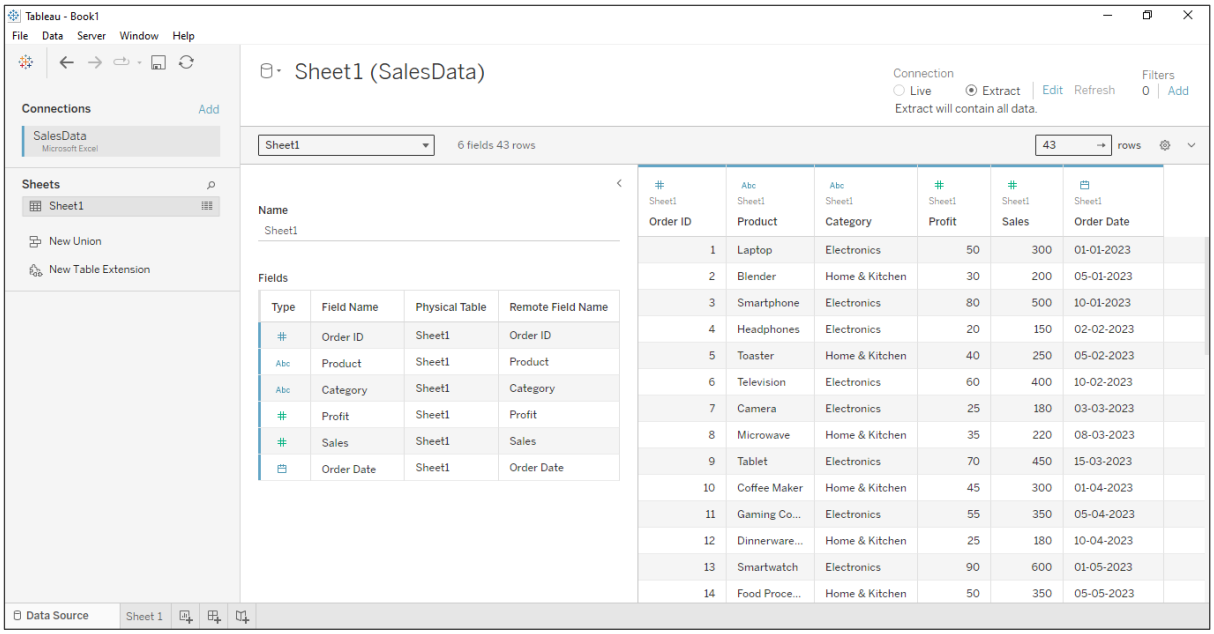
Answer Key

1. Import the SalesData.xlsx dataset into Tableau

- Open Tableau Desktop; click on **Connect** and select **Microsoft Excel**
- Navigate to the location of **SalesData.xlsx** and select it
- Verify that the data types are correctly interpreted and adjust if needed

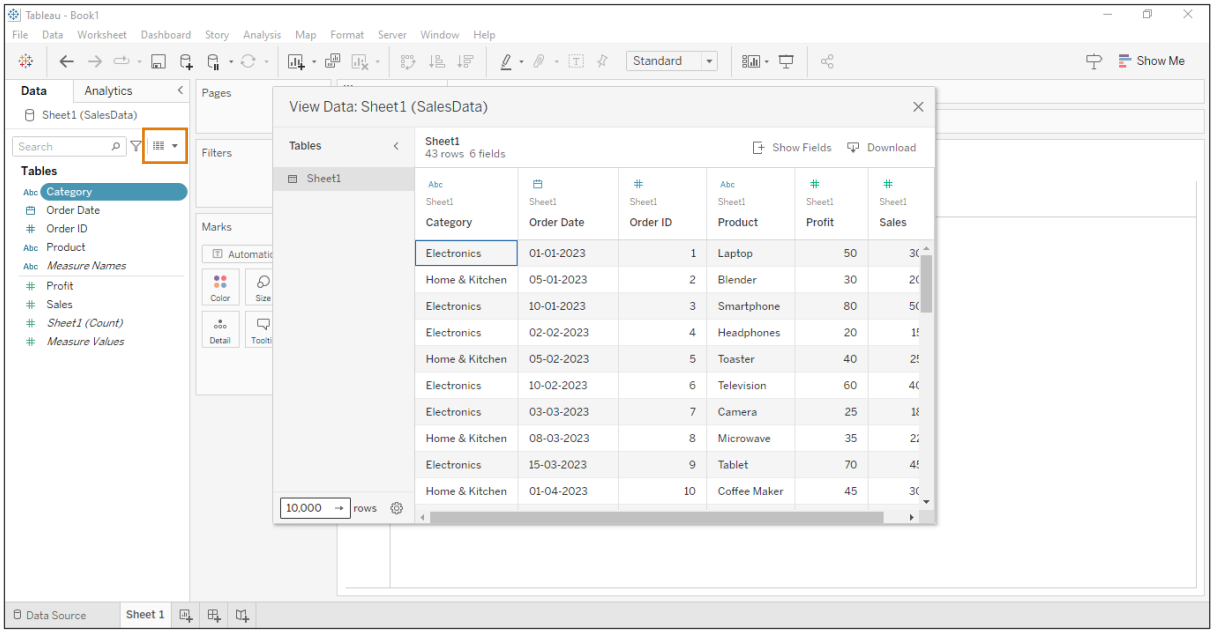
Output:



2. Explore the dataset to understand its structure and contents

- Examine the fields in the Data pane to understand the columns available
- Click on the **View Data** to get a better understanding of each category

Output:



3. Create calculated fields for the following metrics

- Navigate to the Data pane and right-click to select **Create Calculated Field**
- For Profit margin: enter the formula **(SUM([Profit]) / SUM([Sales])) * 100**
- For Sales growth rate: enter the formula **((SUM([Sales]) - LOOKUP(SUM([Sales]), -1)) / LOOKUP(SUM([Sales]), -1)) * 100**
- For Average order value: enter the formula **SUM([Sales]) / COUNTD([Order ID])**

Output:

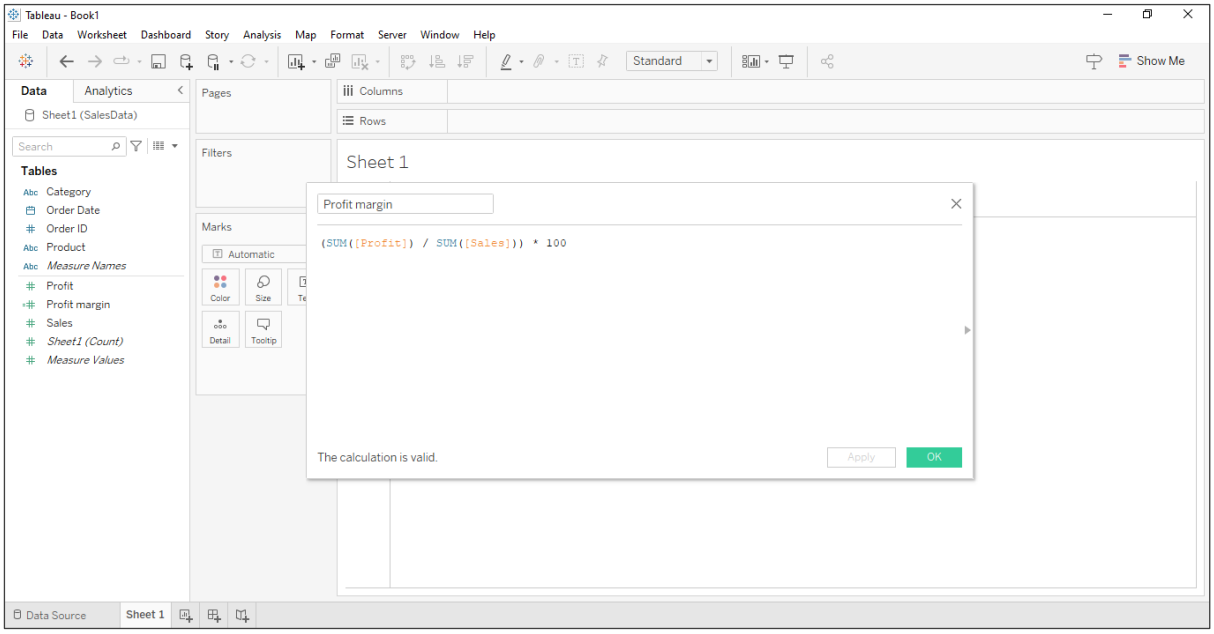
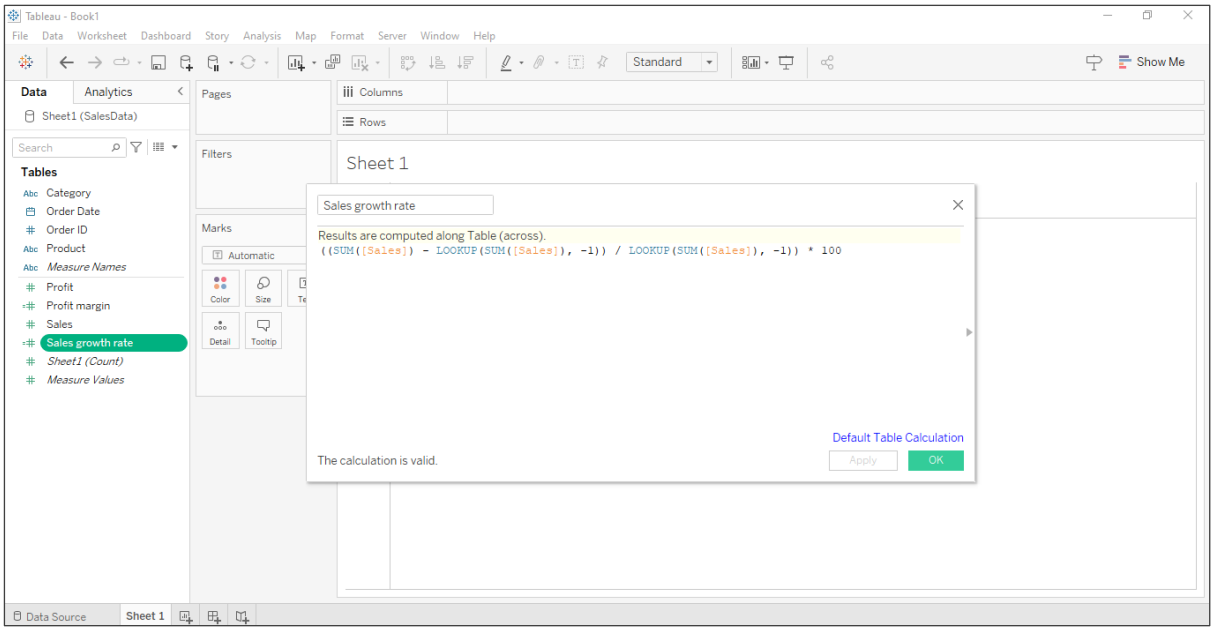


Tableau - Book1
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Standard
Show Me
Data
Analytics
Sheet1 (SalesData)
Search
Tables
Abc Category
Order Date
Order ID
Abc Product
Abc Measure Names
Profit
Profit margin
Sales
Sheet1 (Count)
Measure Values
Pages
Columns
Rows
Filters
Sheet 1
Marks
Automatic
Color
Size
Detail
Tooltip
Profit margin
(SUM([Profit]) / SUM([Sales])) * 100
The calculation is valid.
Apply
OK
Data Source
Sheet 1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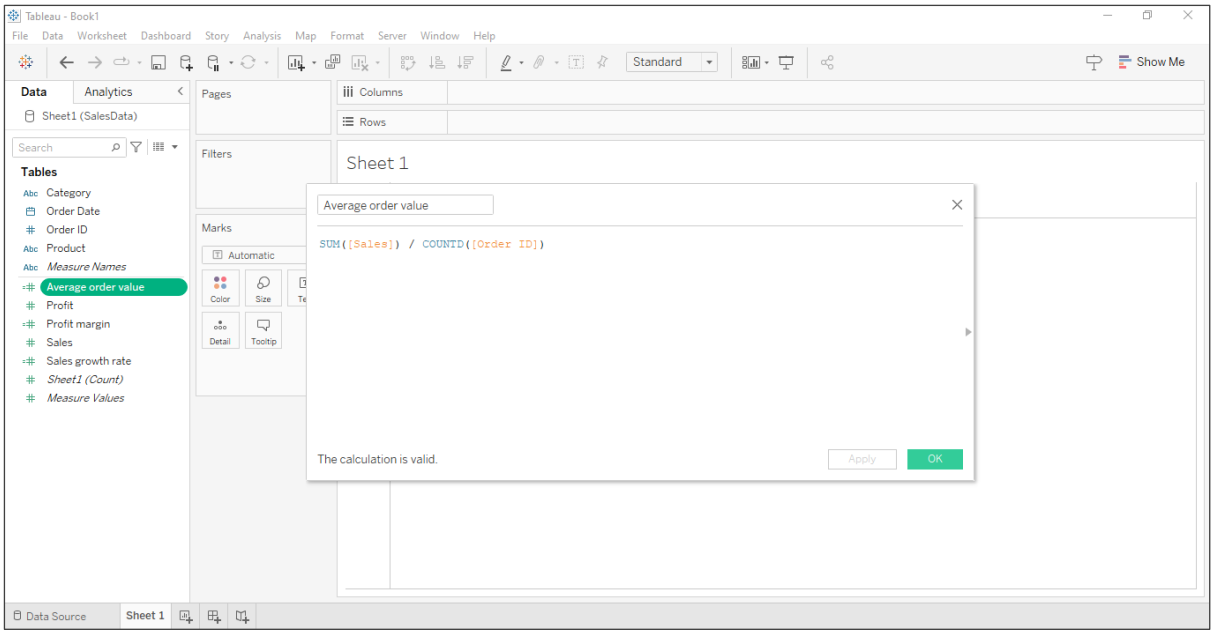
Sales
Sales growth rate
Sheet1 (Count)
Measure Values
Pages
Columns
Rows
Filters
Sheet 1
Marks
Automatic
Color
Size
Detail
Tooltip
Sales growth rate
Results are computed along Table (across).
((SUM([Sales]) - LOOKUP(SUM([Sales]), -1)) / LOOKUP(SUM([Sales]), -1)) * 100
Default Table Calculation
The calculation is valid.
Apply
OK
Data Source
Sheet 1

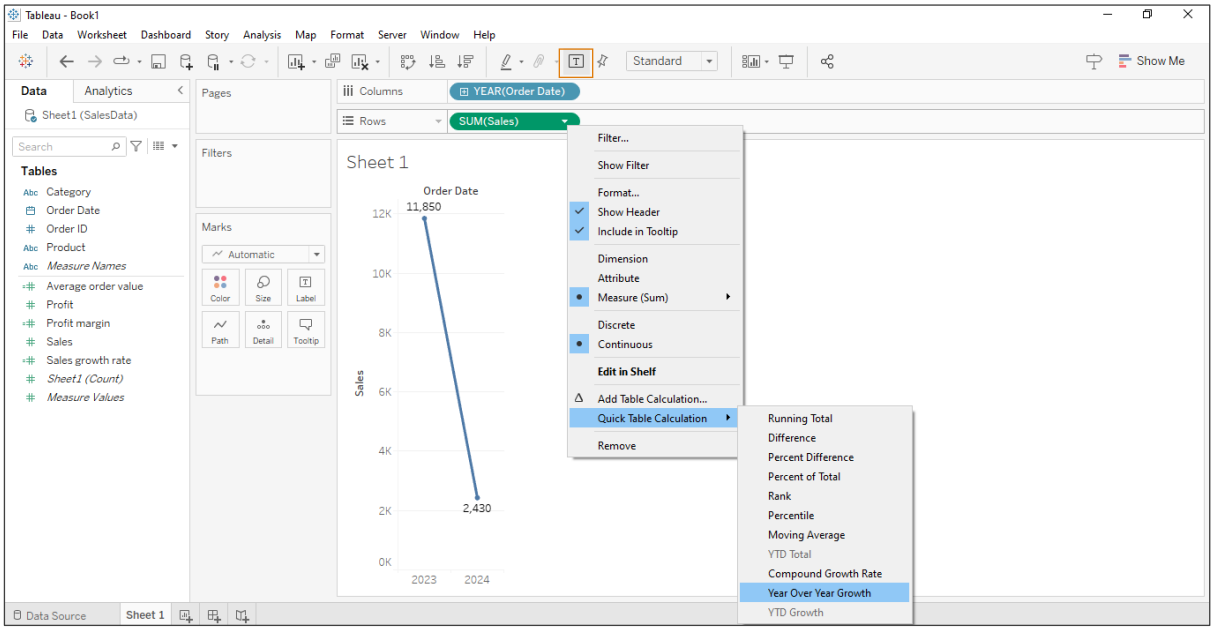


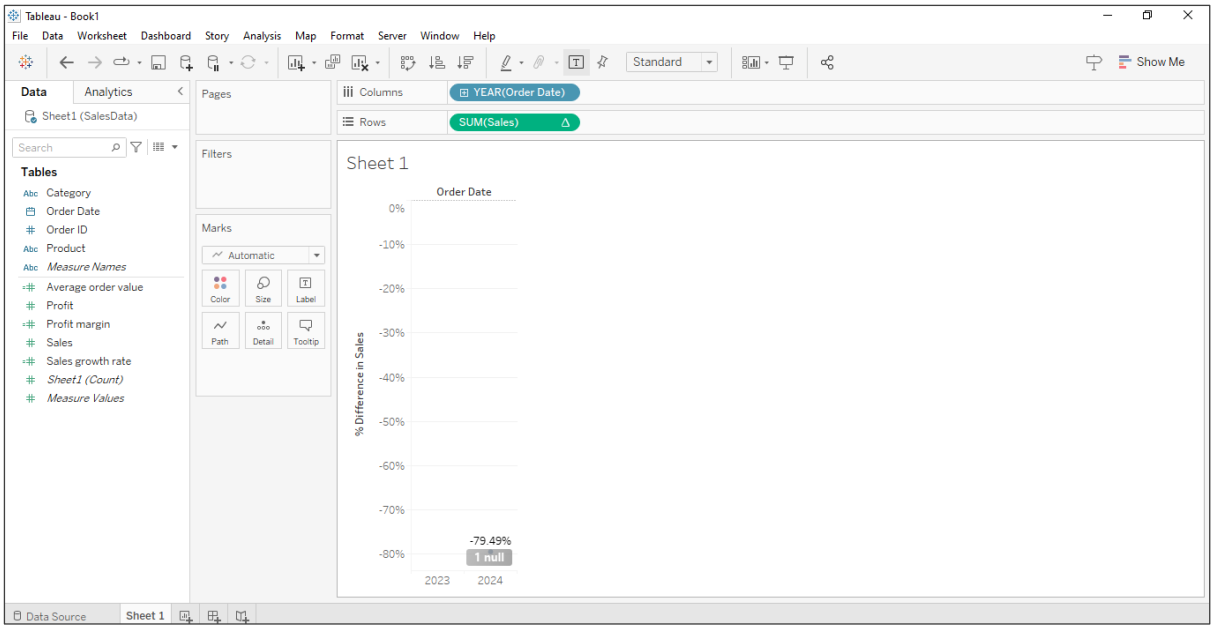
4. Utilize table calculations to perform the following analyses

For year-over-year (YoY) growth:

- Drag **Order Date** to **Columns** and **Sales** to **Rows**
- Right-click on **Sales** on the **Rows** shelf and select **Quick Table Calculation** and then choose **Year Over Year Growth**
- Click on **Text** label present above the **Columns** shelf

Output:

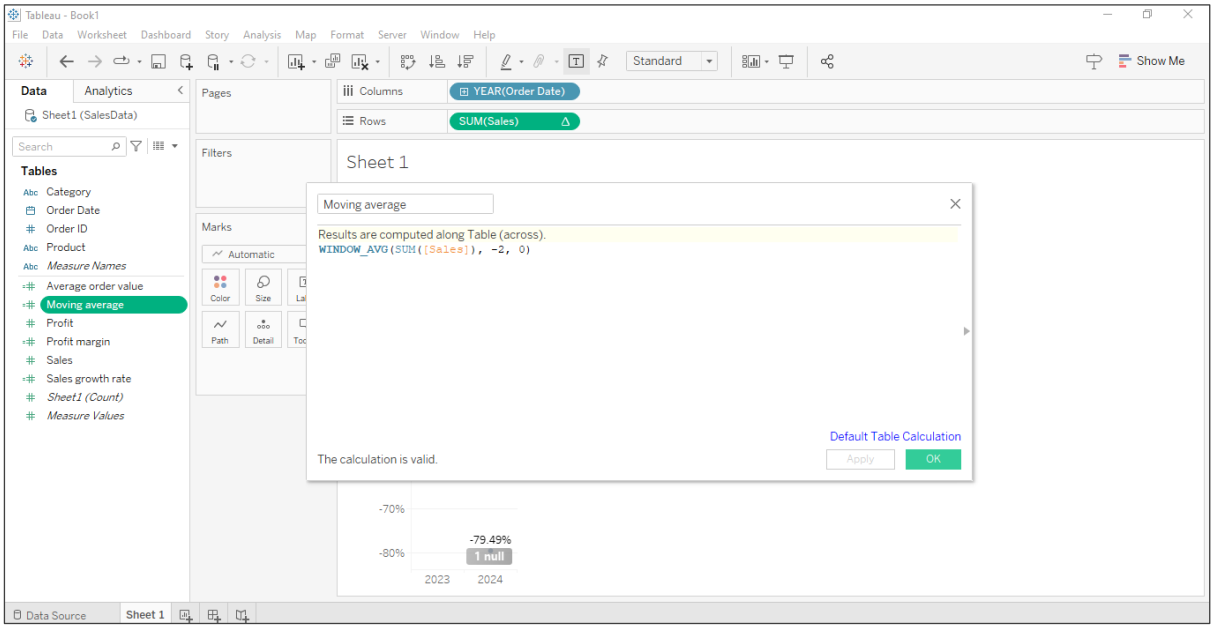


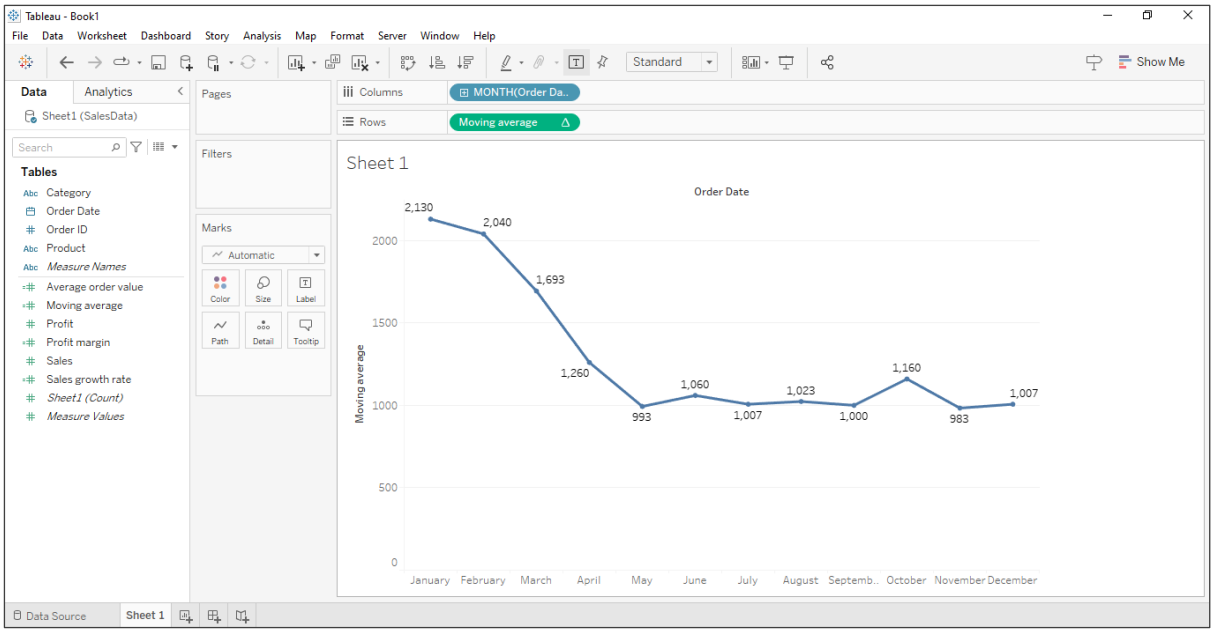


For moving average:

- Create a calculated field for moving average: **WINDOW_AVG(SUM([Sales]), -2, 0)**
- Drag this calculated field (**Moving average**) into the **Rows** and adjust the date granularity as **month**

Output:

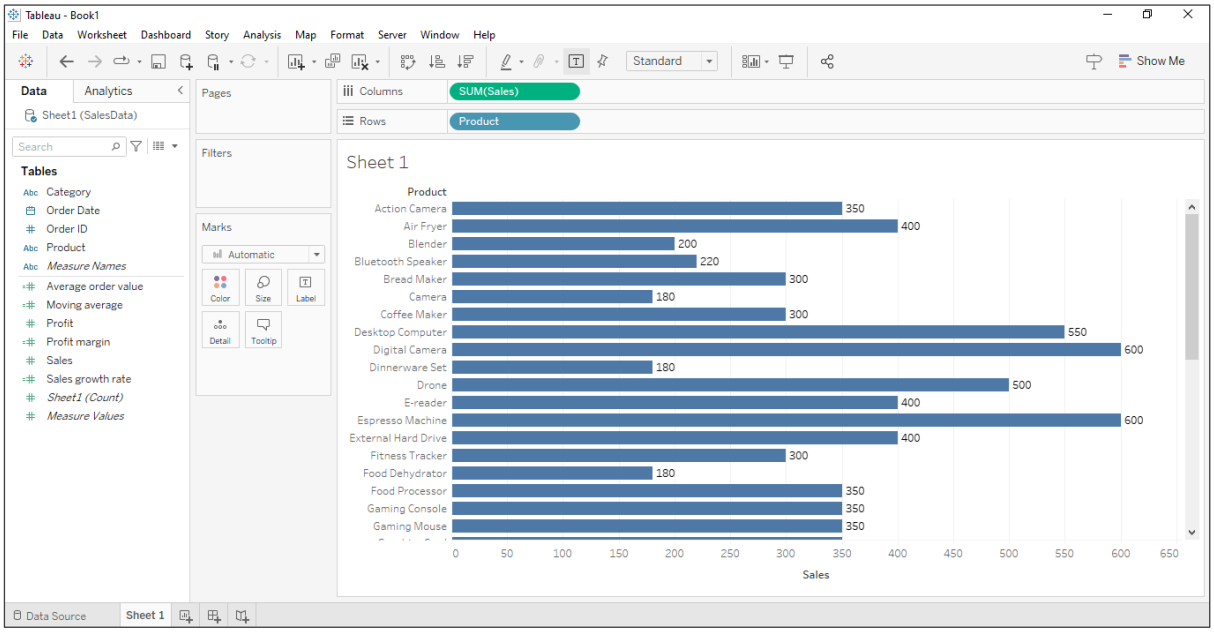


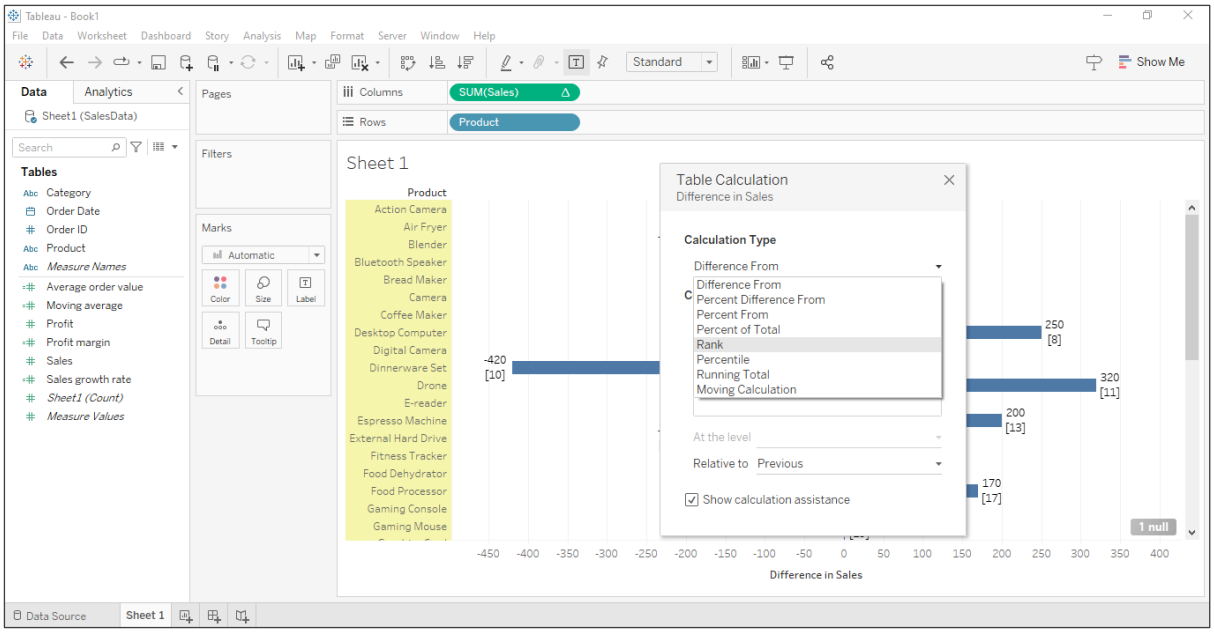


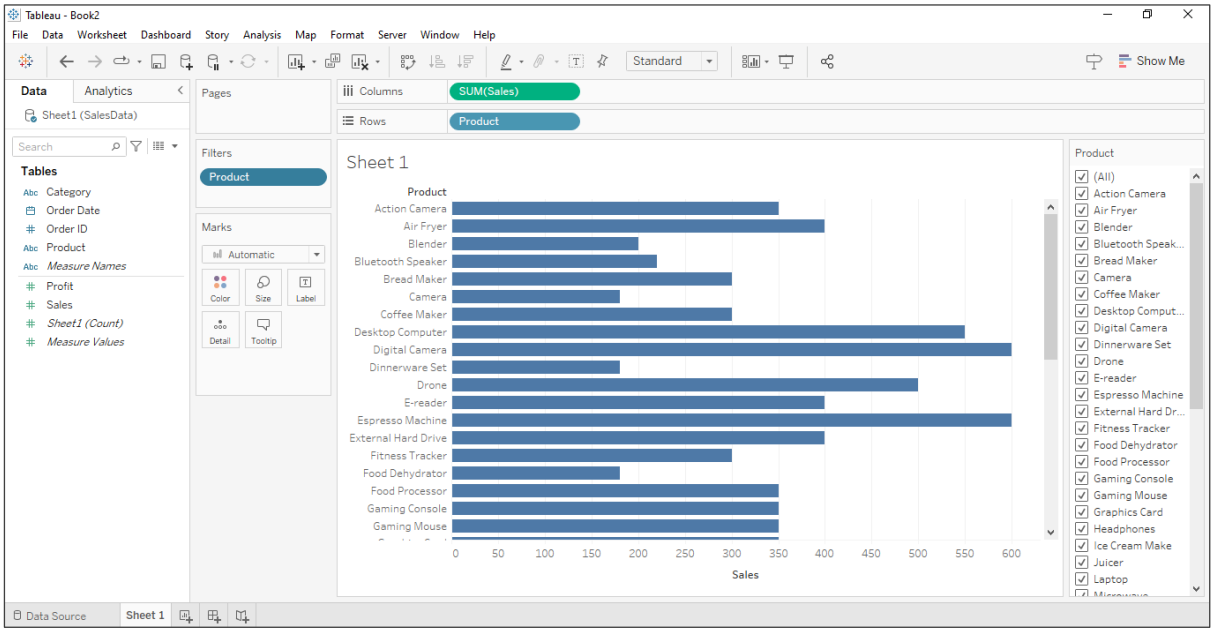
For sales rank:

- Drag **Product** to **Rows** and **Sales** to **Columns**
- Right-click on **Sales** on the **Columns** shelf and select **Add Table Calculation**. Choose **Rank** as the calculation type and configure settings as desired.
- Apply filters to focus on specific categories of **Product** and observe their rankings

Output:







5. Create additional visualizations to explore other aspects of the dataset

- From the **Marks** card, generate **bar chart**, **line graph**, or **scatter plot** to visualize trends over time
- Create **map** to identify regional sales patterns

Output:

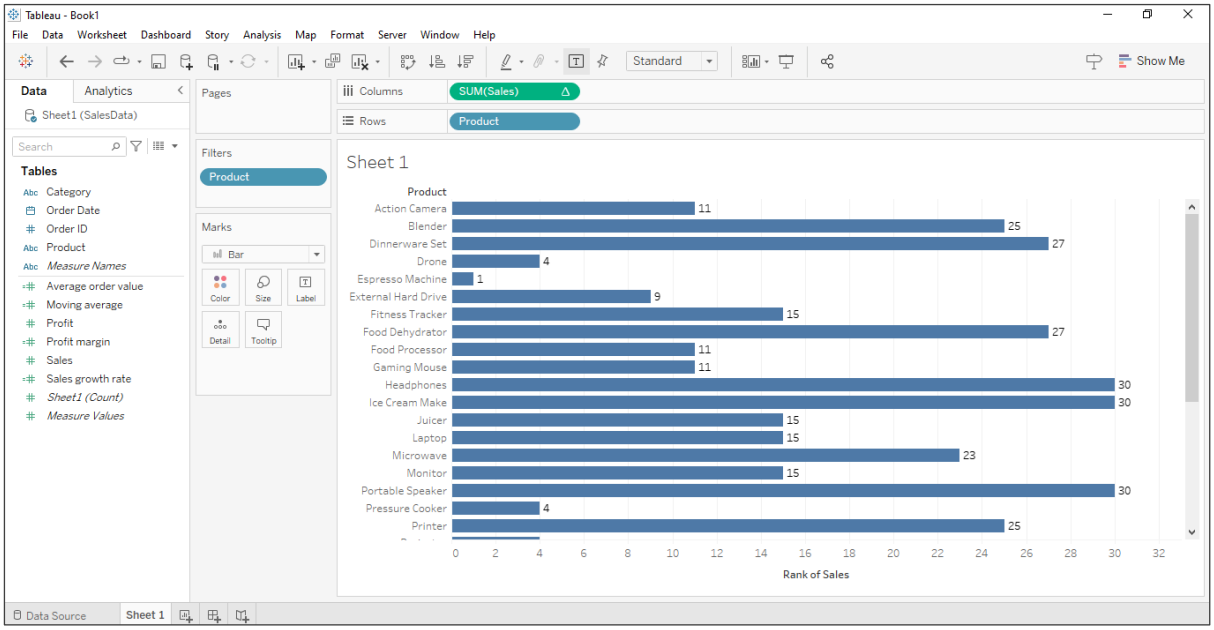


Tableau - Book1
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
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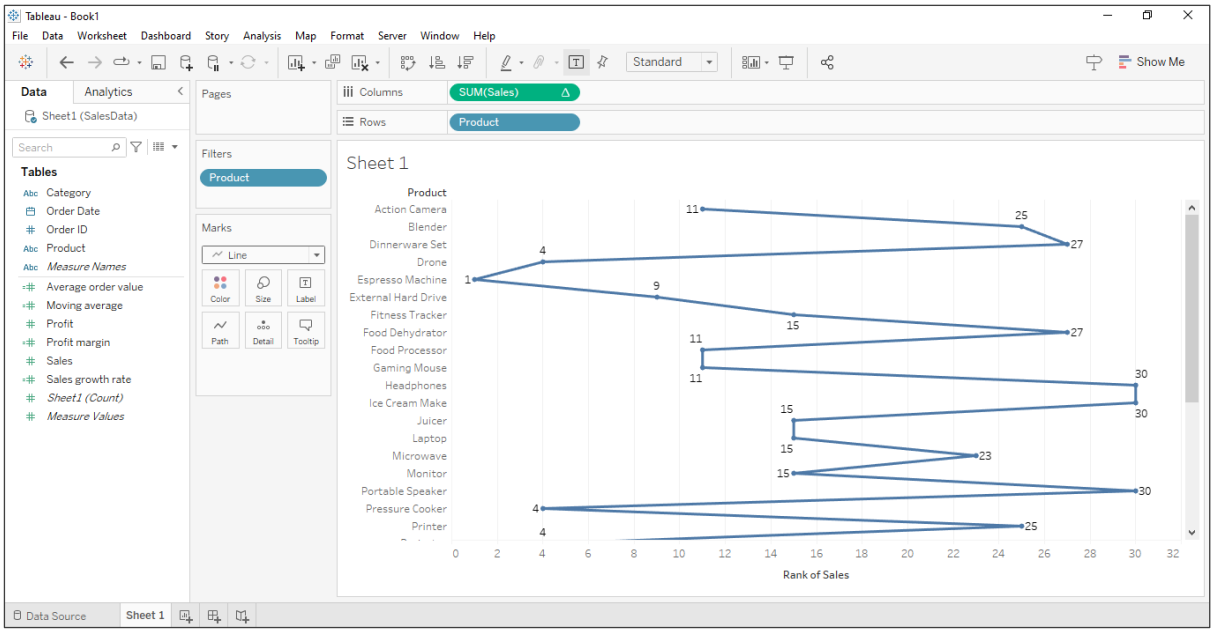
Abc Measure Names
Average order value
Moving average
Profit
Profit margin
Sales
Sales growth rate
Sheet1 (Count)
Measure Values
Pages
Filters
Product
Marks
Bar
Color
Size
Label
Detail
Tooltip
Columns
SUM(Sales)
Rows
Product
Sheet 1
Product
Action Camera 11
Blender 25
Dinnerware Set 27
Drone 4
Espresso Machine 1
External Hard Drive 9
Fitness Tracker 15
Food Dehydrator 27
Food Processor 11
Gaming Mouse 11
Headphones 30
Ice Cream Make 30
Juicer 15
Laptop 15
Microwave 23
Monitor 15
Portable Speaker 30
Pressure Cooker 4
Printer 25
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32
Rank of Sales
Data Source
Sheet 1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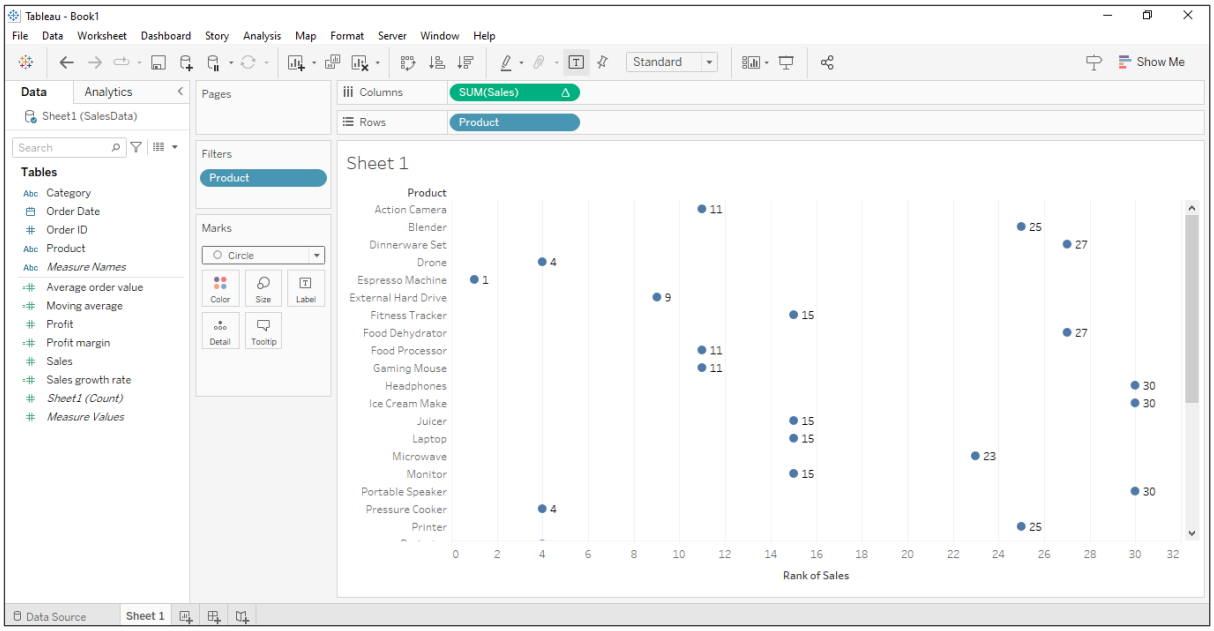
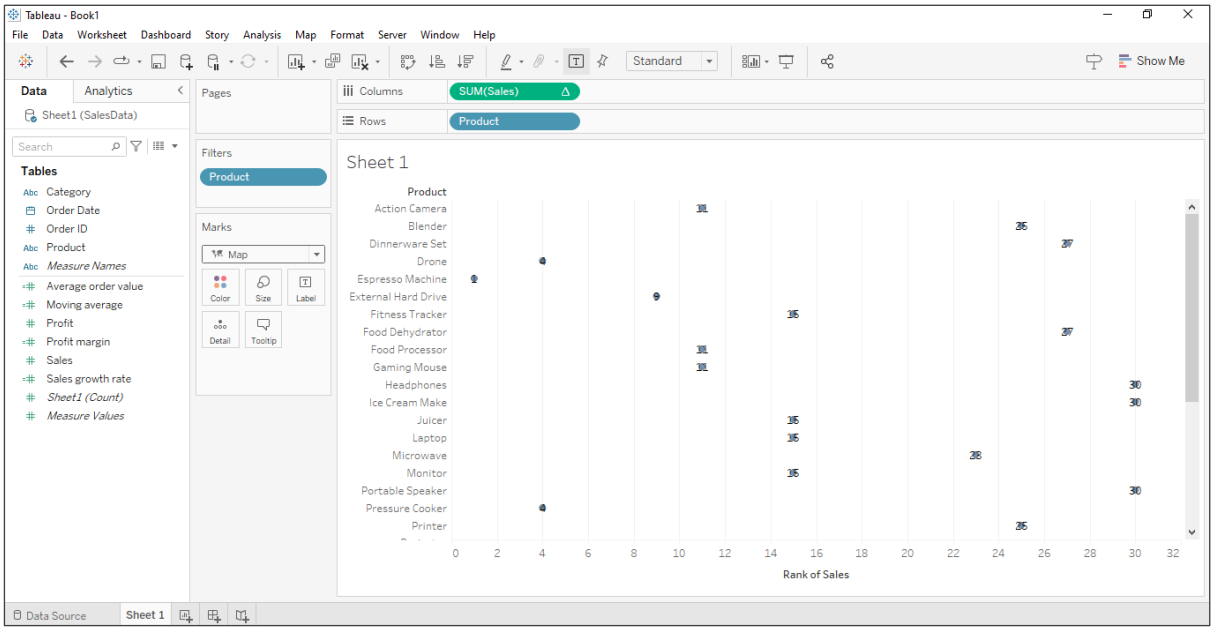
Espresso Machine
External Hard Drive
Fitness Tracker
Food Dehydrator
Food Processor
Gaming Mouse
Headphones
Ice Cream Make
Juicer
Laptop
Microwave
Monitor
Portable Speaker
Pressure Cooker
Printer
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32
Rank of Sales
Data Source
Sheet 1

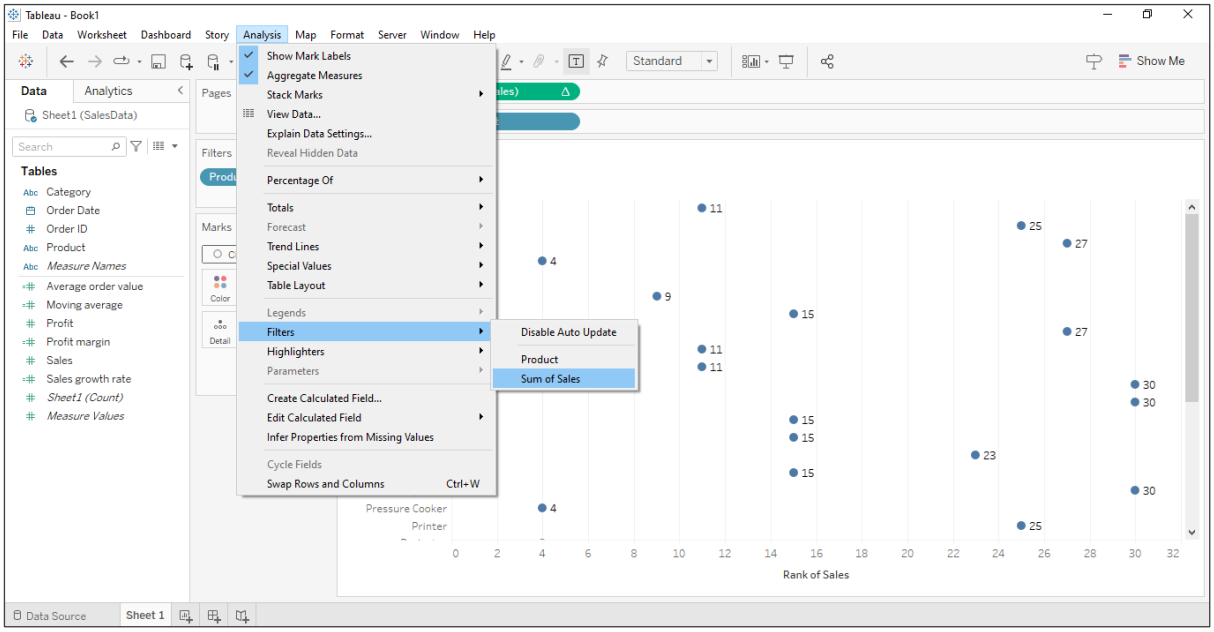


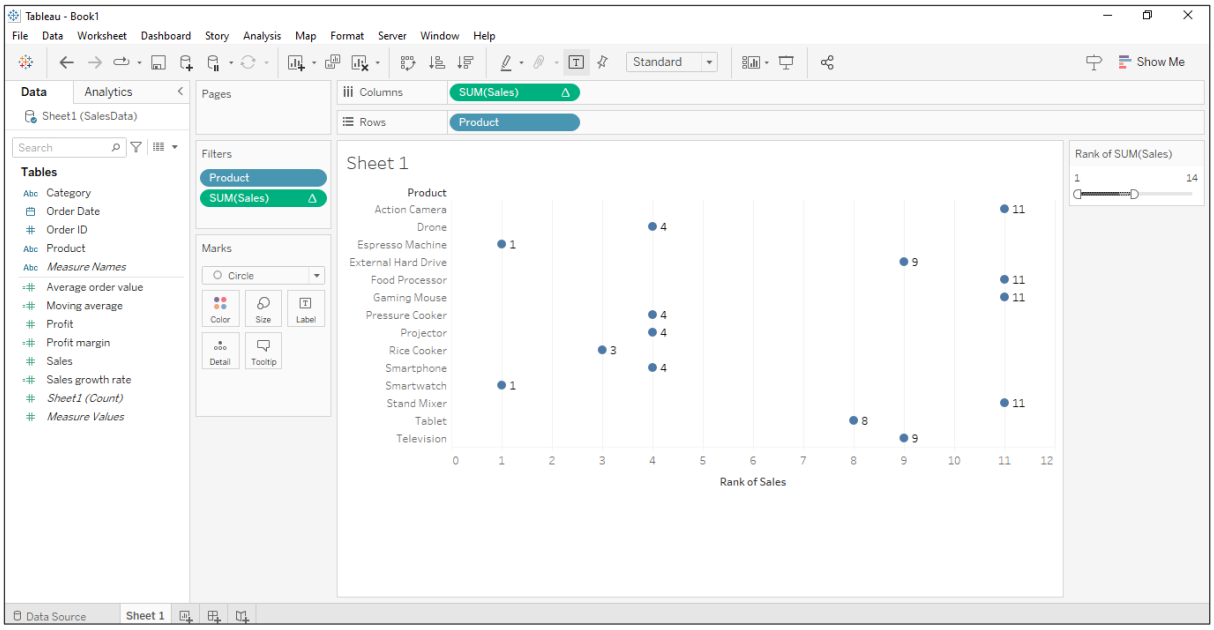


6. Apply filters and parameters to interactively analyze specific segments of the data

- Go to **Analysis**, click on **Filters**, and select **Sum of Sales**

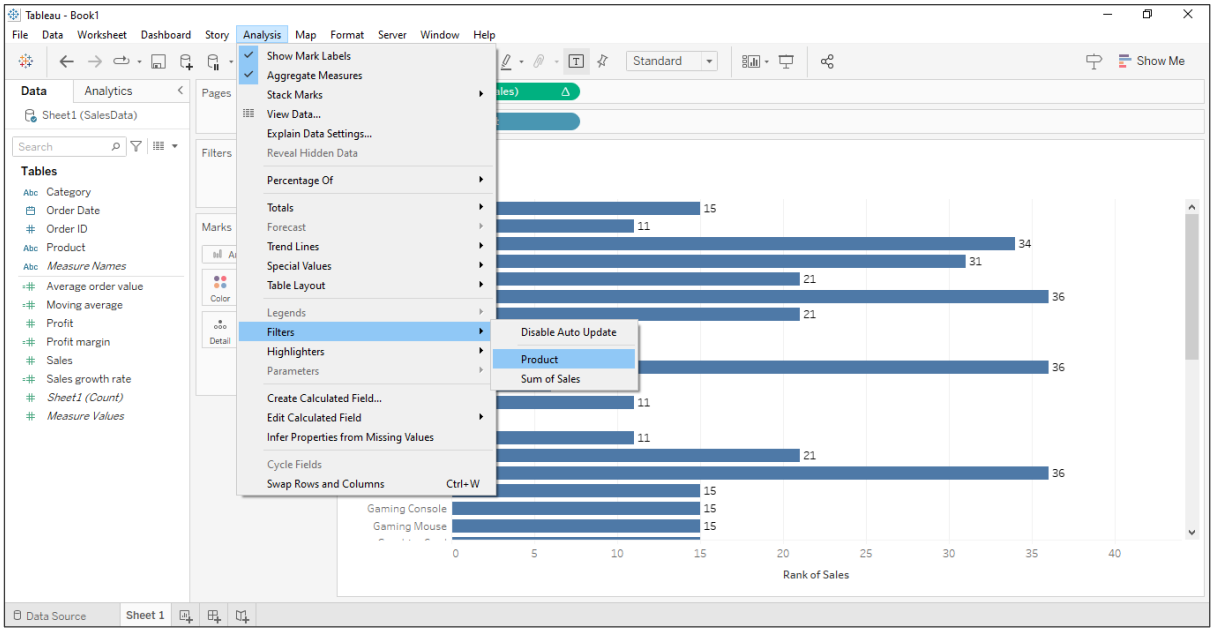
Output:





- Go to **Analysis**, click on **Filters**, and select **Product**

Output: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Show Mark Labels
Aggregate Measures
Stack Marks
View Data...
Explain Data Settings...
Reveal Hidden Data
Percentage Of
Totals
Forecast
Trend Lines
Special Values
Table Layout
Legends
Filters
Highlighters
Parameters
Create Calculated Field...
Edit Calculated Field
Infer Properties from Missing Values
Cycle Fields
Swap Rows and Columns Ctrl+W
Disable Auto Update
Product
Sum of Sales
Data
Analytics
Sheet1 (SalesData)
Tables
Category
Order Date
Order ID
Product
Measure Names
Average order value
Moving average
Profit
Profit margin
Sales
Sales growth rate
Sheet1 (Count)
Measure Values
Gaming Console
Gaming Mouse
Rank of Sales
Data Source
Sheet 1

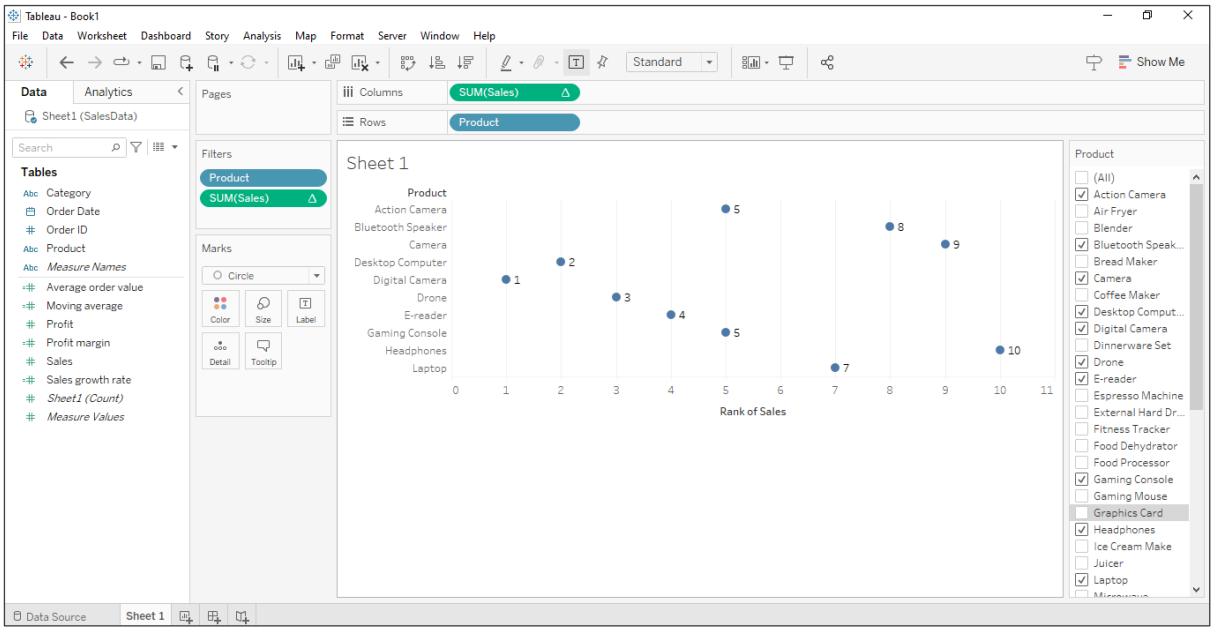
Tableau - Book1
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Columns SUM(Sales)
Rows Product
Filters
Product
SUM(Sales)
Marks
Circle
Color Size Label
Detail Tooltip
Sheet 1
Product
Action Camera
Bluetooth Speaker
Camera
Desktop Computer
Digital Camera
Drone
E-reader
Gaming Console
Headphones
Laptop
Rank of Sales
Data Source
Sheet 1