

# TABLEAU

Day 19

## Motion Chart

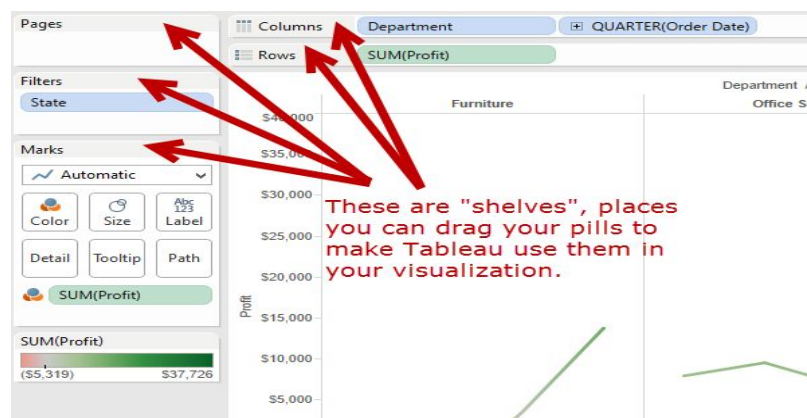
*Want to see data in action?*

*Use Tableau motion!*

Motion charts show data using the X and Y-axes, displaying changes over time by showing the movement of data points within the defined space as well as changes in the color of the lines. The main advantage of a motion chart is to view the entire trail of how the data has changed over time and not just a snapshot of the data.

Tableau needs one **Time Dimension** and one **Measure** to create a Motion chart.

**Before we get started with a motion chart, let's understand what is a pages shelf in Tableau?**



Page shelf let's you break the view into a series of pages, presenting a different view on each page so that you can analyze how a specific field affects the rest of your view.

When you place a dimension on the Pages shelf you are adding a new row for each member in the dimension. When you place a measure on the Pages shelf, Tableau automatically converts the measure into a discrete measure. The Pages shelf creates a set of pages, with a different view on each page. Each view is based on a member of the field you placed on the Pages shelf. You can easily flip through the views and compare them on a common axis, using the controls that get added to the view when you move a field to the Pages shelf.

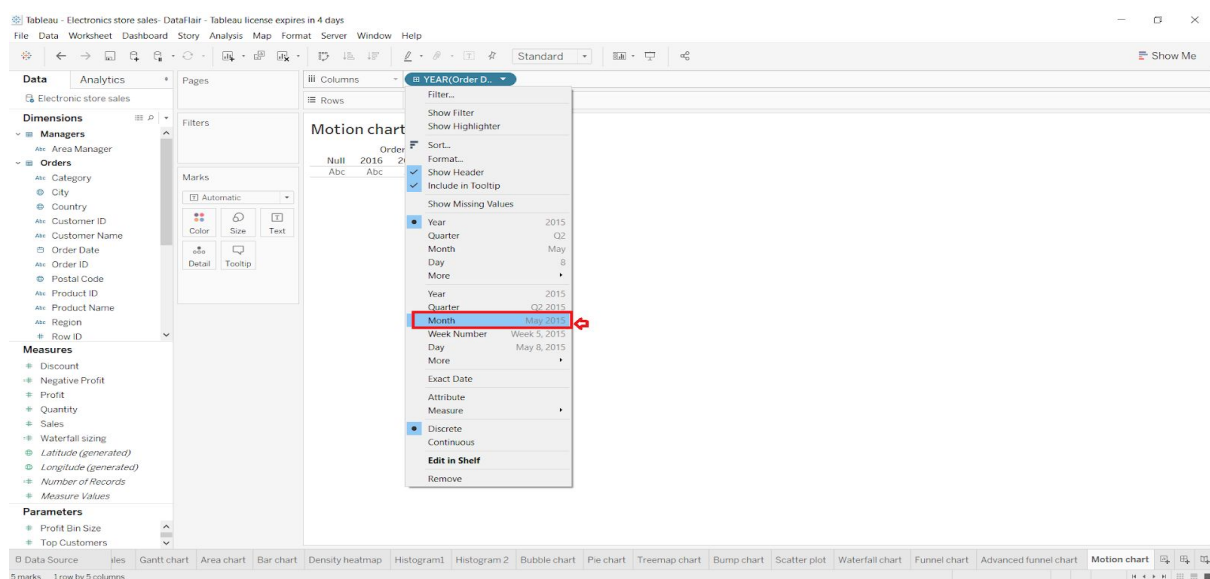
Most commonly used scenario is to use the Date field on the page shelf to see how your data changes overtime. Once you drop a Date field on the page shelf you'll get page control from which you can navigate between months or days and see how your data changes overtime.

A motion chart is similar to a *line chart* in which we plot a line on the x and y-axis.

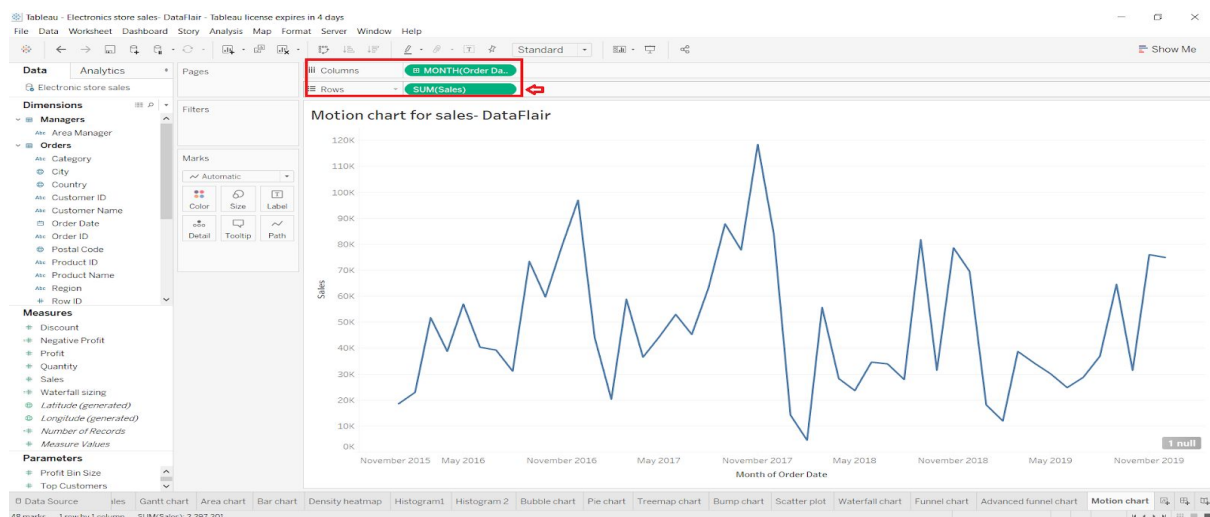
But a difference between a line chart and a motion chart is that the motion chart moves from a starting point and goes to the endpoint leaving a trail of data points occurring in its path. Thus, using motion charts, we can see the highs and lows that our values are hitting in the course

## How to create a motion chart in Tableau?

**Step 1:** We need a **dimension field** to add in our **Columns section**. From our sample dataset of electronics store sales, we select a dimension field Order Date. Then we select our field value to month type.

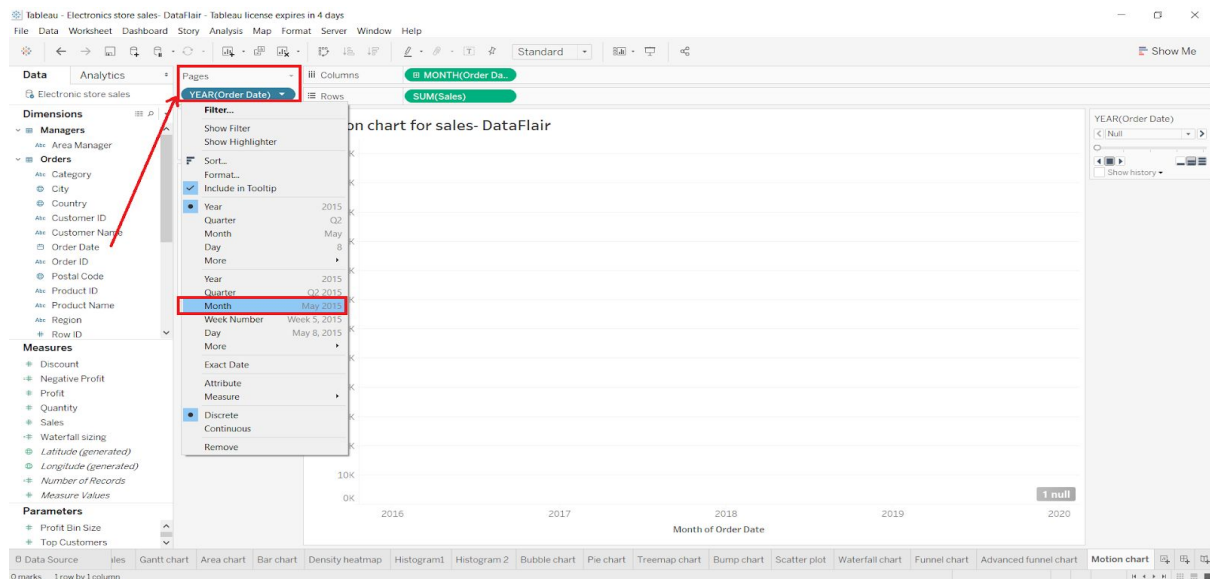


**Step 2:** Next, we add a measure field, Sales in the Rows section. As you can see, this creates a preliminary line chart on the screen.

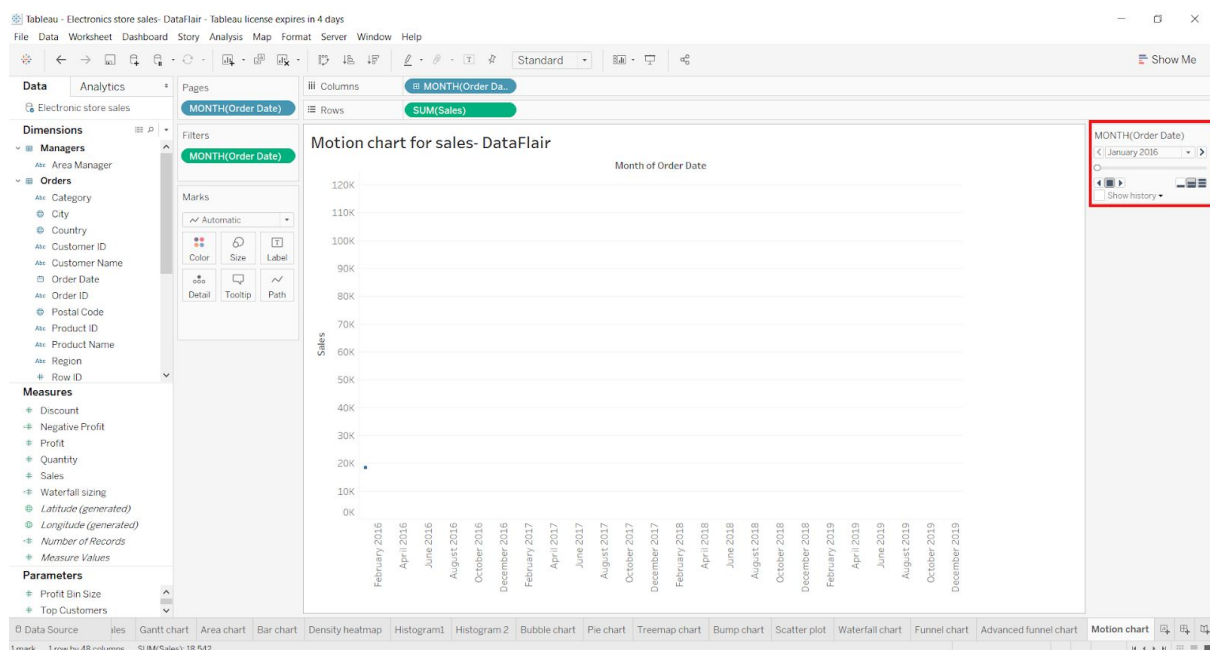


### Step 3: Add Dimension Field into Page Section

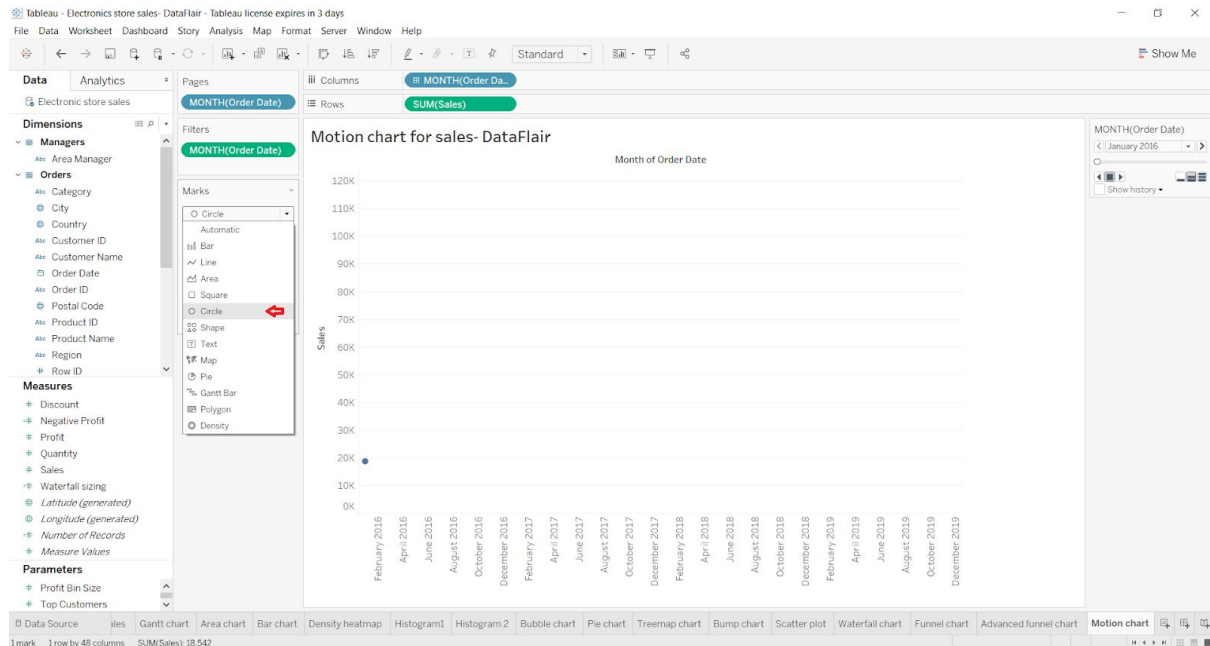
This step is going to be a new one as we did not do this in any of the other charts so far. Here, we add our dimension field, Order Date into the Pages section. We change the field value type of this dimension as Month.



**Step 4:** As soon as we add our dimension to the Pages section, a filter and play box appears on the right. From here, we can set a range of months or use the tableau play-pause button to operate the motion chart. In the next steps, we will learn to further use this filter-playbox for our motion chart.

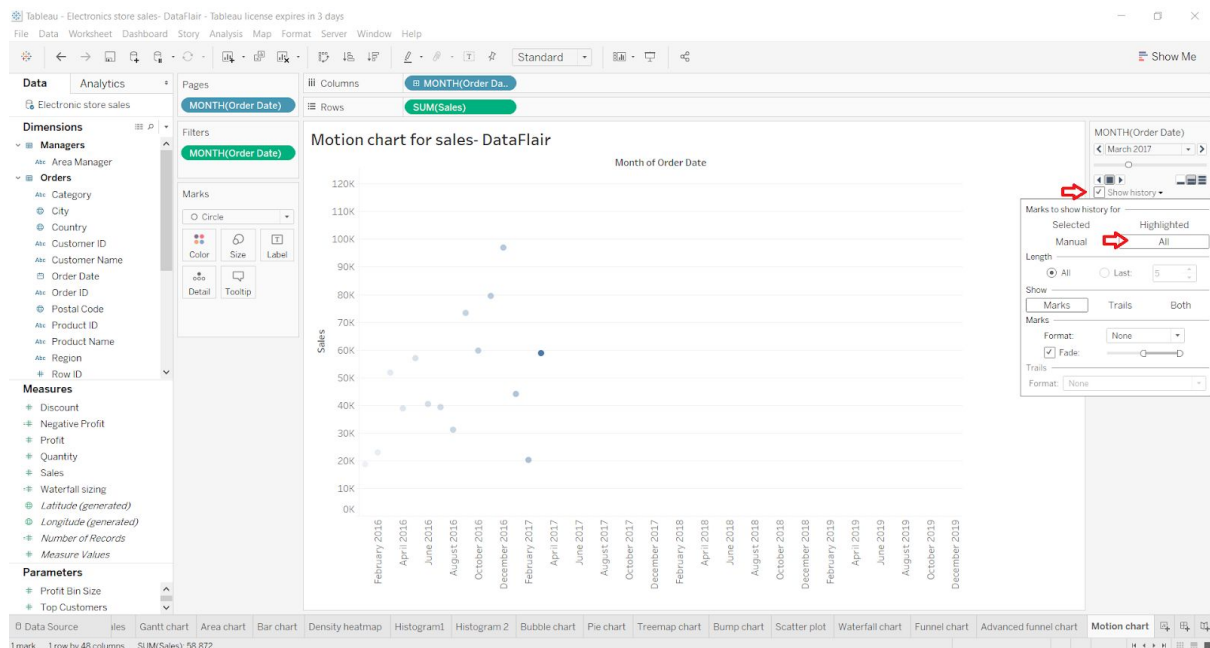


**Step 5:** Now, we select Circle as the mark type from the Marks list. This will show individual data points on the plot.

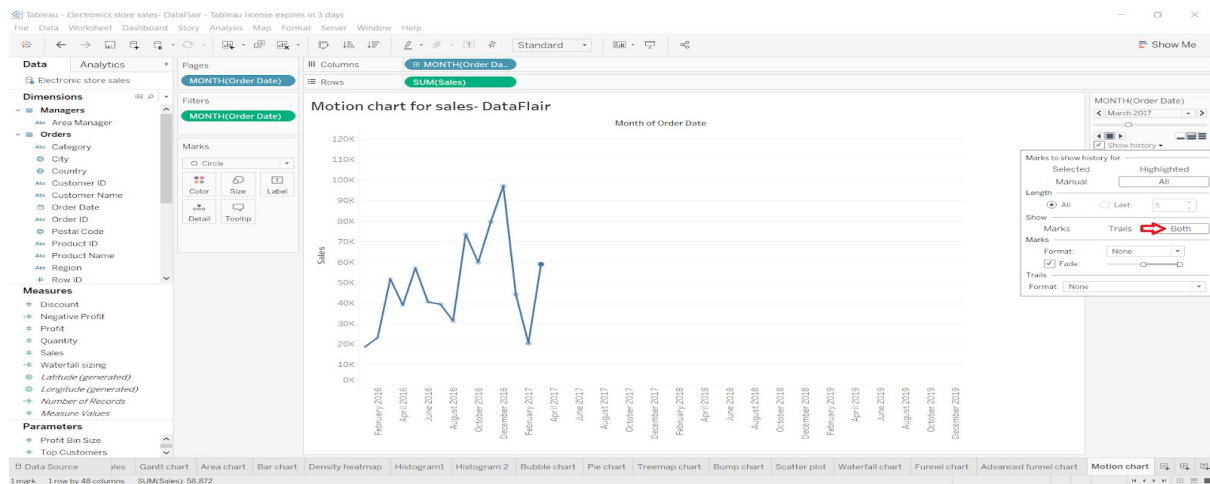


**Step 6:** Go to Show History to Make Changes in Motion Chart

Now, we need to make some changes in the settings to create a motion chart with data points and a trailing line. To do this, go to the Show history option. We can set a lot of options for our line from here such as length, show, marks, etc.

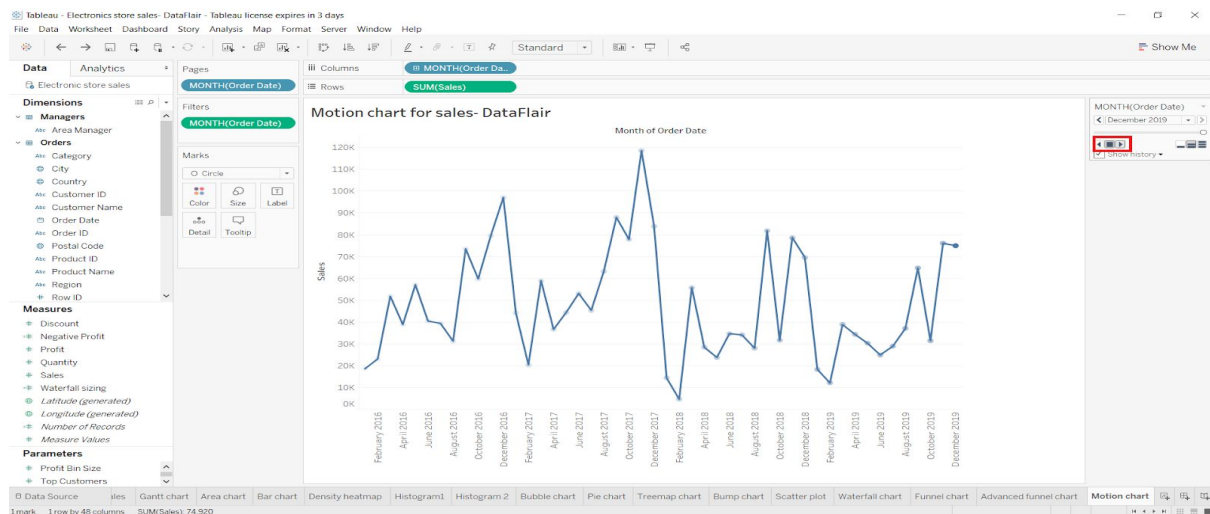


**Step 7:** We select both so that our motion chart has both data points and trailing line when it moves from a start point to an endpoint. select both option in tableau motion chart



**Step 8:** Click on Tableau Play Button

Now, clicking on the play button as shown in the screenshot below, our motion chart starts from one point, moves towards the right following the trail of every data point and then finally terminates on the last data point on the plot.



**Step 9:** We can also create a motion chart with two variables, hence, two lines moving together parallelly (unless they have the same data point). To do this, just add one more measure field on the Rows section.

Here is our final Tableau motion chart trailing line moving in the right direction.