**Tableau Fundamentals**

1. **Tableau Groups vs Sets**

Link –

1. Best -<https://www.youtube.com/watch?v=a35QPlHyofY>
2. 2nd best - <https://www.youtube.com/watch?v=Wt8bpfPBIXI>

1. **Groups**
2. Creating a new Group creates a new discrete Dimension and it also places the newly added Dimension into the Colors section inside Marks card.
3. We intend to Group items which are static by design i.e. they don’t change with time or by any other parameter. Eg we would group zip code, pin code etc.
4. Groups can be created by either selecting multiple bars, scatter points (i.e. chart elements) from the chart or by selecting multiple Headers from the Chart and then group them.
5. Creating multiple groups with same Dimensions won’t create new Dimensions
6. Grouping is done to create a higher category of the Dimension
7. When Grouping we are looking at 1 Dimension and grouping the members within 1 Dimension
8. **Sets**
9. Creating a new Set doesn’t create a new Dimension. Instead a new Sets section is added along the newly created set inside the Data pane in the workspace
10. Sets are Dynamic.
11. If we apply Filters to Customer Names -> Top 100 Customer Names with Sum(Sales). Then it will only show those 100 customers in the charts that fulfill the criteria.
12. But if we apply Sets to Customer Name -> Top 100 Customer names with Sum(Sales). Then it will show all the customers but will highlight only the Top 100 when that Set is dragged and dropped into the Colors Section of the Marks Card.
13. A Set is more complex and dynamic grouping.
14. With Sets we can group across multiple Dimensions and also and apply conditions to make it dynamic.
15. With Dynamic Sets- we can create dynamic calculations across multiple Dimensions. As in the measure values(data) is updated, set will update dynamically.
16. **Tableau Filters**
17. They change the way the data or the graph is displayed based on input parameters.
18. They restrict data is visualization as per user requirements.
19. Facilitates insight discovery easily.

**Types of Filters**

**Link**

1. 52 mins - > <https://www.youtube.com/watch?v=SkSkinTXkmo>
2. 6 videos -> <https://www.youtube.com/watch?v=z36m1nrVTO4&list=PLE50-dh6JzC4m2A3ajD0WJAJzNJwSpBLC&index=3>
3. Brief Explanation with links -> <https://www.upgrad.com/blog/types-of-filters-in-tableau-how-to-use-them/>

**Global, Context, Dimension, date, measure, Cascading,**

**Global is of 2 types – Extract and data Source**

**Global Filters**

1. Applies to complete workbook
2. Example- **Extract and Data Source Filters**
3. They restrict data to complete workbook
4. Can be used as secure filter
5. Help in filtering unwanted data
6. Fix data quality issues.

**Steps:**

1. Click on Filters while connecting to the Excel file and set it

**Context Filters**

1. Applies to current Sheet only.
2. First filter to be applied before all other filters.
3. Can be set to apply across all sheets
4. Trims down the record prior to further filters being applied.
5. Available as Interactive Filters to the user

**Steps:**

1. Drag and drop a Normal Dimension field into Filters. Specify the filter. Click Ok
2. Now Right Click on the Filter -> **Add to Context**.
3. This changes the Filter color to Gray and turns it into a Context Filter.

**Dimension Filters**

1. Similar to Sql where Clause
2. No aggregated data
3. Dimension variables

**Measure Filters**

1. Add a Measure field to Filter

**Extract Filter**

1. Extract filters are used to filter the extracted data from data source. This filter is utilized only if the user extracts the data from data source.
2. Once the text file is connected to Tableau, you can see the live and extract option in the top right corner of data source tab. Live Connection directly connects to a data source. Extract connection extracts the data from data source and creates a local copy in Tableau repository. The procedure for creating an extracting filter is given as follows.

**Steps:**

1. After connecting the text file into Tableau, Click on "Extract" radio button.
2. Click on the 'Edit' option placed near to Extract button.
3. It opens "Extract data" window. Click on 'Add' option present in the Window.
4. "Add Filter" Window is open to select the filter conditions.
5. Search for Dimension /Measure and then click OK. Once you click on OK button, it opens a filter window.
6. The filter window has multiple options to filter 'Category' based on various use case. All the use cases and its filter conditions are explained below. The options are General, Wildcard, Condition, Top

**Data Source Filters**

1. Applies to all the Worksheets.

**Steps:**

1. Connect to a excel or csv file
2. Create a Chart/Graph you want to filter
3. Right click on the excel/csv File -> Edit data Source Filters -> Add
4. Select a Dimension or Measure as per your requirement. Click -> Ok
5. Select A filter either from general or Wildcard or Condition or Top tabs. Click Ok

**Cascading Filters**

**Filter Order (Must see)**

**Link->** [**https://www.youtube.com/watch?v=uK8K1C3Pxl0&list=PLE50-dh6JzC4m2A3ajD0WJAJzNJwSpBLC&index=6**](https://www.youtube.com/watch?v=uK8K1C3Pxl0&list=PLE50-dh6JzC4m2A3ajD0WJAJzNJwSpBLC&index=6)

1. **Extract Filters**
2. **Data Source Filters**
3. **Context**
4. **FIXED (Level of Detail Function)**
5. **Dimension Filter**
6. **Include ad Exclude (Level of Detail Function)**
7. **Measure Filter**
8. **Table calculations**

**Tableau other Topics**

1. **LOD (Level of Detail)**
2. **KPI (**
3. **Time Series Analysis**

**Tableau datasets**

1. [**https://www.superdatascience.com/pages/tableau**](https://www.superdatascience.com/pages/tableau)
2. [**https://www.wisdomaxis.com/technology/software/tableau/sample-data/**](https://www.wisdomaxis.com/technology/software/tableau/sample-data/)

**Tableau calculations**

**Calculated Fields Creation Steps**

**Method1**

1. Right Click any Measure -> Create-> Calculated Field
2. Right the Logic -> Apply-> Ok

**Method2**

1. Go to Analysis -> Create Calculated Field
2. Right the Logic -> Apply-> Ok

**Number Methods**

1. Min, Max, CEILING, FLOOR etc

**String methods**

1. UPPER, LOWER

**Tableau Calculations**

When table related calculations are applied to a pill (green pill). A small Triangle shows up on the Pill towards its right end.

**Data Blending**

1. Helps user combine 2 different data sets that might be related to each other by some common attribute
2. Tableau automatically tries to link these tow datasets based on column names in both the data sets
3. Automatic relationships can be edited by going to data menu and clicking relationship
4. Data blending should be used when you have related data in multiple data sources that you want to analyze in a single view.
5. Tableau by default only supports **Left Join in Data Blending**. Change the order of joining the data sources to make it **Right Join.**
6. Full inner joins filters NULL.
7. Cubes not supported in secondary data sets.
8. Link used -> <https://www.youtube.com/watch?v=ppAHCxKgAE0>
9. Primary data Source is represented by Blue Tick, secondary is represented by red Tick.
10. Click on the Broken link on the connecting field between the two Data sets from the Dimensions
11. Filter Null records/data if needed from the Chart.
12. The first Dimension or Measure dragged and dropped into the Columns/Rows shelf is considered as Primary Source and the 2nd Dimension or Measure dragged and dropped into the Columns/Rows shelf is considered as Secondary Source.
13. Filters applied in case of data blending needs to be global
14. Create a Filter > Right Click -> Apply to Worksheets -> All Using Related Data Sources

**Cross Database Joins**

1. When **related data is stored in tables across different databases**, you can use a cross database join to combine the tables.
2. To create a cross database join, you must create a multi-connection tableau data source. This is done by adding and then connecting to each of the different databases(including excel and text files) before you join.
3. It can of the type – Left, Right, Full or Inner

**When to Join and when to Blend**

1. If all the data resides in one data source, joining the data tables can improve the performance and filtering control.
2. If new data or table is added in the same data connection, joining is better.
3. If data source contains too many records for a join to be practical, blending is preferred.
4. When summary and details both needs to be showcased, blending is preferred

**Link used**

1. <https://help.tableau.com/current/pro/desktop/en-us/buildexamples_bar.htm>
2. <https://chartio.com/learn/charts/stacked-bar-chart-complete-guide/>

**Tableau Basic Charts**

1. **Bar Chart**

**Definition -** Bar used is used tocompare data across categories.

**Requirement -** Abar chart by placing a dimension on the Rows shelf and a measure on the Columns shelf, or vice versa. A bar chart uses the Bar mark type from the Marks Card

**How to Create a Bar Chart**

**Steps:**

1. Connect to a Data Source and open it a new worksheet.
2. Drag a relevant Dimension Pill into Columns and a relevant Measure Pill into Rows or vice versa.
3. This will automatically create a bar chart in most cases.
4. If you get a line Chart or some other Chart. Select Bar from Mark Type under marks Card or you can select Bar chart from Show Me Charts section on right top.
5. As per your requirement, you can arrange it in Horizontal or Vertical alignment to create Horizontal or Vertical Bar charts respectively.
6. **Stacked Bar Chart**

**Definition -** The stacked bar chart (aka stacked bar graph) extends the standard [bar chart](https://chartio.com/learn/charts/bar-chart-complete-guide/) from looking at numeric values across one categorical variable to two. Each bar in a standard bar chart is divided into a number of sub-bars stacked end to end, each one corresponding to a level of the second categorical variable.

**Requirement -** Abar chart by placing a dimension on the Rows shelf and a measure on the Columns shelf, or vice versa. A bar chart uses the Bar mark type from the Marks Card. Add a categorical field from Dimensions into the Color section of the Marks Card

**How to Create a Stacked Bar Chart**

**Steps:**

1. Connect to a Data Source and open it a new worksheet.
2. Drag a relevant Dimension Pill into Columns and a relevant Measure Pill into Rows or vice versa.
3. This will automatically create a bar chart in most cases.
4. If you get a line Chart or some other Chart. Select Bar from Mark Type under marks Card or you can select Bar chart from Show Me Charts section on right top.
5. Drag and drop a Categorical field from Dimensions into the Color section of the Marks card.
6. This will create a Stacked Bar Chart
7. **Multiple Axis Bar Chart**

**Definition -** The Multiple Axis bar chart **\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**Requirement -** ABar chart is created by placing a dimension on the Rows shelf and a measure on the Columns shelf, or vice versa. Add another Dimension pill (Green pill) adjacent to the Measure pill in Rows or Columns. This creates a multiple axis Bar chart

**How to Create a Stacked Bar Chart**

**Steps:**

1. Connect to a Data Source and open it a new worksheet.
2. Drag a relevant Dimension Pill into Columns and a relevant Measure Pill into Rows or vice versa.
3. This will automatically create a bar chart in most cases.
4. If you get a line Chart or some other Chart. Select Bar from Mark Type under marks Card or you can select Bar chart from Show Me Charts section on right top.
5. Drag and drop a Dimension Pill (Categorical Field / Blue Pill) to the left of the Measure Pill adjacently.
6. This creates a Multiple Axis Bar chart.
7. **Line Chart and Multiple Axis Line Chart**

**Definition -** Line charts connect individual data points in a view. They provide a simple way to visualize a sequence of values and are useful when you want to see trends over time, or to forecast future values.

**Multiple Axis Line Chart Definition -**  **\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**Requirement -** A Date filed from Dimensions, A Measure Field

**How to Create a Area Chart (Stacked Line Chart)**

**Steps:**

1. Connect to a Data Source and open it a new worksheet.
2. Drag the Date Dimension to Columns shelf and drag and drop a relevant Measure Field into the Rows Shelf.
3. This Creates a **Line Chart.**
4. Drag and drop another relevant Measure Pill into the Rows shelf to create **Multiple Axis Line Chart**
5. **Check Forecast and Analytics at ->** [**https://help.tableau.com/current/pro/desktop/en-us/buildexamples\_line.htm**](https://help.tableau.com/current/pro/desktop/en-us/buildexamples_line.htm)
6. **Area Chart/ Stacked Line Chart**

**Definition -** An area chart is a line chart where the area between the line and the axis are shaded with a color. These charts are typically used to represent accumulated totals over time and are the conventional way to display **Stacked lines** **chart**.

**Requirement –** Add a Dimension to Column shelf, add a Measure to Rows shelf. Mark type is Area. Add a dimension to Color shelf inside Marks Card.

**How to Create a Area Chart**

**Steps:**

1. Connect to a Data Source and open it a new worksheet.
2. Drag a relevant Date Field(you can change it to month, quarter, days etc) from Dimensions into Columns shelf and a relevant Measure Pill into Rows or vice versa.
3. From the Measure Shelf, drag a relevant Field (Green Pill) to the Rows shelf.
4. Drag and drop a relevant categorical Field from the Dimensions into the Color Section of the Marks Card.
5. This creates a \*\*\*\*\*\*\*\*\*
6. Select Mark Type as Area under the Marks Card. This Creates an Area Chart.
7. When you are displaying multiple measures in a line chart, you can align or merge axes to make it easier for users to compare values.
8. You can synchronize the axis as well.
9. **Scatter Chart**

**Definition -** It isused scatter plots to visualize relationships between numerical variables.

**Requirement –** Add at least 1 Measure Field into Rows and at least 1 Measure field into Columns

**How to Create a Scatter Chart**

**Steps:**

1. Connect to a Data Source and open it a new worksheet.
2. Drag and drop a relevant Measures field into the Columns Shelf and drag and drop another relevant Measures field into the Row Shelf.
3. This creates a Scatter Chart.
4. You can add a Categorical Field from Dimensions and drop it into the Color Section of the Marks card, to show scatter charts in different colors.
5. **Check Trend Lines(Regression Lines) and Analytics at ->** [**https://help.tableau.com/current/pro/desktop/en-us/buildexamples\_scatter.htm**](https://help.tableau.com/current/pro/desktop/en-us/buildexamples_scatter.htm)
6. **Histogram**

**Definition -** A histogram is a chart that displays the shape of a distribution (frequency distribution). A histogram looks like a bar chart but groups values for a continuous measure into ranges, or bins.

**Requirement -** Add 1 Measure Field into Columns Shelf and **Bins** into Columns Shelf. Mark type is Automatic from the Marks card.

**How to Create a Histogram**

**Steps:**

1. Connect to a Data Source and open it a new worksheet.
2. Drag a relevant Measure Field into the Columns Shelf.
3. From the Show Me charts options select Histogram.
4. This creates a histogram
5. Three things happen after you click the histogram icon in Show Me.
6. The view changes to show vertical bars, with a continuous x-axis (1 – n) and a continuous y-axis (0 – m).
7. The Measure you placed on the Columns shelf, which had been aggregated as SUM, is replaced by a continuous Quantity (bin) dimension. (The green color of the field on the Columns shelf indicates that the field is continuous.) To edit this bin: In the Data pane, right-click the bin and select Edit.
8. The selected Measure Field moves to the Rows shelf and the aggregation changes from SUM to CNT (Count).
9. **Stacked Histogram**

**Definition -** A Stacked Histogram is a**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**Requirement -** Add 1 Measure Field into Columns Shelf and **Bins** into Columns Shelf. Mark type is Automatic from the Marks card.

**How to Create a Stacked Histogram**

**Steps:**

1. Connect to a Data Source and open it a new worksheet.
2. Drag a relevant Measure Field into the Columns Shelf.
3. From the Show Me charts options select Histogram.
4. This creates a histogram.
5. Drag and drop a relevant Dimension field into the Colors Section of the Marks Card to derive a relationship between the Measure Field added to the Columns and the Dimension Field added to the Colors.
6. This creates a Stacked Histogram.
7. Add CNT(Measure/Quantity field for example) into Labels Section of Marks Card.
8. Right Click on the CNT(Measure) -> Quick Table Calculation -> Percent. This will show percentage contribution.

1. **Pie Chart**

**Definition -** It isused to show proportions of a whole. Percentage distribution of a whole.

**Requirement -** Add 1 Dimension to Rows and a Measure Field into Columns Shelf. You have a Bar Chart as of Now. Mark Type is Pie from Marks card

**How to Create a Pie Chart**

**Steps:**

**Method-1**

1. Select a relevant Dimension and a relevant Measure from then Click Pie from the Show Me charts.

**Method-2**

1. Connect to a Data Source and open it a new worksheet.
2. Drag a relevant Dimension to Rows and a relevant Measure into Columns.
3. You will get a Bar chart as of this moment.
4. Select Pie from Show Me Charts or Pie from Mark Type to convert Bar chart into Pie Chart.
5. Add Labels to the Pie chart by dropping the relevant Dimension filed into the Labels section of the marks card.
6. Drop the relevant Measure field to the Label Section of the Marks Card to display the Percentage contribution.

**Method -3 Multiple Pie Charts**

1) Drop Market into Rows

2) Drop Sales into Labels and Sales into Size

3) Drop category into Colors

1. **Text Table**

**Definition –** They are also called cross-tabs or pivot tables

**Requirement -** create text tables (also called cross-tabs or pivot tables) by placing one dimension on the Rows shelf and another dimension on the Columns shelf. You then complete the view by dragging one or more measures to Text on the Marks card. A text table uses the text mark type

**How to Create a Text Table**

**Steps:**

1. Connect to a Data Source and open it a new worksheet.
2. Drag and drop a relevant Dimension into Rows shelf and another relevant Dimension into the Column shelf.
3. Drag and drop a relevant Measure field into the Labels section of the Marks Card.
4. Set the Marks type as Text.
5. Add more Dimension to the Rows and or Columns to increase the levels of Pivot in your pivot table or Text Table.
6. **Confusion check** -> <https://help.tableau.com/current/pro/desktop/en-us/buildexamples_text.htm>
7. **Packed Bubble Chart**

**Definition -** It displays data in a cluster of circles. Dimensions define the individual bubbles, and measures define the size and color of the individual circles.

**Requirement -** Mark Type is Circle from the Marks Card. **There are no Dimensions or measures in either Rows or Columns shelf.** Add Dimensions to Details. Size is determined by Measure, Color is determined by Dimension or Measure. Labels (optional) can be put to use with either Dimension or Measure

**How to Create a Packed Bubble Chart**

**Steps:**

1. Connect to a Data Source and open it a new worksheet.
2. Drag a relevant Dimension to Columns and a relevant Measure into Rows.
3. This displays a Bar chart
4. Click on Packed Bubble Chart from Show Me Charts section on top right.
5. This displays a Packed Bubble Chart
6. Drag and drop relevant Dimensions into the Labels section of the Marks Card.
7. Drag and drop relevant Measures into the Labels section of the Marks Card.
8. **Tree Map**

**Definition -** Use treemaps to display data in nested rectangles. You use dimensions to define the structure of the treemap, and measures to define the size or color of the individual rectangles. Treemaps are a relatively simple data visualization that can provide insight in a visually attractive format.

**In Treemap, both the size of the rectangles and their color are determined by the value of Measure, the greater the value, the darker the color.**

**We can also use Dimension as color. This will sort the Treemap into n different categories of color as the no of categories in the Dimension field.**

**Requirement -** Mark Type is Automatic or Square. Color is determined by Dimension or Measure. Size is determined by Measure. Use Dimensions for Label or Details from Marks Card.

In the final graph there will no Dimension or Measure in the Colums or rows shelf.

**How to Create a Tree Map**

**Steps:**

1. Connect to a Data Source and open it a new worksheet.
2. Drag a relevant Dimension to Columns and a relevant Measure into Rows.
3. This displays a Bar chart.
4. Click Show Me on the toolbar, then select the Treemap chart type.
5. Drag and drop a Dimension field to Color section of Marks Card.
6. In Treemap, both the size of the rectangles and their color are determined by the value of Measure, the greater the value, the darker the color.
7. We can also use Dimension as color. This will sort the Treemap into n different categories of color as the no of categories in the Dimension field.
8. **With treemaps, Size and Color are the crucial elements.**
9. **Bullet Graph**

**Definition -** A bullet graph is a variation of a bar graph developed to replace dashboard gauges and meters. A bullet graph is useful for comparing the performance of a primary measure to one or more other measures.

**Requirement –** 2 Measures and 0 Dimensions. 1 Dimension added later to give basic look and feel.

**How to Create a Bullet Graph**

**Steps:**

1. Connect to a Data Source and open it a new worksheet.
2. Select 2 Measures from the Dimension field and then click on Show me Charts
3. From Show Me, select Bullet Graph image.
4. This adds measure values into the Rows and creates a single category bar chart.
5. Drag a relevant Dimension and drop it into the Rows shelf
6. This creates a Bullet chart.
7. **Box Plot**

**Definition -** Use box plots, also known as box-and-whisker plots, to show the distribution of values along an axis. Boxes indicate the middle 50 percent of the data (that is, the middle two quartiles of the data's distribution).

You can configure lines, called *whiskers*, to display all points within 1.5 times the interquartile range (in other words, all points within 1.5 times the width of the adjoining box), or all points at the maximum extent of the data.

**Requirement** - Mark Type is circle. 1 Dimension in columns shelf, 1 measure in Rows shelf.

Add Dimension to Details

**How to Create a Box Plot**

**Steps:**

1. Connect to a Data Source and open it a new worksheet.
2. Drag a relevant Dimension to Columns and a relevant Measure into Rows.
3. This creates a bar chart on Vertical Axis.
4. Add another relevant Dimension into the Column shelf to the right of the first Dimension. This creates a two-level hierarchy of dimensions from left to right in the view, with 1st Dimension (listed along the bottom) nested within 2nd Dimension (listed across the top).

In short this creates a Multiple Axis Bar Chart.

1. Select Box Plot from the Show Me Charts.
2. The 2nd Dimension is automatically added to the Details section of the Marks card from the Column shelf. When you changed the chart type to a box plot, Tableau determined what the individual marks in the plot should represent. It determined that the marks should represent 2nd Dimension (added to the right).
3. Removing 2nd Dimension from the details section in the Marks Card creates **Flattened Box Plots** based on single Mark. **Box plots are intended to show a distribution of data, and that can be difficult when data is aggregated under the given circumstance.**
4. Select **Analysis > Aggregate Measures** to disaggregate data. This command turns aggregation on or off, and because data is aggregated by default in Tableau, the first time you select this command, it disaggregates the data.
5. Now, instead of a single mark for each column in the view, you see a range of marks, one for each row in your data source.
6. Right-click the bottom axis and select Edit Reference Line.
7. In Edit Reference Line, Band, or Box dialog box, in the Fill drop-down list, select an interesting color scheme.
8. **HeatMap / Density Marks**

**Definition -** Use density chart to visualize patterns or trends in dense data with many overlapping marks. Tableau does this by grouping overlaying marks, and color-coding them based on the number of marks in the group.

Density maps help you identify locations with greater or fewer numbers of data points.

You can create a chart using the density mark by placing at least one continuous measure on the Columns shelf, and at least one dimension or measure on the Rows shelf (or vice versa), and then adding a field to the Marks card.

**Requirement** - Mark Type is Density. At least one continuous measure, and at least one measure or dimension in Rows and Columns. At least 1 continuous measure in Details in Marks Card.

**How to Create a HeatMap**

**Steps:**

1. Connect to a Data Source and open it a new worksheet.
2. Drag and drop 2 relevant Measures field into the Columns and Rows shelf respectively.
3. This creates a scatter plot.
4. Drag and drop a relevant Dimension into Details section of the marks Card.
5. Change Marks type to Density. Tableau created a density chart by overlaying marks, called kernels, and color-coding where those kernels overlap. The more overlapping data points, the more intense the color is.
6. Select **Color** from the **Marks** card and select **Density Multi-color Light** from the menu.
7. Select **Size** from the Marks card to adjust the size of the density's kernel.

**Method2**

1. Select a Dimension and a Measure and then click on HeatMap from Show Me.
2. This creates a HeatMap.

**Method 3**

1. Select 1st Dimension and a Measure and then click on HeatMap from Show Me.
2. Select 2nd Dimension and drag and drop into Columns shelf.
3. Set the order of Measure as Descending.
4. **Gantt chart**

**Definition -** Use Gantt charts to show the duration of events or activities.

In a Gantt chart, each separate mark (usually a bar) shows a duration. For example, you might use a Gantt chart to display average delivery time for a range of products.

**Requirement** - Mark Type is Automatic or Gantt Bar. Row shelf needs Dimension(s). Columns shelf needs Date or Time Field (Continuous Measure)

**How to Create a Gantt Chart**

**Steps:**

1. Connect to a Data Source and open it a new worksheet.
2. Drag a relevant Date Dimension to Columns Shelf (Green Pill).
3. Add 2 relevant Dimensions field into the Rows shelf
4. Size the marks according to the length of the interval between the order by creating a **Calculated Field.**
5. In the toolbar menu, click Analysis > Create Calculated Field. You can also right-click (Control-click on Mac) any field in the Data pane and select Create > Calculated Field.
6. **Check this link for more info ->** [**https://help.tableau.com/current/pro/desktop/en-us/buildexamples\_gantt.htm**](https://help.tableau.com/current/pro/desktop/en-us/buildexamples_gantt.htm)
7. **Combination chart**

**Definition -** Combination charts are views that use multiple mark types in the same visualization. For example, you may show sum of profit as bars with a line across the bars showing sum of sales. You can also use combination charts to show multiple levels of detail in the same view. For example, you can have a line chart with individual lines showing average sales over time for each customer segment, then you can have another line that shows the combined average across all customer segments.

**Requirement** -

**How to Create a Combination Chart**

**Steps:**

1. Connect to a Data Source and open it a new worksheet.
2. Drag and drop a relevant Date Dimension Field (Discrete) to the Columns shelf.
3. Drag and drop 2 relevant Measures field into the Rows Shelf.
4. This creates a Multiple Axis Line Chart.
5. Add Dual axis to the 2nd Measure added to the Rows Shelf.
6. This creates a single Line chart with different color for each of the Measure cris-crossing each other
7. In the Marks Card, now there are 2 different sections one for each Line chart.
8. For one of the Measure, convert its Marks Type to Bar.
9. This creates a Combination of Bar and Line Chart.

**Tableau Advanced Charts**

1. **Funnel Chart - done**
2. **Donut Chart**
3. **Lollipop Chart**
4. **Sankey Chart**
5. **World Map/ Country/ State/ Region Map - done**
6. **Population Pyramid**
7. **Bump Chart - done**
8. **Benford’s Law**
9. **Waterfall charts - done**
10. **Histogram Bins from Continuous Measure**
11. **Pareto chart**

**Definition -** A Pareto chart is a type of chart that contains both bars and a line graph, where individual values are represented in descending order by bars, and the ascending cumulative total is represented by the line.

**Requirements -**

**Tableau Super Advanced Charts**

**Link ->** [**https://www.vizzingdata.com/category/tableau-tutorial/tableau-advanced-charts/**](https://www.vizzingdata.com/category/tableau-tutorial/tableau-advanced-charts/)

1. **Race Bar Chart**
2. **Arc Chart**
3. **Trellis charts**
4. **Ring charts**
5. **Circular calendar**
6. **Circles with common base**
7. **Radial time Series**
8. **Scatter Pie chart**
9. **Rank Charts**
10. **Slope Graph**
11. **Motion chart (actually moving trend lines- line chart) - done**
12. **Word Map**

**Definition –**

**Requirements -** No Dimension/ Measure in Rows or Columns

**Dataset used for this Ex – Sample SuperStore**

**How to Create a Word Map**

**Method 1 Steps:**

1. Drag and drop a relevant Dimension into Text section of the Marks Card.
2. Drag and drop a relevant Measure into Text section of the Marks Card.
3. From the Mark Type -> Select text.
4. This creates a Word Map.
5. Add the same Measure field as used above to the Colors section of the Marks Card.
6. **Bump Chart**

**Definition –**

**Requirements -**

**Dataset used for this Ex – Sample SuperStore**

**How to Create a Bump Chart**

**Method 1 Steps:**

1. Drag and drop a relevant Date Dimension into Columns Shelf.
2. Drag and drop a relevant Measure into Rows Shelf.
3. Drag and drop a relevant Categorical/Discrete Dimension into colors Section of the Marks Card.
4. Select the Measure Pill from the rows Shelf -> Right Click -> Quick table Calculation -> Rank
5. Select the Measure Pill from the rows Shelf -> Right Click -> -> Rank
6. Add the same Measure field as used above to the Colors section of the Marks Card.
7. This creates a bump chart
8. **Funnel Chart**

**Definition -**

**Requirements -**

**Dataset used for this Ex – Sample SuperStore**

**Solve this Ex(pending)\*\*\*\*\*\*\* -** [**https://www.youtube.com/watch?v=vPfYMHv9cfc**](https://www.youtube.com/watch?v=vPfYMHv9cfc)

**How to Create a Funnel Chart**

**Method 1 Steps:**

1. Drag and drop a relevant Measure into the Rows Shelf and also to the size section of the Marks card.
2. Drag and drop a relevant Dimensions into Colors section of the marks Card
3. This creates a funnel chart. Click Entire View to make it look more like a funnel.
4. Add Measure to the Labels section of the Marks card.
5. Add the same Measure to the labels and the Dimension that you have added to the colors section to the Label as well.

**Method - 2**

1. Drag and drop a relevant Measures field into Columns and Dimension into Rows shelf.
2. Depict the Measure values in descending order.
3. Change the Mark type to Area.
4. Create a calculated Filed as rename it as Negative Measure with the formula: -[MeasureName]
5. Drag and drop this Measure field into Columns to the left of the 1st Measure Pill.
6. This creates an advanced funnel chart.
7. **Waterfall Chart**

**Definition –**

**Requirements -**

**Dataset used for this Ex – Sample SuperStore**

**How to Create a Waterfall Chart**

**Method 1 Steps:**

1. Drag and drop a relevant Measure into the Rows Shelf.
2. Drag and drop a relevant Dimension into Colors section of the marks Card.
3. Select the Mark type as ‘Gantt Bar ‘
4. Drag and drop the same Measure into the Size as the on dropped onto the Rows shelf.
5. This creates a waterfall chart.

1. **Map Chart**

**Definition –**

**Requirements -**

**Dataset used for this Ex – Sample SuperStore**

**How to Create a Map Chart**

**Method 1 Steps:**

1. Double click on a Country/State/City/Region Dimension
2. Drag and drop a relevant Measure into the Colors section of the Marks card.
3. This creates a Map chart.
4. **Motion Chart**

**Definition –**

**Requirements –**

**Dataset used for this Ex – Sample SuperStore**

**How to Create a Motion Chart**

**Steps:**

1. Connect to a Data Source and open it a new worksheet.
2. Drag and Drop Order Date Dimension into Columns and Sales Measure into rows shelf respectively.
3. Change Date Format for Order Date present inside columns shelf to Month Year from Right Click -> More-> Custom -> Month/Year
4. Drag and drop order date into pages Shelf.
5. Change Date Format for Order Date present inside Page Shelf to Month Year from Right Click -> More-> Custom -> Month/Year.
6. A filter is generated on the right side below the Show Me section
7. Move the Scaler available on the filter manually and you will see the dots moving on the Chart
8. Set the Mark Type to Circle from the Marks card.
9. Go to Filter -> Show History -> Select All
10. In the Show History Select Both(for line and dots) or trails( just for lines) or Marks (just for Dots)