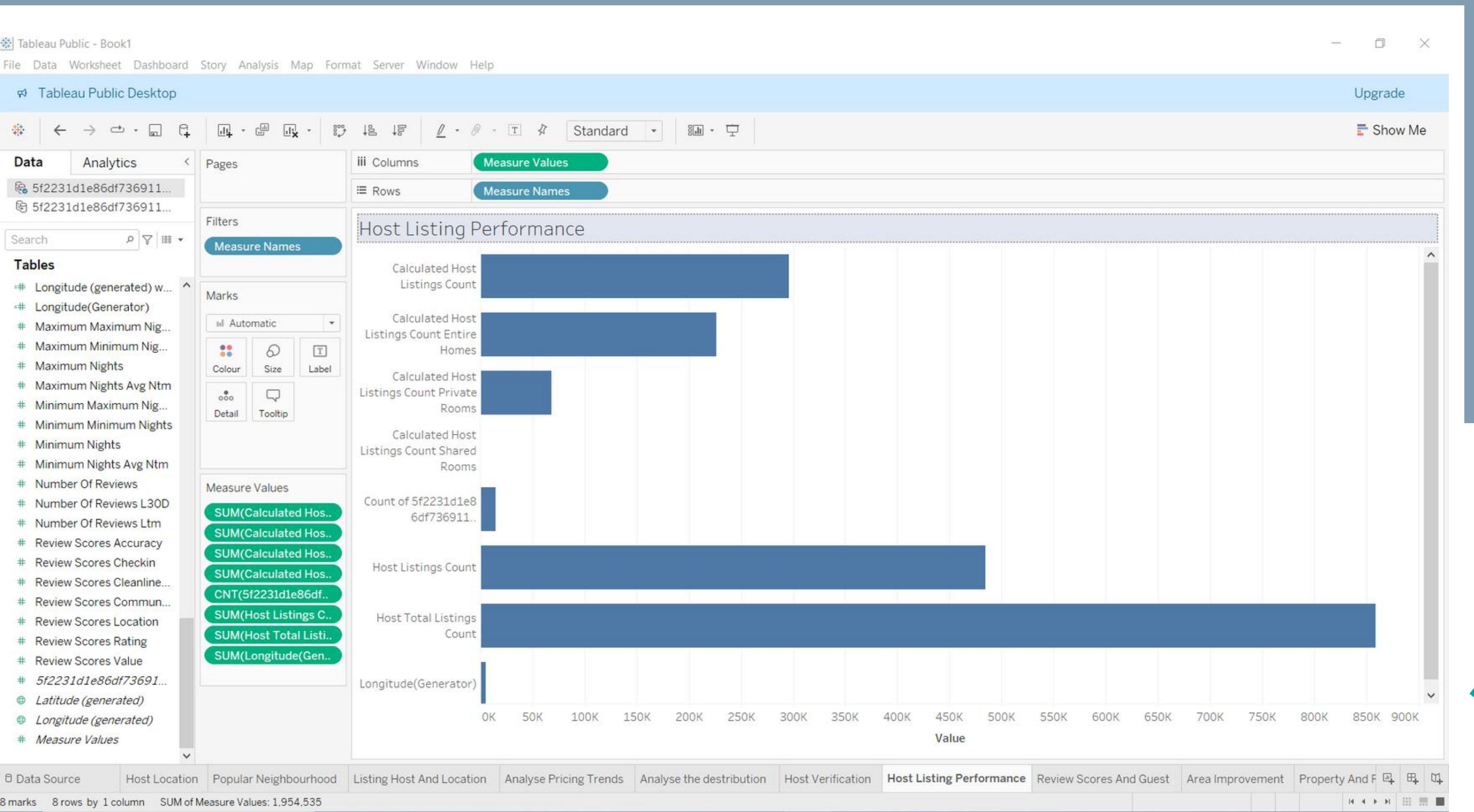
# Analyse The Distribution:



# Host Verification



# Host Listing Performance:



# Review Scores & Guest:

Tableau Public - Book1

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Tableau Public Desktop Upgrade

Show Me

Data Analytics <

Pages Columns Rows Measure Names

5f2231d1e86df736911... 5f2231d1e86df736911...

Search

Tables

- # Longitude (generated) w...
- # Longitude(Generator)
- # Maximum Maximum Nig...
- # Maximum Minimum Nig...
- # Maximum Nights
- # Maximum Nights Avg Ntm
- # Minimum Maximum Nig...
- # Minimum Minimum Nights
- # Minimum Nights
- # Minimum Nights Avg Ntm
- # Number Of Reviews
- # Number Of Reviews L30D
- # Number Of Reviews Ltm
- # Review Scores Accuracy
- # Review Scores Checkin
- # Review Scores Cleanline...
- # Review Scores Commun...
- # Review Scores Location
- # Review Scores Rating
- # Review Scores Value
- # 5f2231d1e86df736911...
- # Latitude (generated)
- # Longitude (generated)
- # Measure Values

Review Scores And Guest

Number Of Reviews

Pie

Colour Size Label Detail Tooltip Angle

Host Name

- (Maria) ANNA
- A&E
- Aaron
- Aarti
- Abbey
- Abby
- Abdi
- Abdul
- Abdulaziz
- Abdurahman
- Abe
- Abel
- Abhay
- Abigail
- Abraham
- Abs
- ACD Apartments
- Ace
- Ada
- Adam
- Adam & Claudia
- Adam & Hayley
- Adam And Mina
- Addison
- Ade

Measure Values

- SUM(Number Of Rev..)
- SUM(Review Scores ..)

Review Scores Accuracy

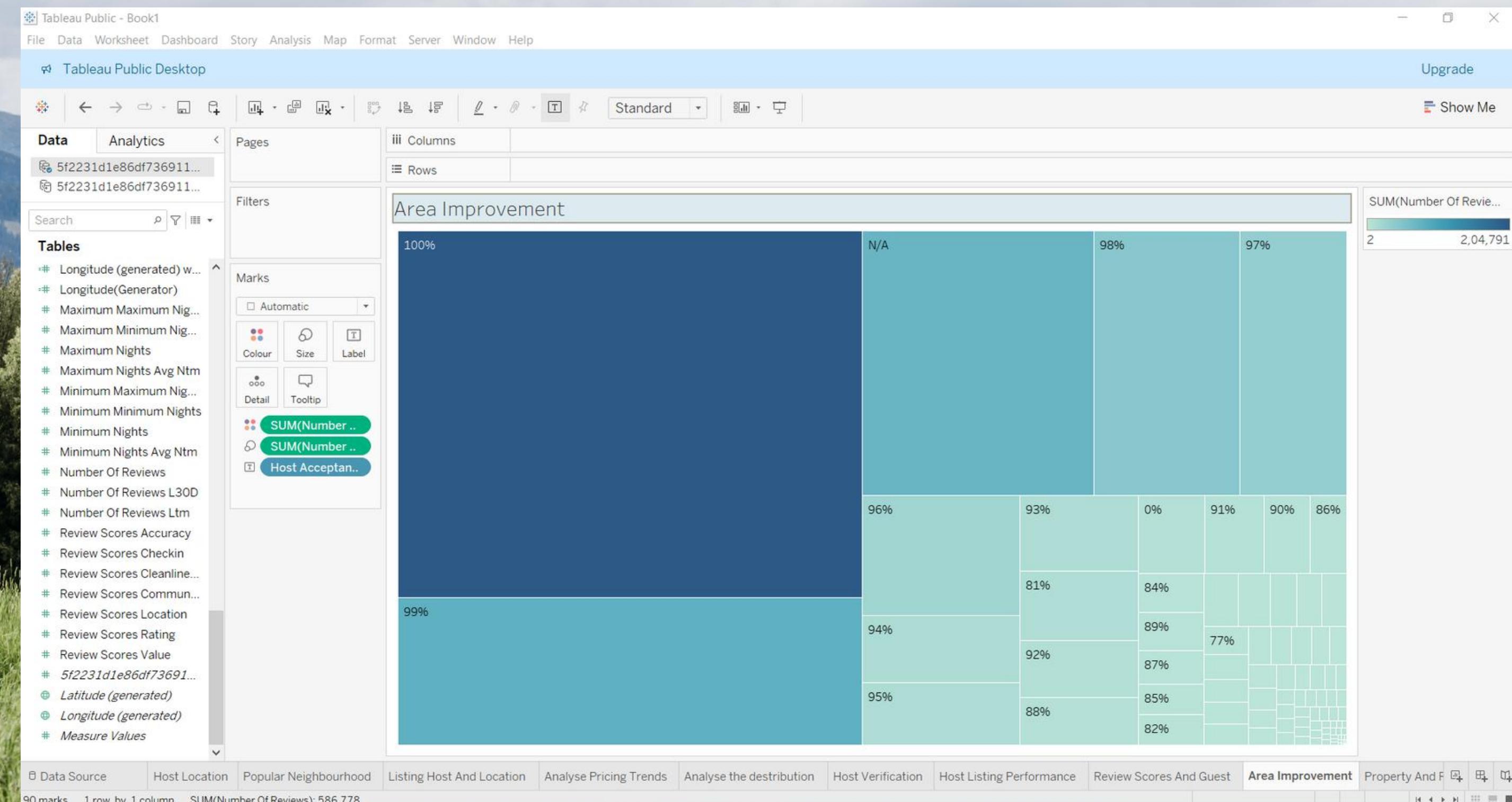
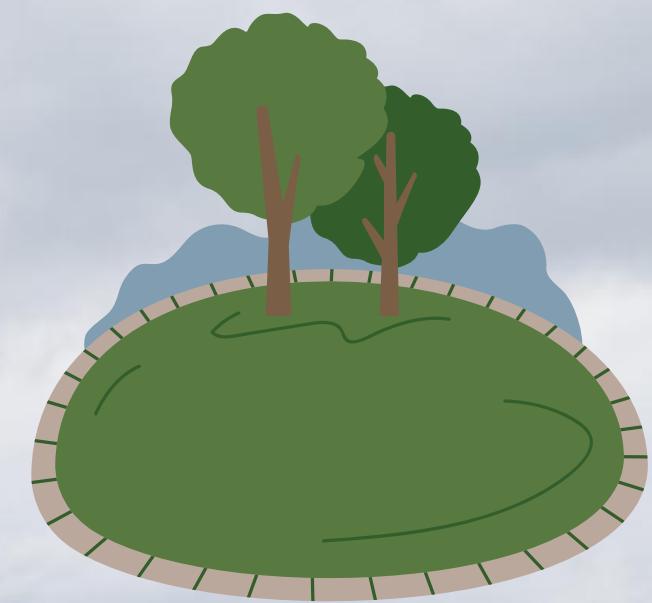
67,416  
200,000  
300,000  
400,000  
500,000  
586,778

Data Source Host Location Popular Neighbourhood Listing Host And Location Analyse Pricing Trends Analyse the distribution Host Verification Host Listing Performance Review Scores And Guest Area Improvement Property And F

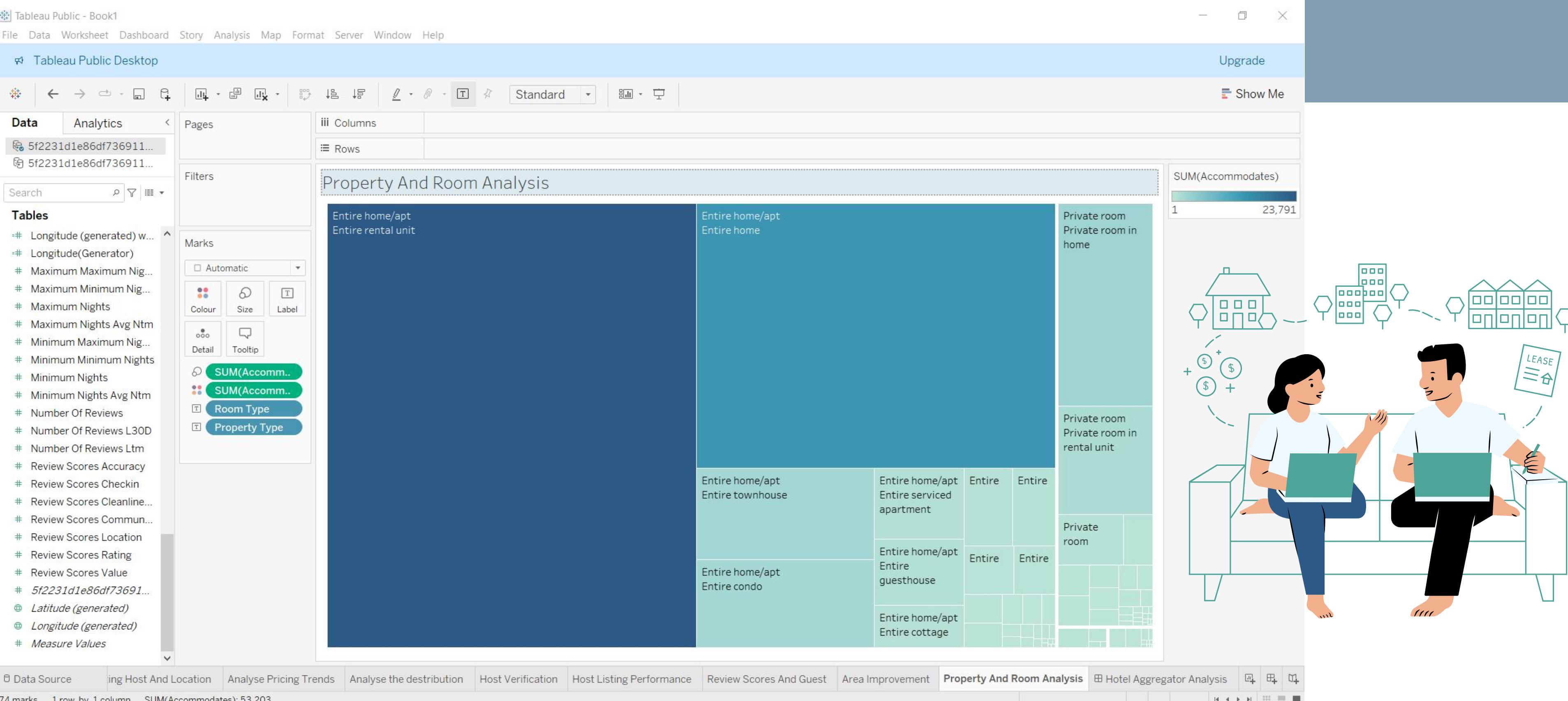
7068 marks 2 rows by 1 column SUM of Measure Values: 654,194



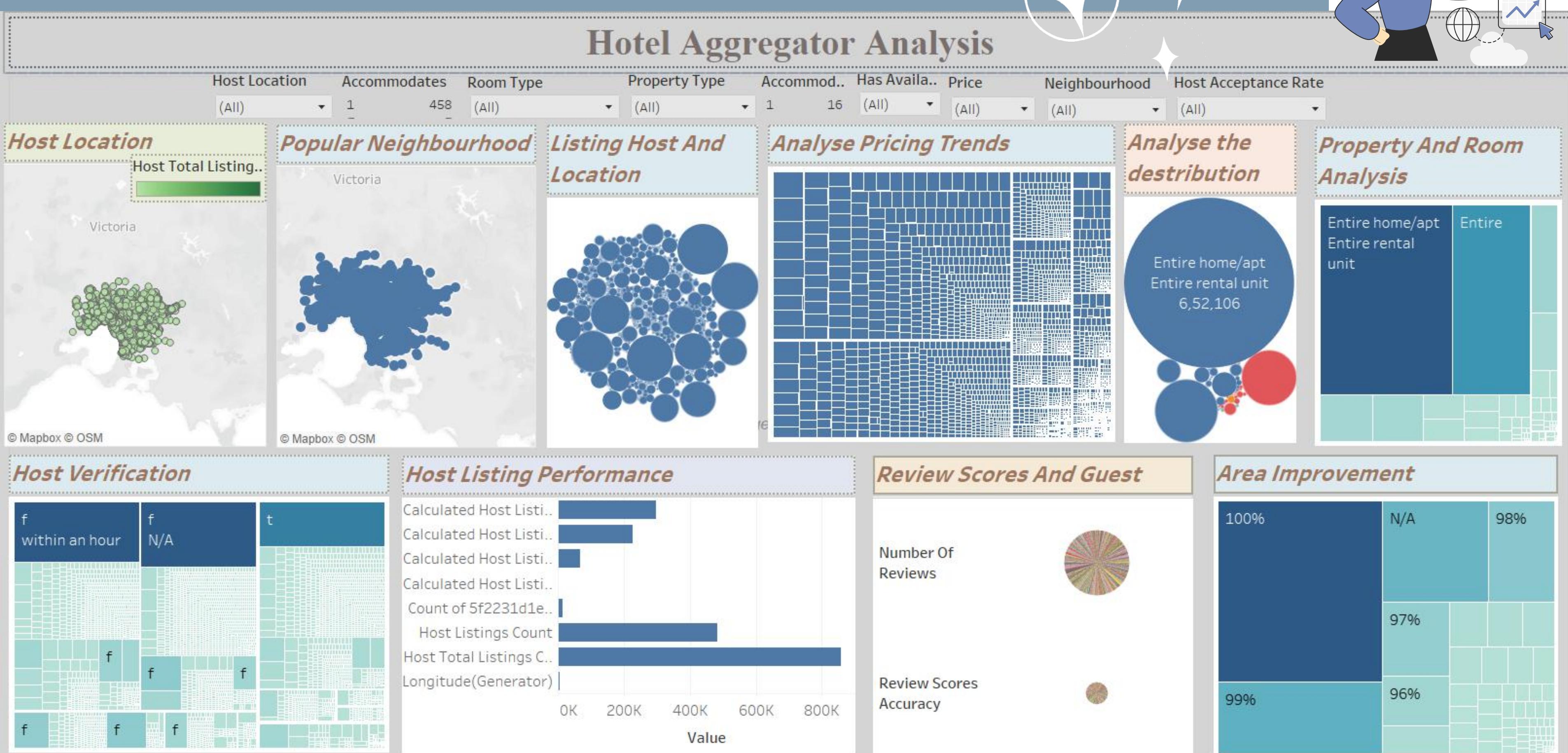
# Area Improvement:



# Property & Room Analysis:



# Final Dashboard:





Source Code:

<https://github.com/VinitaSoni28/Hotel-Aggregator-Analysis>

Thank you

