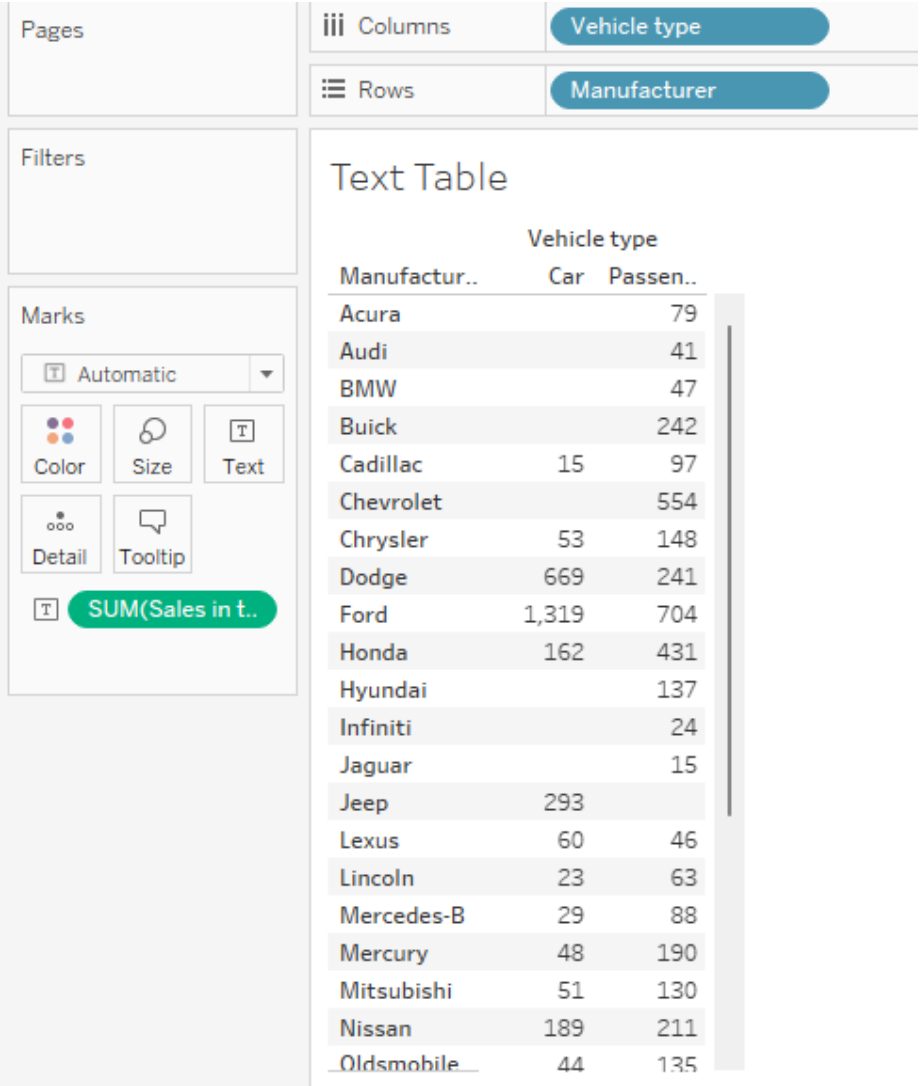
Different types of Visualisation Charts

Text Tables

A Text Table is similar to a Pivot Table in spreadsheets and can be created by placing one dimension in a row and one dimension in a column. Further, you need to drag a measure to Text to get insights from the Text table.

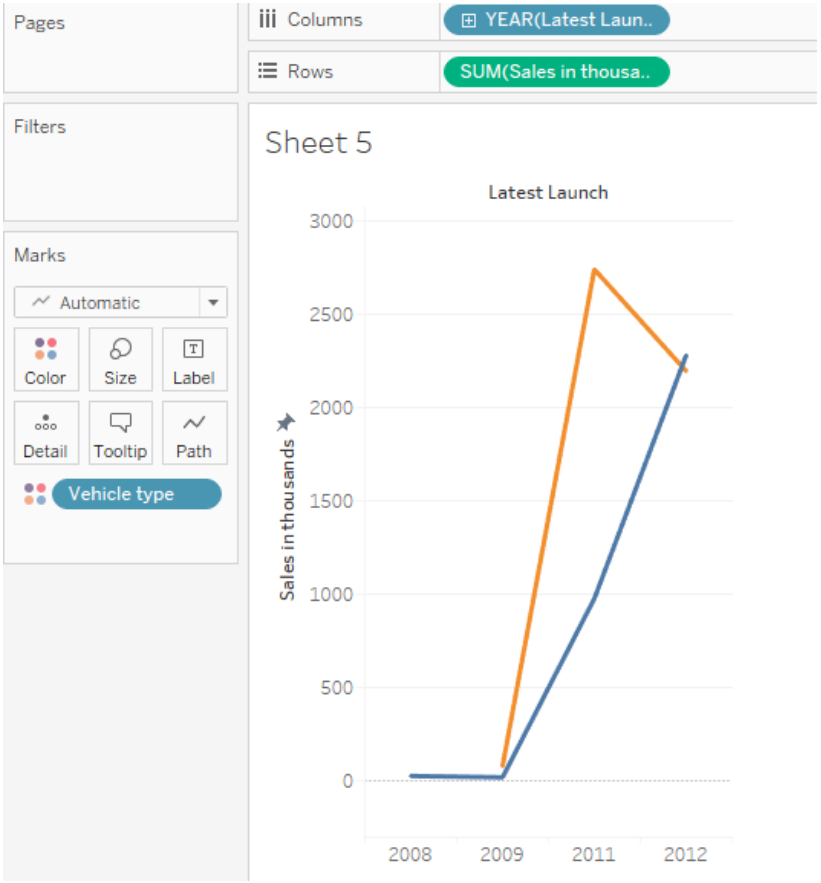
- **Pros:** Text tables in the tableau are great for seeing individual values in detail.
- **Cons:** The text table requires great attention & focus on reading and comparing the numbers because insights are not easy to spot.



Line Charts

A line chart displays information as a series of data points connected by a straight line segment. It is used to show the change of data over continuous time intervals. At least one measure and a Date value are required to create a line chart in Tableau.

- **Pros:** Line charts are beneficial for showing changes and trends over a while, and one can easily notice very small changes which are otherwise difficult to observe in other charts.
- **Cons:** Plotting too many lines over a graph could make it difficult to read and create confusion while performing the analysis.



Bar Chart

A Bar Chart represents categorical data with rectangular bars whose heights/lengths are proportional to the value. The bars can be plotted both horizontally and vertically.

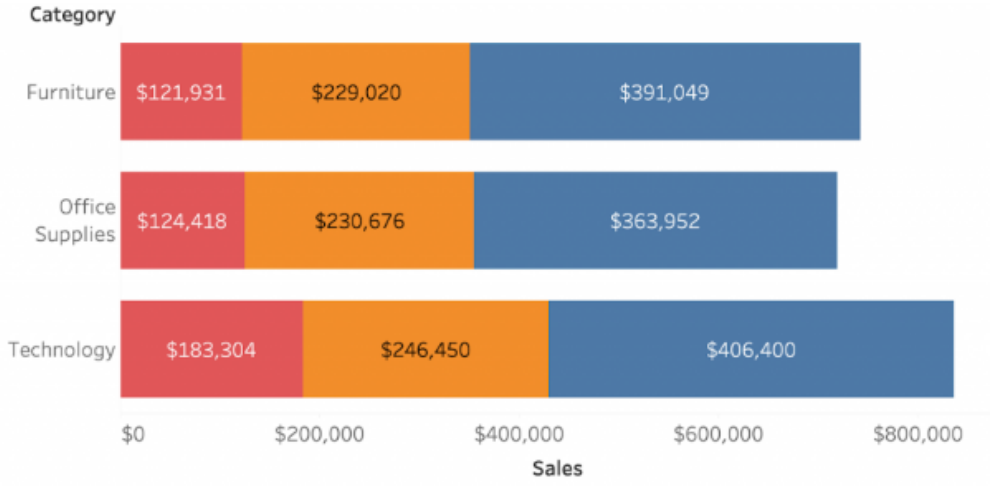
- **Pros:** Bar charts help to show each data category in a frequency distribution, which helps summarise a large dataset in visual form because they clarify trends better than Text tables.

- **Cons:** The main problem with bar charts is that they fail to expose key assumptions, causes, impacts, and patterns and can be easily manipulated to give false impressions.

Stacked Bar charts

The stacked bar chart extends the standard bar chart from looking at numeric values across one categorical variable to two. We can use a stacked bar chart to analyse more than one type of information on the same bar.

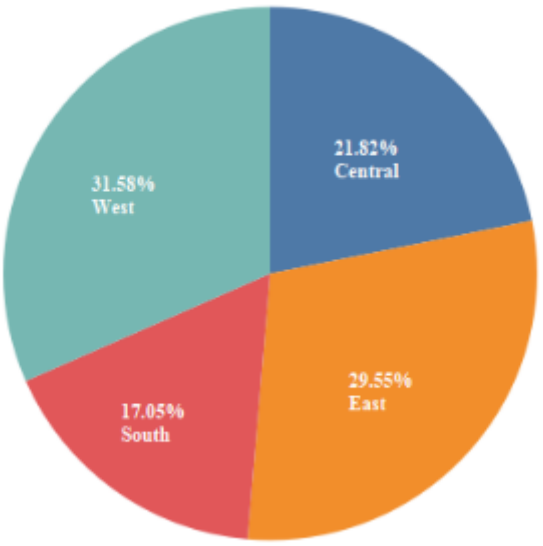
- **Pros:** Stacked bar charts are good for comparison between different variables. Also, they make the data concise and limit it to one final variable for each variable, and everything looks neater.
- **Cons:** Although the information might get concise, it becomes harder to read with each variable addition.



Pie Chart

A Pie chart is a Statistical graph divided into slices to illustrate numerical proportion. In a pie chart arc length of each slice is proportional to the quantity it represents.

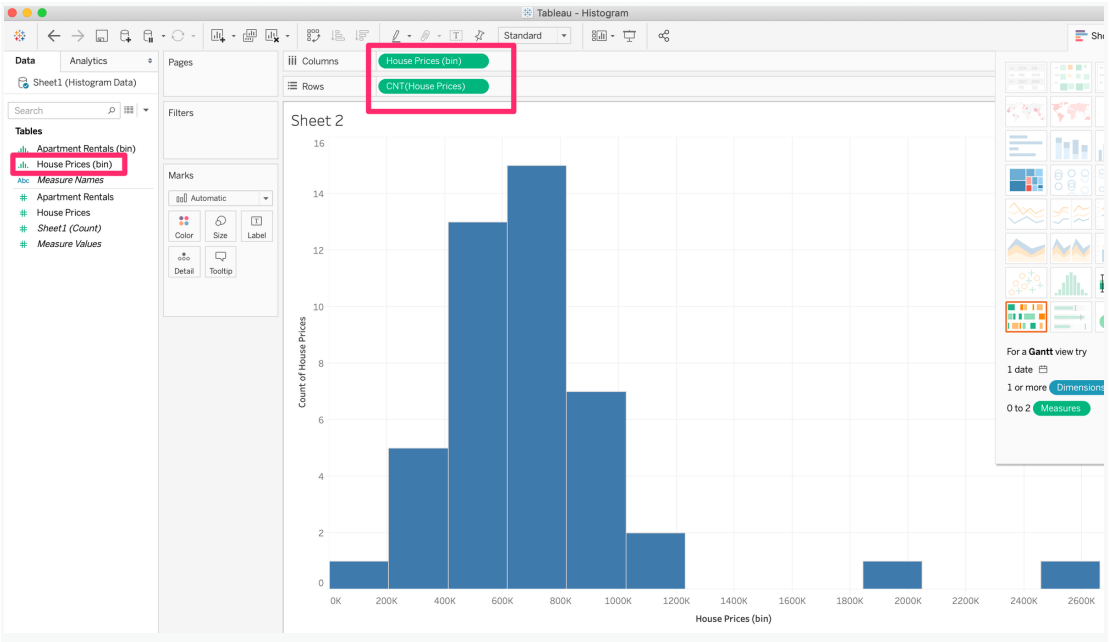
- **Pros:** A pie chart displays relative proportions of multiple data classes and visually summarises a large dataset.
- **Cons:** Pie charts do not easily reveal exact values, fail to reveal key assumptions, causes, impacts & patterns, and can be easily manipulated to give false impressions.



Histogram

A histogram is a graphical representation that organises a group of data points into user-specified ranges. A histogram appears like a bar chart but groups values continuously into ranges or bins.

- **Pros:** A single glance at a histogram gives us some idea about the shape and spread of the data. The advantage of a histogram over bar charts is that both length(height of rectangle) and width(base) are important and carry numerical information. In contrast, a bar chart is a one-dimensional diagram where only length has significance.
- **Cons:** We must note that histograms are only useful for continuous data and fail in the case of discrete data.



Heat Maps

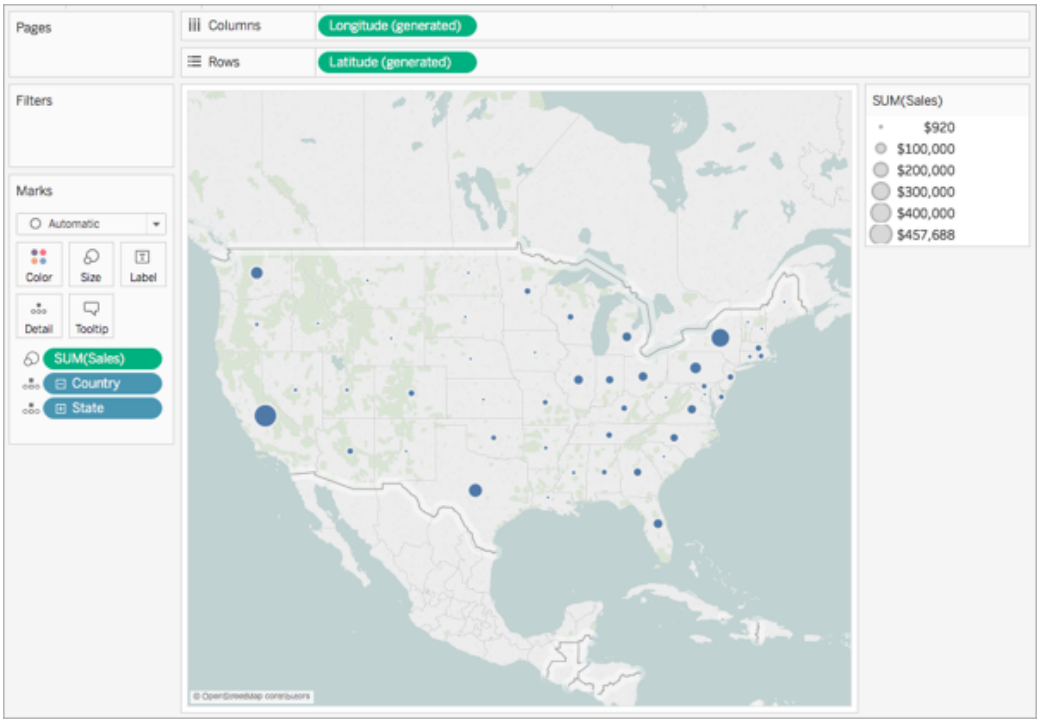
Heatmap is a visualisation where marks on the view are represented using colour. We can create a Heat map by placing one or more dimensions in the row and one or more dimensions in the column.

- **Pros:** Heat maps effectively compare categorical data using size and colours. It provides us with a broad overview of the situation.
- **Cons:** Heat maps won't give us much detail but will give us a quick way to draw global conclusions.

Maps

Maps are the best way to represent visualisation in Tableau. Maps can be created if there is a Geographic Location such as a Country, State or region present in our dataset. Because of these Geographic locations present in our dataset, Tableau will automatically create the fields Longitude and Latitude, which play a role in creating Maps.

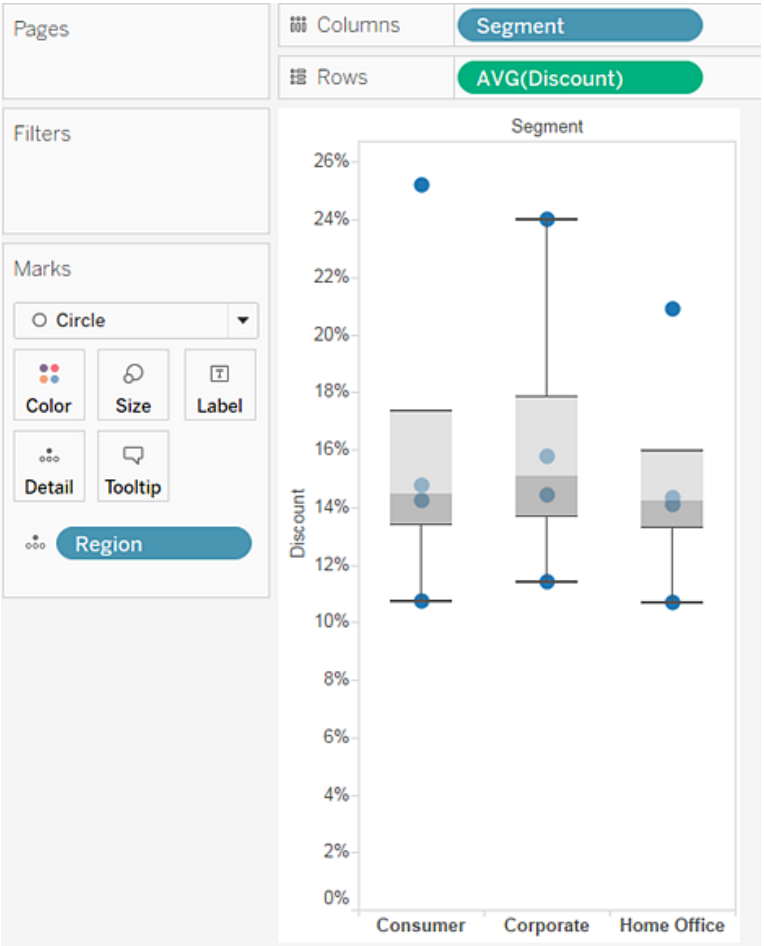
- **Pros:** Simply looking at the maps gives an individual a great insight into the data.



Box & Whisker

Box and whisker plot, also known as Box Plot, is a great chart to use when showing the distribution of data points across a selected measure. Box and whisker plots include outliers, median, and mode, and most data points lie in the “box”. These charts display ranges within variables measured.

- **Pros:** Box and whisker plots are very effective and easy to read, as they can summarise data from multiple sources and display the results in a single graph.
- **Cons:** However, Box and whisker plot hides the multimodality and other features of distributions.



Scatter Plots

A scatter plot is a plot which uses Cartesian coordinates. It usually displays the data for two variables. It is also called a scatterplot or scattergraph.

- **Pros:** A scatter plot shows a trend in the data relationship. It represents all the data points, including minimum, maximum and outliers. It can highlight correlations.
- **Cons:** However, a scatter plot cannot give the exact extent of correlation and cannot be used for more than two variables.