

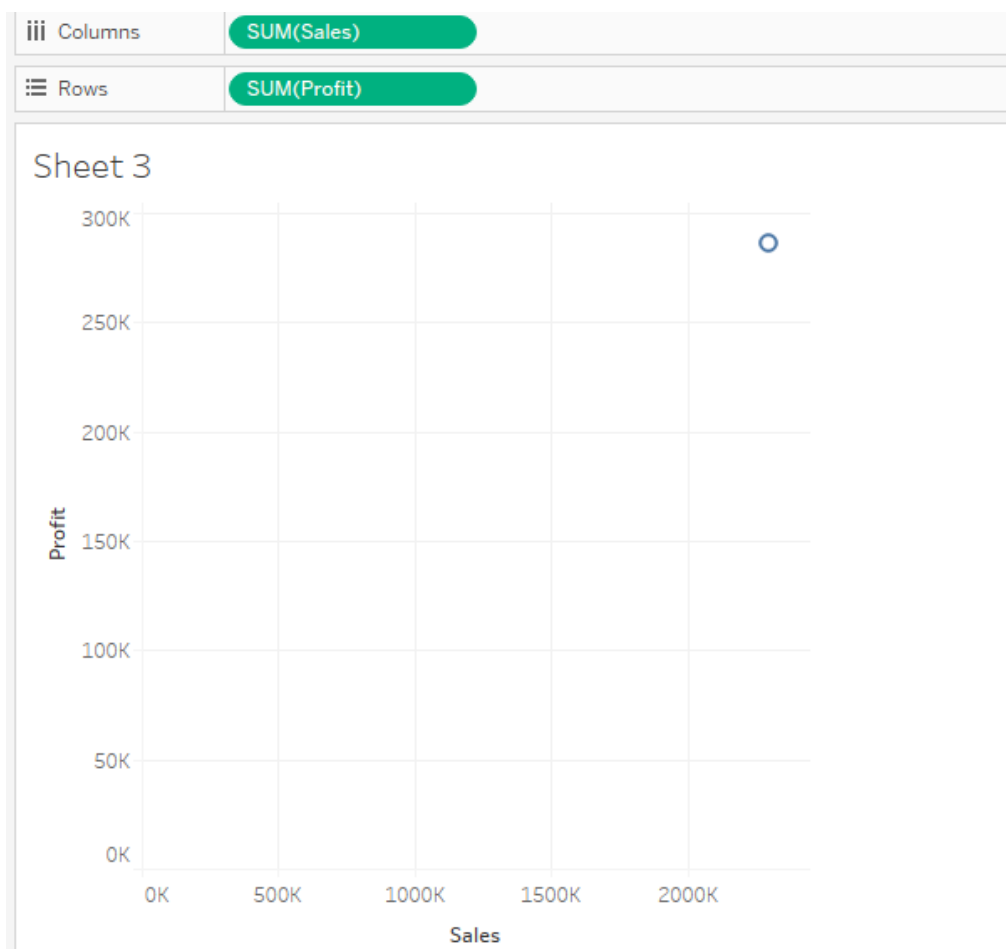
## Scatter Plot

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.

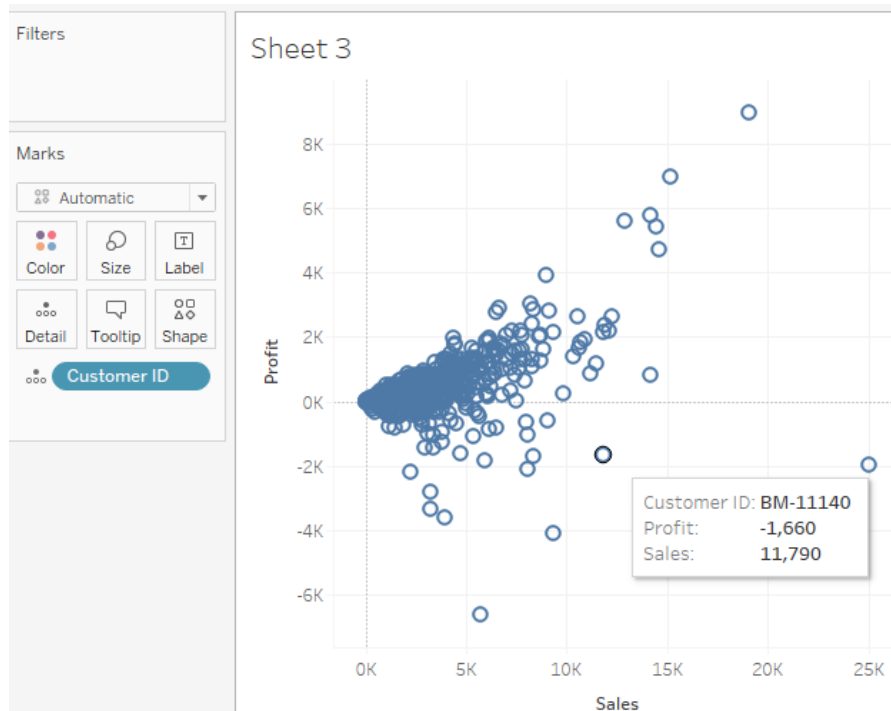
- **Pros:** A scatter plot shows a trend in the data relationship. It represents all the data points, including minimum, maximum and outliers. It can highlight correlations.
- **Cons:** However, a scatter plot cannot give the exact extent of correlation and cannot be used for more than two variables.

Suppose you want to analyse Sales vs Profit concerning various customers to determine if there is an outlier in our dataset.

So for that, we keep Sales in the Column and profit in Rows to get our desired Scatter Plot that will help us determine any outlier present and analyse the given problem. We get the plot as follows:

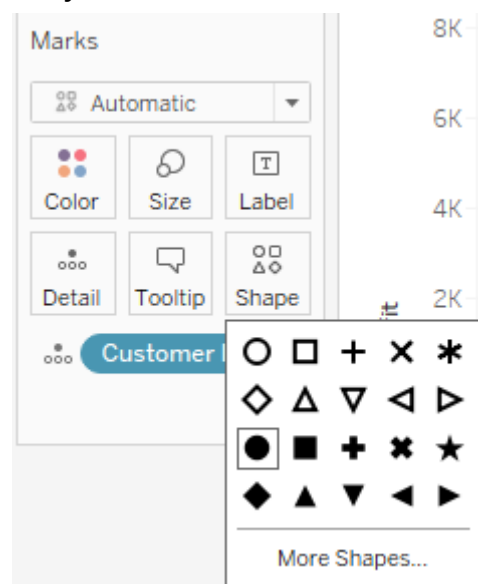


Scatter plot depicts overall Sales vs Profit for our Dataset, but we want a plot for individual customers, so we need to add Customer Id to the 'Details' in the Marks part.

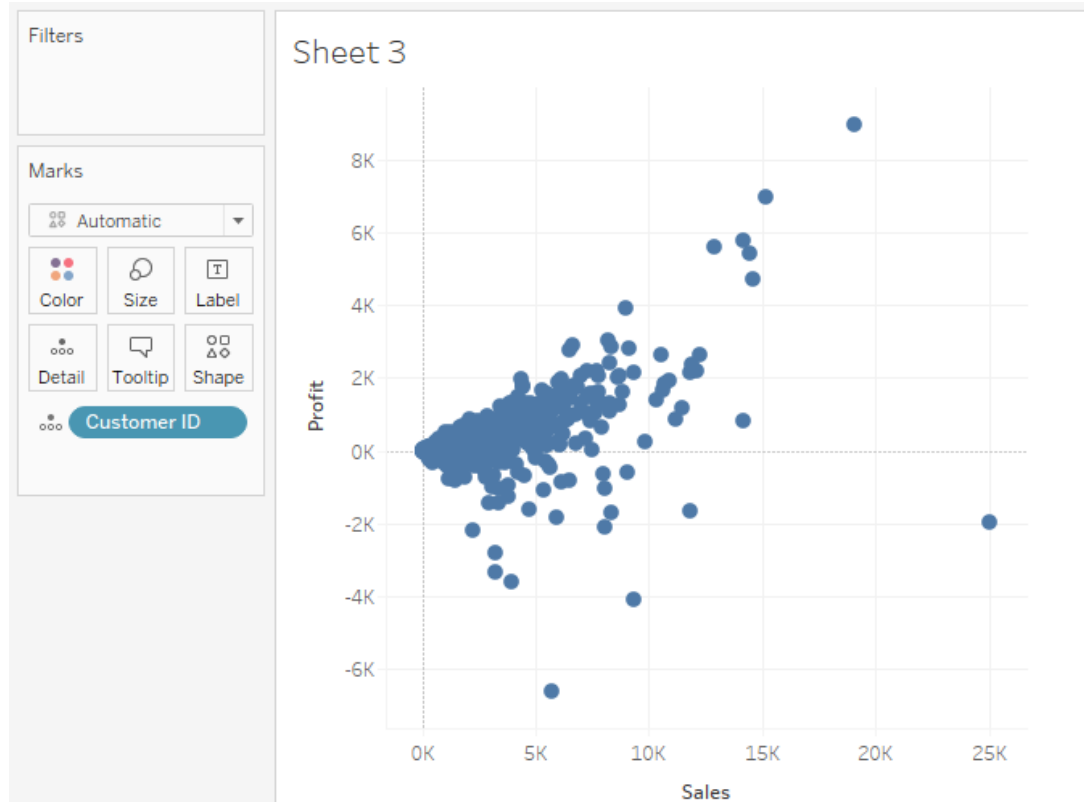


We have broken down the graph for various Customer IDs by adding Customer Id to 'Details'.

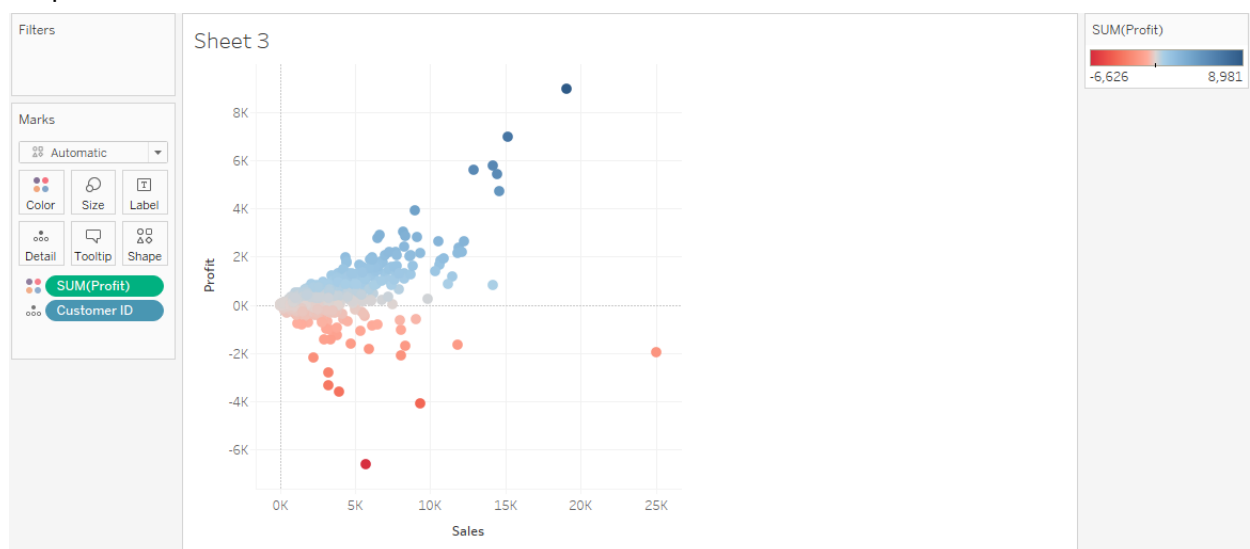
Now let's increase the readability of the chart. First, we can change the shape of the Dot representing each Customer by a Filled Circle.



By using this Filled Circle, our chart would look something like this:

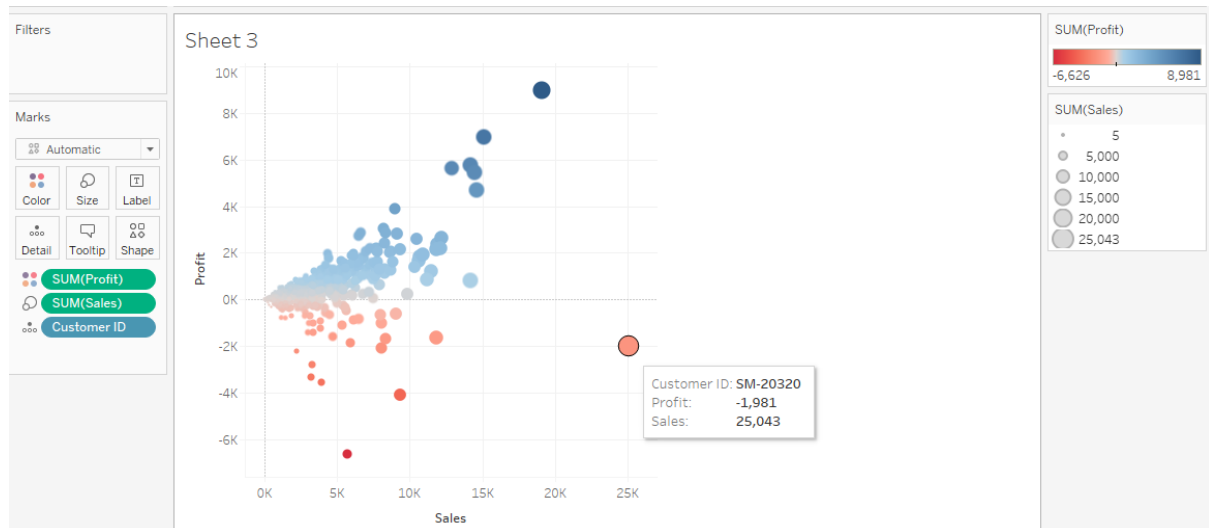


Further, I want to increase the readability of the graph by depicting the Customers with Profits and Losses in Different Colours. So we want to decide the colour based on Profits, and for that, we will drag and drop profits on to colour and will get the following output:



Here, Red Coloured circles indicate Loss while the Blue Coloured circles indicate Profit.

Further, we want to increase the size of a circle based on the sales, i.e. bigger sized circle should depict more sales and vice versa, and for that, we drag and drop sales to 'Size' in the Marks.



Further, to increase the readability of the graph, we can add Profits to the Label, which will show the individual profit of each customer as shown below:

