**ASSIGNMENT 2**

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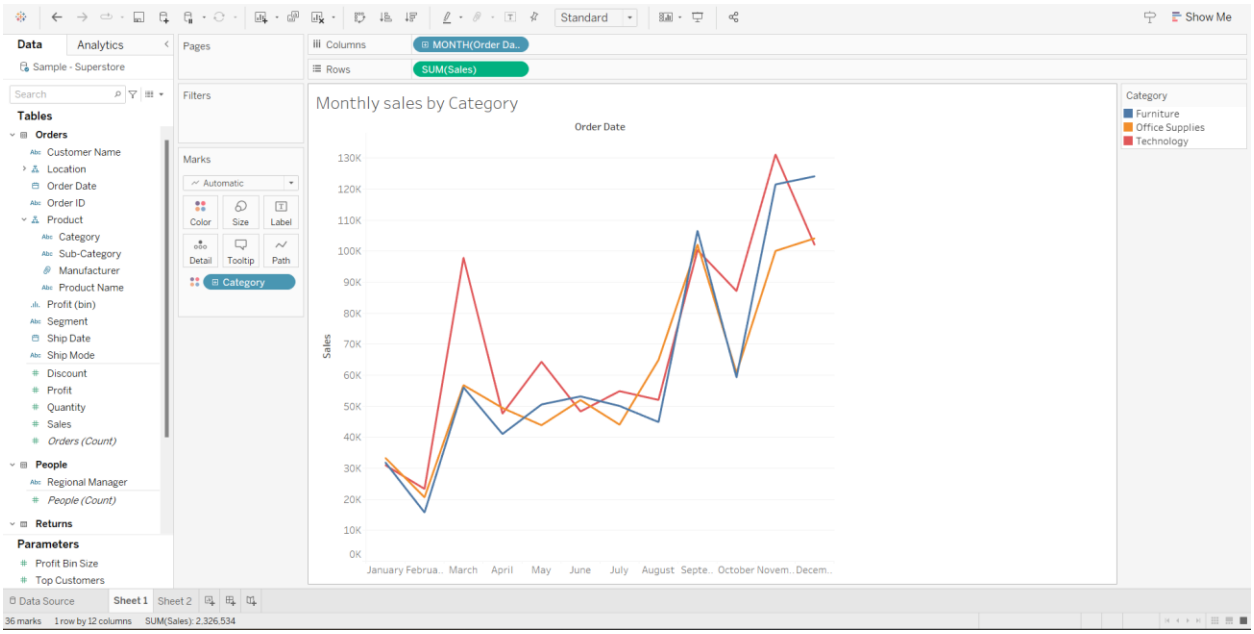
**20BCR7032**

1) Create any 7 data visualizations/charts and perform the following
2) Apply dimension filter, context and measure filter on any of the three visualizations
3) Perform the following data manipulations on your dataset
- create a Hierarchy
- create a set
- create a group

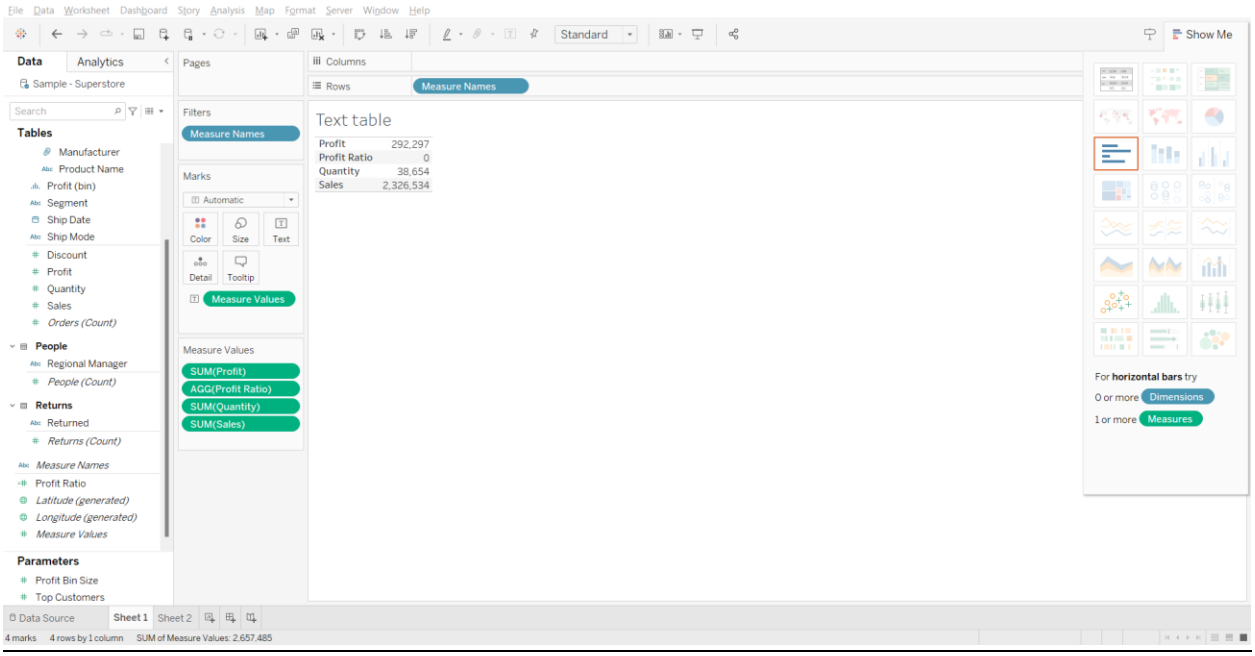
Line Chart




Monthly Sales by Category

The x-axis represents the month and y-axis represents the total sales. By looking at the visualization, we can infer the maximum/minimum sales of each category monthly and draw necessary conclusions.

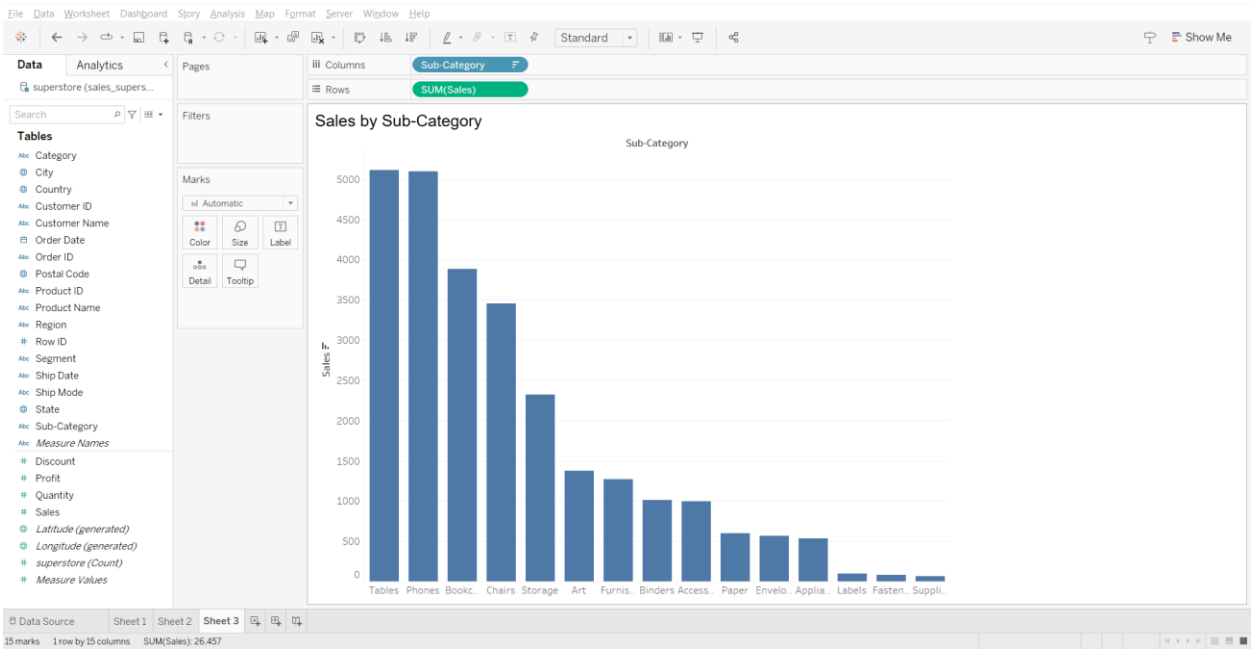
Text table




Text table

Structured representation of data organized in rows and columns using text. Can analyze the profit, profit ratio, quantity and sales.

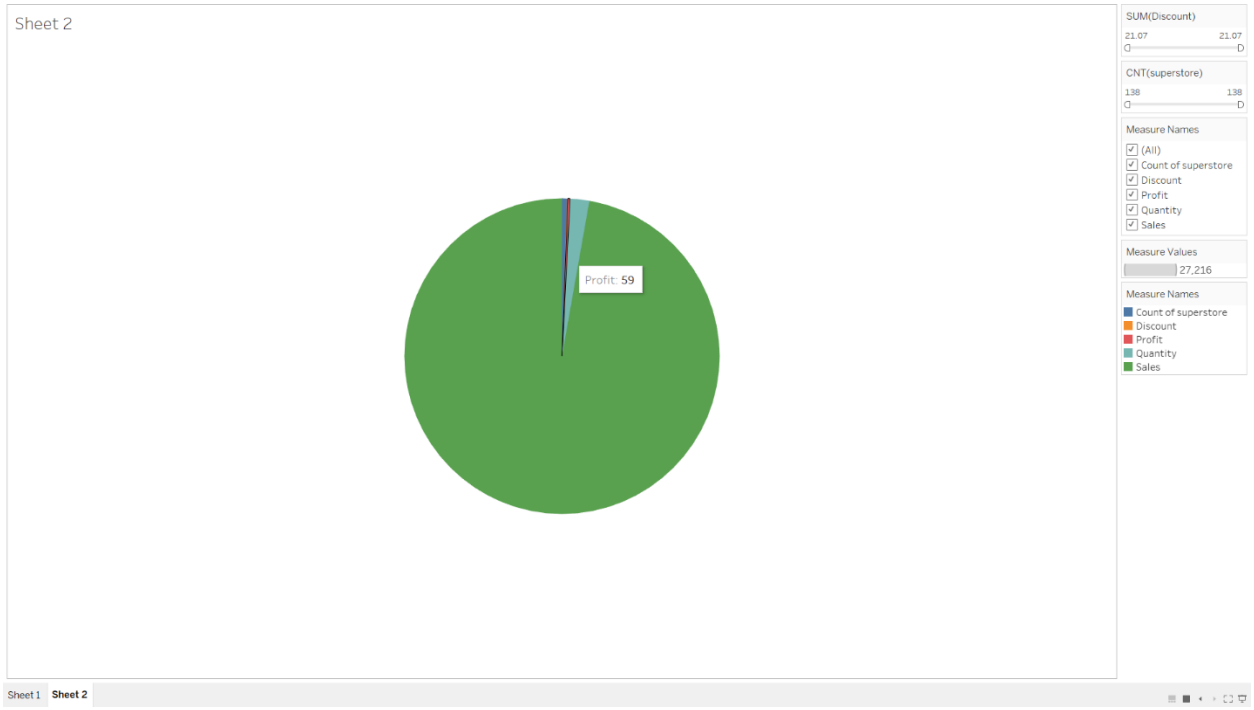
## Bar chart




## Sales by Sub-Category:

Plotting the total sales on the y-axis and the Sub-Category on the x-axis. This bar chart gives insights into which sub-categories generate the most sales, allowing you to identify the most popular product categories.

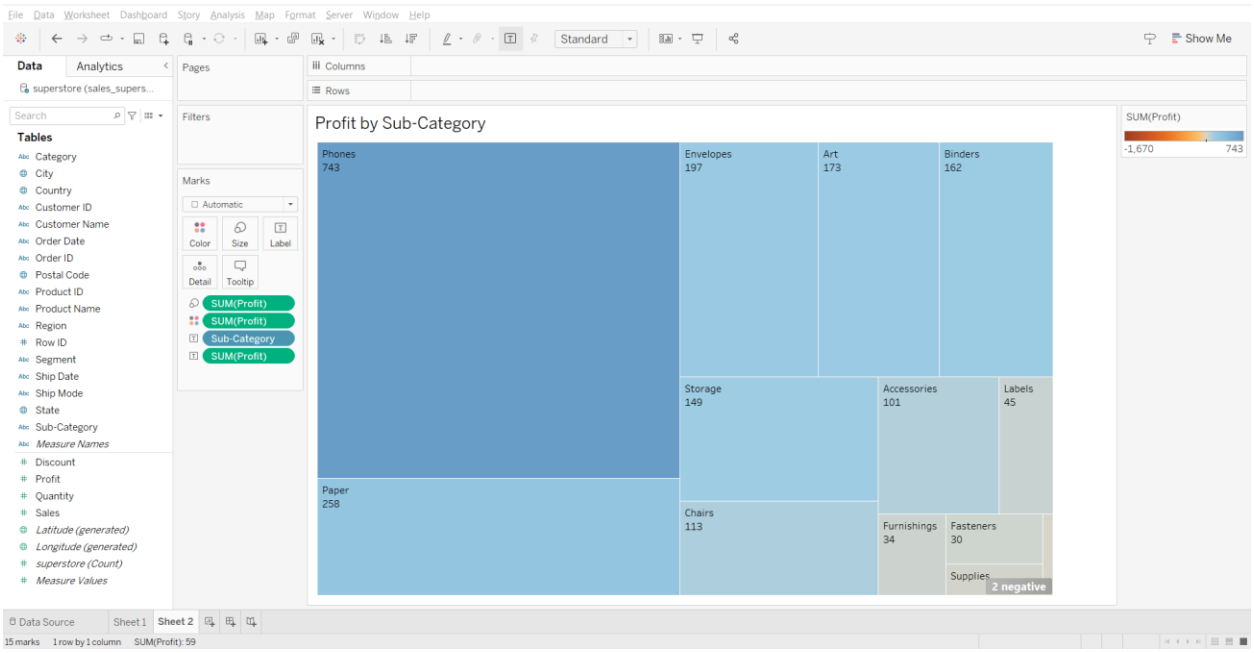
Pie chart




Proportion of Sales by Category:

Each slice represents the proportion of count of the superstore, discount, profit, sales contributed by each category, and quantity. This visualization allows you to see the relative distribution of these factors and identify which categories are more significant in terms of overall superstores.

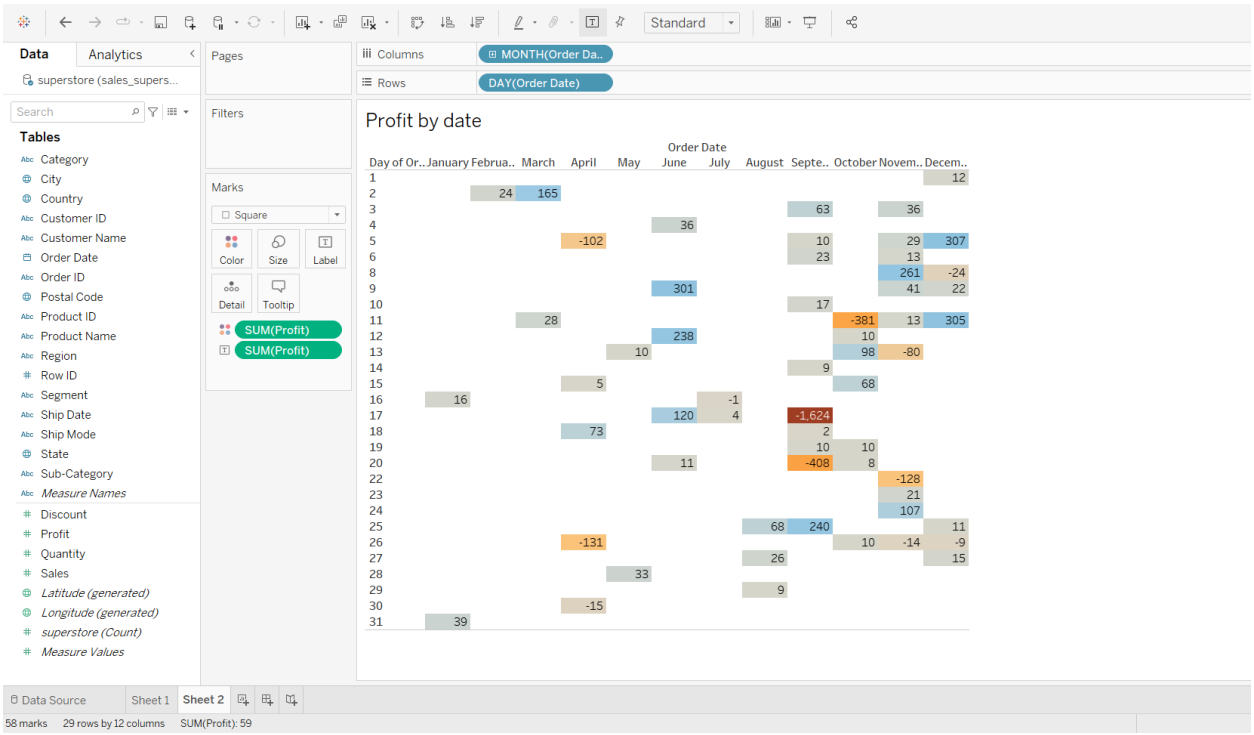
## Tree Map




## Profit by Category and Sub-Category:

The treemap represents the profit generated by each category and sub-category. The size of the rectangles can represent the profit amount, allowing us to identify the most profitable areas of the business.

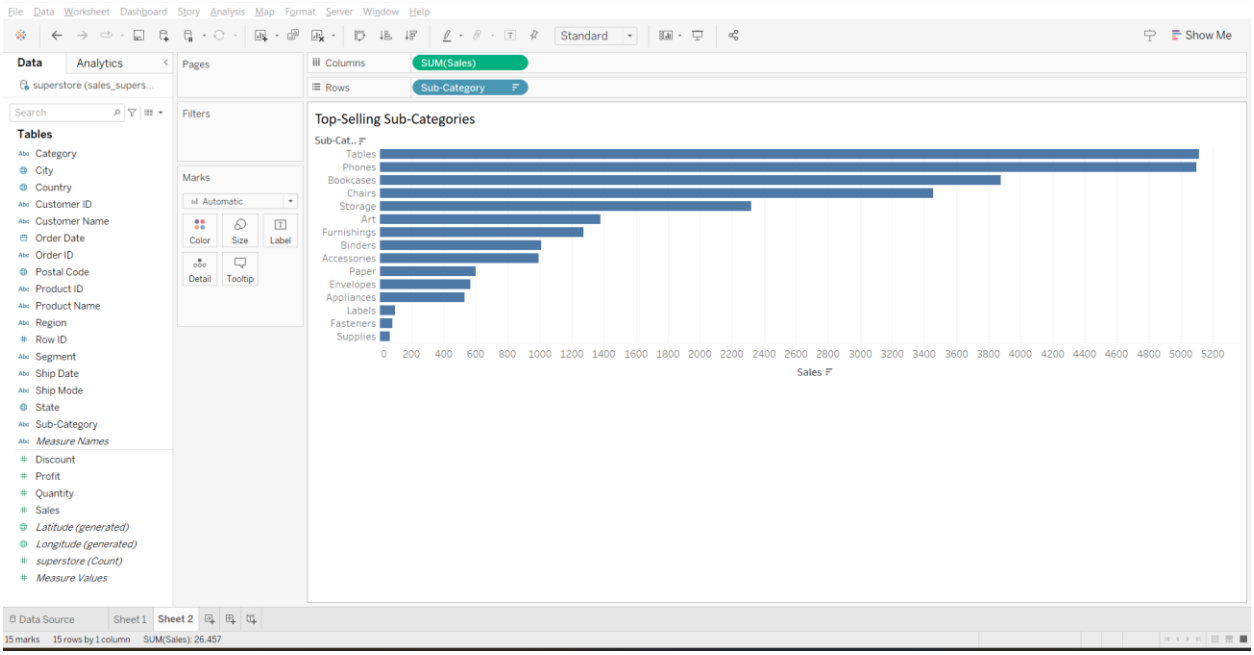
## Heatmap




## Profit by Date:

The heatmap represents the profit values over a period of time. The x-axis can represent the months, the y-axis can represent the days, and the color intensity can depict the profit amount. This analysis helps you identify which day the most profit was generated.

Horizontal bar chart

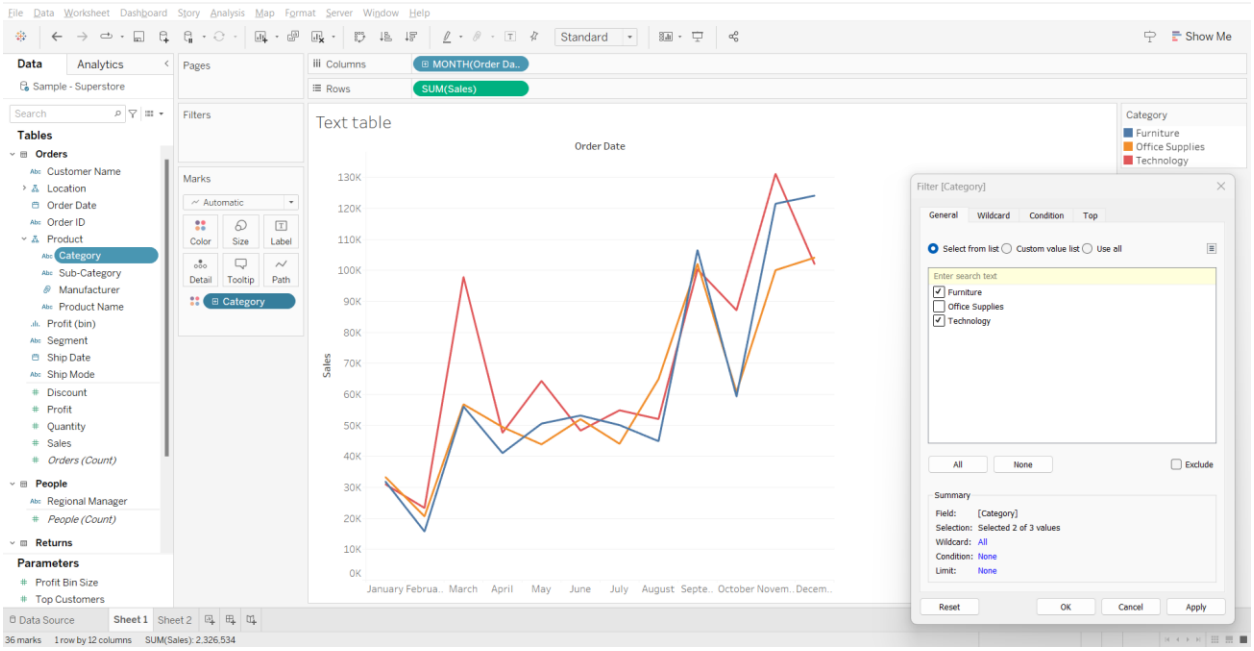


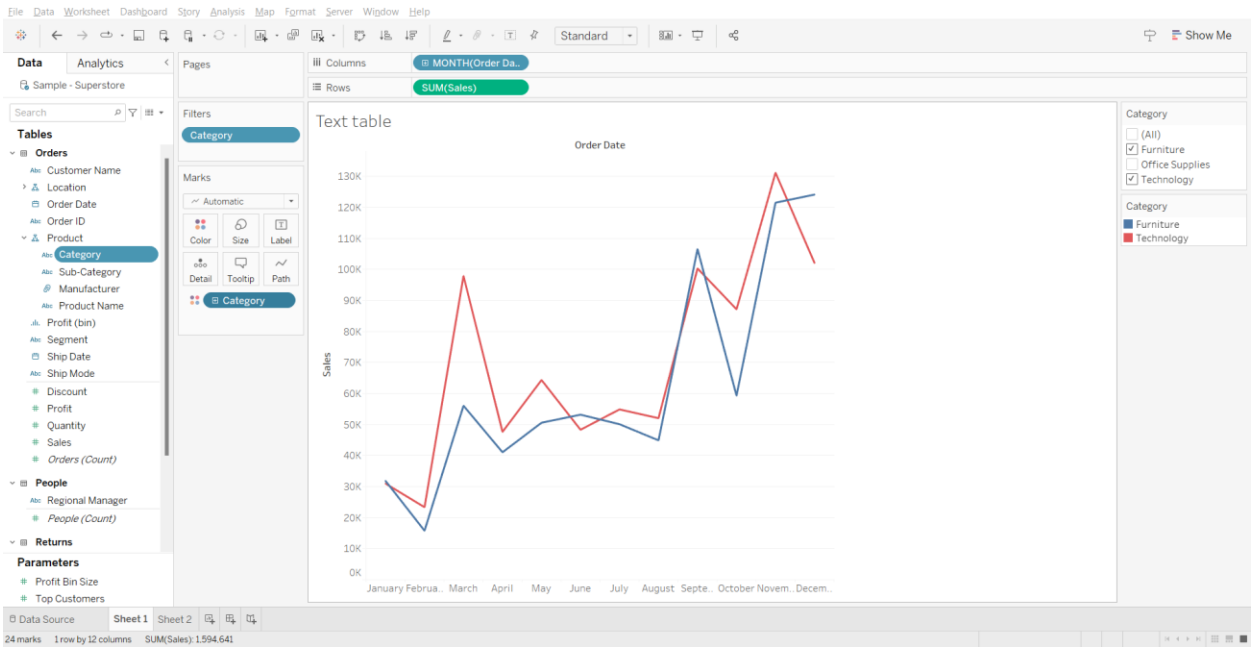

Top-Selling Sub-Categories:

The horizontal bar chart with the y-axis representing different sub-categories and the x-axis representing the total sales. This visualization identifies the top-selling categories and compares their sales performance.

Applying Dimension Filter

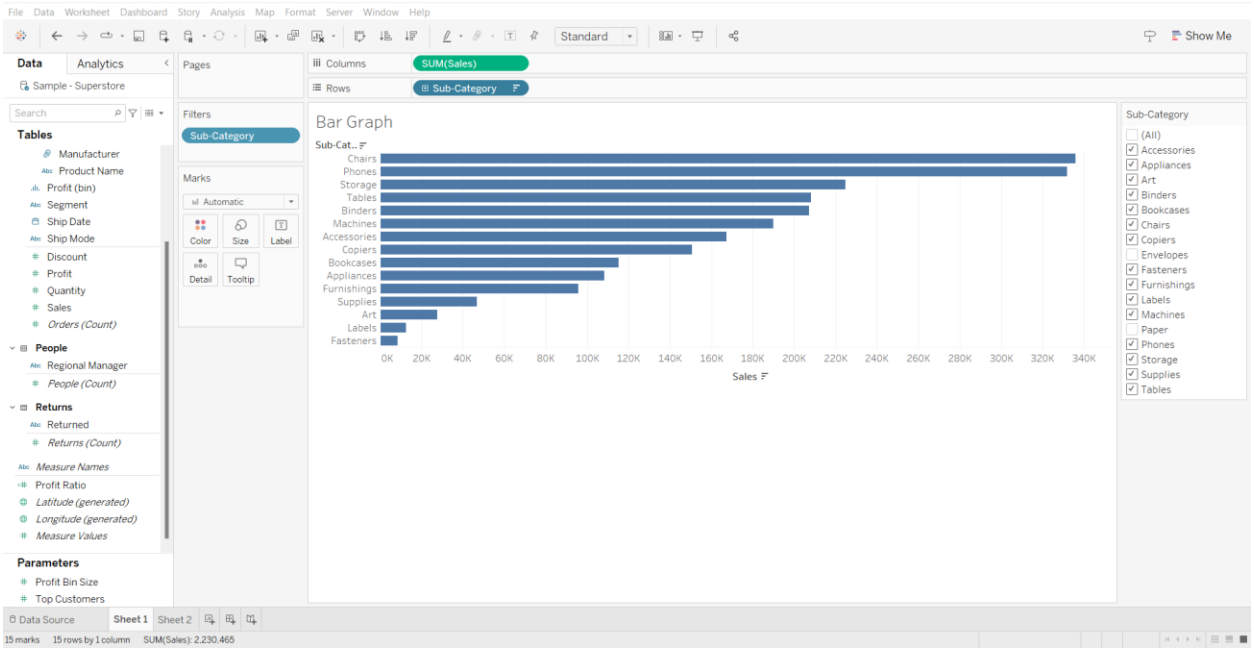
Line Graph



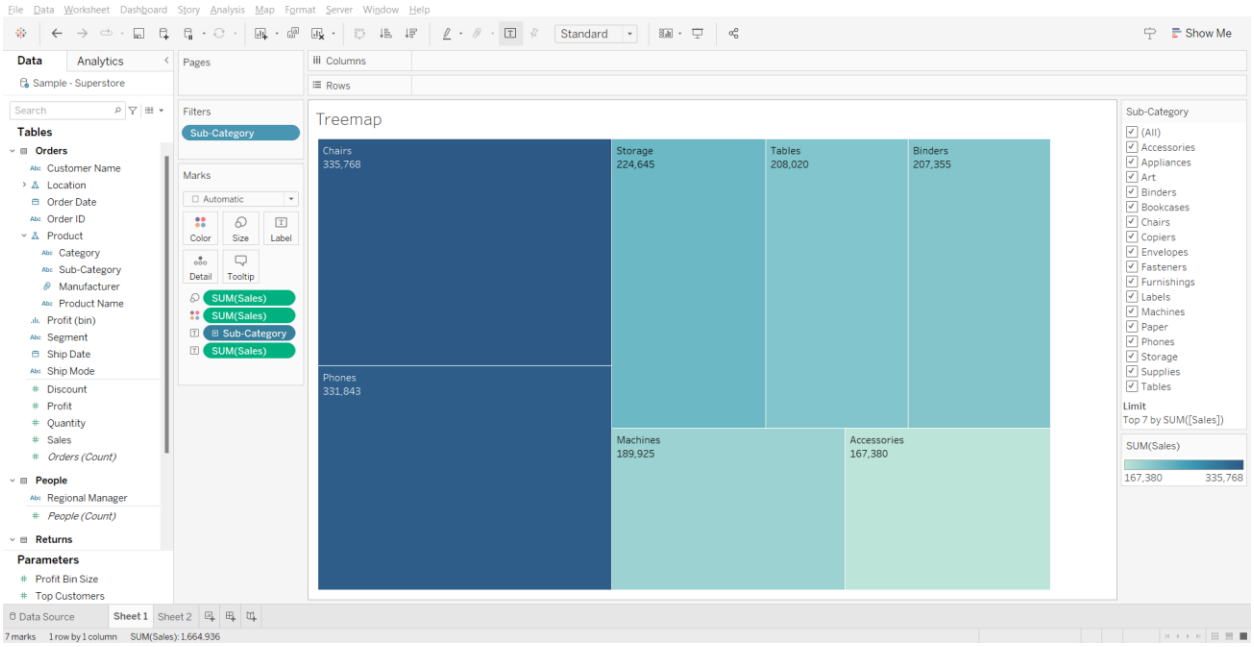

By applying dimension filters, we can focus on specific categories or subsets of data on the line map based on the chosen dimensions.

Bar Graph




Dimension filters enable you to focus on specific categories or subsets of data within the bar chart based on the chosen dimensions.

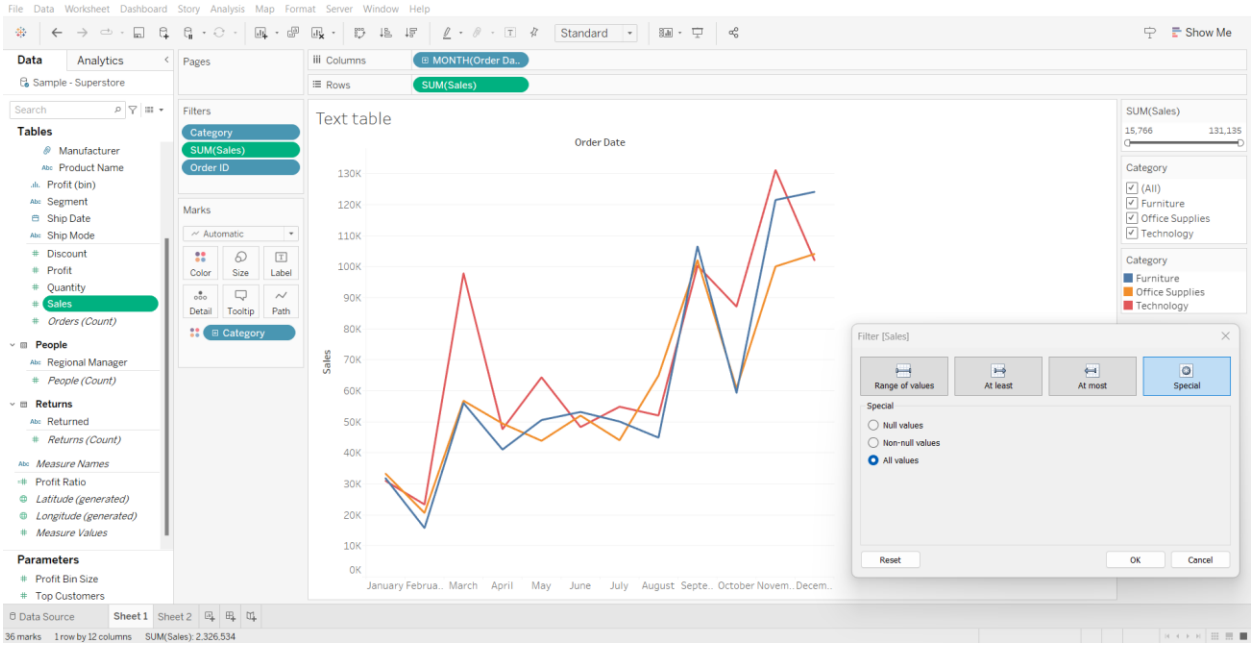
## Treemap




By applying dimension filter on the treemap for Sub-Categories and their Sales, we obtain the top 7 categories with the highest sales.

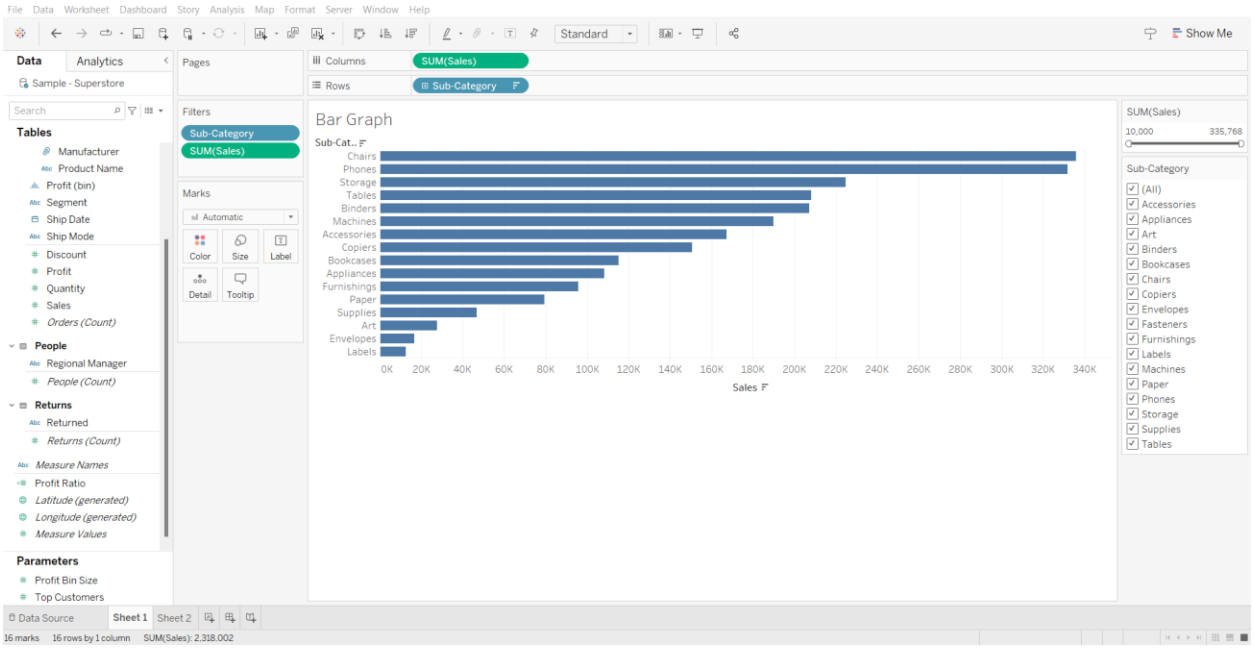
Applying Measure Filter

Line Graph



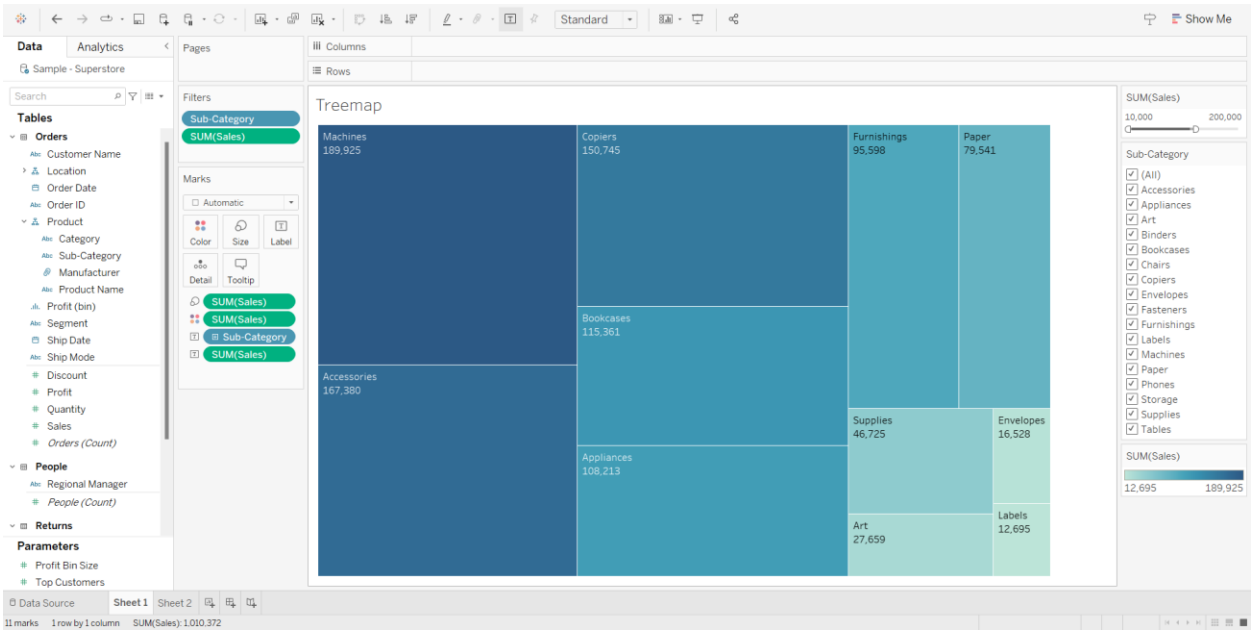

Applying measure filters can help you focus on specific ranges or subsets of data based on the chosen measures.

## Bar Graph




For the bar graph, by applying measures filter, we can obtain the visualization for the values of sales between 10,000 and 335,768.249

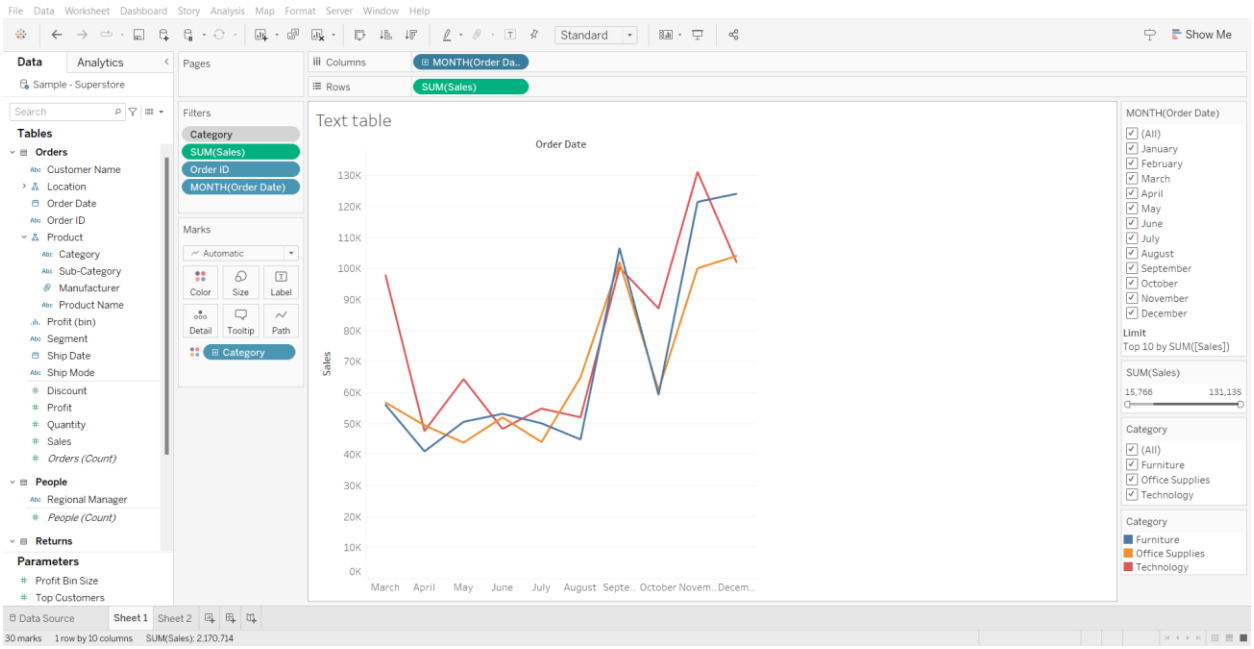
## Treemap




We applied the measures filter to obtain the sales between 10,000 and 200,000. We removed the dimension filter to obtain this output.

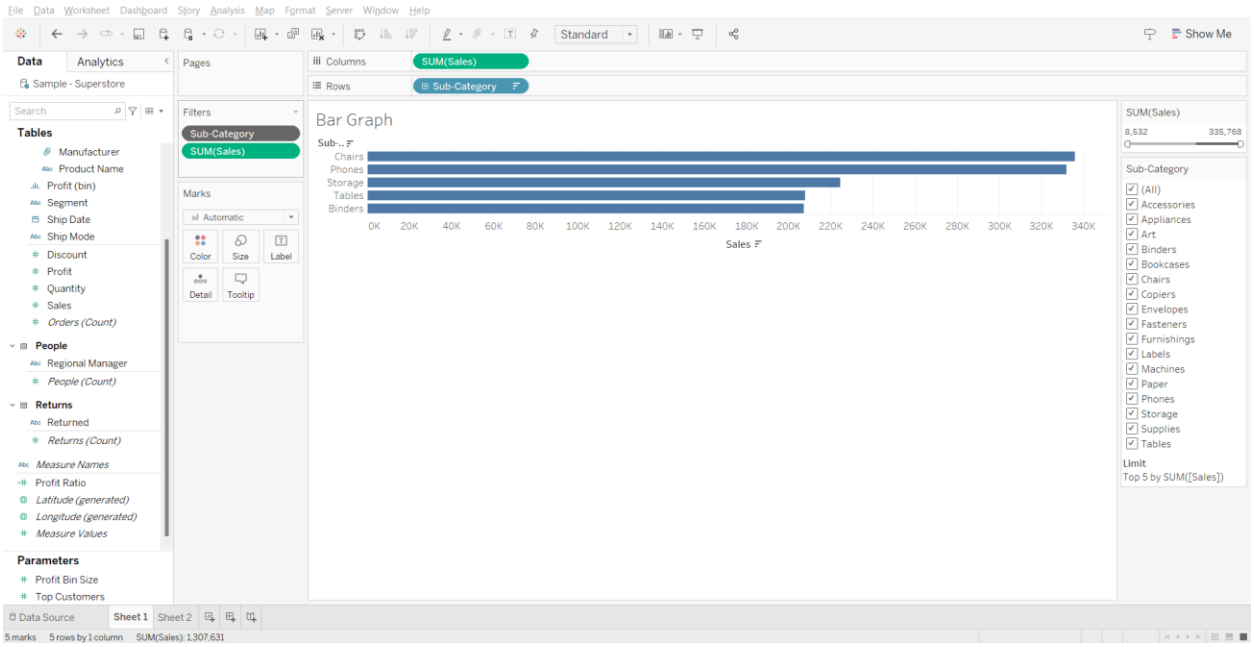
Applying Context Filter

Line Graph



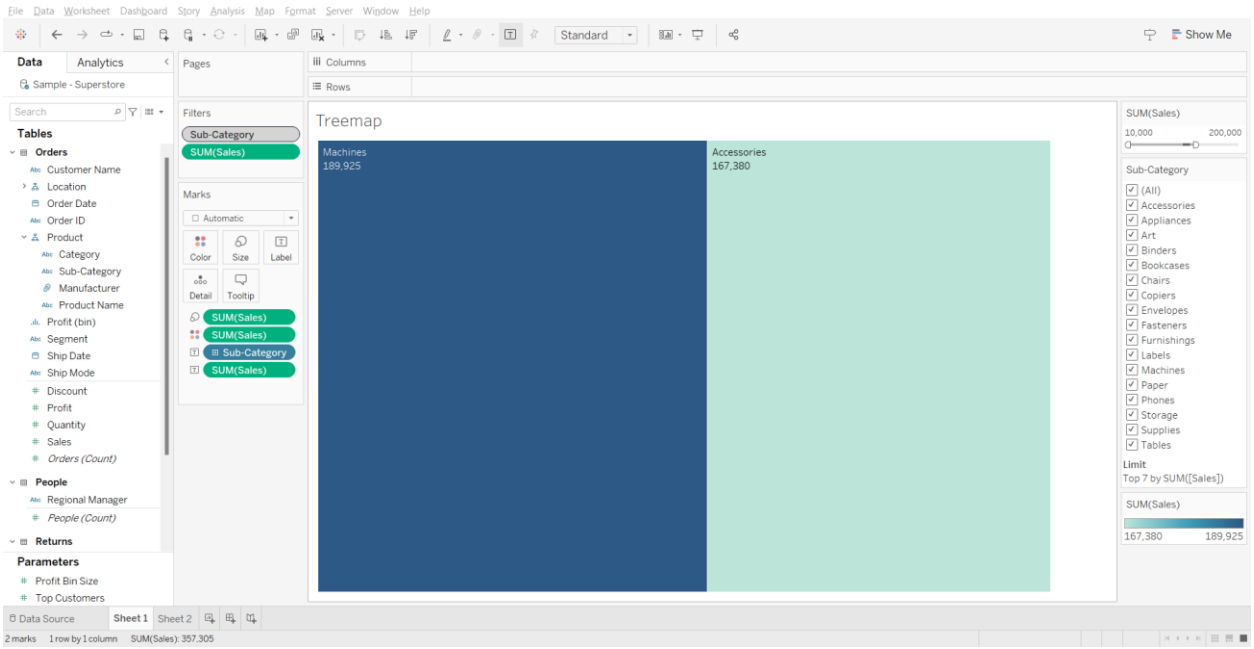

Context filters help you define a specific subset of data that is used as a filter for all the visualizations in the workbook, including the line map.

## Bar Graph




Context filter was added to Sub-Category, filters applied will go through the Sub-Category. Here, we are obtaining the top 5 Sub-Categories based on the sum.

## Treemap




Here, we applied the context filter to Sub-Category. The dimension filter applied was to limit the output to the top 7 Sub-Categories based on the sales values. The measure filter applied sets the range of sales amount between 10,000 and 200,000. Since the context filter is applied to the Sub-Categories (dimension), the output obtained will have the given visualization, from which we can infer that Machines and Accessories are in the top 7 sub-categories by sales having sales values between 10,000 and 200,000.

Hierarchy

Creating custom hierarchies based on specific needs, this is particularly useful when you want to define hierarchies for dimensions that are not automatically recognized. Here, we created the hierarchy “Product” with Category -> Sub-Categories -> Manufacturer -> Product Name

Select the dimensions wanted to include in the hierarchy from the Dimensions pane.

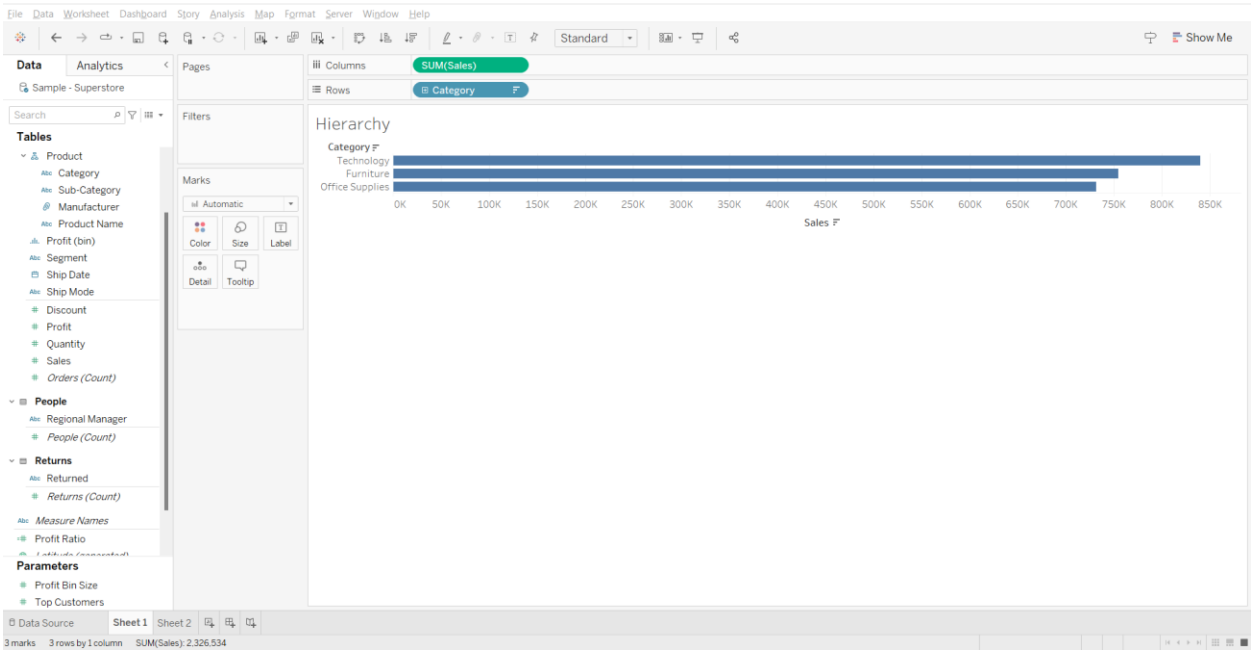
Right-click on the selected dimensions and choose "Create Hierarchy."

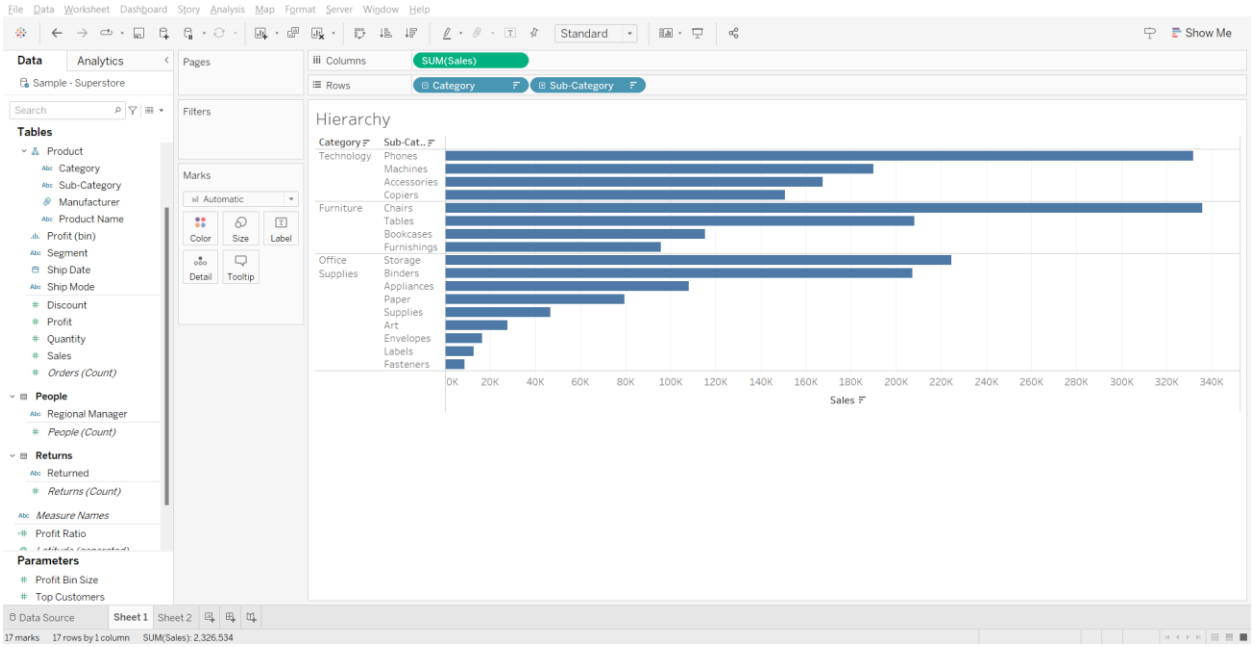
Give the hierarchy a name and arrange the dimensions in the desired order.

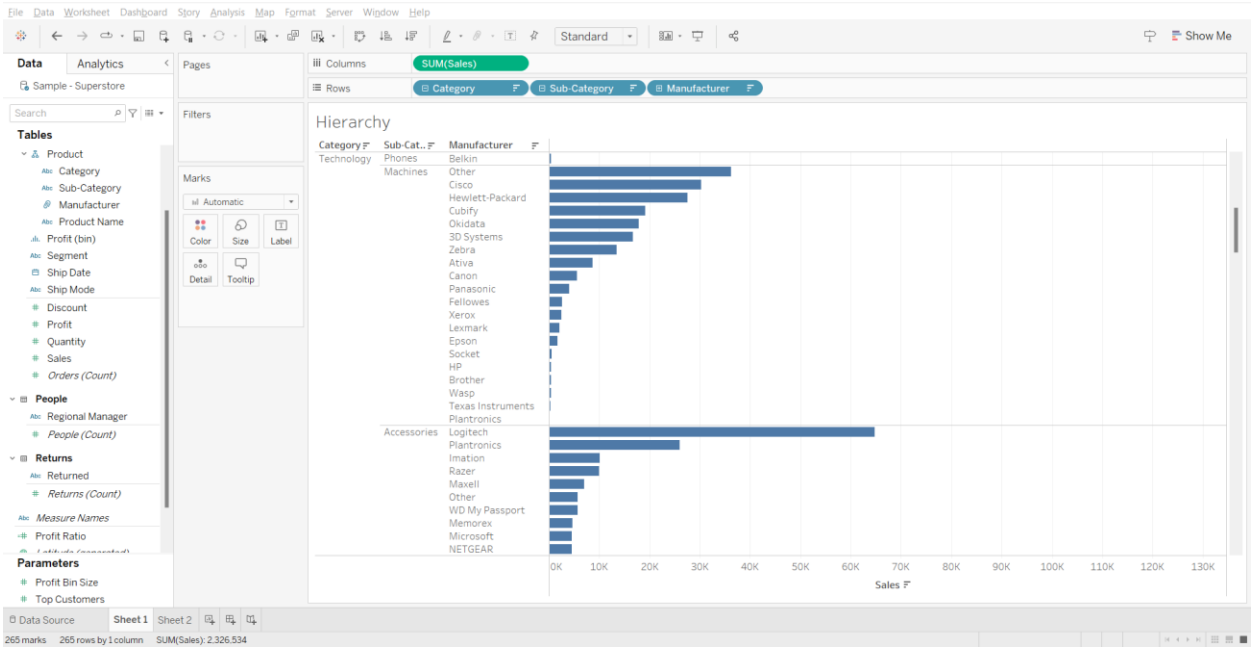
Click on "OK" to create the custom hierarchy.

Once created, we can use the custom hierarchy by dragging and dropping it onto the view.

Expanding or collapsing different levels of the hierarchy to show or hide the underlying data. This allows you to control the level of detail displayed in your visualizations:




File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Standard
Show Me
Data
Analytics
Sample - Superstore
Search
Tables
Product
Category
Sub-Category
Manufacturer
Product Name
Profit (bin)
Segment
Ship Date
Ship Mode
Discount
Profit
Quantity
Sales
Orders (Count)
People
Regional Manager
People (Count)
Returns
Returned
Returns (Count)
Measure Names
Profit Ratio
Parameters
Profit Bin Size
Top Customers
Pages
Filters
Marks
Automatic
Color
Size
Label
Detail
Tooltip
Columns
SUM(Sales)
Rows
Category
Sub-Category
Hierarchy
Category
Sub-Cat..
Technology
Phones
Machines
Accessories
Copiers
Furniture
Chairs
Tables
Bookcases
Furnishings
Office Supplies
Storage
Binders
Appliances
Paper
Supplies
Art
Envelopes
Labels
Fasteners
0K 20K 40K 60K 80K 100K 120K 140K 160K 180K 200K 220K 240K 260K 280K 300K 320K 340K
Sales
Data Source
Sheet 1
Sheet 2
17 marks
17 rows by 1 column
SUM(Sales): 2,326,534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Standard
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Manufacturer
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Profit (bin)
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Regional Manager
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Rows
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Manufacturer
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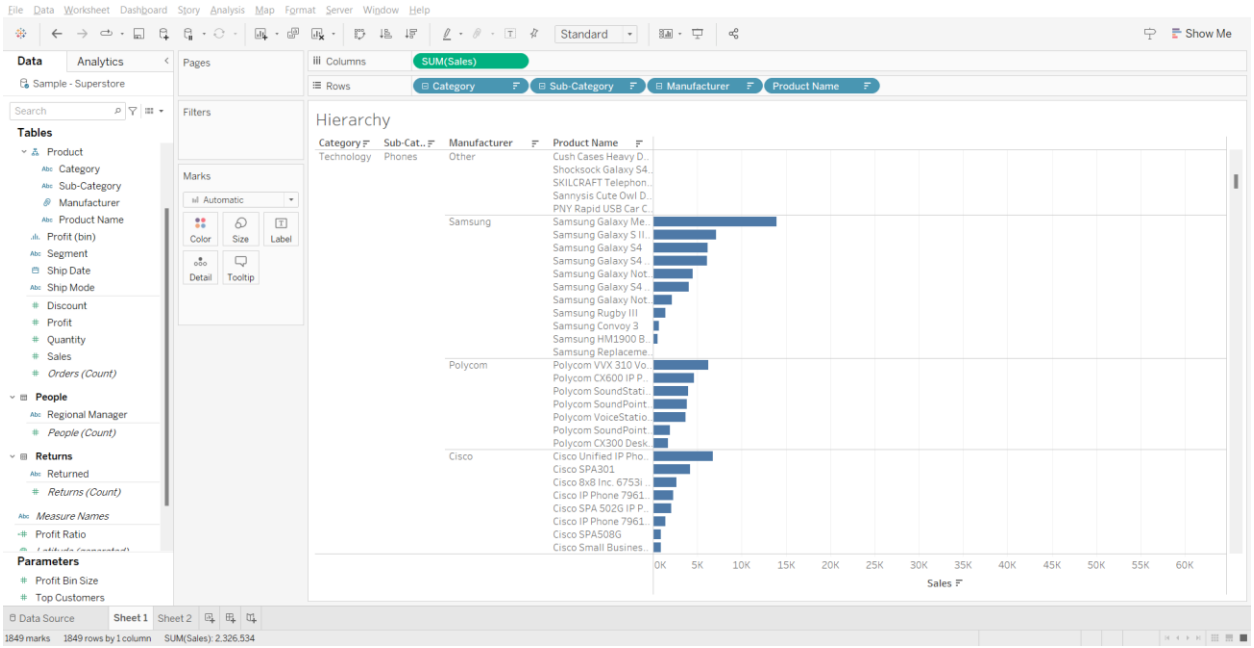
Sub-Cat..
Manufacturer
Technology
Phones
Belkin
Machines
Other
Cisco
Hewlett-Packard
Cubify
Okidata
3D Systems
Zebra
Ativa
Canon
Panasonic
Fellowes
Xerox
Lexmark
Epson
Socket
HP
Brother
Wasp
Texas Instruments
Plantronics
Accessories
Logitech
Plantronics
Imation
Razer
Maxell
Other
WD My Passport
Memorex
Microsoft
NETGEAR
0K 10K 20K 30K 40K 50K 60K 70K 80K 90K 100K 110K 120K 130K
Sales
Data Source
Sheet 1
Sheet 2
265 marks
265 rows by 1 column
SUM(Sales): 2,326,534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Measure Names
Profit Ratio
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Pages
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Automatic
Color
Size
Label
Detail
Tooltip
Columns
SUM(Sales)
Rows
Category
Sub-Category
Manufacturer
Product Name
Hierarchy
Category
Sub-Cat..
Manufacturer
Product Name
Technology
Phones
Other
Cush Cases Heavy D..
Shocksock Galaxy S4..
SKILCRAFT Telephon..
Sannysis Cute Owl D..
PNY Rapid USB Car C..
Samsung
Samsung Galaxy Me..
Samsung Galaxy S II..
Samsung Galaxy S4
Samsung Galaxy S4 ..
Samsung Galaxy Not..
Samsung Galaxy S4 ..
Samsung Galaxy Not..
Samsung Rugby III
Samsung Convoy 3
Samsung HM1900 B..
Samsung Replaceme..
Polycom
Polycom VVX 310 Vo..
Polycom CX600 IP P..
Polycom SoundStati..
Polycom SoundPoint..
Polycom VoiceStatio..
Polycom SoundPoint..
Polycom CX300 Desk..
Cisco
Cisco Unified IP Pho..
Cisco SPA301
Cisco 8x8 Inc. 6753i ..
Cisco IP Phone 7961..
Cisco SPA 502G IP P..
Cisco IP Phone 7961..
Cisco SPA508G
Cisco Small Busines..
0K 5K 10K 15K 20K 25K 30K 35K 40K 45K 50K 55K 60K
Sales
Data Source
Sheet 1
Sheet 2
1849 marks
1849 rows by 1 column
SUM(Sales): 2,326,534

Creating Sets

Sets are custom subsets of data that you can create based on specific conditions or criteria, here we are creating a set for the top 4 sub-categories by sale values.

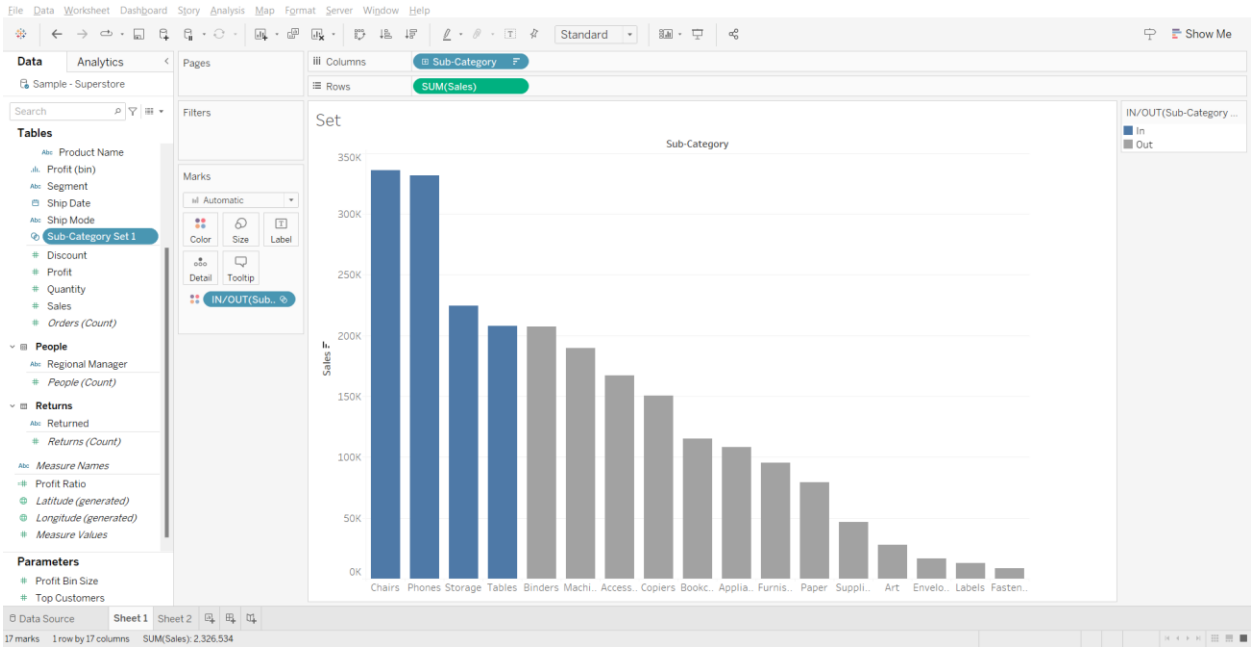
Select the dimension field, Sub-Category, to create a set from and drag it to the "Marks" card or the "Data" pane.

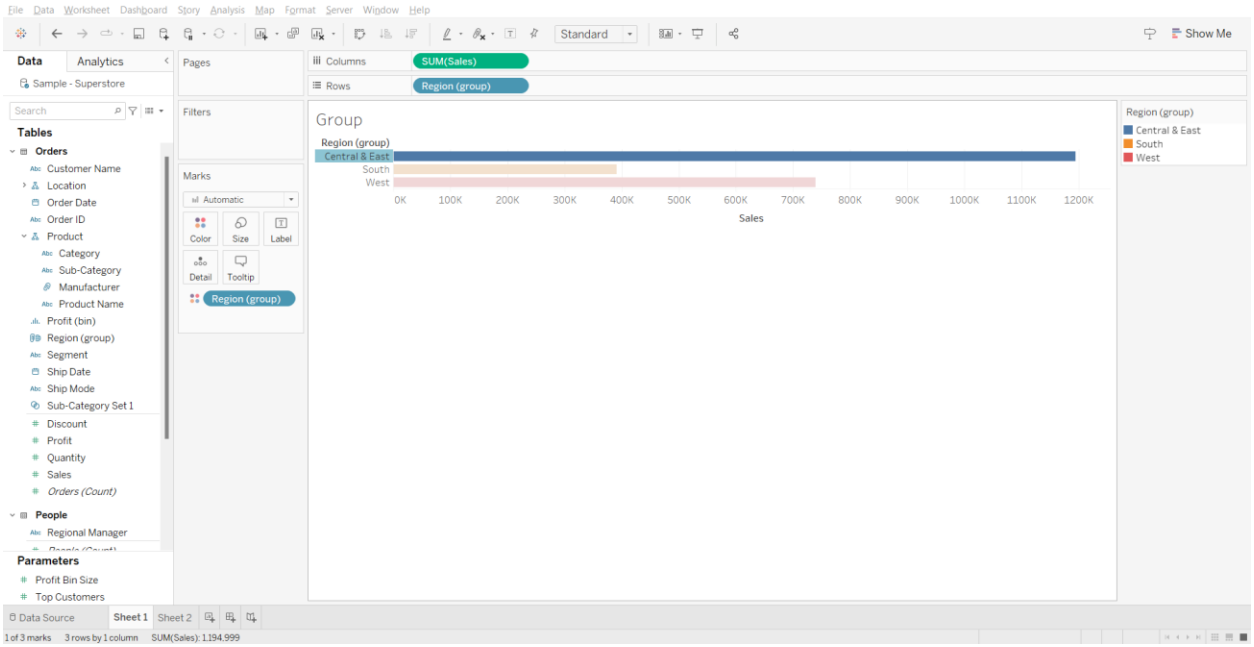
Right-click on the dimension field and choose "Create Set."

In the "Create Set" dialog box, specify the conditions or criteria for the set, top 4 values by sales.

Give the set a name, Sub Category Set 1 and click on "OK" to create the set.

The set will appear in the "Data" pane under the "Sets" section.



## Creating groups

Groups allow you to combine related dimension members into higher-level categories or clusters for easier analysis and visualization. Grouping helps you simplify complex data and focus on specific subsets. Here, we have grouped Central and East locations and compared them with South and West using a bar graph.