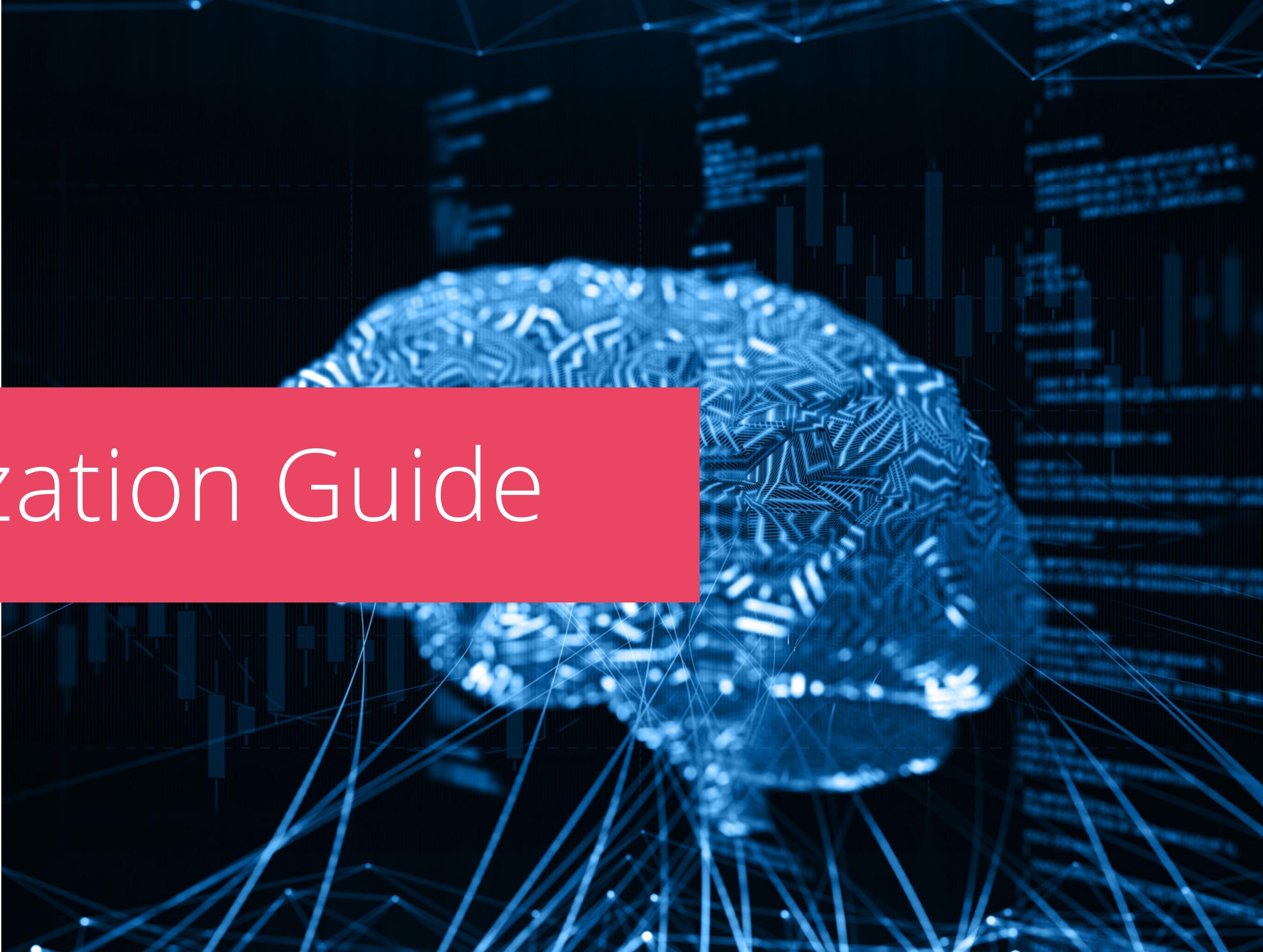
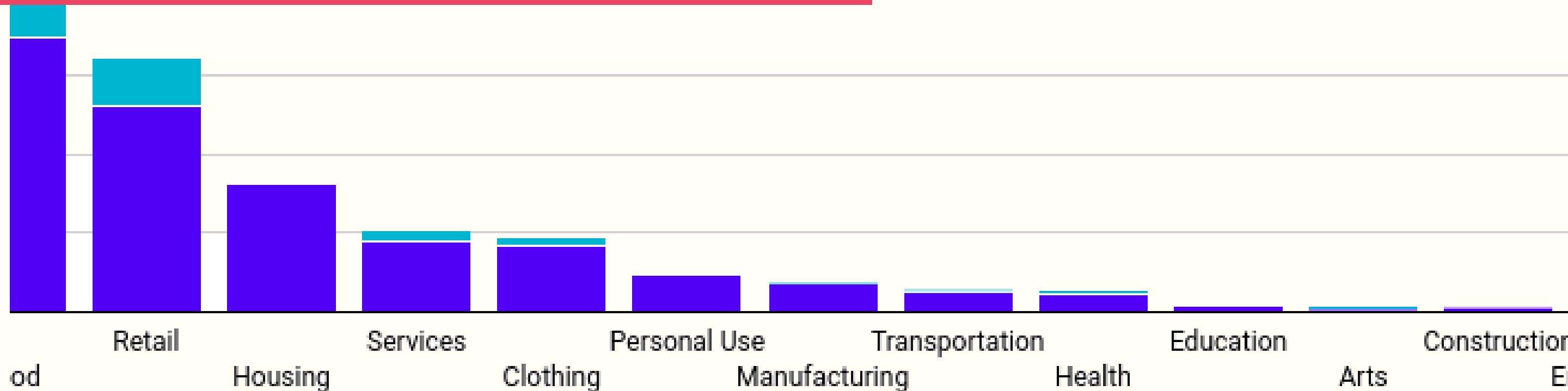


NAMESPACE LABS

# Visualization Guide



# Categorical Plots



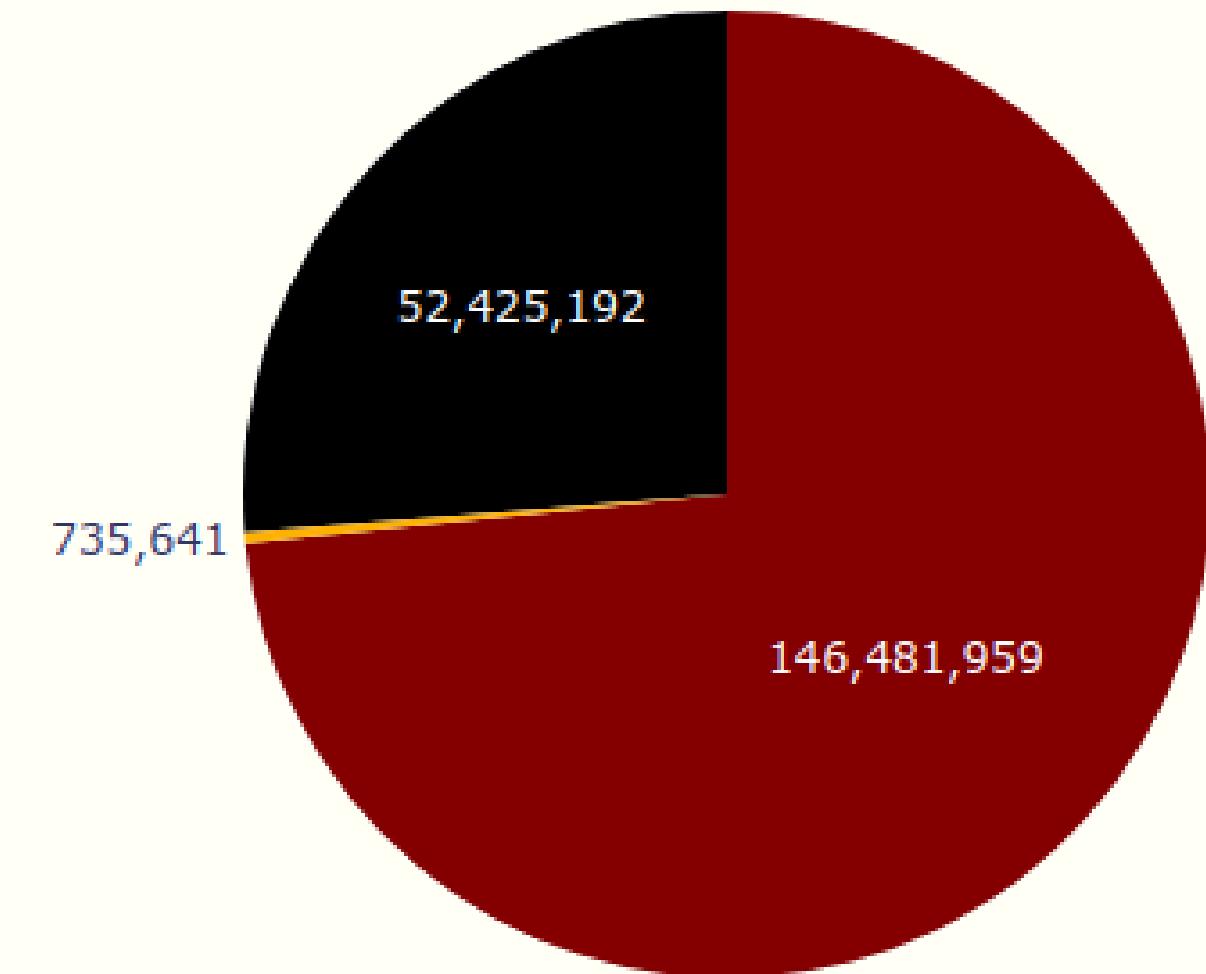
# PIE CHART

## What it is

A Pie Chart is a graph that shows the percentage of a certain numerical value distributed across various categories. The percentage should always total to 100.

## Where to use it

For example, one can use it to show various sign up methods on a website in order to see the one that is mostly used by site visitors.



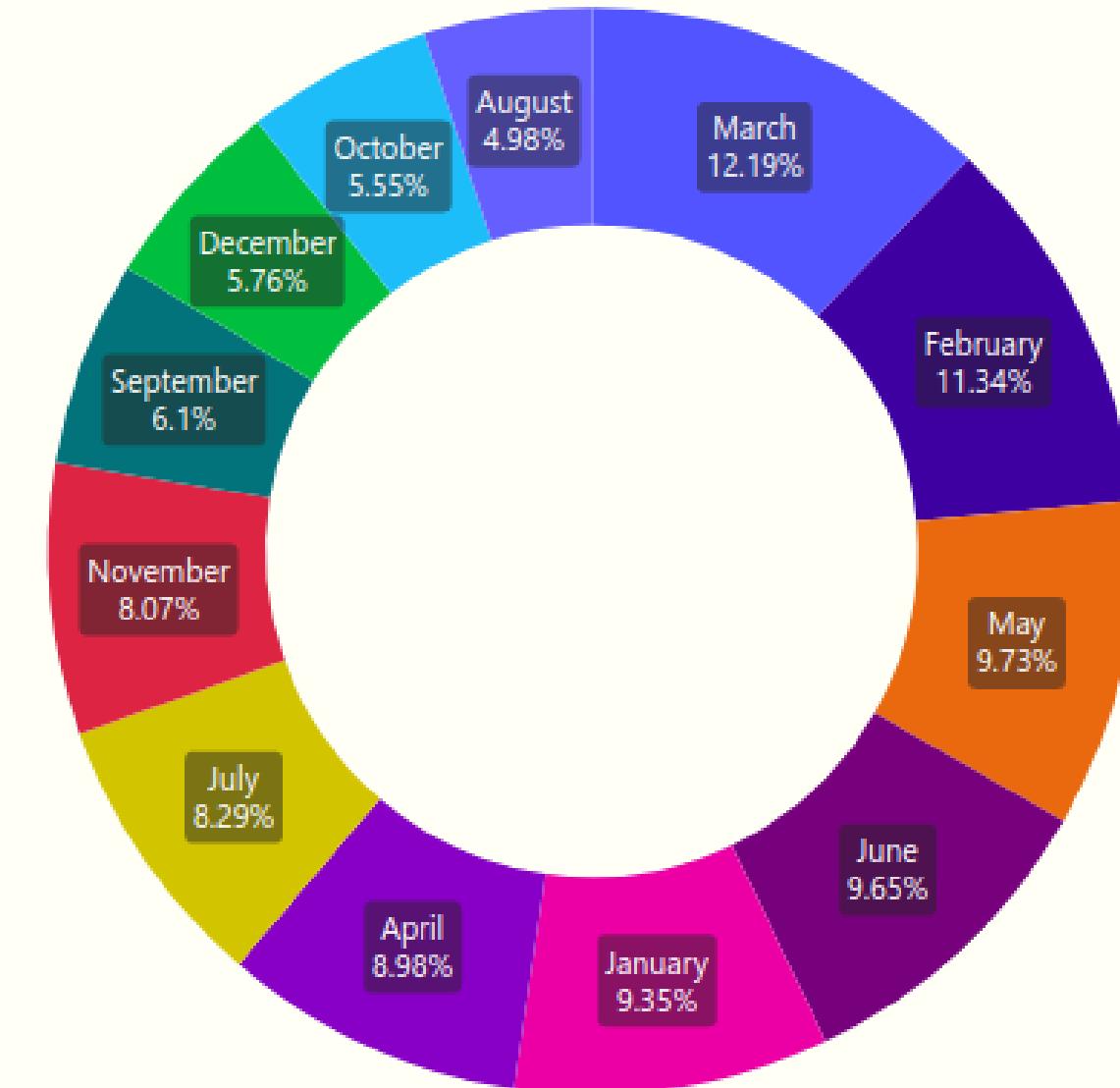
# DONUT CHART

## What it is

A Donut Chart is a pie chart that has a hole in the middle.

## Where to use it

For example, one can use it to show various sign up methods on a website in order to see the one that is mostly used by site visitors.



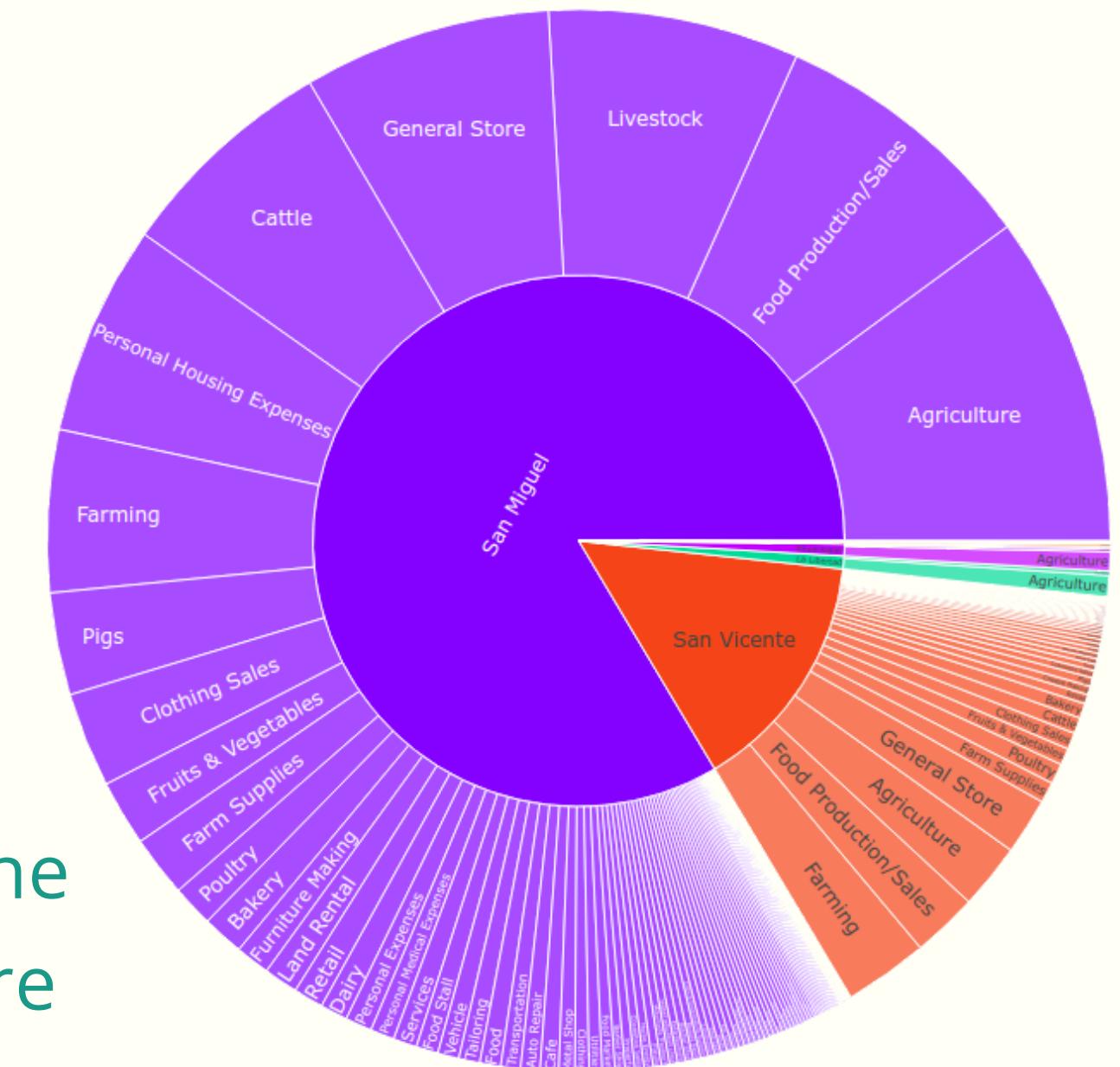
# SUNBURST

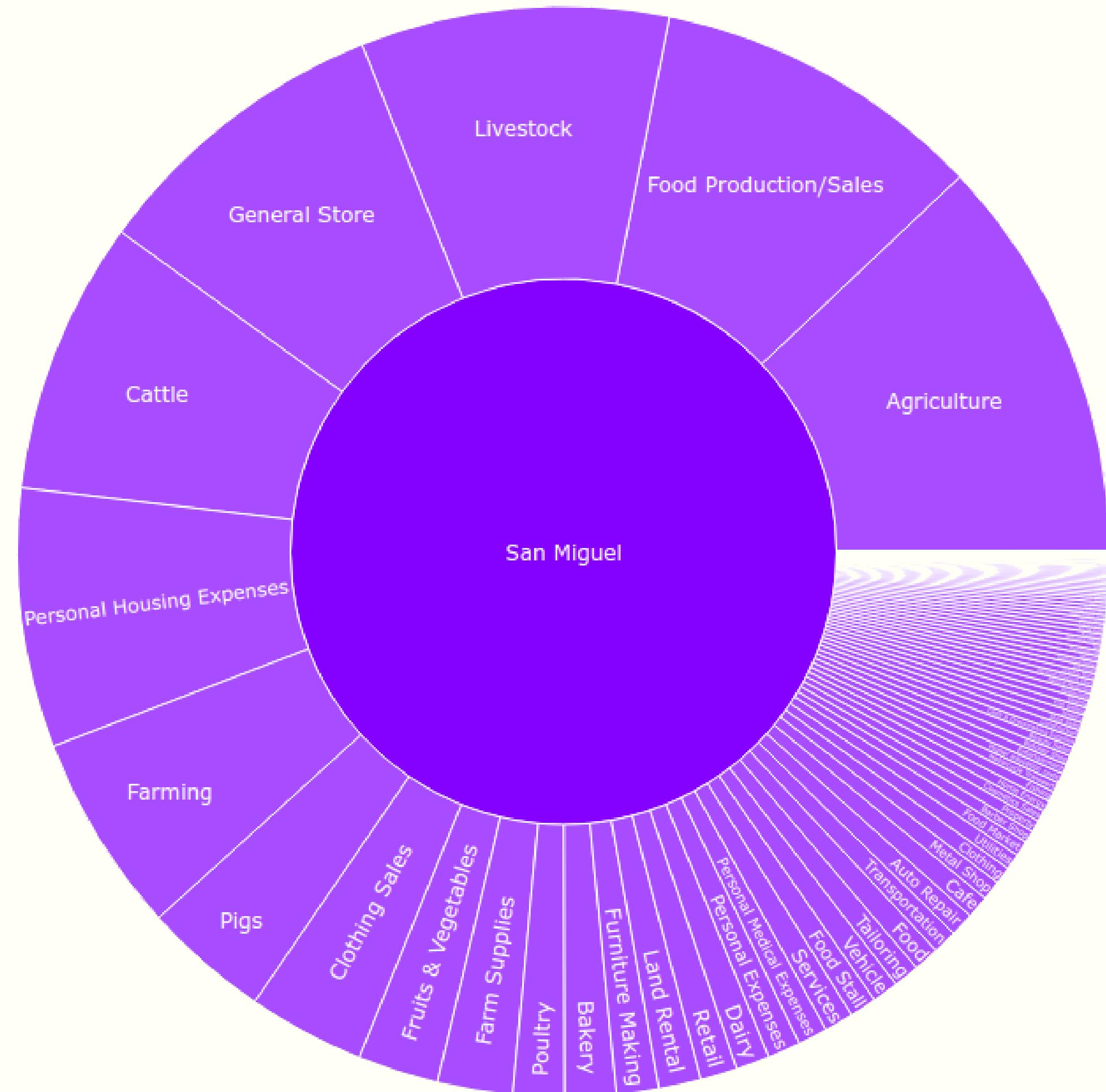
## What it is

A Sunburst is a hierarchical pie chart. It has various rings that are taken from each level in the hierarchical. The center forms the root of the visualization.

## Where to use it

It can be used when you want to display data from one hierarchy to another. Best suited for live demos where you can click the various sections. For example clicking the center on the Sunburst on the left will show you all the values from San Miguel. See next page





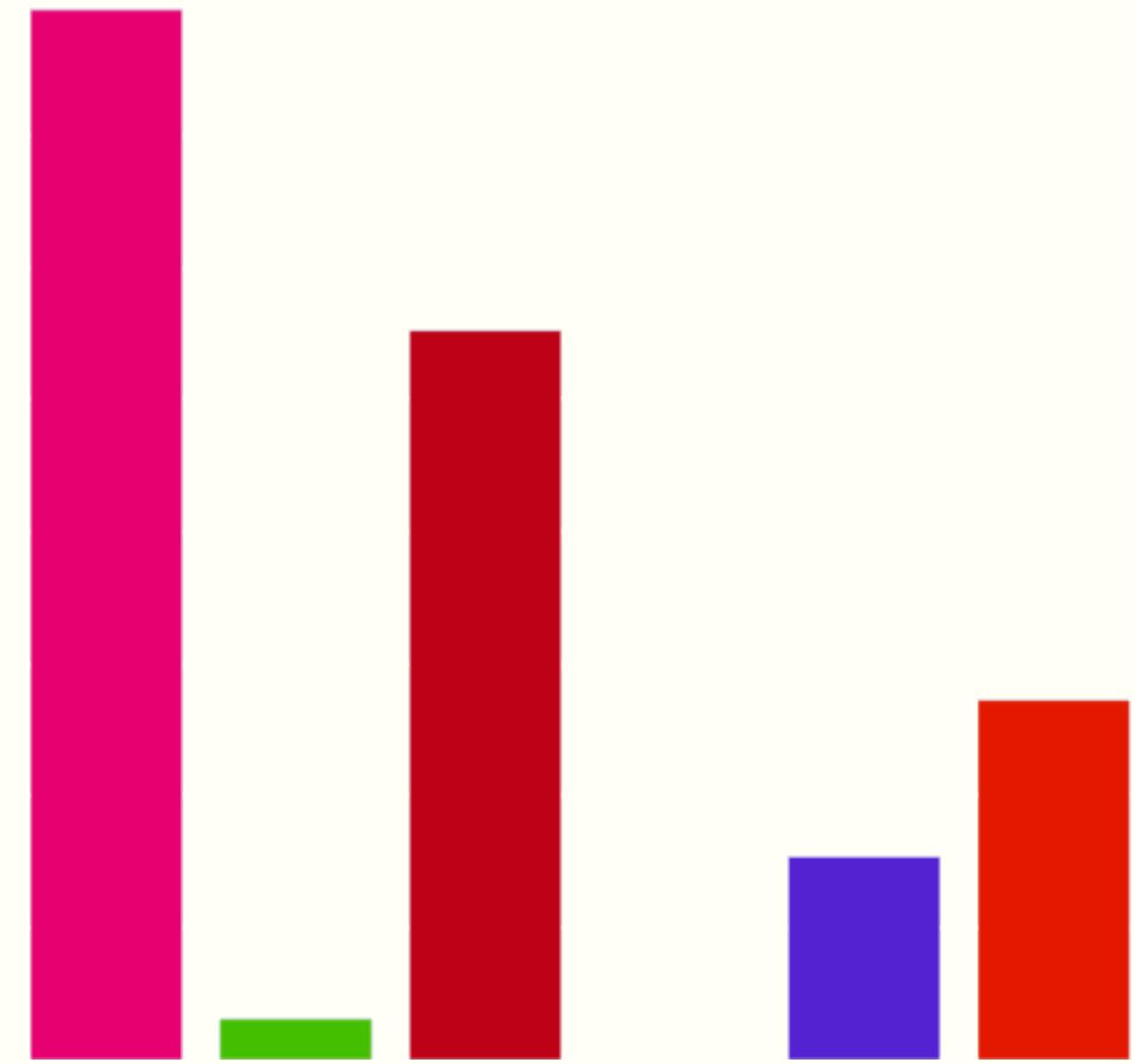
# BAR CHART

## What it is

A Bar Chart (also known as a column graph) is used to show the representation of a certain numerical item across various categories. It can be vertical or horizontal.

## Where to use it

For example, it can be used to show the spending by each department in an organization.



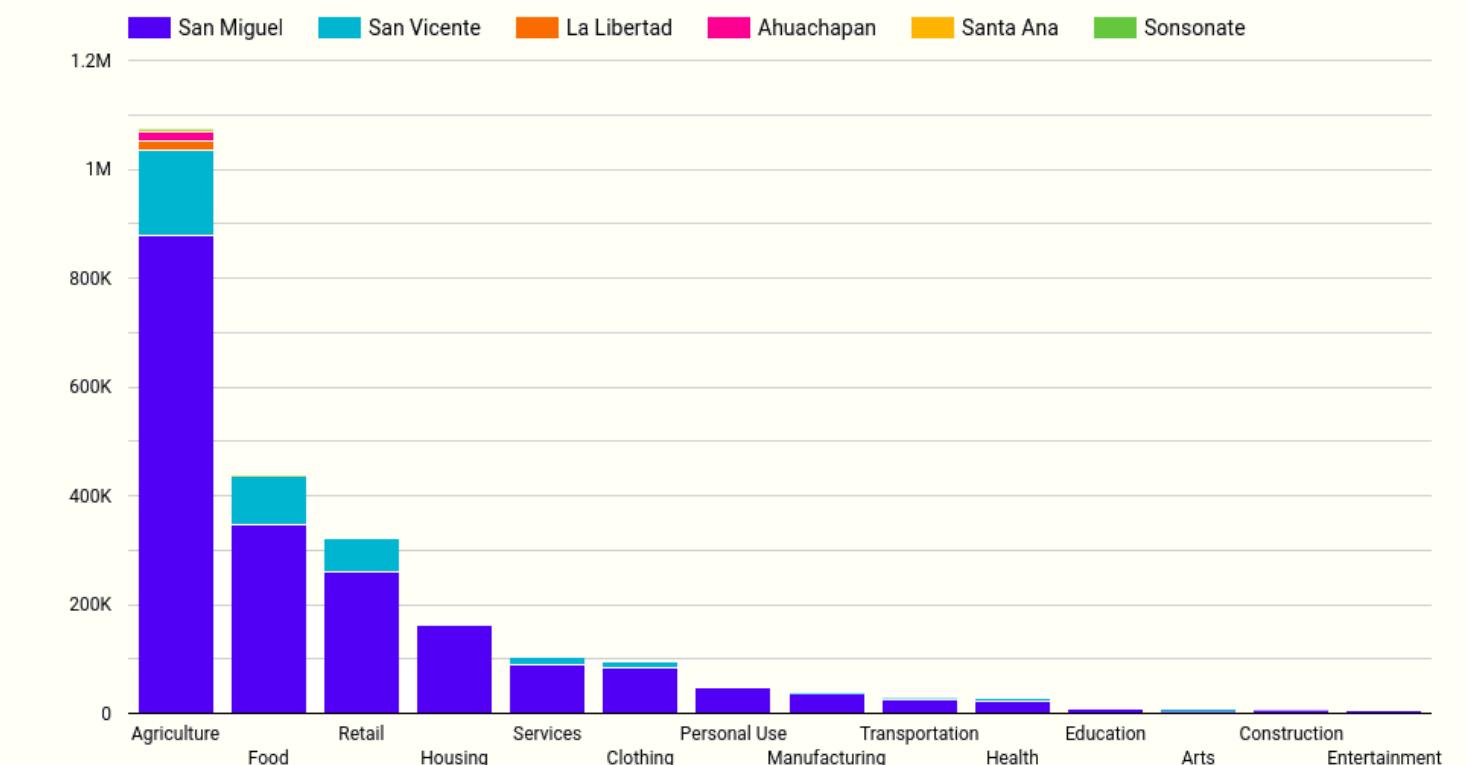
# STACKED BAR CHART

## What it is

A stacked Bar chart is a bar chart with segmented bars. Each segment shows the quantity of a certain numerical value. The larger the segment the larger the quantity.

## Where to use it

For example, it can be used to show the spending by each department in an organization with the segments being the office location. Therefore one can see the location with the largest expenditure in each department.



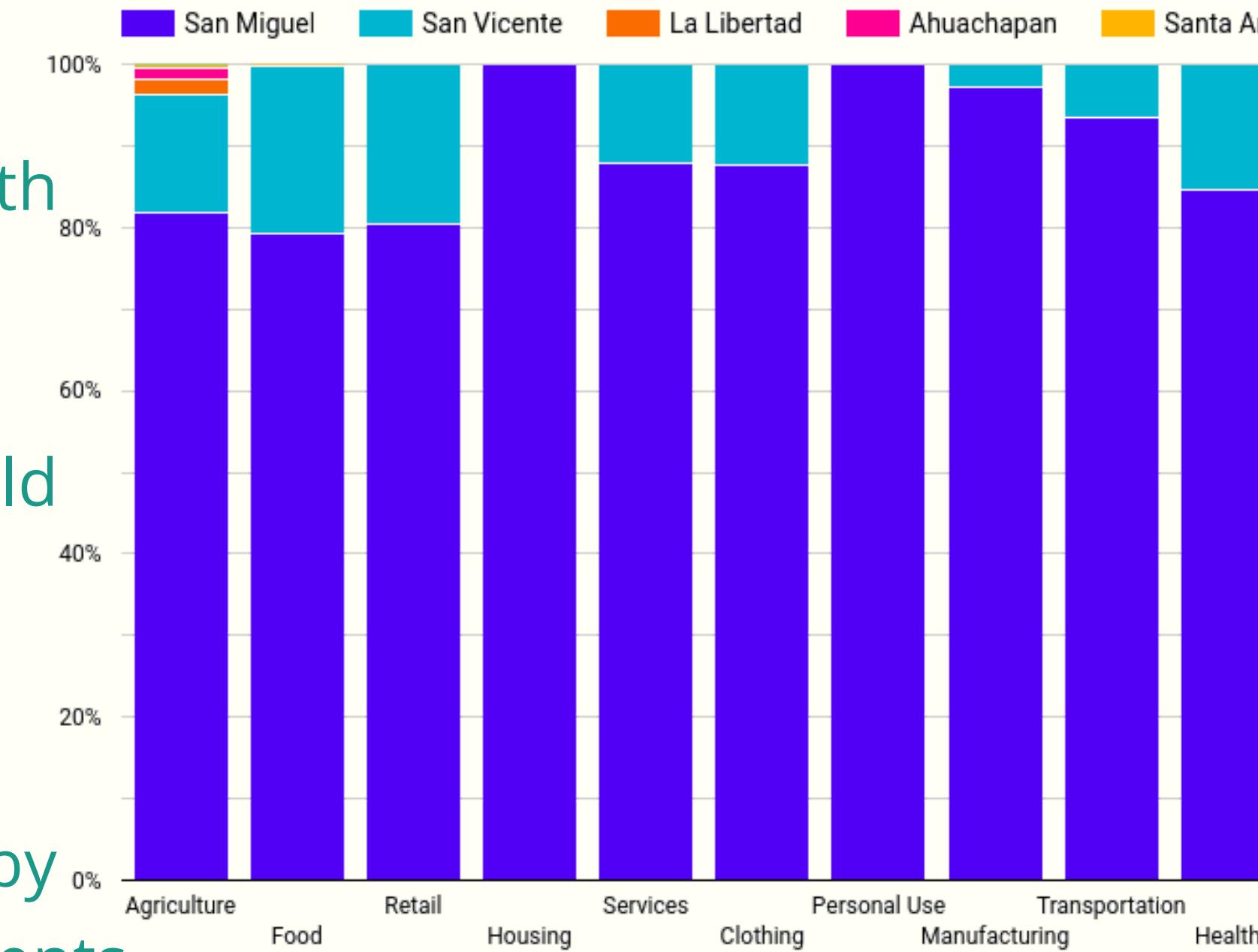
# 100% STACKED BAR CHART

## What it is

A 100% stacked Bar chart is a stacked bar chart with the values in each column normalized to fit into 100%. Therefore the when all the segment percentages are totaled up, their percentage should add to 100%.

## Where to use it

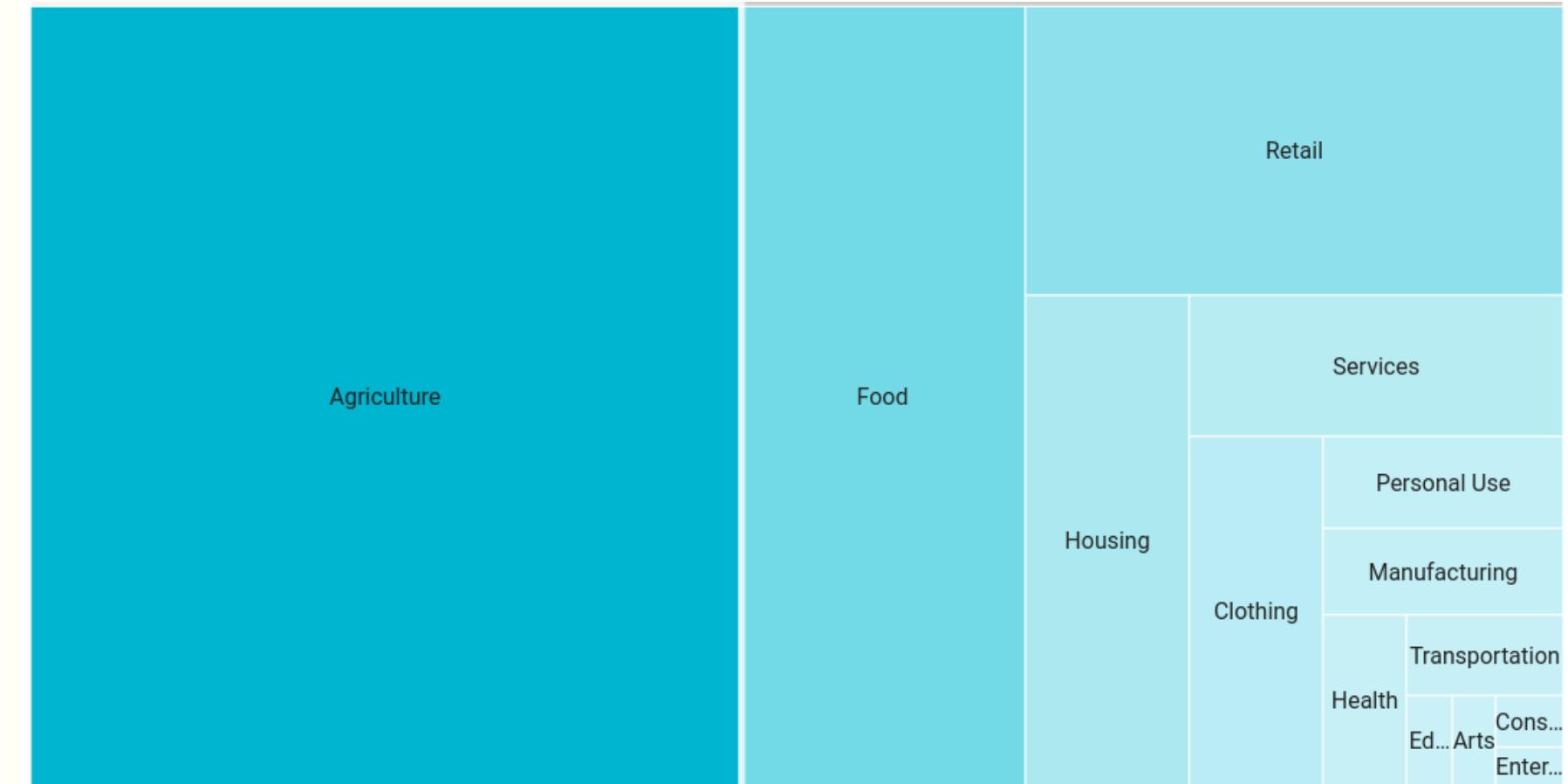
For example, it can be used to show the spending by each department in an organization with the segments being the office location. The segments now show the relative difference in expenditure in each location.



# TREEMAP

## What it is

A Treemap is used to visualize numerical values across various categories using nested rectangles. The size of the rectangle represents the quantity. The larger the rectangle the more quantity taken by that category.



## Where to use it

For example, the budgetary allocation for each sector can be visualized using a Treemap.

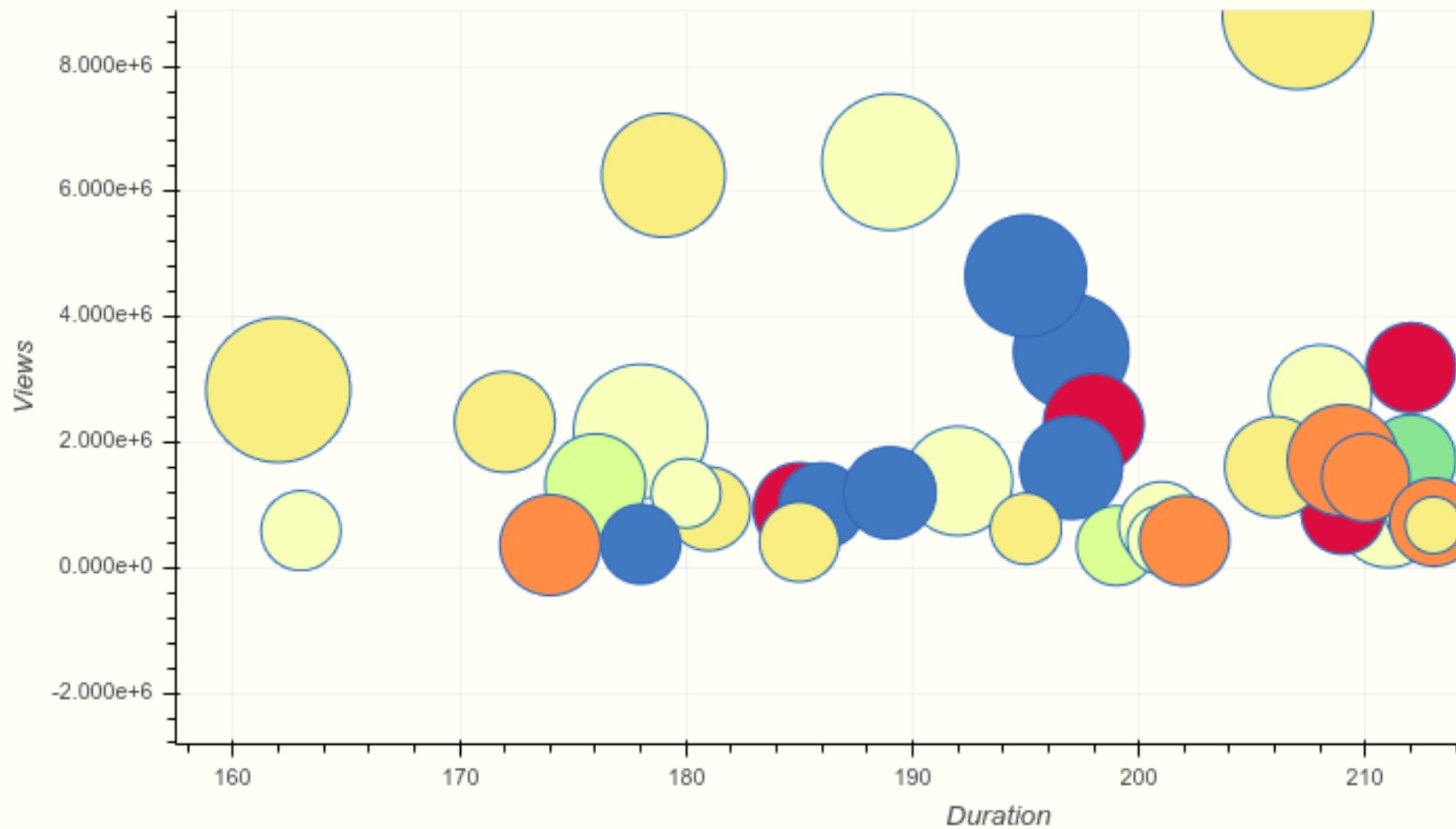
# BUBBLE CHART

## What it is

A Bubble chart is similar to a scatter plot. The difference is that the size of the bubble represents a certain numerical value.

## Where to use it

For example, on the right it is used to show the relationship between the duration and the views a talk gets. The size of the bubble can for example show the number of comments for the talk.



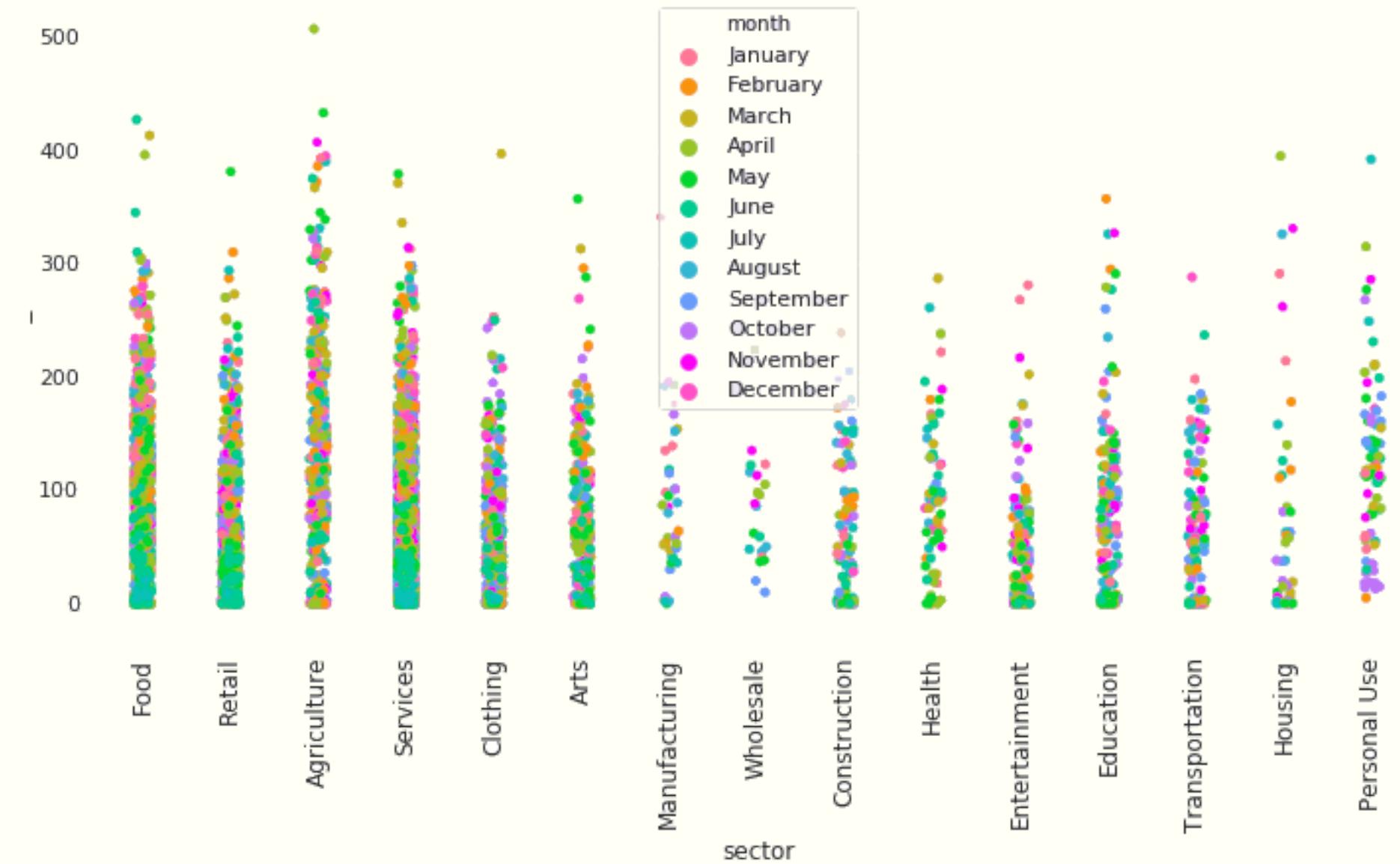
# STRIP PLOT

## What it is

A strip plot is a graph that can be used to represent categorical data in as a scatter plot.

## Where to use it

For example, a lending firm can use it to show the distribution of loans in various sectors of the economy



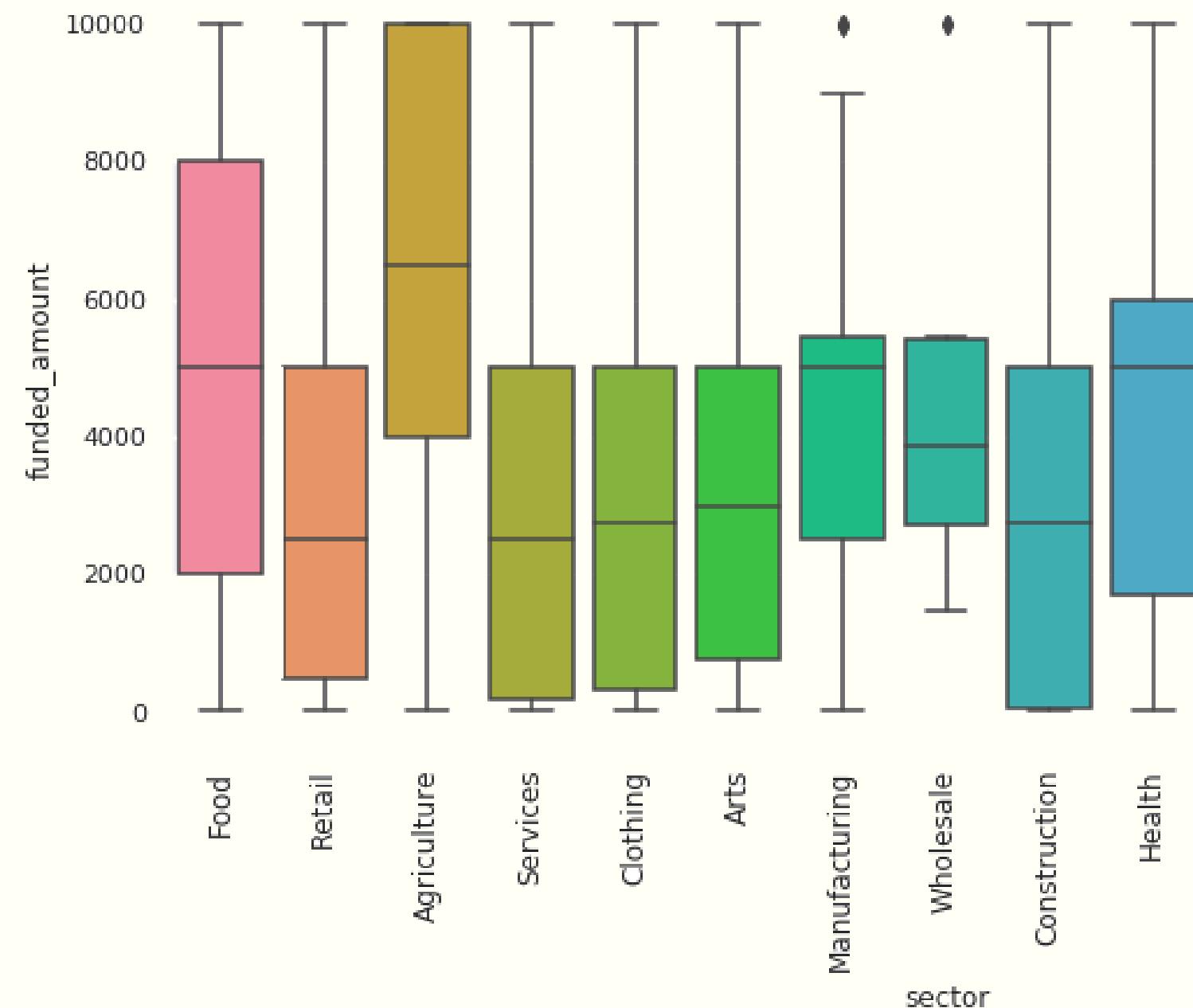
# BOX PLOT

## What it is

A Box Plot shows the distribution of numerical value in various categories.

## Where to use it

It is good for showing outliers. It also shows the quartiles hence showing whether the data is balanced or skewed.



# Visualizing Distributions



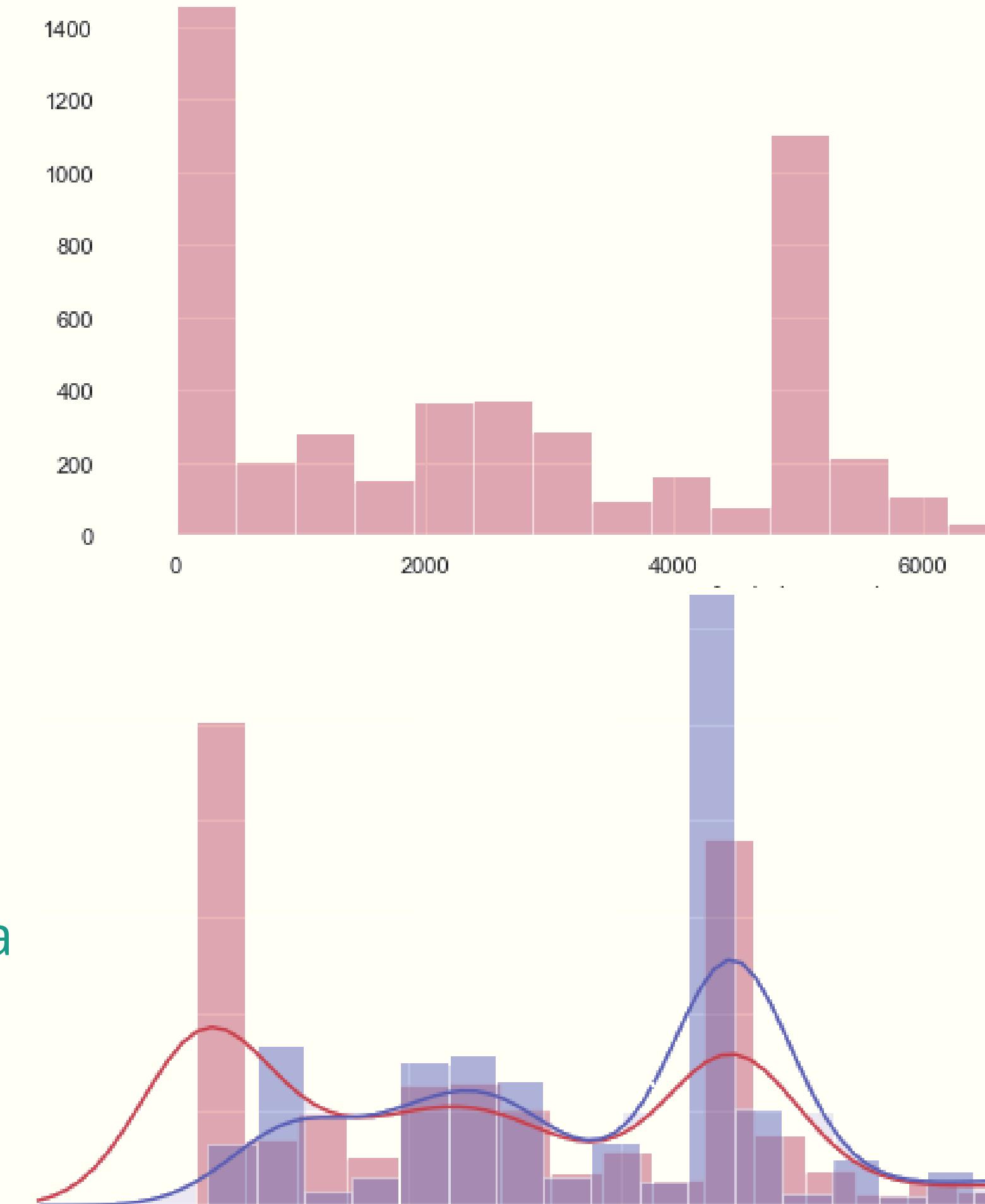
# HISTOGRAM

## What it is

A Histogram is essentially a bar plot that represents the distribution of a numerical value in bins. Each bin's height is the frequency of observations in that bin. The aggregation function used for the bins can be the count, the sum, mean etc

## Where to use it

When you want to see the distribution of a certain numerical value. It is also good for showing if the data is skewed towards any side.



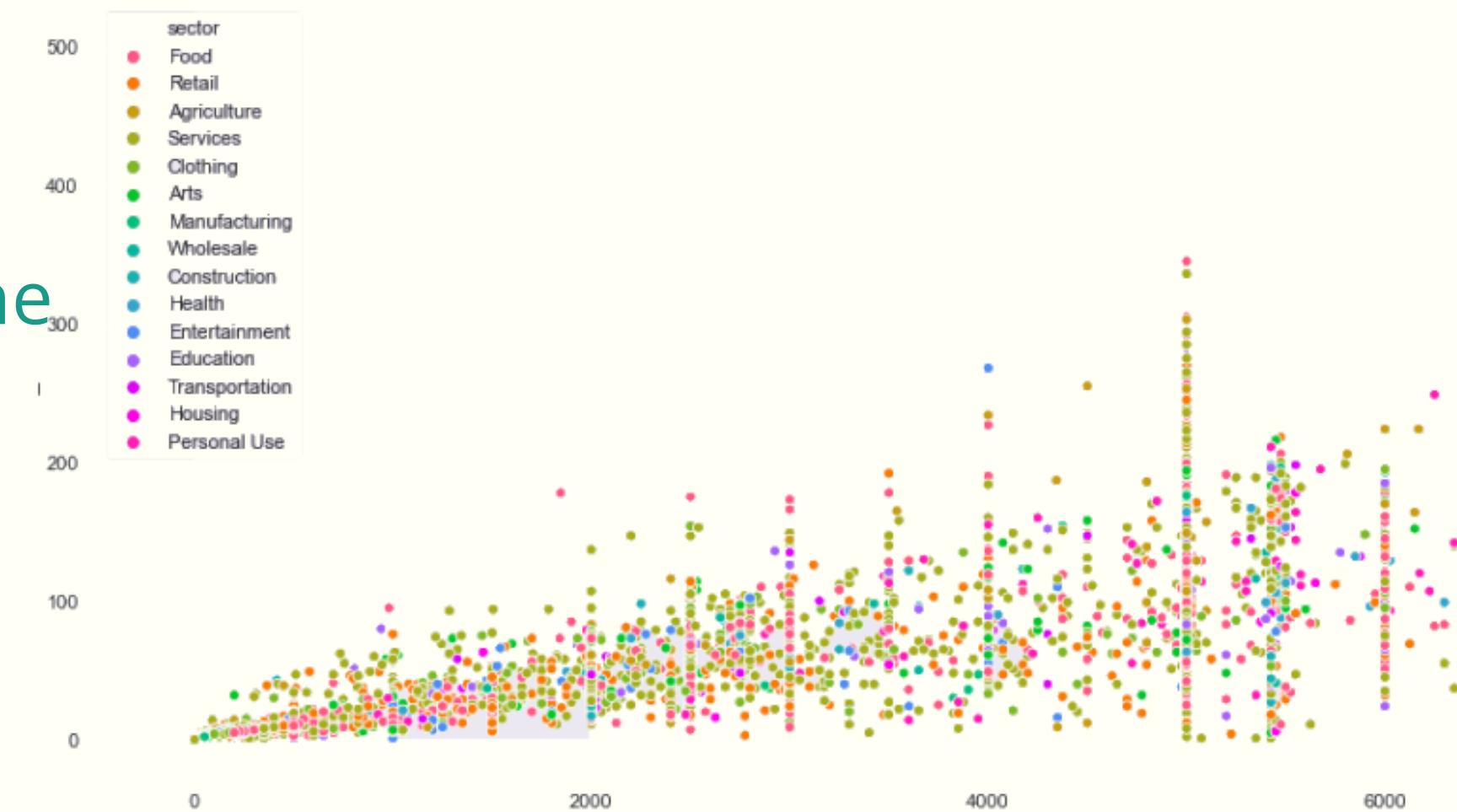
# SCATTER PLOT

## What it is

A scatter plot visualizes the relationship between two numerical variables. It is good for showing the correlation between two numerical values

## Where to use it

For example a crowd funding platform can use it to determine if there is a relationship between the age of a person and of money they donate. Remember however that correlation doesn't automatically infer causation.



# Showing Trend



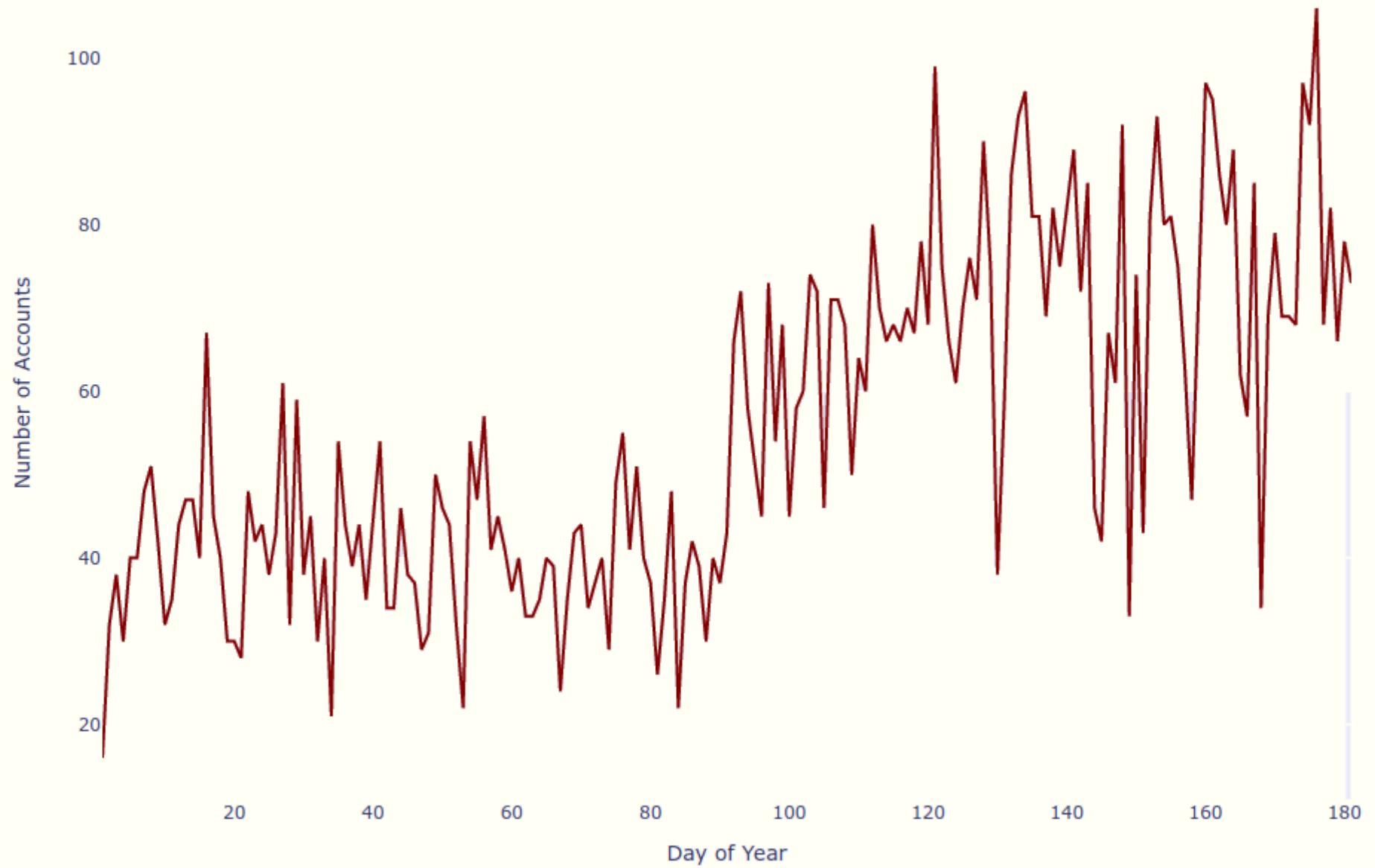
# LINE PLOT

## What it is

A Line plot is used to show the trend of a certain numerical value over time.

## Where to use it

On the left the line plot shows the trend of the number of online accounts created over a period of one year for a certain online platform



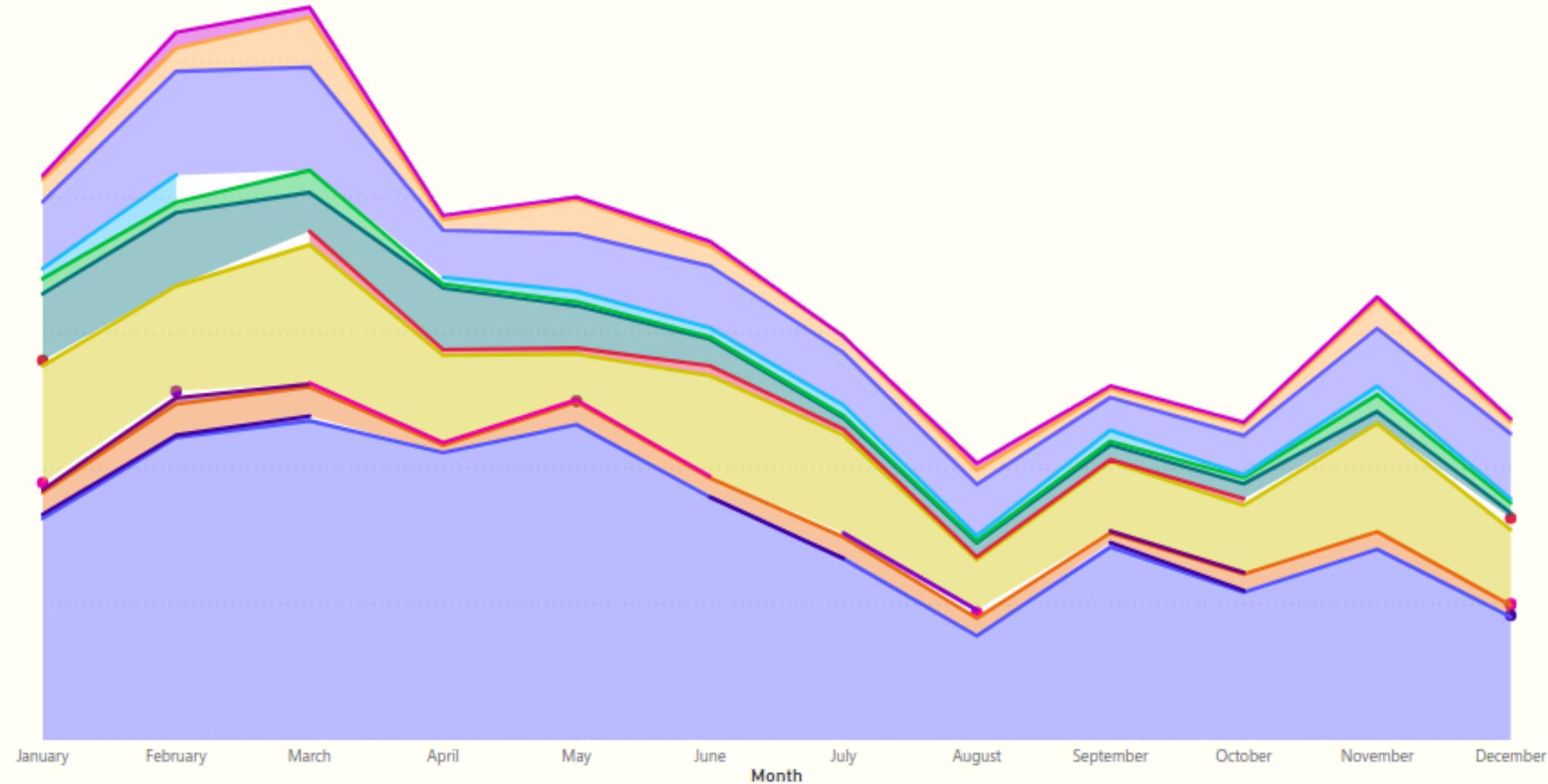
# AREA CHART

## What it is

An Area Chart is a line plot with the area below the line covered with a certain color.

## Where to use it

Like line charts, an area chart can be used to show the trend of a certain numerical value through time e.g years, months etc



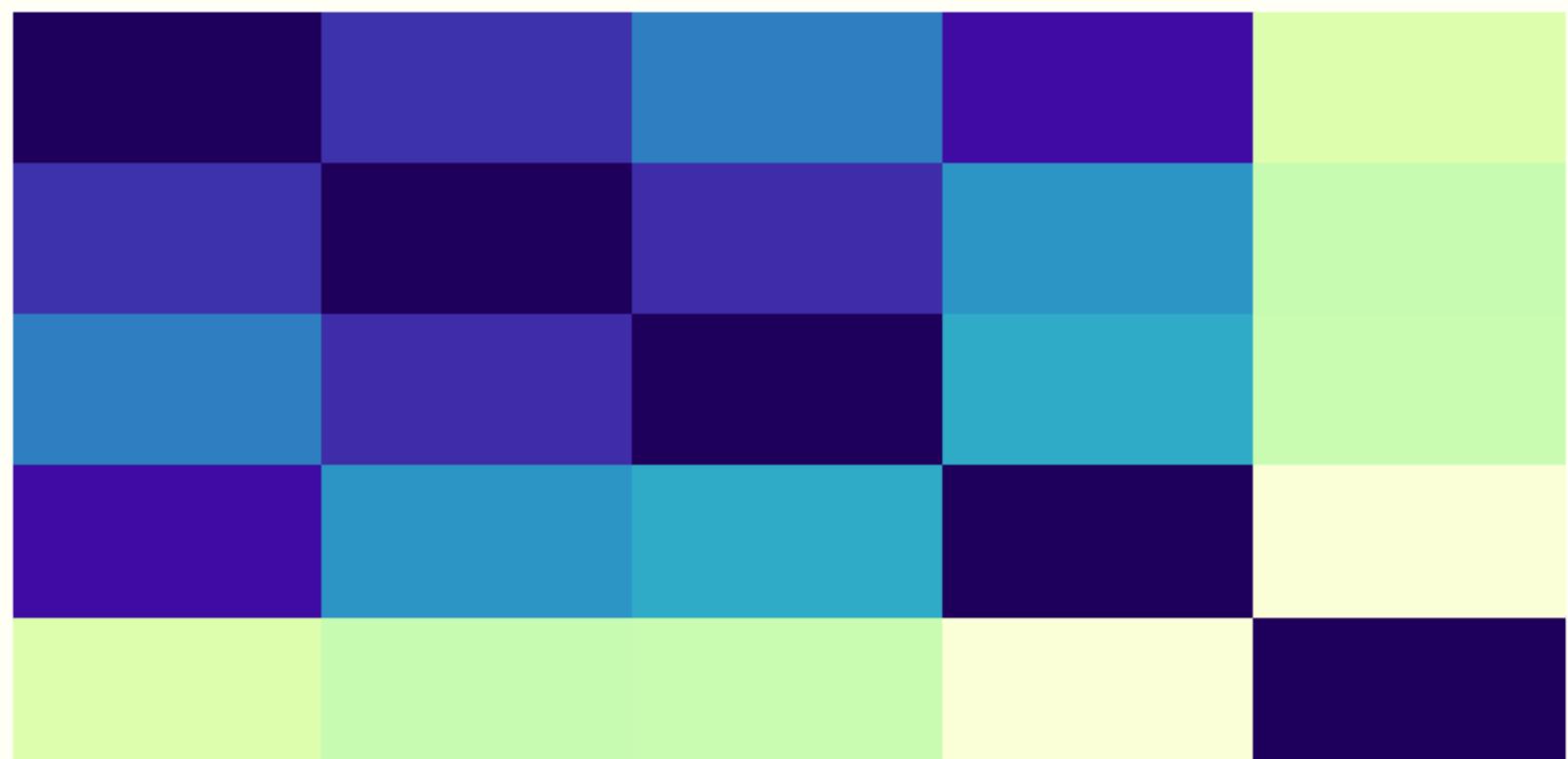
# Matrix Visualization



# HEATMAP

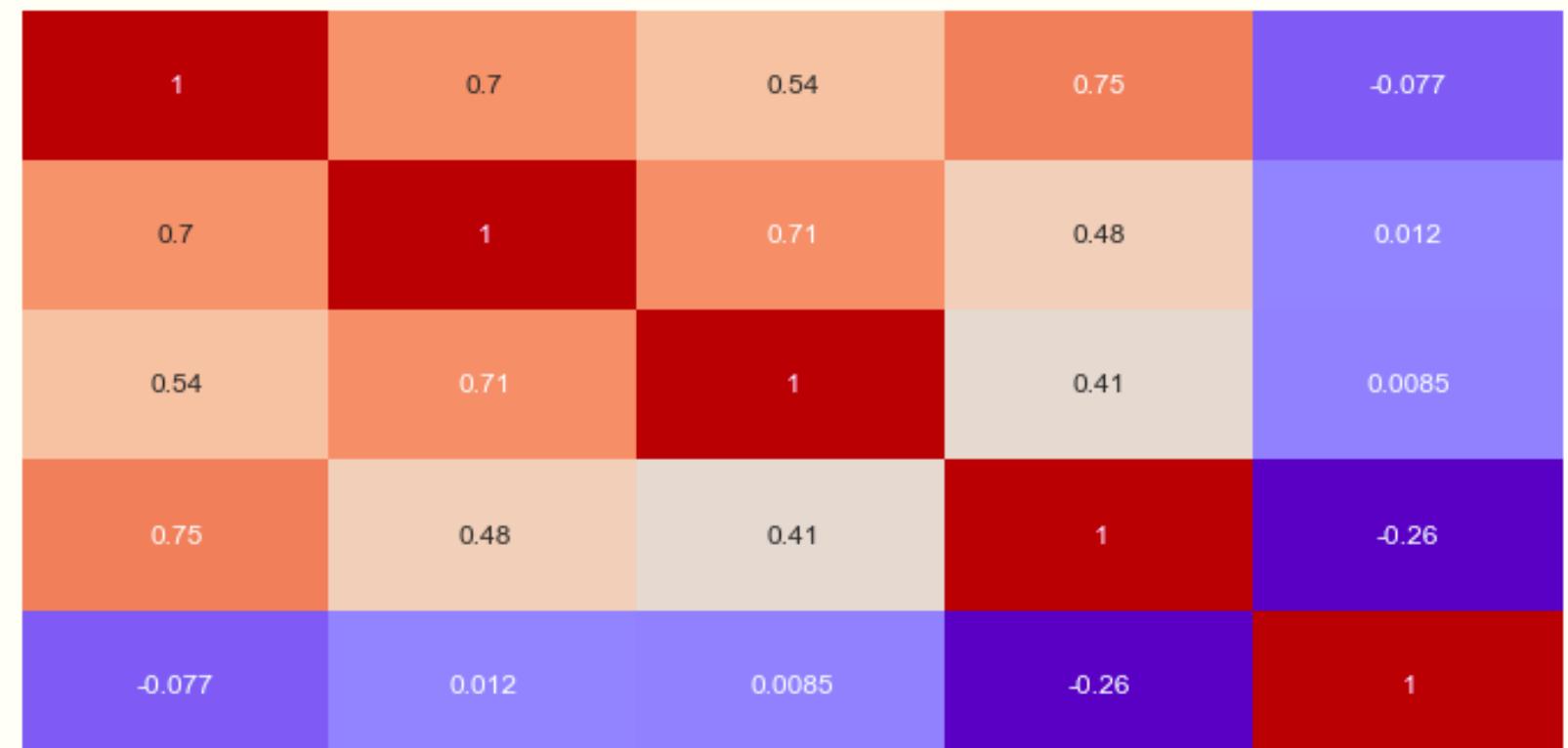
## What it is

A Heatmap plots a rectangular representation of data with an encoded color matrix.



## Where to use it

For example you can use it to display the correlation between various numerical values. The color becomes darker as the correlation gets stronger.



# Word Cloud



# WORD CLOUD

# What it is

A Word Cloud is used to show the prominence of words in textual analysis. Words that appear more frequently have a larger font.

# Where to use it

An example is analyzing someones tweets to determine which words they mostly use. Common words such as the, a etc are eliminated.



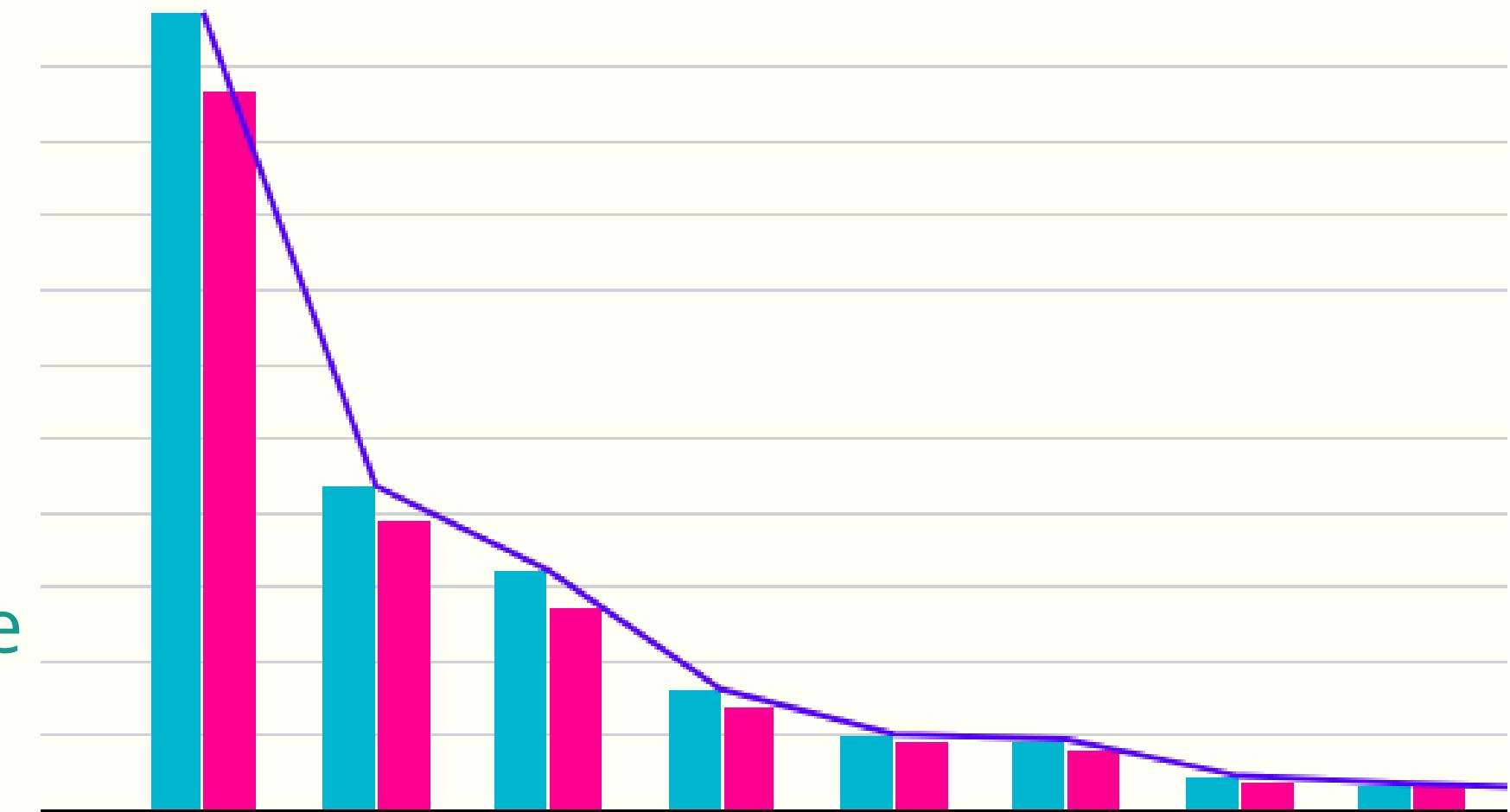
# Combo Charts



# COMBO CHART

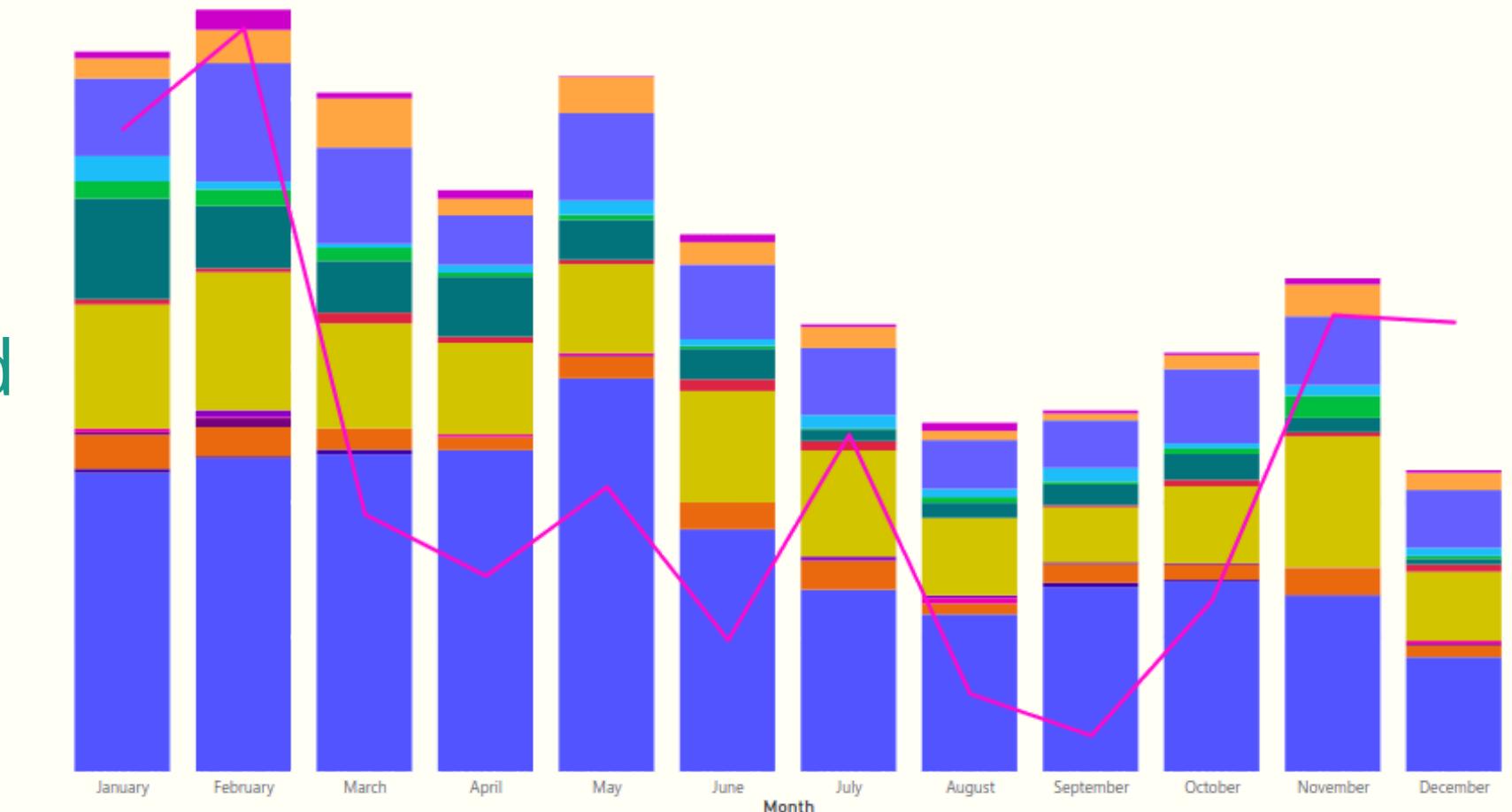
## What it is

A Combo Chart can be used to display more than one visualization on the same graph.



## Where to use it

For example, you can use a bar plot coupled with a line graph to show the trend of a certain numerical value through time  
e.g years or months



# Funnels



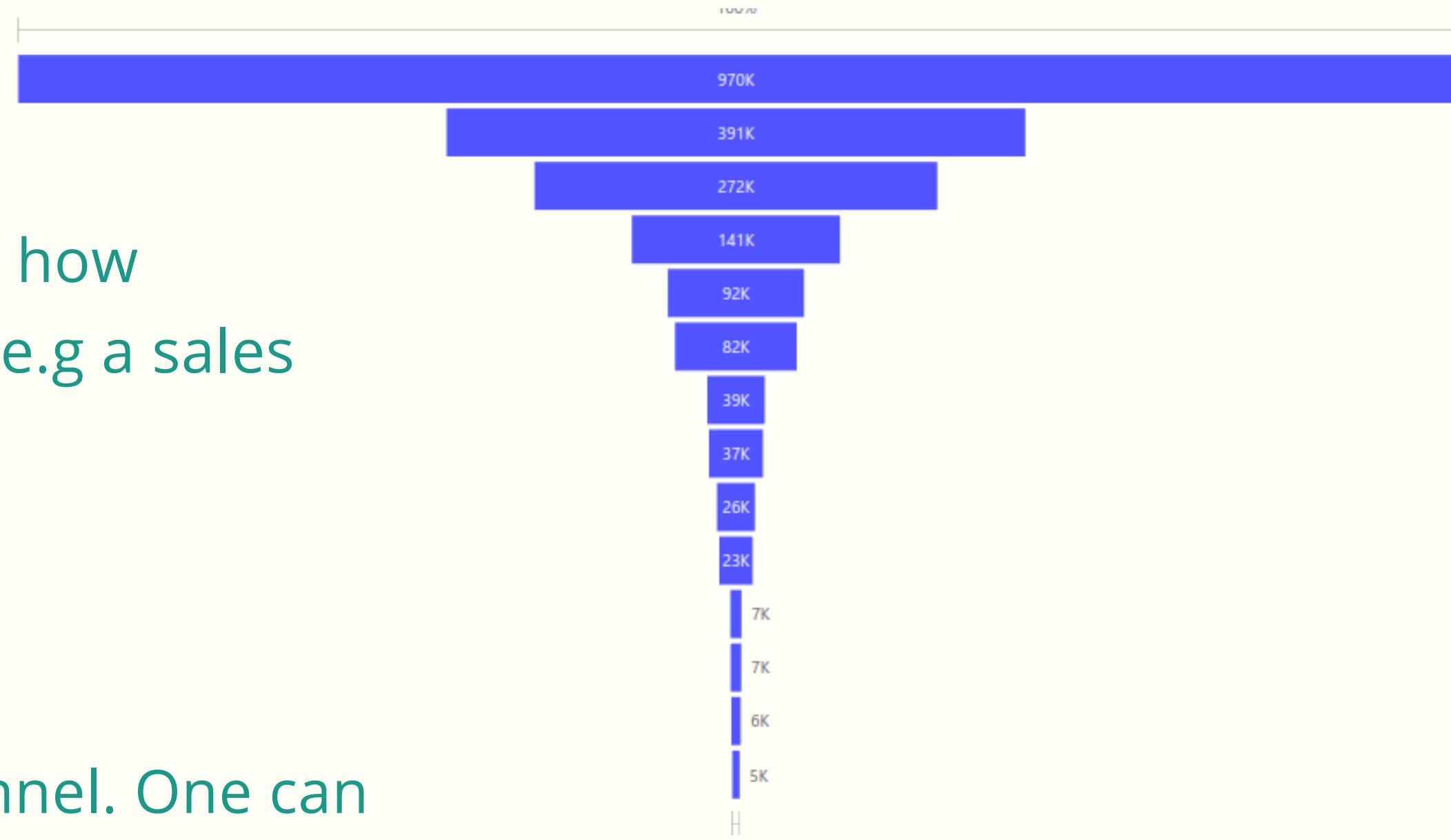
# FUNNEL CHART

What it is

The Funnel Chart can be used to show how people enter and exit a certain funnel e.g a sales funnel

Where to use it

A great example is its use in a sales funnel. One can visualize the number of people who get on boarded and the ones who become customers. Hence showing the conversion rate.



# Maps



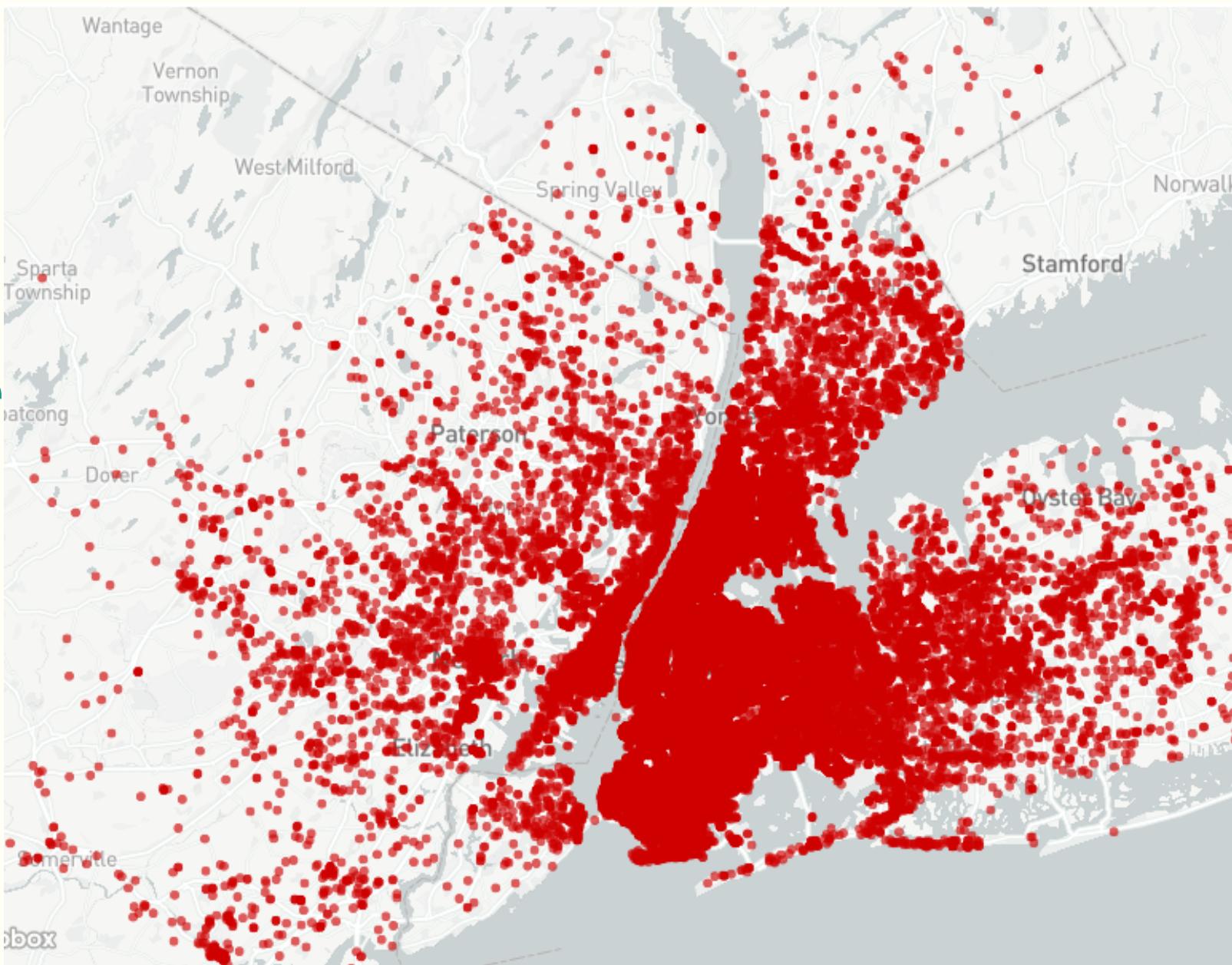
# GEOGRAPHICAL CHARTS

## What it is

In Geographical charts, data is displayed on a map. Most tools that support this will usually require the longitude and latitude. Some just need the place name.

## Where to use it

For example the map on the left shows the concentration of pick ups in New York City for a taxi hailing company.





# Learn More

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