

# Introduction

INTRODUCTION TO TABLEAU

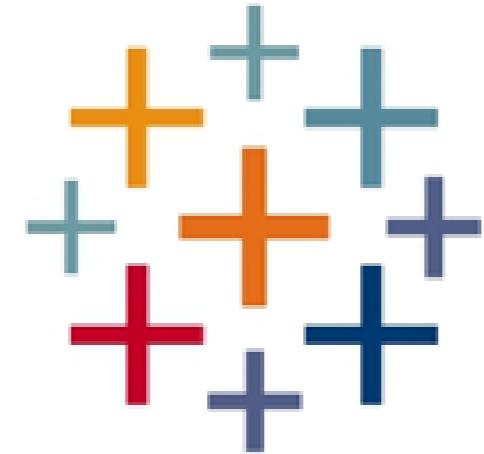


**Hadrien Lacroix**

Content Developer at DataCamp

# What is Tableau

+ a b l e a u



- Visualization tool
- VizQL
- Easy
- Beautiful
- Interactive

# Why use Tableau

Traditional photography



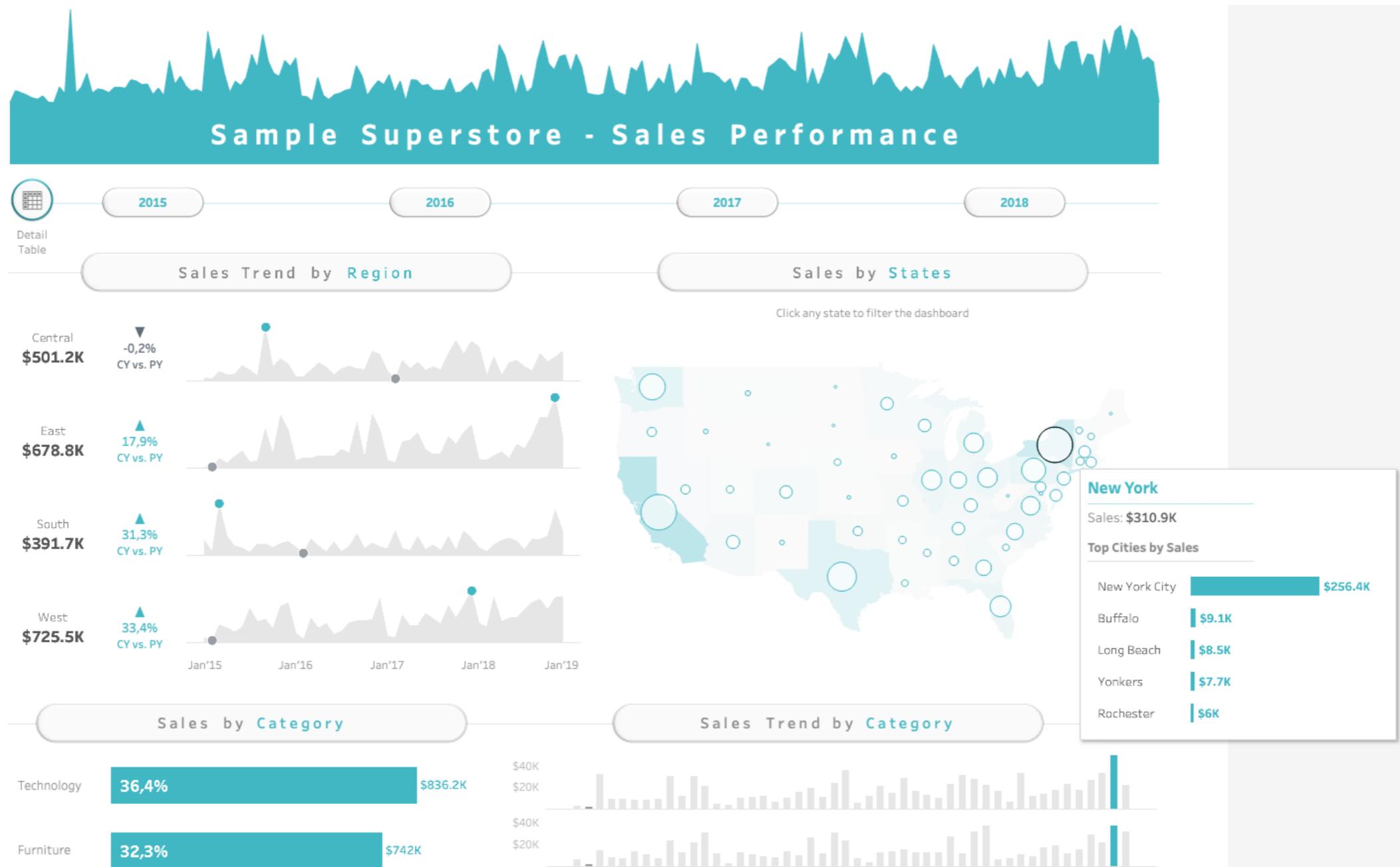
Digital photography



# Why use Tableau

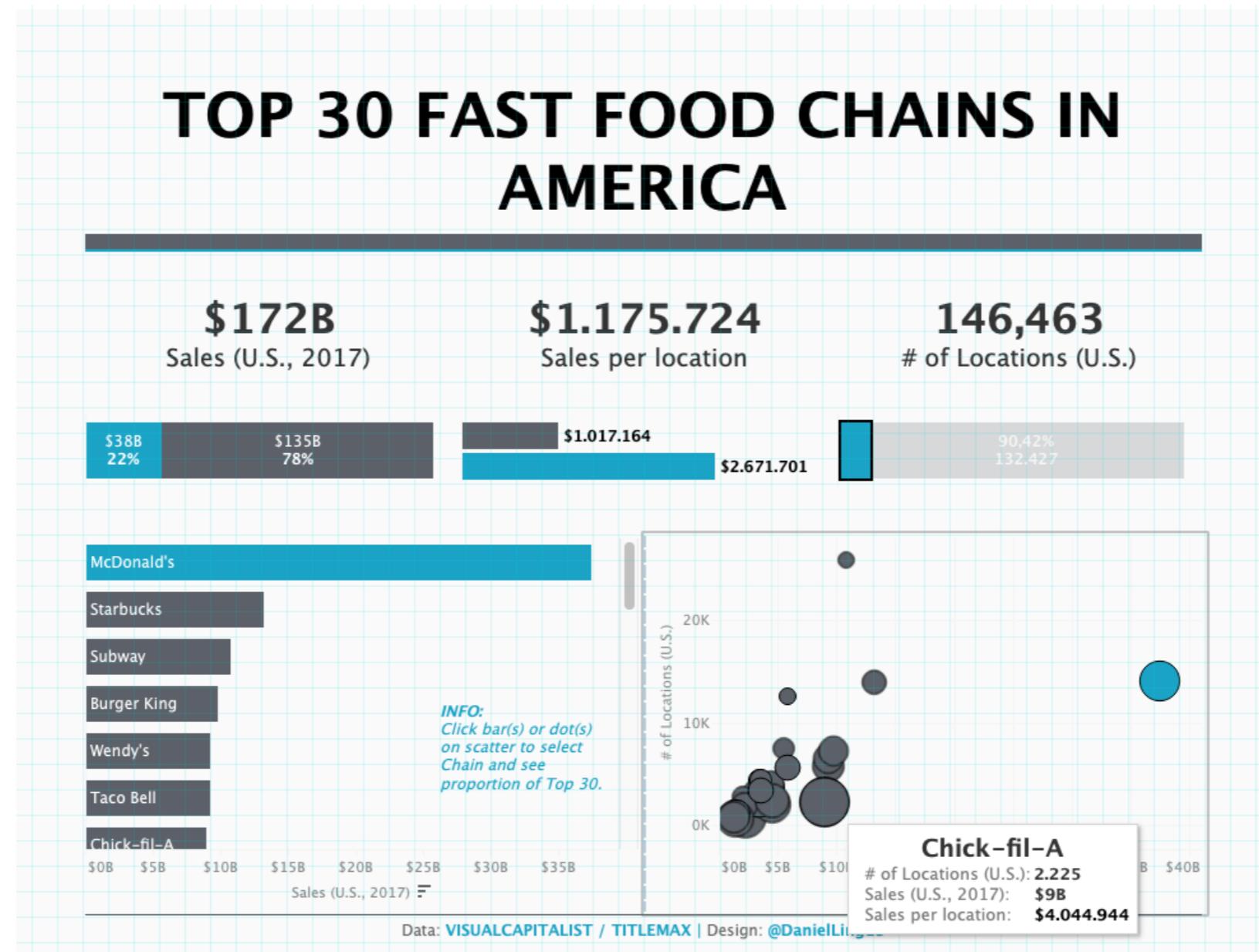
- Accessible...
- ...but complete
- Flexible
- Intuitive
- Quick and robust prototyping
- Frame business questions
- Import and clean data
- Analyze and visualize data
- Drive business decisions
- Present insights

# Why use Tableau - Monitoring performance



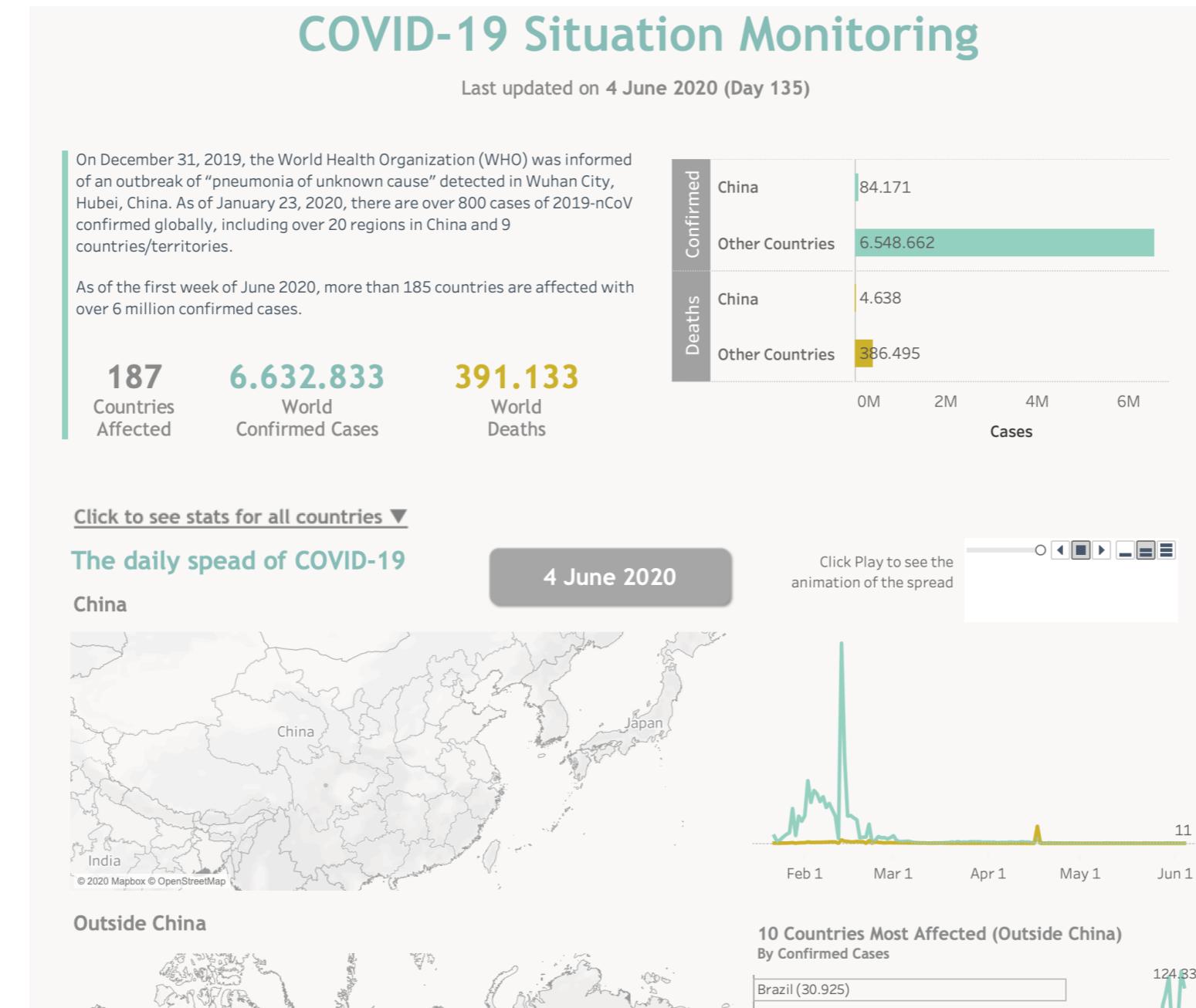
<sup>1</sup> Author: Pradeep Kumar G. Originally published on: Tableau Public

# Why use Tableau - Competitive analysis



<sup>1</sup> Author: Daniel Ling. Originally published on: Tableau Public.

# Why use Tableau - Tracking outbreaks



<sup>1</sup> Author: Thi Ho. Originally published on: Tableau Public

# Who uses Tableau

## Roles

- Data analyst
- Business analyst
- Quantitative analyst

# Who uses Tableau

LinkedIn

The Cisco logo consists of a series of blue vertical bars of varying heights followed by the word "CISCO" in a bold, blue, sans-serif font.The Adobe logo features a red stylized 'A' icon followed by the word "Adobe" in a large, black, sans-serif font.The Walmart logo consists of the word "Walmart" in a large, blue, sans-serif font, accompanied by its signature yellow five-pointed starburst symbol.The Tripadvisor logo consists of the words "trip" in black and "advisor" in green, with a small orange dot above the 'i' in "trip".

<sup>1</sup> <https://enlyft.com/tech/products/tableau>

# Tableau versions

## Tableau Public

- Free
- Create beautiful visualizations
- Only CSV, Excel and text files
- Save online
- 15 millions rows of data
- Public reports

## Tableau Desktop

- Paid
- Create beautiful visualizations
- All listed data sources
- Save locally
- Unlimited rows of data

# **Let's practice!**

## **INTRODUCTION TO TABLEAU**

# Connecting to data

INTRODUCTION TO TABLEAU



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# **Let's practice!**

## **INTRODUCTION TO TABLEAU**

# Navigating Tableau

INTRODUCTION TO TABLEAU



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The screenshot shows the Tableau desktop application interface. The top navigation bar includes icons for file operations (New, Open, Save, etc.), a search bar, and a "Standard" theme switch. The left sidebar contains the "Data" and "Analytics" tabs, with "Data" selected. Under "Data", there is a connection named "san\_francisco". A search bar and a filter icon are also present. The main workspace is titled "Sheet 1" and features three empty columns labeled "Drop field here". On the left, the "Tables" shelf lists various data fields: Id, Neighbourhood, Reviews per Month, Room type, Measure Names, Availability 2019, Days Occupied in 2018, F1, Latitude, Longitude, Minimum Nights, Number of Reviews, Price, san\_francisco.csv (Count), and Measure Values. The "Marks" shelf is set to "Automatic" and includes options for Color, Size, Text, Detail, and Tooltip.

The screenshot shows the Tableau desktop application interface. The top navigation bar includes icons for file operations, zoom, and standard view. The left sidebar features the 'Data' tab selected, showing a list of data sources: 'san\_francisco'. Below this is the 'Tables' section listing various dimensions and measures from the data source. The main workspace is titled 'Sheet 1' and contains three blank white rectangular areas labeled 'Drop field here' for columns, rows, and marks. The 'Marks' shelf on the right side is set to 'Automatic' and offers options for Color, Size, Text, Detail, and Tooltip.

san\_francisco

Search

Tables

- # Id
- Abc Neighbourhood
- # Reviews per Month
- Abc Room type
- Abc *Measure Names*
- # Availability 2019
- # Days Occupied in 2018
- # F1
- ⊕ Latitude
- ⊕ Longitude
- # Minimum Nights
- # Number of Reviews
- # Price
- # *san\_francisco.csv (Count)*
- # *Measure Values*

Sheet 1

Drop field here

Drop field here

Drop field here

Data Source Sheet 1

The screenshot shows the Tableau desktop application interface. The top navigation bar includes icons for file operations, zoom, and standard view. The left sidebar has tabs for 'Data' (selected) and 'Analytics'. Under 'Data', there's a project named 'san\_francisco' and a search bar. The 'Tables' section lists various data fields:

- # Id
- Abc Neighbourhood
- # Reviews per Month
- Abc Room type
- Abc *Measure Names*
- # Availability 2019
- # Days Occupied in 2018
- # F1
- ⊕ Latitude
- ⊕ Longitude
- # Minimum Nights
- # Number of Reviews
- # Price
- # *san\_francisco.csv (Count)*
- # Measure Values

The main workspace is titled 'Sheet 1'. It features three large, empty rectangular areas labeled 'Drop field here' in each corner. To the right of these areas is a 'Marks' shelf with a dropdown set to 'Automatic' and five options: Color, Size, Text, Detail, and Tooltip.

At the bottom, a navigation bar includes 'Data Source' (with a refresh icon), 'Sheet 1' (selected), and other sheet icons.

The screenshot shows the Tableau desktop application interface. The top navigation bar includes icons for file operations, a search bar, and a "Standard" view dropdown. The left sidebar has tabs for "Data" and "Analytics", with "san\_francisco" selected. The "Tables" section lists various data fields: "Id", "Neighbourhood", "Reviews per Month" (selected), "Room type", "Measure Names", "Availability 2019", "Days Occupied in 2018", "F1", "Latitude", "Longitude", "Minimum Nights", "Number of Reviews", "Price", "san\_francisco.csv (Count)", and "Measure Values". The "Marks" shelf on the right shows options for "Automatic" marks (Color, Size, Text) and "Detail" marks (Detail, Tooltip). The main workspace, "Sheet 1", contains three blank "Drop field here" placeholder areas.

The screenshot shows the Tableau desktop application interface. The top navigation bar includes icons for file operations (New, Open, Save, etc.), a search bar, and a "Standard" view switcher. The left sidebar contains the "Data" and "Analytics" tabs, with "san\_francisco" selected under Data. The "Tables" section lists various data fields: "Id", "Neighbourhood", "Reviews per Month", "Room type", "Measure Names", "Availability 2019", "Days Occupied in 2018", "F1", "Latitude", "Longitude", "Minimum Nights", "Number of Reviews", "Price", "san\_francisco.csv (Count)", and "Measure Values". The "Filters" section is currently empty. The main workspace, titled "Sheet 1", features three blank white squares with "Drop field here" placeholder text. The bottom navigation bar includes "Data Source", "Sheet 1", and other sheet tabs.

The screenshot shows the Tableau desktop application interface. The top navigation bar includes icons for file operations (New, Open, Save, etc.), a search bar, and a "Standard" theme switch. The left sidebar contains the "Data" and "Analytics" tabs, with "san\_francisco" selected under Data. A search bar and a "Tables" section are also present. The main workspace is titled "Sheet 1" and features three empty columns labeled "Drop field here". The "Marks" shelf on the right side is set to "Automatic" and includes options for Color, Size, Text, Detail, and Tooltip. The overall layout is clean and organized, typical of a data visualization tool.

The screenshot shows the Tableau desktop application interface. The top navigation bar includes icons for file operations (New, Open, Save, etc.), a search bar, and a "Standard" view switcher. The left sidebar contains the "Data" and "Analytics" tabs, with "san\_francisco" selected under Data. A search bar and a filter dropdown are also present. The main workspace is titled "Sheet 1" and features three large, empty rectangular areas labeled "Drop field here". On the far left, the "Tables" shelf lists various data fields: Id, Neighbourhood, Reviews per Month, Room type, Measure Names, Availability 2019, Days Occupied in 2018, F1, Latitude, Longitude, Minimum Nights, Number of Reviews, Price, san\_francisco.csv (Count), and Measure Values. The "Measure Names" section is highlighted with a blue border. To the right of the tables shelf is the "Marks" shelf, which is currently set to "Automatic" and offers options for Color, Size, Text, Detail, and Tooltip.

# Segmenting with dimensions

- Dimensions and measures affect visualizations differently:
  - Dimensions are used to **segment** data
  - Measures can be aggregated
- **Segmenting** = grouping similar data together
  - For example: price per neighborhood, days occupied by room type

The screenshot shows the Tableau desktop interface with a context menu open over a data item in the Marks shelf.

**Context Menu Options:**

- Add to Sheet
- Duplicate
- Rename
- Hide
- Create ▾
- Convert to Discrete
- Convert to Measure** (selected)
- Change Data Type ▾
- Geographic Role ▾
- Default Properties ▾
- Group by ▾
- Folders ▾
- Hierarchy ▾
- Replace References...
- Describe...

**UI Elements:**

- Data** tab selected in the top-left corner.
- Analytics** tab in the top-left corner.
- Pages**, **Columns**, **Rows** panels in the top-left corner.
- Standard** view mode in the top-right corner.
- Show Me** button in the top-right corner.
- Search** bar at the top.
- Tables** pane on the left showing data items: # Id, Abc Neighbourhood, # Reviews per Month (highlighted), Abc Room type, Abc Measure Names, # Availability 2019, # Days Occupied in 2018, # F1, @ Latitude, @ Longitude, # Minimum Nights, # Number of Reviews, # Price, # san\_francisco.csv (Count), # Measure Values.
- Marks** shelf on the left containing the selected item.
- Sheet 1** workspace with two "Drop field here" placeholder boxes.
- Bottom navigation bar:** Data Source, Sheet 1, and three icons.

The screenshot shows the Tableau desktop interface with the following details:

- Top Bar:** Includes icons for file operations (New, Open, Save, etc.), zoom, and standard view.
- Data Tab:** Selected tab, showing a connection named "san\_francisco".
- Search Bar:** Contains a search input and a refresh icon.
- Tables Panel:** Lists data fields:
  - # Id
  - Abc Neighbourhood
  - # Reviews per Month (highlighted with a green border)
  - Abc Room type
  - Abc Measure Names
  - # Availability 2019
  - # Days Occupied in 2018
  - # F1
  - ⊕ Latitude
  - ⊕ Longitude
  - # Minimum Nights
  - # Number of Reviews
  - # Price
  - # san\_francisco.csv (Count)
  - # Measure Values
- Marks Context Menu:** A context menu is open for the "Reviews per Month" measure, with the "Convert to Discrete" option highlighted.
  - Add to Sheet
  - Duplicate
  - Rename
  - Hide
  - Create ▾
  - Convert to Discrete
  - Convert to Measure
  - Change Data Type ▾
  - Geographic Role ▾
  - Default Properties ▾
  - Group by ▾
  - Folders ▾
  - Hierarchy ▾
  - Replace References...
  - Describe...
- Sheet 1:** The main workspace is titled "Sheet 1". It has two empty drop zones labeled "Drop field here".
- Bottom Navigation:** Includes tabs for "Data Source" and "Sheet 1", along with other navigation icons.

The screenshot shows the Tableau Data Prep interface. At the top, there's a toolbar with icons for file operations like back, forward, and save. Below the toolbar, the navigation bar includes 'Data' (selected), 'Analytics', 'Pages', 'Columns', 'Rows', and 'Show Me'. A search bar is also present.

The main workspace is titled 'Sheet 1'. It features three main sections: 'Pages' (highlighted with an orange border), 'Filters' (highlighted with an orange border), and 'Marks' (highlighted with an orange border). The 'Rows' section is currently active, with the word 'Neighbourhood' highlighted in a blue box.

The 'Filters' section contains a search bar and a list of fields: 'san\_francisco', 'Search', and a list of columns including 'Id', 'Neighbourhood', 'Reviews per Month', 'Room type', 'Measure Names', 'Availability 2019', 'Days Occupied in 2018', 'F1', 'Latitude', 'Longitude', 'Minimum Nights', 'Number of Reviews', 'Price', 'san\_francisco.csv (Count)', and 'Measure Values'. The 'Neighbourhood' field is also listed here.

The 'Marks' section has a dropdown menu set to 'Automatic' and includes options for 'Color', 'Size', 'Text', 'Detail', and 'Tooltip'. The 'Text' option is highlighted with an orange border.

The 'Rows' section has three empty drop zones labeled 'Drop field here'.

At the bottom, there's a navigation bar with tabs for 'Data Source' and 'Sheet 1', along with other icons for saving and sharing.

The screenshot shows the Tableau desktop application interface. The top navigation bar includes icons for file operations (New, Open, Save, etc.), a search bar, and a "Standard" view switcher. The left sidebar contains the "Data" and "Analytics" tabs, with "Data" selected. Under "Data", there is a section for the "san\_francisco" data source, which includes a search bar and a list of fields:

- # Id
- Abc Neighbourhood
- # Reviews per Month
- Abc Room type
- Abc *Measure Names*
- # Availability 2019
- # Days Occupied in 2018
- # F1
- ⊕ Latitude
- ⊕ Longitude
- # Minimum Nights
- # Number of Reviews
- # Price
- # *san\_francisco.csv (Count)*
- # *Measure Values*

The main workspace is titled "Sheet 1". It features a grid with four quadrants, each labeled "Drop field here". To the right of the grid is a "Marks" shelf, currently set to "Automatic" and showing options for Color, Size, Text, Detail, and Tooltip.

At the bottom of the interface, there is a navigation bar with tabs for "Data Source" and "Sheet 1", along with other standard navigation icons.

The screenshot shows the Tableau desktop application interface. The top navigation bar includes icons for file operations (New, Open, Save, etc.), a search bar, and a "Standard" view switcher. On the left, the "Data" pane lists a single data source named "san\_francisco". The "Analytics" pane is currently selected. The main workspace is titled "Sheet 1" and contains three empty rectangular drop zones labeled "Drop field here". To the left of the workspace are the "Pages", "Columns", and "Rows" headers. On the far left, the "Tables" pane displays a list of fields from the data source, including "Id", "Neighbourhood", "Reviews per Month", "Room type", "Measure Names", "Availability 2019", "Days Occupied in 2018", "F1", "Latitude", "Longitude", "Minimum Nights", "Number of Reviews", "Price", "san\_francisco.csv (Count)", and "Measure Values". A "Marks" pane on the right side offers options for "Automatic" marking and specific tools like "Color", "Size", "Text", "Detail", and "Tooltip".

The screenshot shows the Tableau desktop application interface. The top navigation bar includes icons for file operations, a search bar, and a "Standard" view switcher. The left sidebar contains the "Data" tab selected, showing a project named "san\_francisco" and a search bar. Below this is the "Tables" section listing various data fields: Id, Neighbourhood, Reviews per Month, Room type, Measure Names, Availability 2019, Days Occupied in 2018, F1, Latitude, Longitude, Minimum Nights, Number of Reviews, Price, san\_francisco.csv (Count), and Measure Values. The main workspace is titled "Sheet 1". The "Rows" shelf at the top is active, indicated by a blue border. The "Marks" shelf on the left shows options for Automatic, Color, Size, Text, Detail, and Tooltip. Three large, empty rectangular boxes are present in the workspace, each labeled "Drop field here". The bottom navigation bar includes tabs for "Data Source" and "Sheet 1", along with other standard toolbar icons.

The screenshot shows the Tableau desktop application interface. The top navigation bar includes icons for file operations, a search bar, and a "Standard" view switcher. The left sidebar features the "Data" and "Analytics" tabs, with "Data" selected. Below this is a search bar and a "Tables" section listing various data fields. A "san\_francisco" data source is currently selected. The main workspace is titled "Sheet 1" and contains three blank rectangular drop zones labeled "Drop field here". To the right of these zones is a "Marks" shelf with options for Color, Size, Text, Detail, and Tooltip. The overall layout is clean and organized, typical of a data visualization tool.

The screenshot shows the Tableau desktop application interface. The top navigation bar includes icons for file operations (New, Open, Save, etc.), a search bar, and a "Show Me" button. The left sidebar contains the "Data" tab selected, showing a single data source named "san\_francisco". Below the data source are sections for "Tables" and "Measures". The "Tables" section lists various fields: Id, Neighbourhood, Reviews per Month, Room type, Measure Names, Availability 2019, Days Occupied in 2018, F1, Latitude, Longitude, Minimum Nights, Number of Reviews, Price, san\_francisco.csv (Count), and Measure Values. The "Measures" section is currently empty. The main workspace is titled "Sheet 1" and features three empty columns for dragging and dropping fields. The top column has a placeholder "Drop field here". The bottom-left column has a placeholder "Drop field here". The bottom-right column has a placeholder "Drop field here". To the left of the workspace, there are three panes: "Pages" (with one page listed), "Columns" (with one column listed), and "Rows" (empty). The "Filters" pane is also visible on the left, containing a list of filters. The "Marks" pane on the right shows options for Automatic, Color, Size, Text, Detail, and Tooltip.

The screenshot shows the Tableau desktop application interface. At the top, there is a toolbar with various icons for navigation and file operations. Below the toolbar, the top navigation bar includes 'Data' (selected), 'Analytics' (dropdown), 'Pages', 'Columns', 'Rows', and a 'Standard' dropdown. On the far right of the top bar is a 'Show Me' icon.

The left side of the interface features a 'Tables' pane containing a list of data fields:

- # Id
- Abc Neighbourhood
- # Reviews per Month
- Abc Room type
- Abc *Measure Names*
- # Availability 2019
- # Days Occupied in 2018
- # F1
- ⊕ Latitude
- ⊕ Longitude
- # Minimum Nights
- # Number of Reviews
- # Price
- # *san\_francisco.csv (Count)*
- # *Measure Values*

The main workspace is titled 'Sheet 1'. It contains three large, empty rectangular areas labeled 'Drop field here' in each corner. To the left of these areas is a 'Marks' shelf panel, which is currently set to 'Automatic' and displays five options: Color, Size, Text, Detail, and Tooltip. The entire workspace has a light gray background.

At the bottom of the screen, there is a navigation bar with tabs for 'Data Source' (selected) and 'Sheet 1', along with other icons for navigating between sheets and saving workbooks.

The screenshot shows the Tableau desktop application interface. The top navigation bar includes icons for file operations (New, Open, Save, etc.), a search bar, and a "Standard" theme switch. The left sidebar contains the "Data" and "Analytics" tabs, with "Data" selected. Under "Data", there is a section for "san\_francisco" containing a "Search" field and a "Tables" list. The "Tables" list includes fields like Id, Neighbourhood, Reviews per Month, Room type, Measure Names, Availability 2019, Days Occupied in 2018, F1, Latitude, Longitude, Minimum Nights, Number of Reviews, Price, san\_francisco.csv (Count), and Measure Values. The main workspace is titled "Sheet 1" and features three empty drop zones labeled "Drop field here". On the right side of the workspace, there is a "Marks" shelf with options for Color, Size, Text, Detail, and Tooltip, currently set to "Automatic". The bottom navigation bar includes buttons for "Data Source", "Sheet 1", and other sheet tabs.

The screenshot shows the Tableau desktop application interface. The top navigation bar includes icons for file operations, a search bar, and a "Standard" view mode. The left sidebar contains the "Data" tab selected, showing a project named "san\_francisco" and a search bar. Below the search bar is a "Tables" section listing various data fields: Id, Neighbourhood, Reviews per Month (highlighted in green), Room type, Measure Names, Availability 2019, Days Occupied in 2018, F1, Latitude, Longitude, Minimum Nights, Number of Reviews, Price, san\_francisco.csv (Count), and Measure Values. A "Filters" section is also present. The main workspace is titled "Sheet 1" and features three empty drop zones labeled "Drop field here". To the right of the workspace is a "Marks" dropdown menu, which is open and displays a list of visualization types: Automatic (selected), Bar, Line, Area, Square, Circle, Shape, Text, Map, Pie, Gantt Bar, Polygon, and Density. The bottom navigation bar includes tabs for "Data Source" and "Sheet 1", along with other standard toolbar icons.

The screenshot shows the Tableau Data Prep interface. At the top, there's a toolbar with various icons for navigation and file operations. Below the toolbar, the left sidebar displays a "Data" tab and an "Analytics" dropdown set to "san\_francisco". A search bar and a filter section are also present. The main area is titled "Sheet 1" and contains three large, empty rectangular fields labeled "Drop field here". To the left of these fields is a "Marks" panel with options for "Automatic" and "Color", "Size", "Text", "Detail", and "Tooltip". Above the marks panel are sections for "Columns" and "Rows". The bottom navigation bar includes tabs for "Data Source" and "Sheet 1", along with other icons.

# Our business question

**Which neighborhood and room type has the highest price on Airbnb listings?**

# **Let's practice!**

## **INTRODUCTION TO TABLEAU**

# A tour of the interface

INTRODUCTION TO TABLEAU



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# **Let's practice!**

## **INTRODUCTION TO TABLEAU**

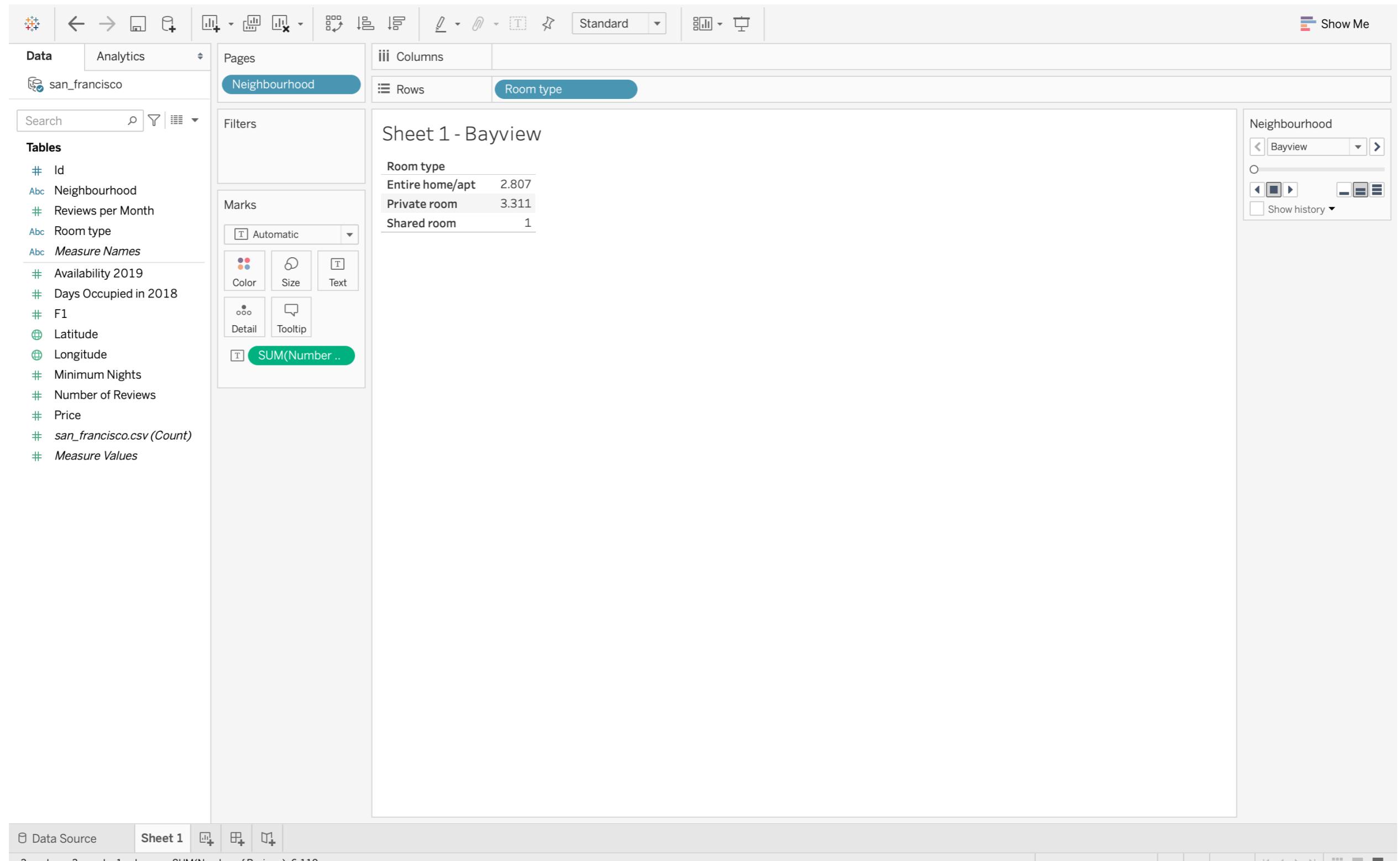
# Your first visualization

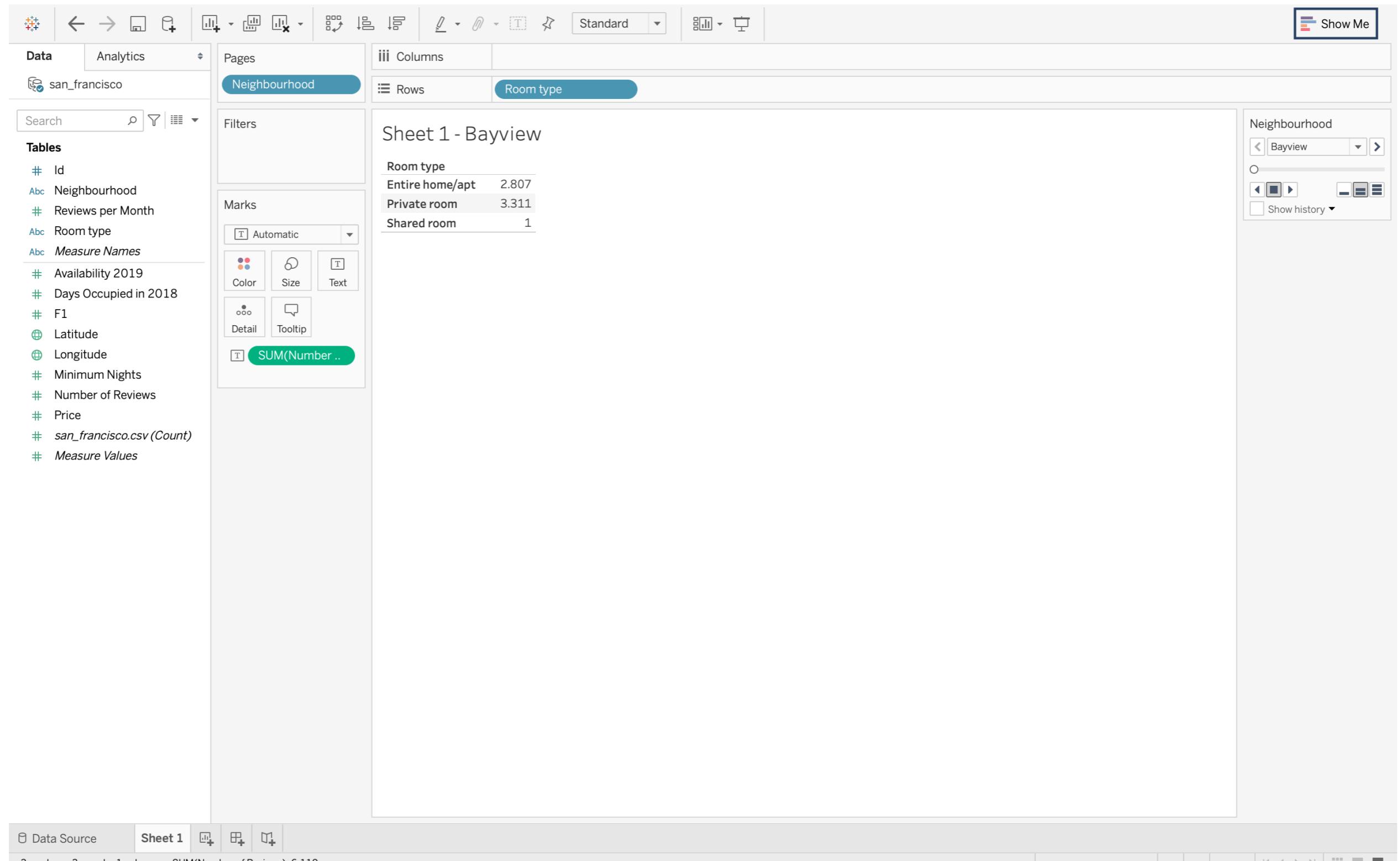
INTRODUCTION TO TABLEAU



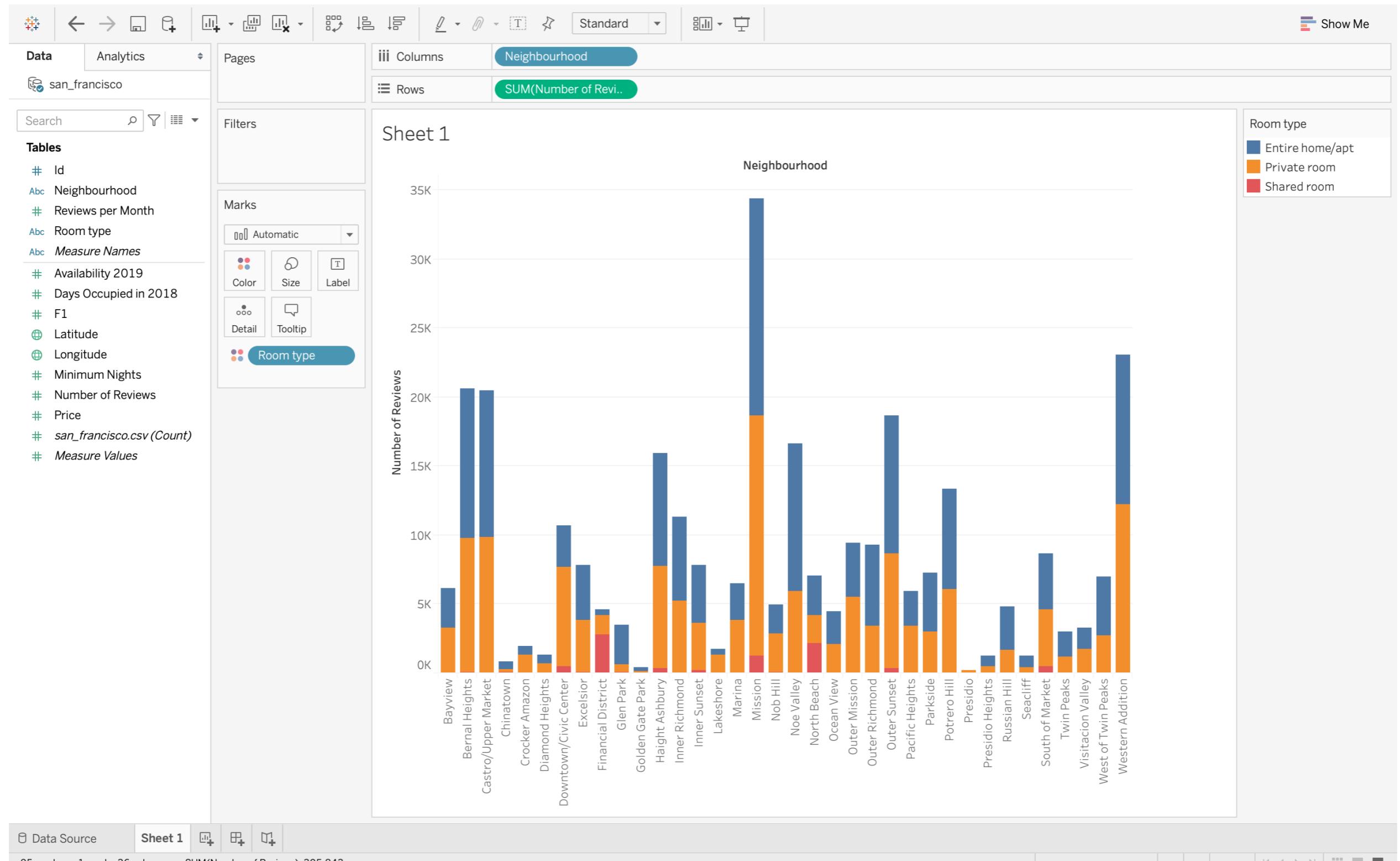
**Hadrien Lacroix**

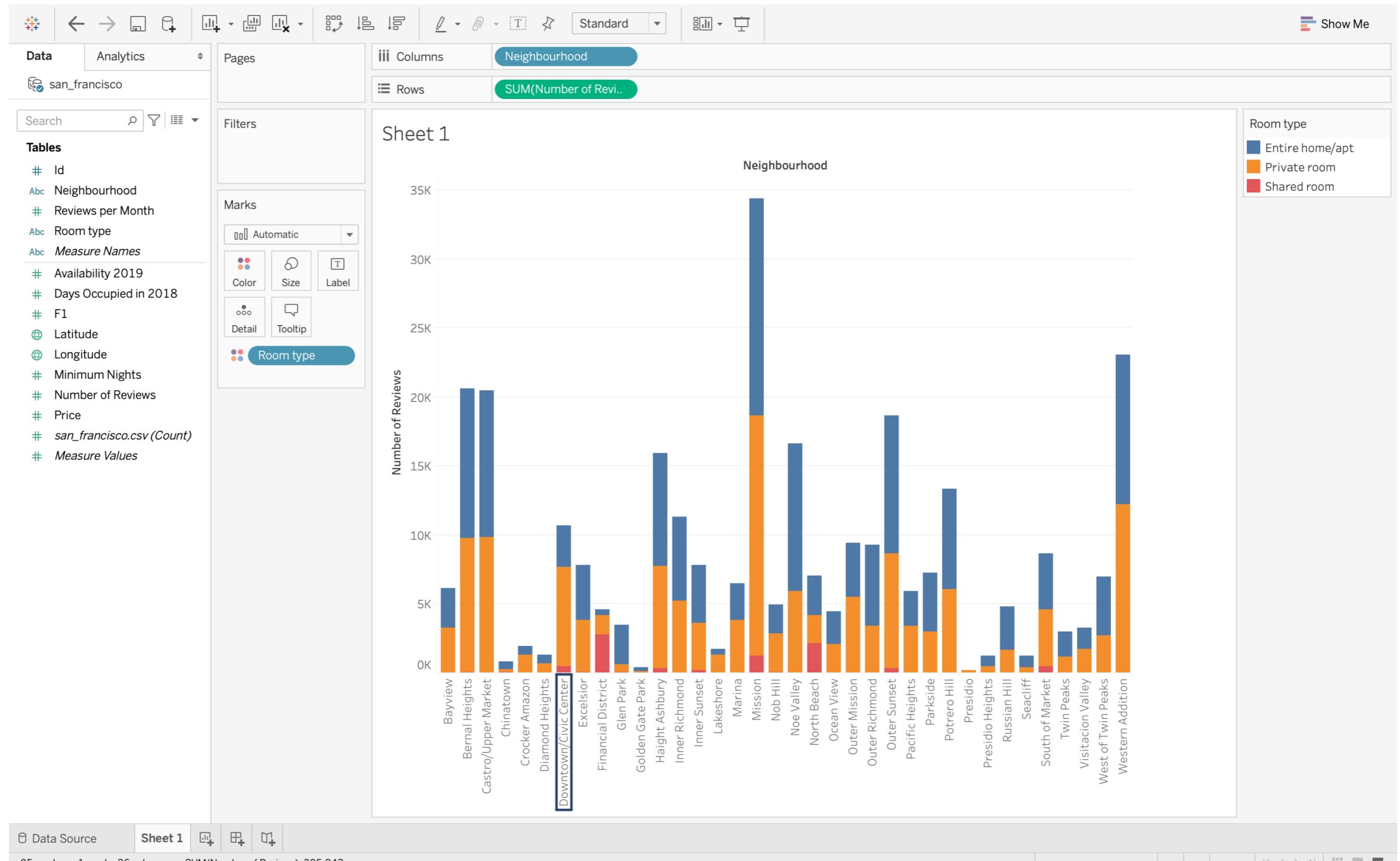
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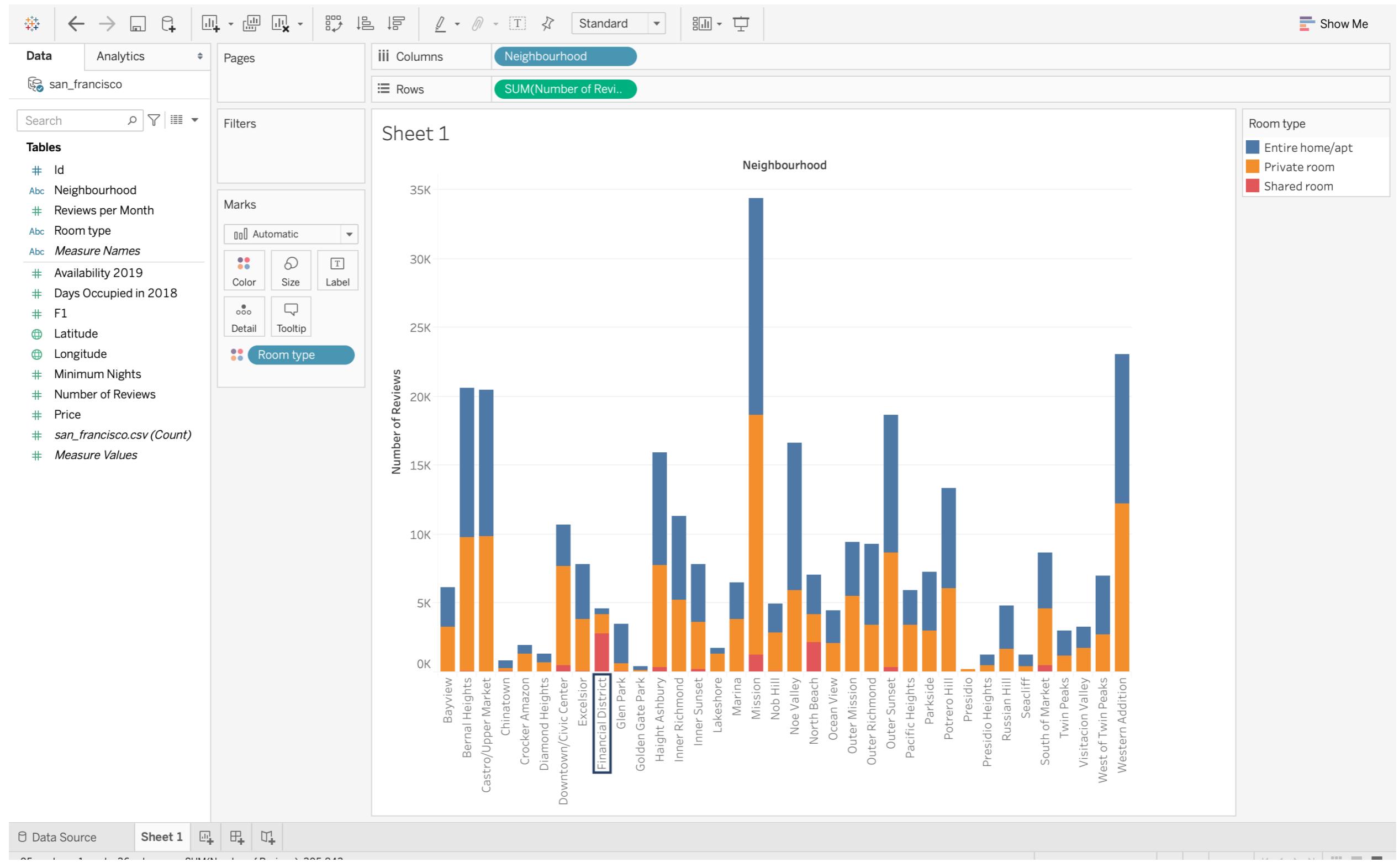


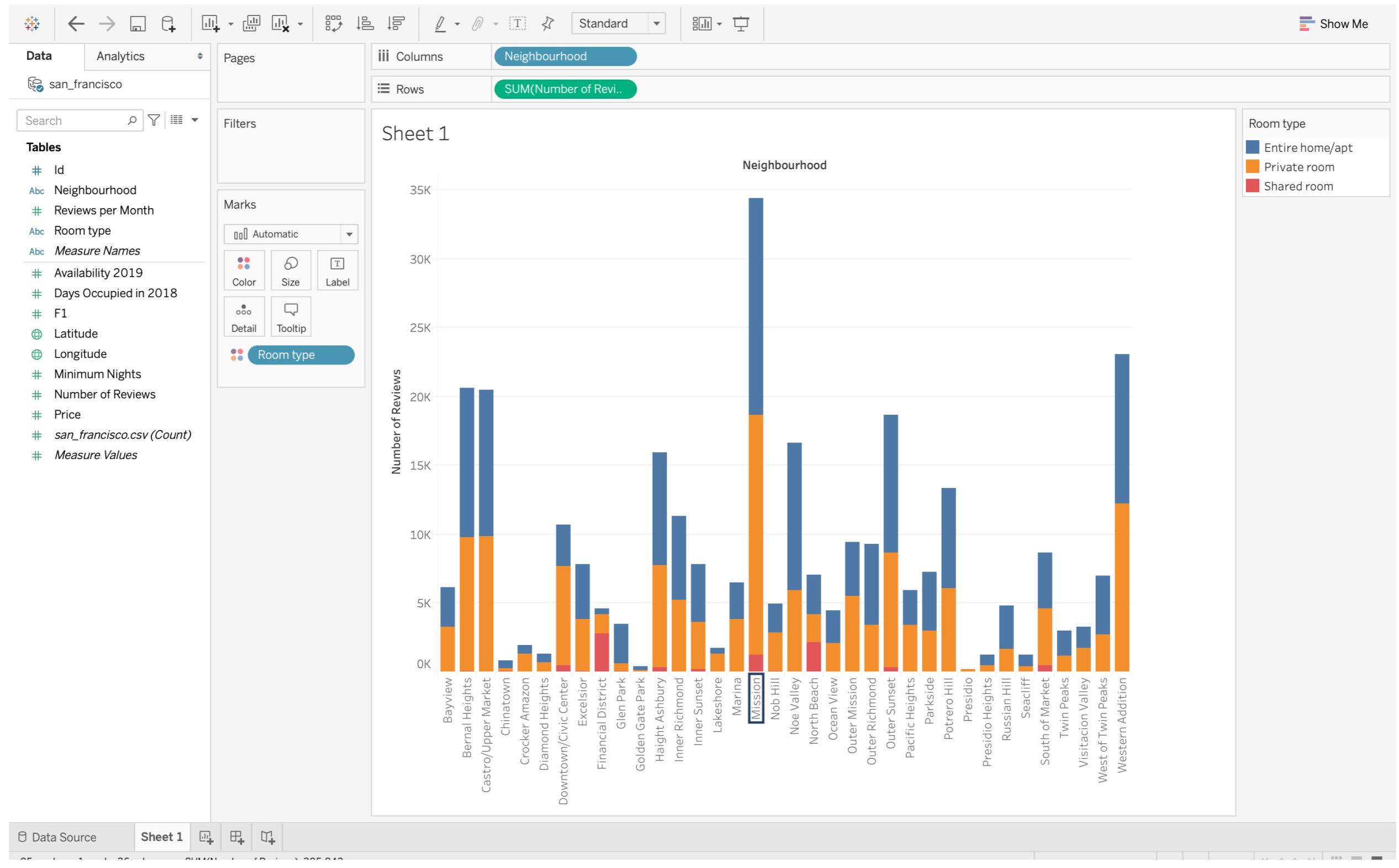












# **Let's practice!**

## **INTRODUCTION TO TABLEAU**

# Building and improving visualizations

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# **Let's practice!**

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