

Charts and Plots in Power-BI

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GitHub: <https://github.com/Purnendu16/Analytics>

Convert OrderDate from Text to Date and then expand

File Home Insert Modeling View Optimize Help Table tools Column tools

Name OrderDate

Data type Date ✓

Format *Wednesday, Marc...

Summarization Don't summarize

Data category Uncategorized

Sort by column

Data groups

Manage relationships

New column

Structure Formatting Properties Sort Groups Relationships Calculations

Visualizations

Build visual

Filters

Values

Add data fields here

Drill through

Cross-report

Keep all filters

Add drill-through fields here

Data

Search

superstore

- ☐ Category
- ☐ City
- ☐ Country
- ☐ CustomerID
- ☐ CustomerName
- ☐ Discount
- ☒ OrderDate
- ☐ Date Hierarc...
- ☐ Year
- ☐ Quarter
- ☐ Month
- ☐ Day

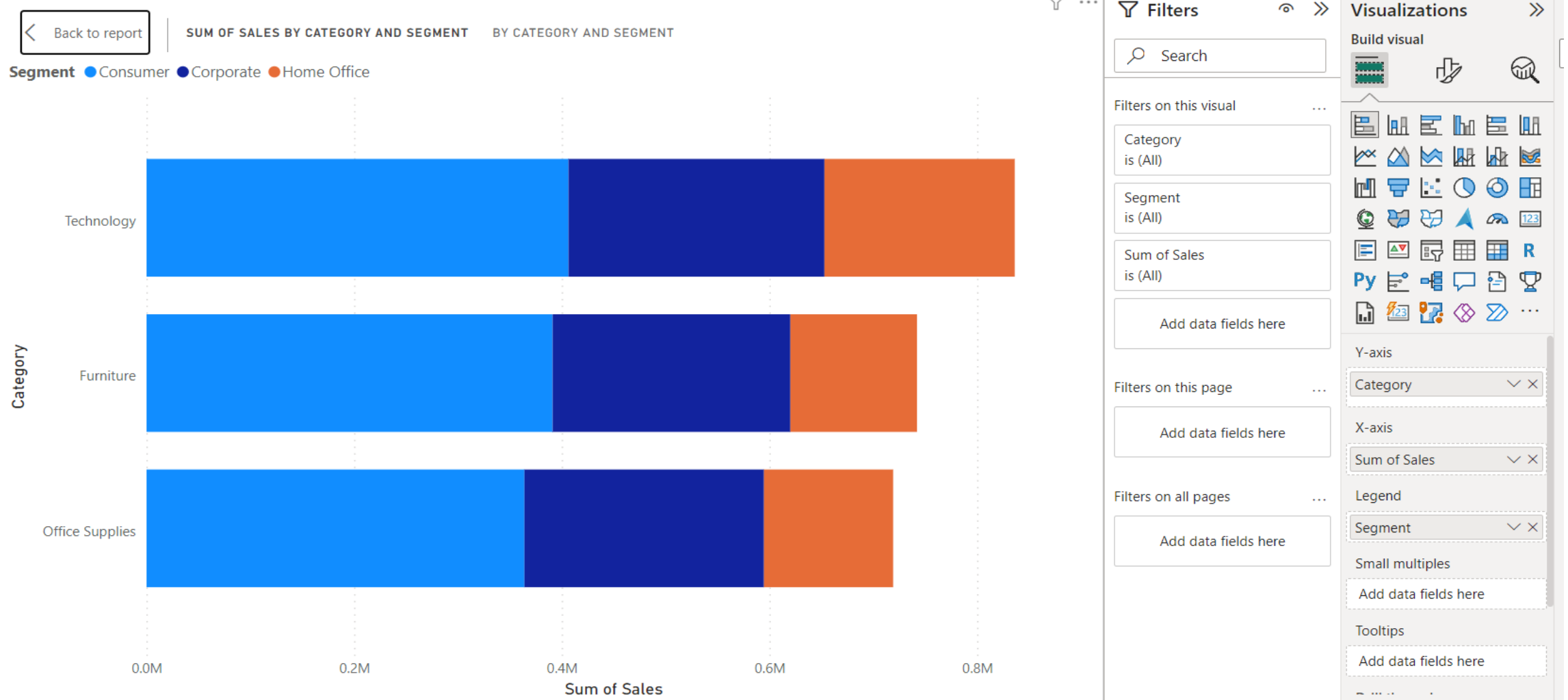
Build visuals with your data

Select or drag fields from the Data pane onto the repo

Fields and their values

- 1) If you are using Legends then don't use Secondary y axis.
- 2) Secondary y axis will take Continuous values and when u use it don't use Legends and legends will always take Categorical data.
- 3) In Y axis and in Secondary Y-axis use Continuous Data (Metric) and in Legends use Categorical data(Non-Metric).
- 4) In Small Multiples we will take Categorical data.
- 5) Legends will bifurcate a single chart in different regions suppose where as Multiples will bifurcate the charts in multiple sub graphs region wise.
- 6) Tooltips allow you to display additional information or details about a data point when a user hovers over it. This can include numerical values, percentages, or any other relevant details.
- 7) So Tooltips can be for both metric(Continuous data) and non-metric data (Categorical data).

Create Stacked Bar Chart with Y-axis as Category, X-Axis as Sum of Sales, Legend as Segment and apply all the properties learned in previous class.



Create 2 Cards: 1) Sum of Quantity 2) Sum of Sales

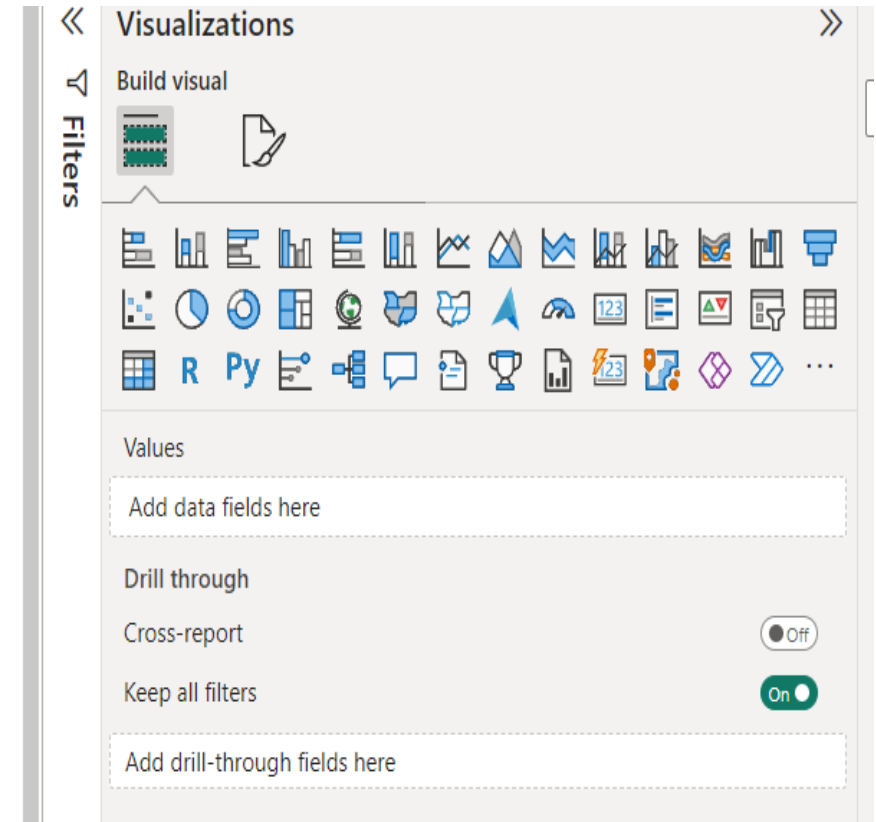
Create 2 Cards: 1) Sum of Quantity 2) Sum of Sales

38K

Sum of Quantity

2.30M

Sum of Sales



Create a KPI for Values as Sum of Profit and
trend axis as Year

Create a KPI for Values as Sum of Profit and trend axis as Year

[Back to report](#)

SUM OF PROFIT BY YEAR BY YEAR

93.44K

Visualizations

Build visual

Filters

Value

Sum of Profit

Trend axis

OrderDate

Year

Target

Add data fields here

Drill through

Cross-report

Keep all filters

Add drill-through fields here

Create a Matrix, with Rows as Category, Column as OrderDate(Year) and values as Sum of Profit and Sum of Sales.

Create a Matrix, with Rows as Category, Column as OrderDate(Year) and values as Sum of Profit and Sum of Sales.

Back to report

Year	2014		2015		2016		2017		Total
Category	Sum of Profit	Sum of Sales	Sum of Profit	Sum of Sales	Sum of Profit	Sum of Sales	Sum of Profit	Sum of Sales	Sum of
Furniture	5,457.73	157,192.85	3,015.20	170,518.24	6,959.95	198,901.44	3,018.39	215,387.27	18,4
Office Supplies	22,593.42	151,776.41	25,099.53	137,233.46	35,061.23	183,939.98	39,736.62	246,097.18	122,4
Technology	21,492.83	175,278.23	33,503.87	162,780.81	39,773.99	226,364.18	50,684.26	271,730.81	145,4
Total	49,543.97	484,247.50	61,618.60	470,532.51	81,795.17	609,205.60	93,439.27	733,215.26	286,3

Visualizations

Build visual

Filters

Rows

Category

Columns

OrderDate
Year

Values

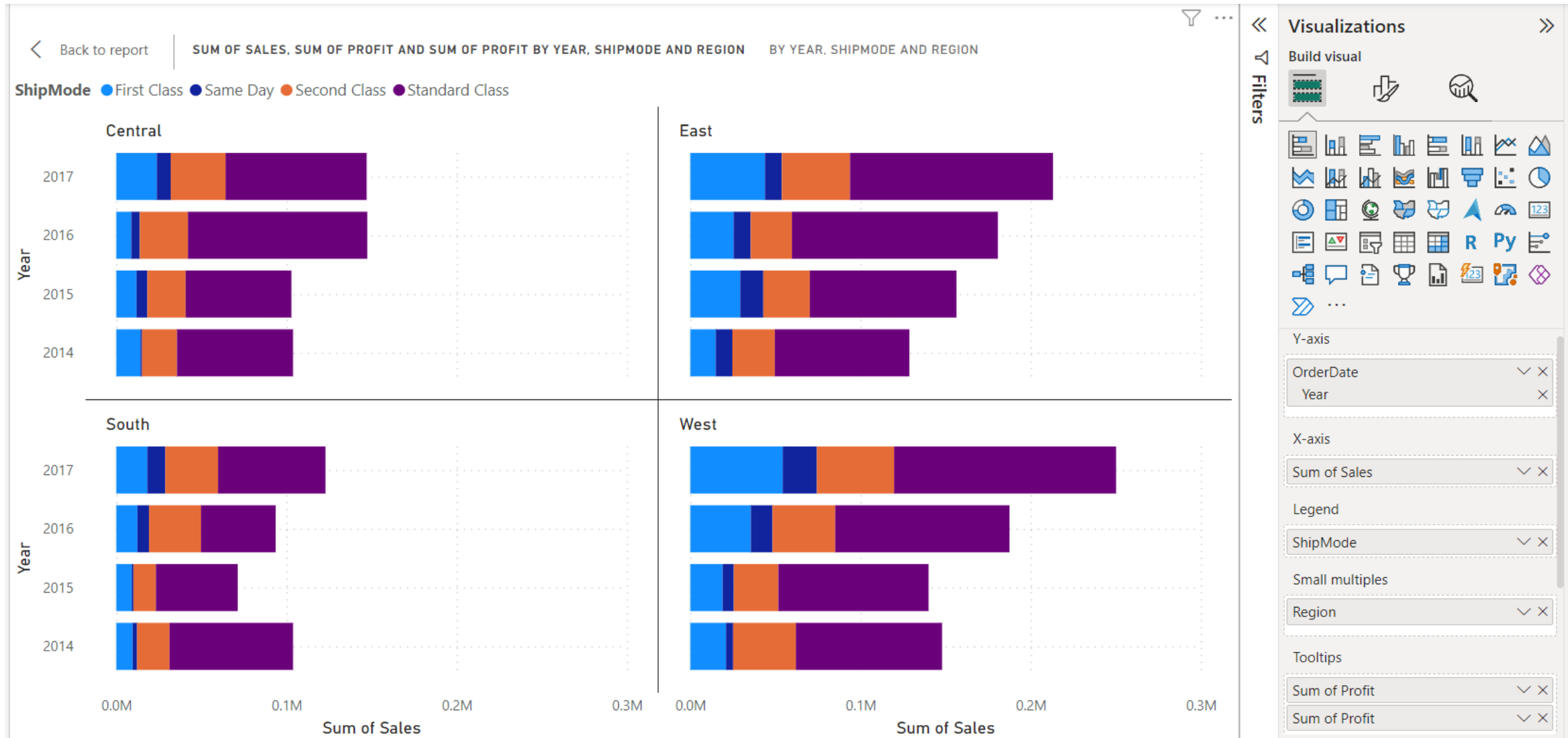
Sum of Profit

Sum of Sales

Create a Matrix, with Rows as Category, Column as OrderDate(Year & Month) and values as Sum of Profit and Sum of Sales, and then drill up and drill down.

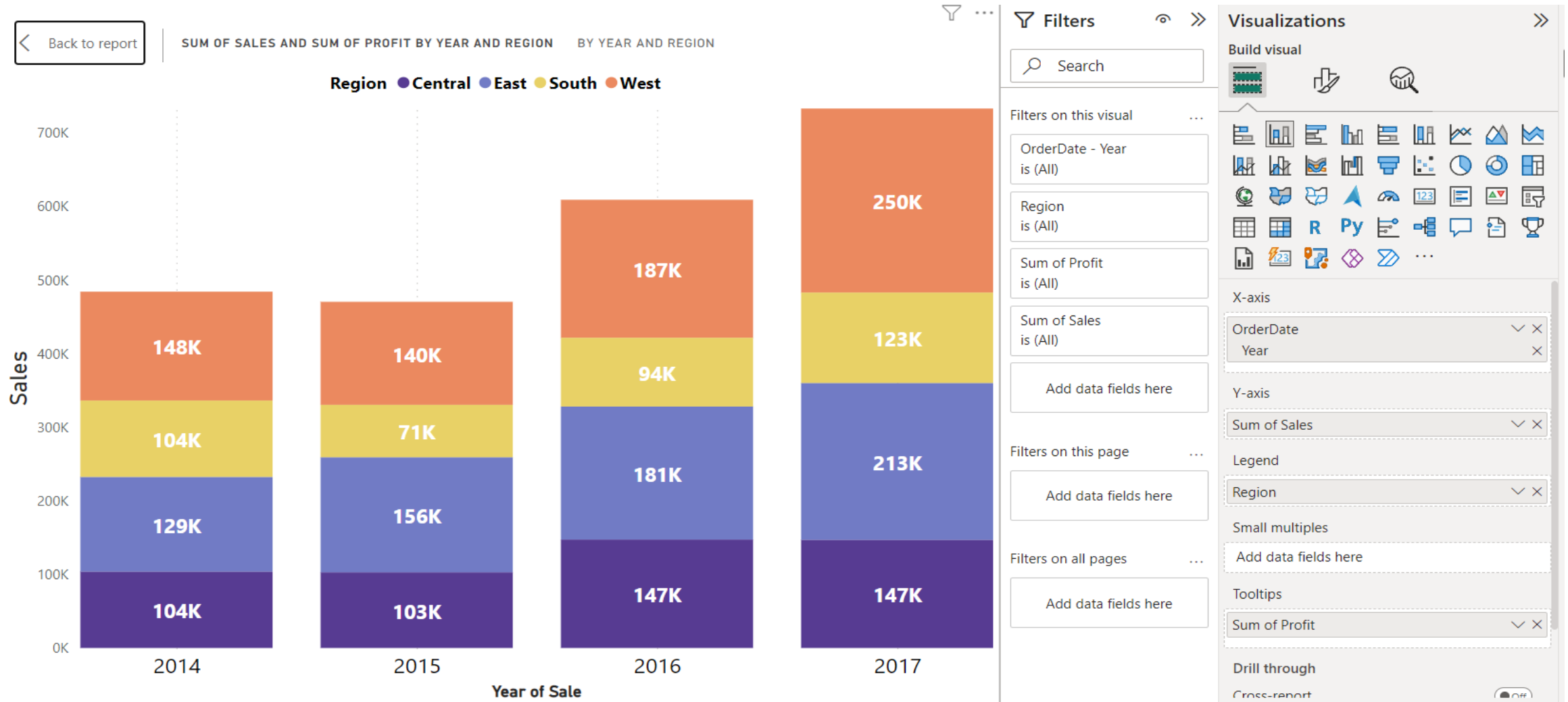
Create a stacked bar chart of Year wise sum of sales with categorical input of ShipMode and further has more input of Sum of Profit and Sum of quantity.

Create a stacked bar chart of Year wise sum of sales with categorical input of ShipMode and include small multiples of region further add more information Sum of Profit and Sum of quantity.



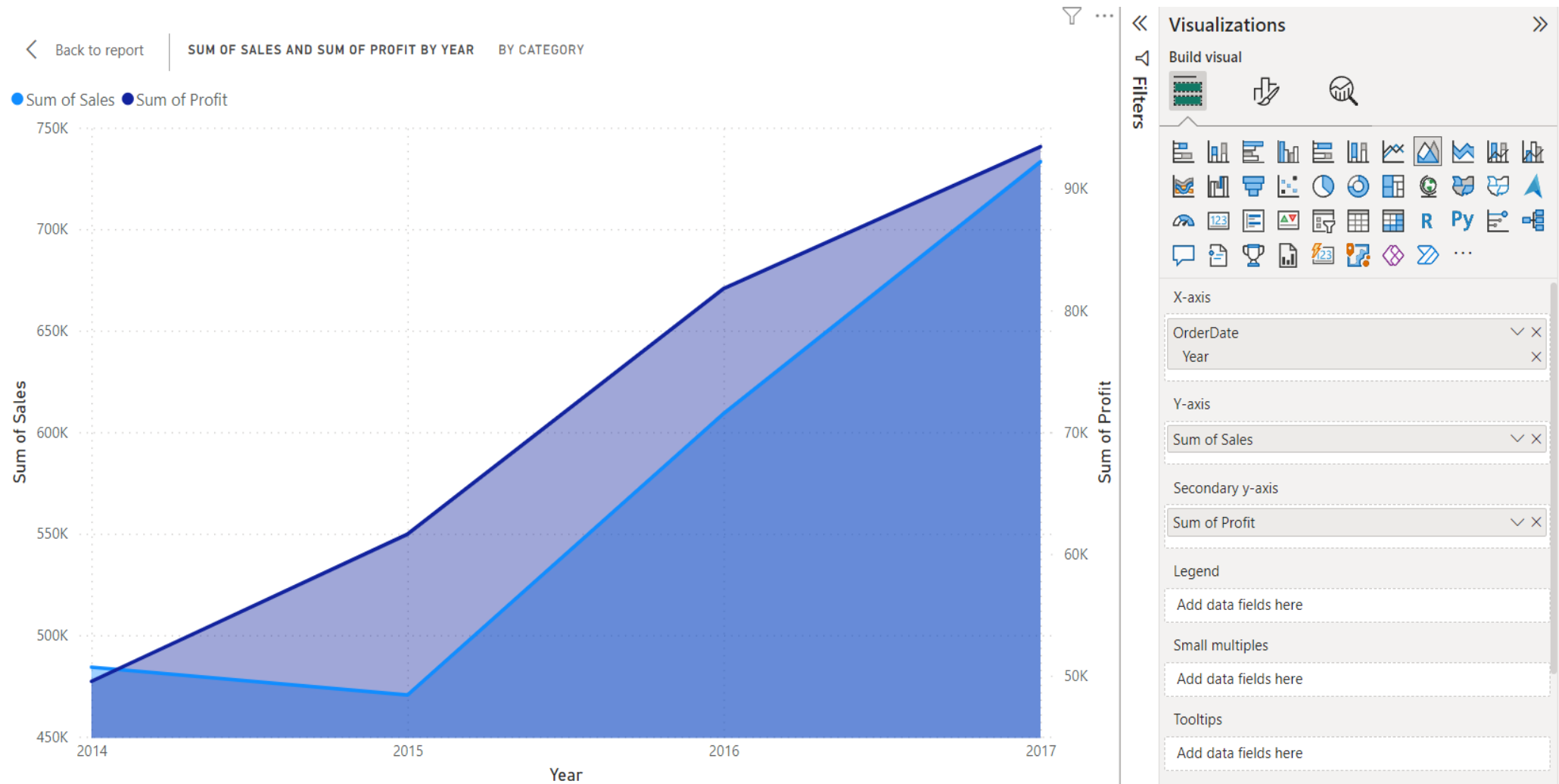
Create a stacked column chart of Year wise sum of sales with categorical input of region further add more information Sum of Profit and Sum of quantity.

Create a stacked column chart of Year wise sum of sales with categorical input of region further add more information Sum of Profit and Sum of quantity.



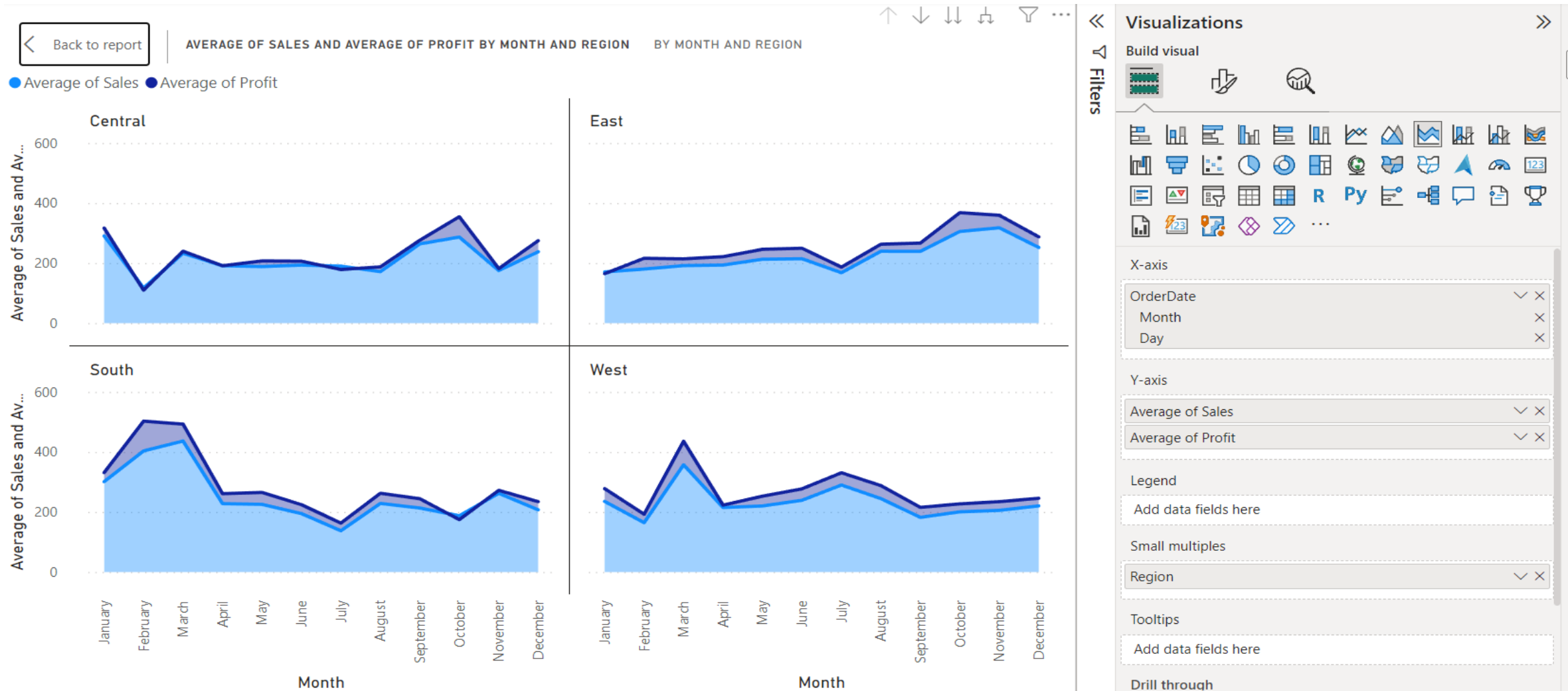
Create a Area chart of Year wise sum of sales with secondary input of Sum of Profit further add more information in ToolTips Sum of Profit and Sum of quantity and see whether graph changes?

Create a Area chart of Year wise sum of sales with secondary input of Sum of Profit further add more information in ToolTips Sum of Profit and Sum of quantity and see whether graph changes?



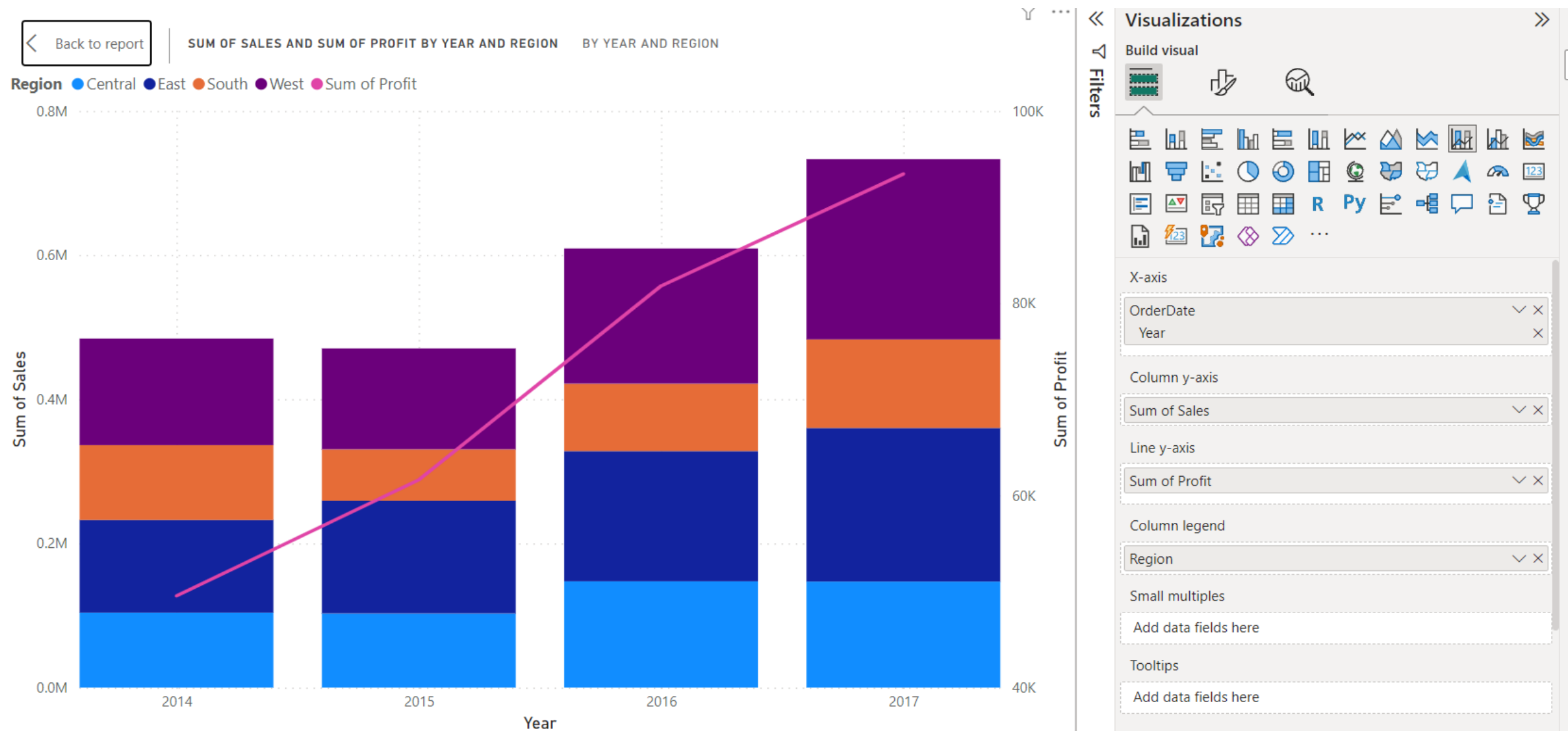
Create a stacked area chart of Year wise sum of sales, Average of Profit with small multiples input of region further add more information Sum of Profit and Sum of quantity.

Create a stacked area chart of Year wise sum of sales, Average of Profit with small multiples input of region further add more information Sum of Profit and Sum of quantity.



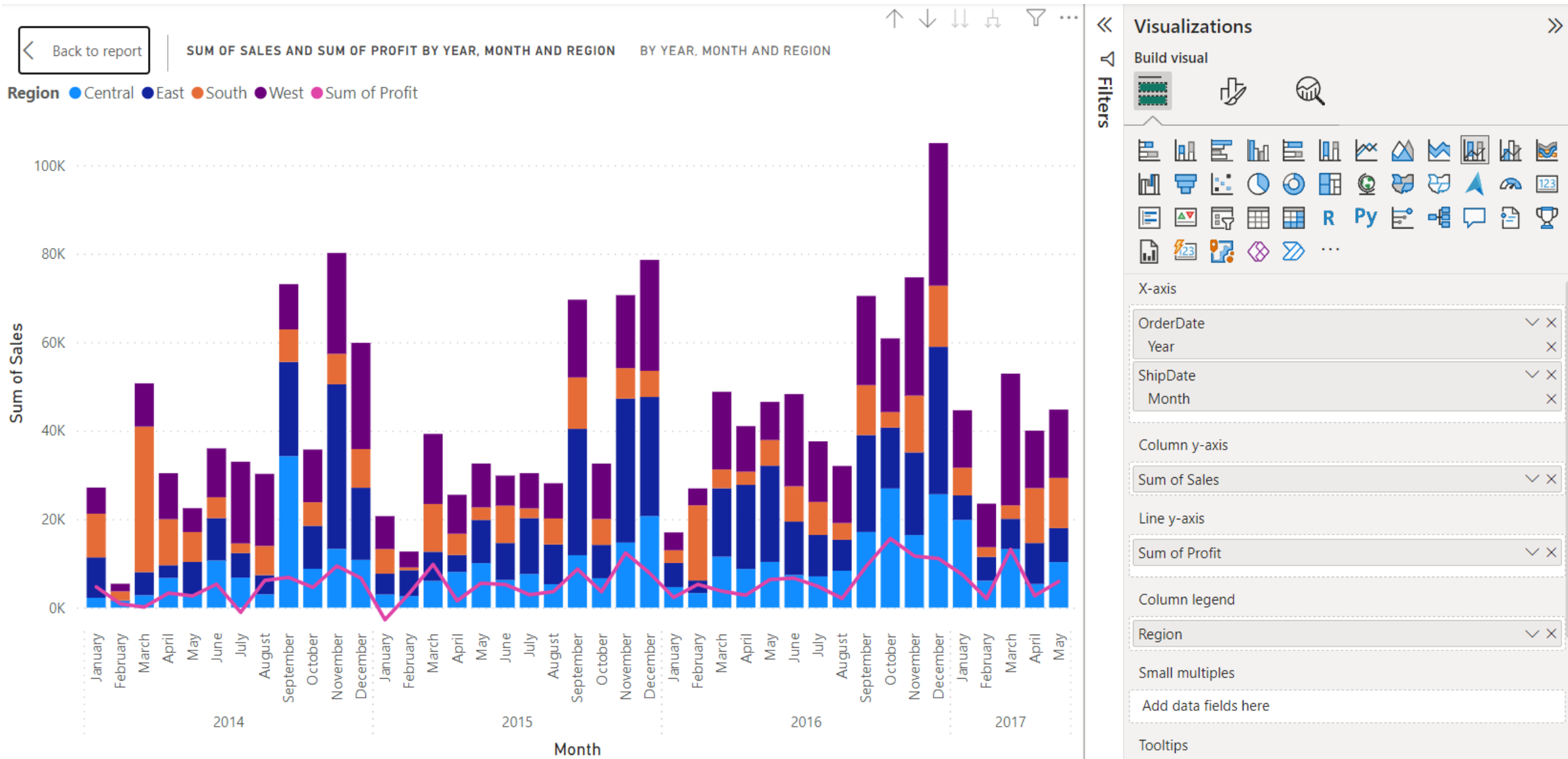
Create a line and stacked column chart of Year wise(order date(year) Vs [sum of sales(column), line y-axis input (sum of Profit)]and column legend (region)).

Create a line and stacked column chart of Year wise(order date(year) Vs [sum of sales(column), line y-axis input (sum of Profit)]and column legend (region).



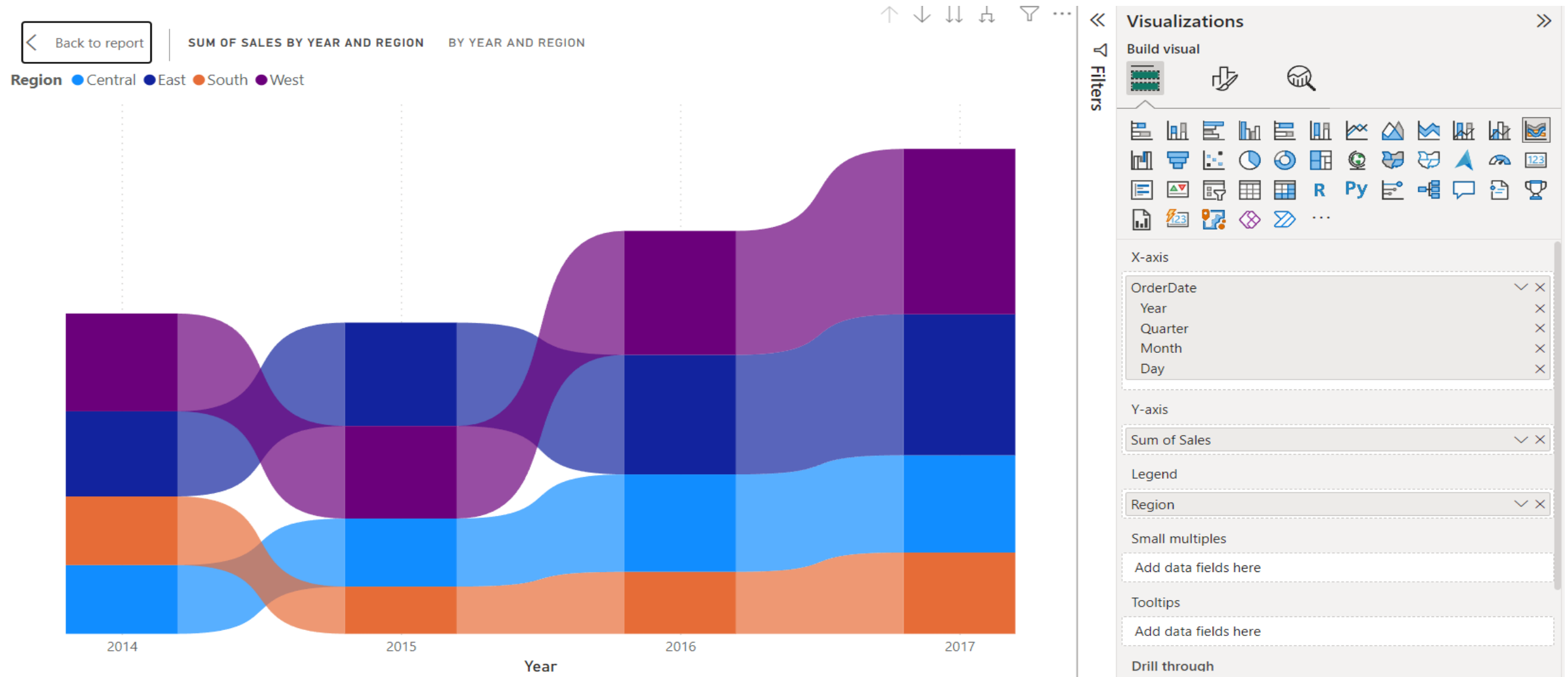
Create a line and stacked column chart of Year wise(order date(year) and ShipDate(Month)) Vs [sum of sales(column), line y-axis input (sum of Profit)]and column legend (region).

Create a line and stacked column chart of Year wise(order date(year) and ShipDate(Month)) Vs [sum of sales(column), line y-axis input (sum of Profit)]and column legend (region).

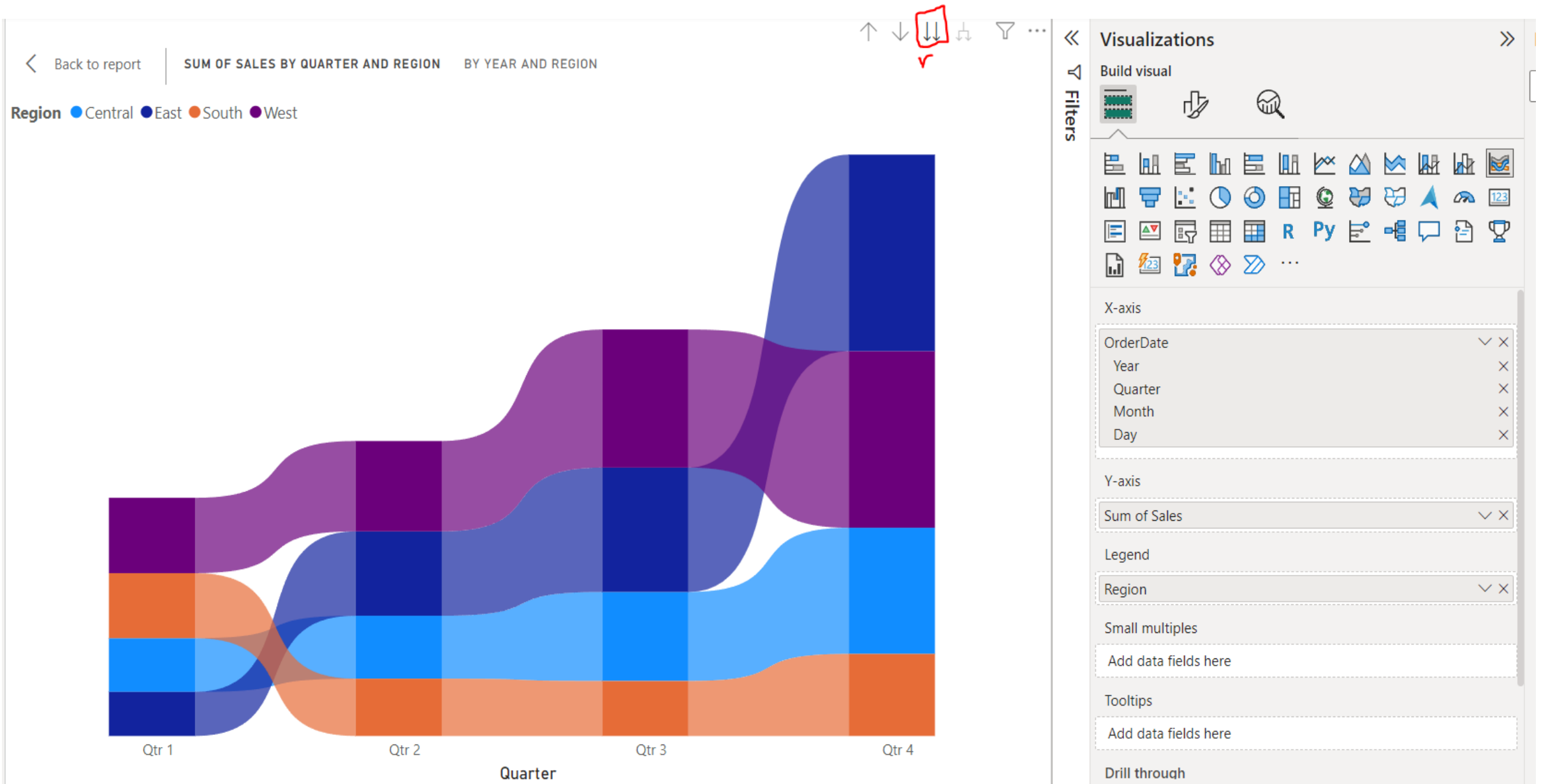


Create a Ribbon chart of order date Vs sum of sales, legend (region).

Create a Ribbon chart of order date Vs sum of sales, legend (region).

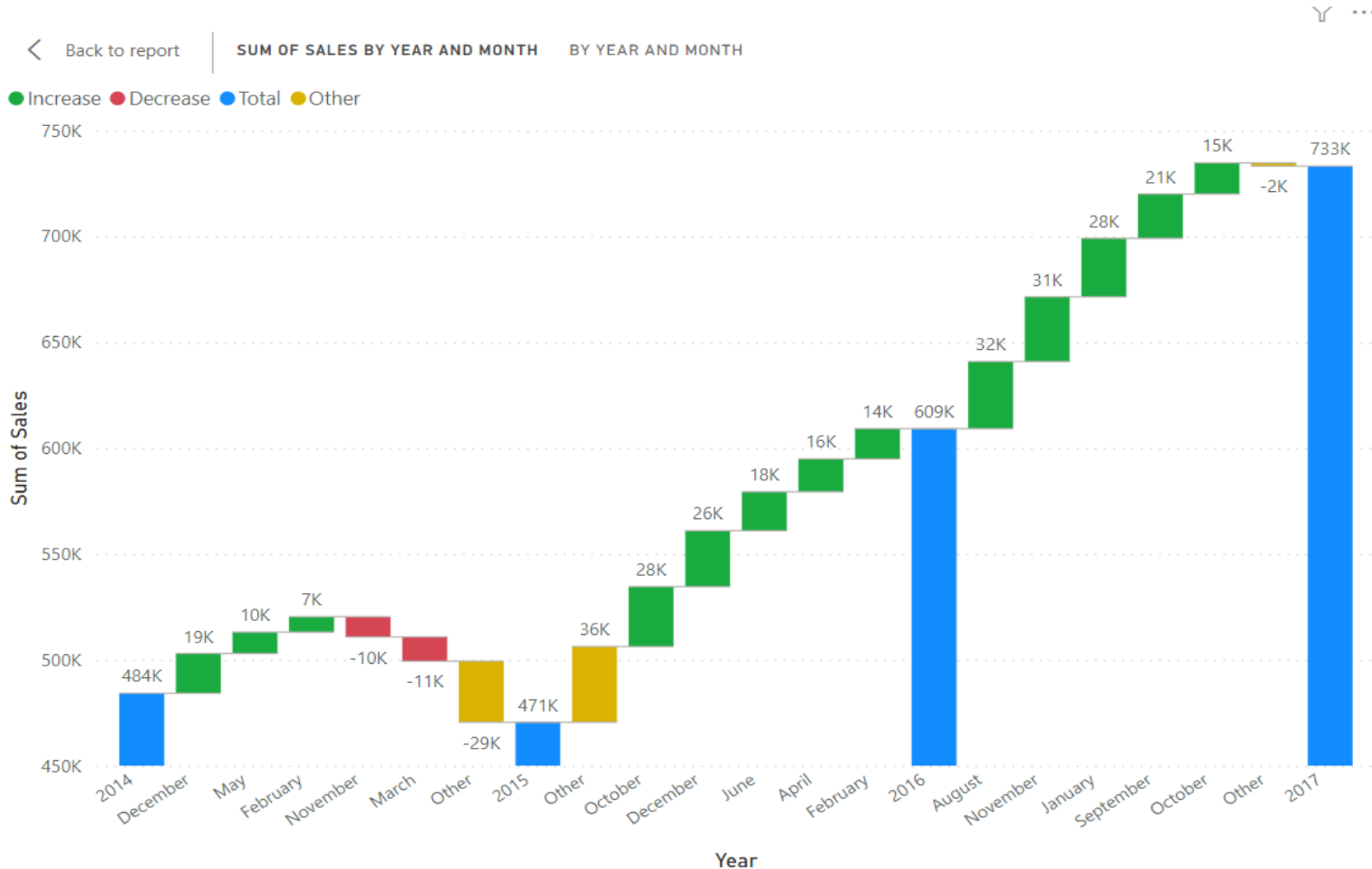


Now Drill it down to Quarter wise, month wise and then datewise and even analyse.



Create a waterfall chart of Category OrderDate, Breakdown it with ShipDate and Y-axis as Sum of Sales.

Create a waterfall chart of Category OrderDate, Breakdown it with ShipDate and Y-axis as Sum of Sales.



Visualizations

Build visual

Filters

Category

OrderDate

Year

Breakdown

ShipDate

Month

Y-axis

Sum of Sales

Tooltips

Add data fields here

Drill through

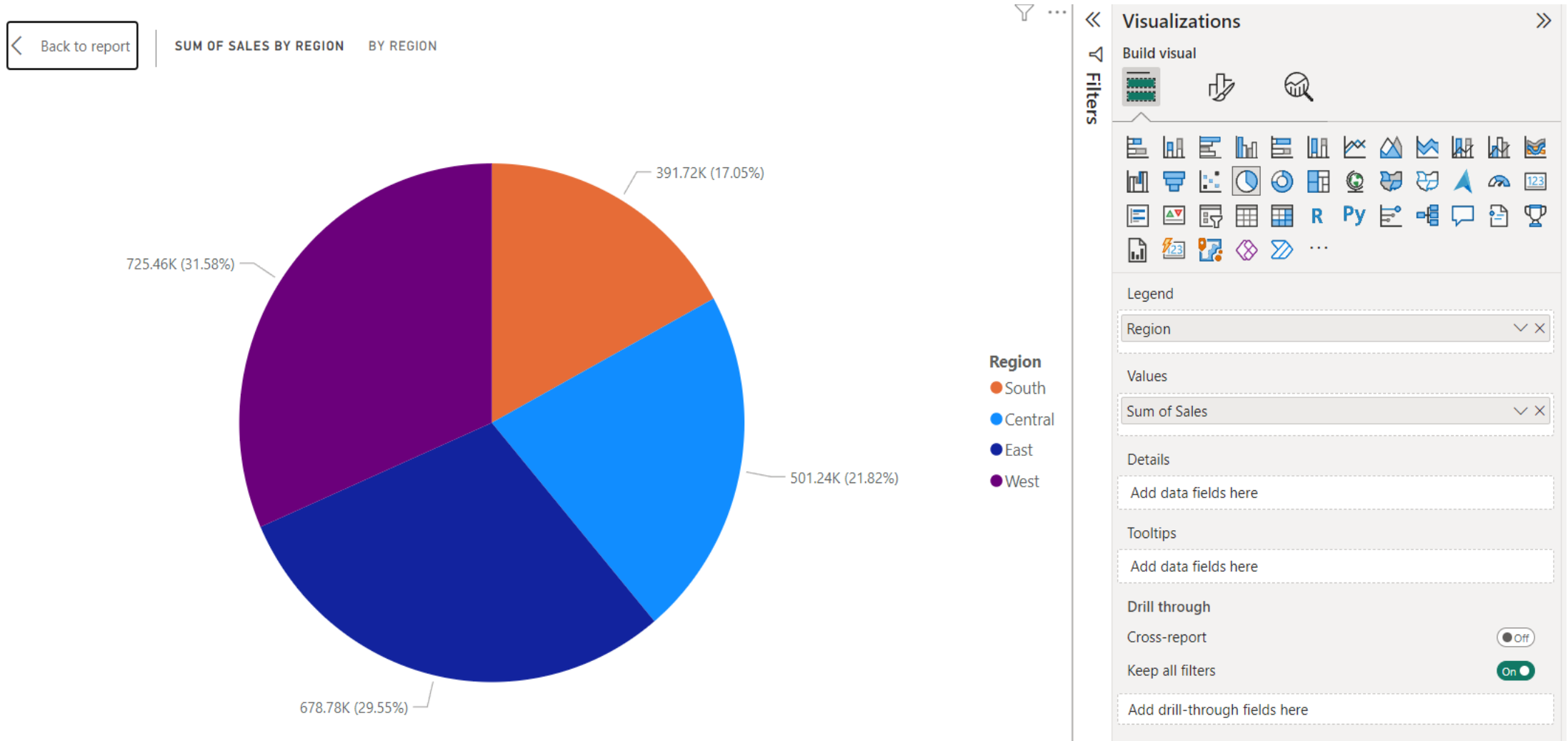
Cross-report

Keep all filters

Add drill-through fields here

Create a Pie chart having Legend as region Values as Sum of Sales

Create a Pie chart having Legend as region Values as Sum of Sales

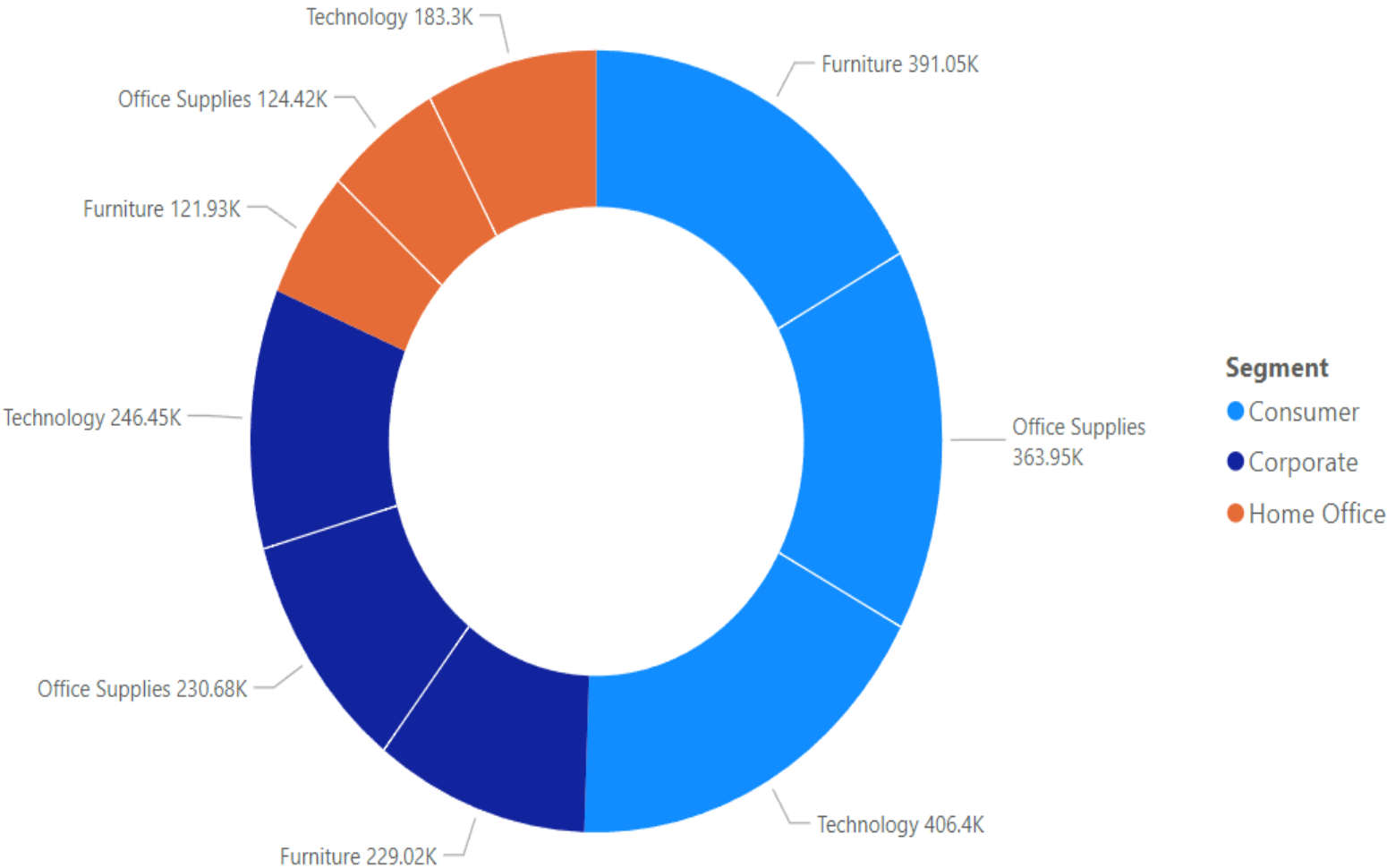


Create a Donut chart having Legend as Segment, Values as Sum of Sales, and Details as Category

Create a Pie chart having Legend as Segment, Values as Sum of Sales, and Details as Category

[Back to report](#)

SUM OF SALES BY SEGMENT AND CATEGORY BY SEGMENT AND CATEGORY



Visualizations

Build visual

Filters

Legend

Segment

Values

Sum of Sales

Details

Category

Tooltips

Add data fields here

Drill through

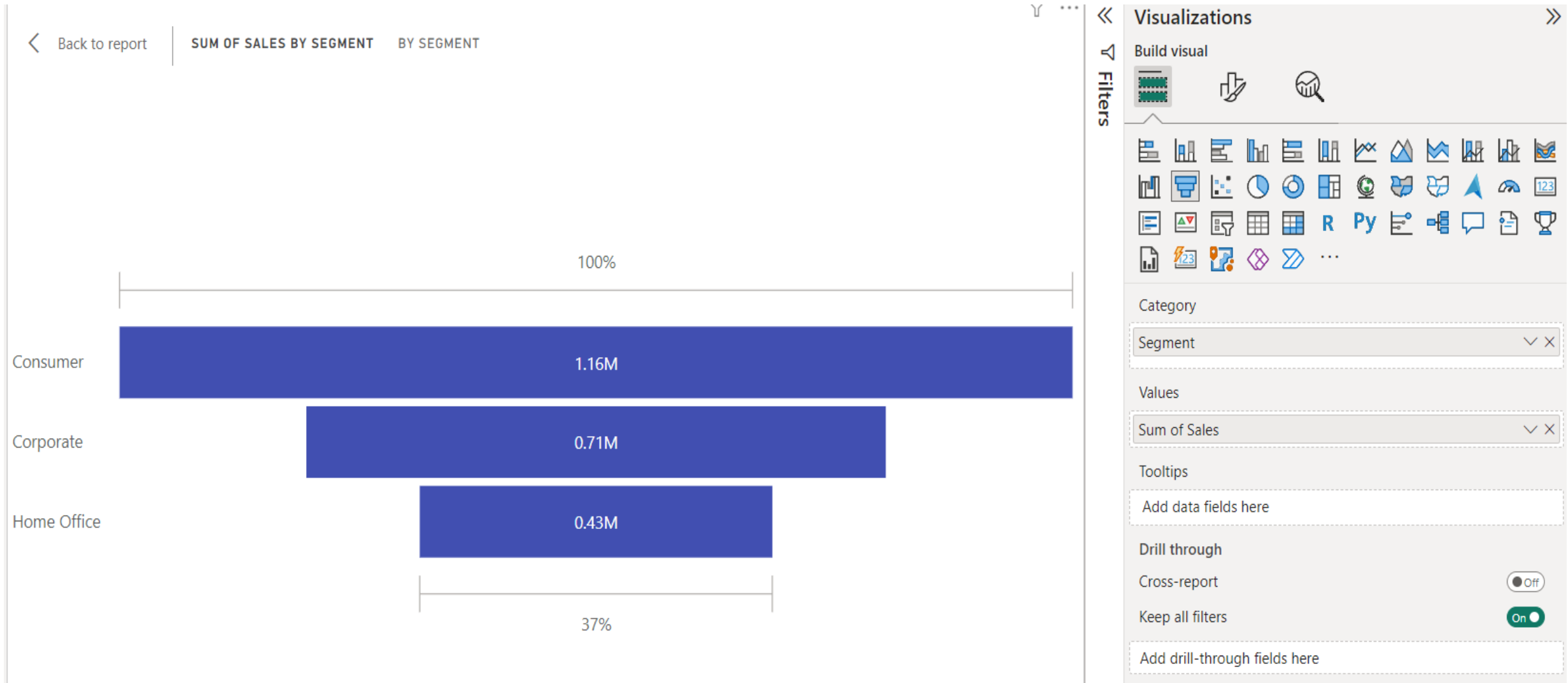
Cross-report

Keep all filters

Add drill-through fields here

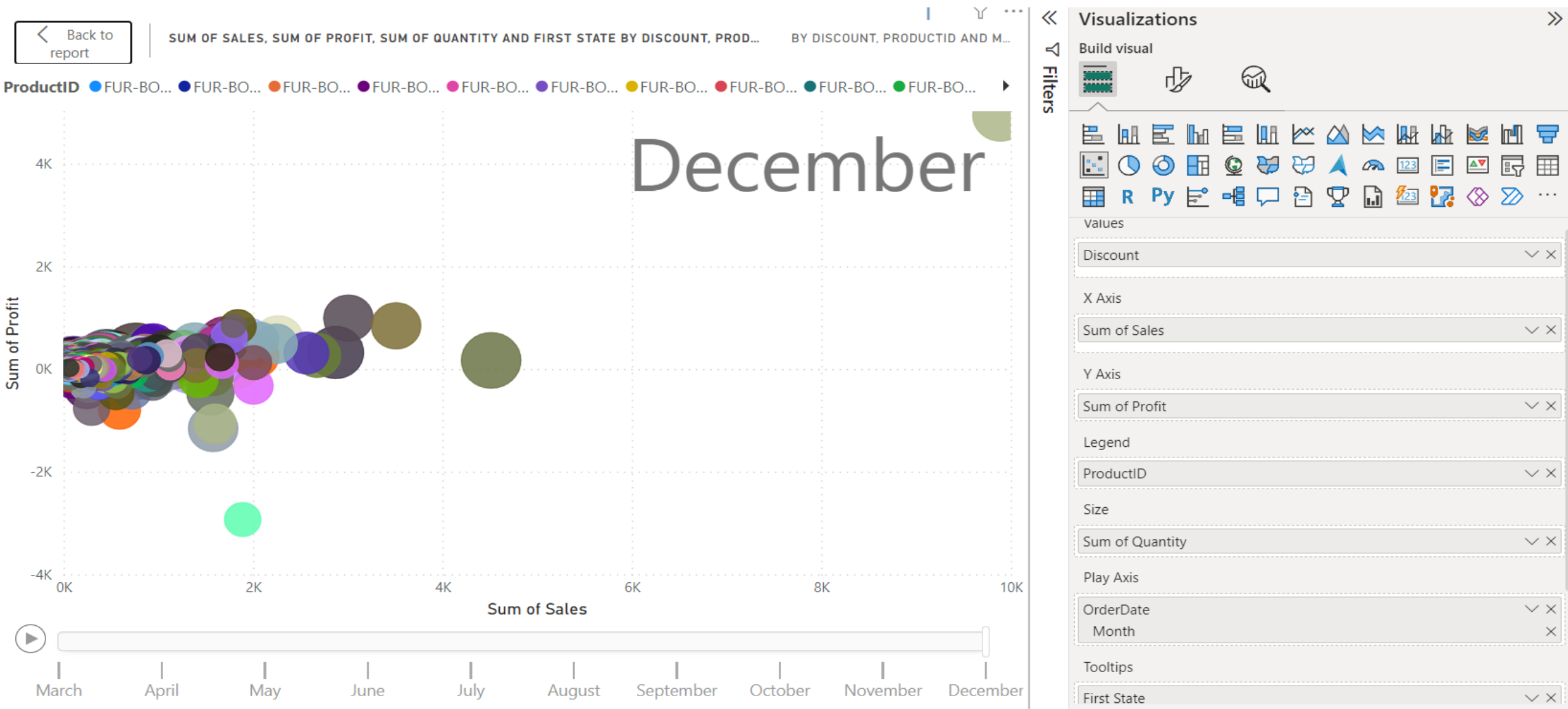
Create a Funnel chart having Category as Segment and Values as Sum of Sales

Create a Funnel chart having Category as Segment and Values as Sum of Sales



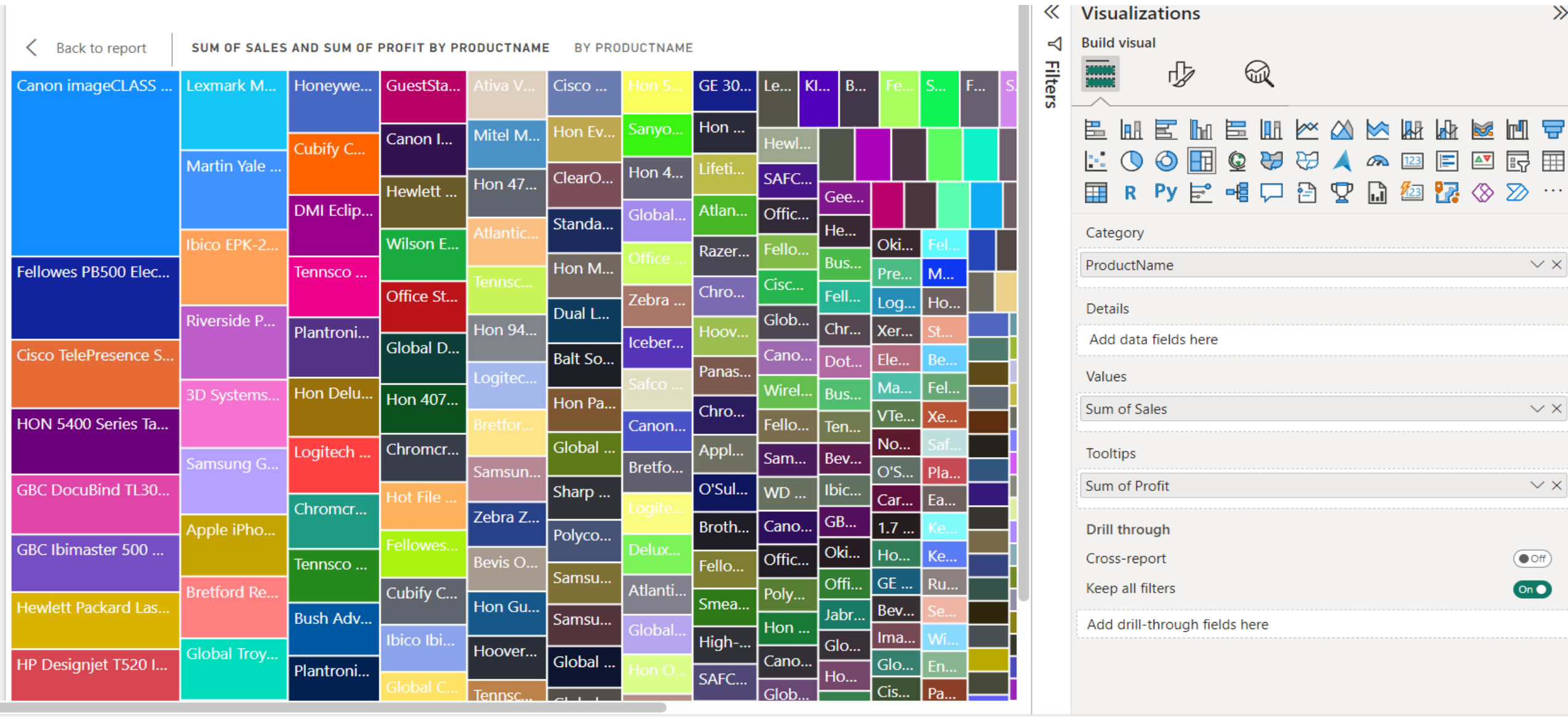
Create a Scatter plot having Values as Discount and X-axis as Sum of Sales, Y Axis as Sum of Profit, Legend as ProductID, Size as Sum of Quantity, Play Axis as OrderDate(Month), Tooltips (State)

Create a Scatter plot having Values as Discount and X-axis as Sum of Sales, Y Axis as Sum of Profit, Legend as ProductID, Size as Sum of Quantity, Play Axis as OrderDate(Month), Tooltips (State)



Create a TreeMap having Category as ProductName, Values as Sum of Sales and Tooltips as Sum of Profit

Create a TreeMap having Category as ProductName, Values as Sum of Sales and Tooltips as Sum of Profit



For Maps Change the following Setting, click OK, Save ur Power-Bi as Practice_report and then restart ur power BI

Options

GLOBAL

Data Load

Power Query Editor

DirectQuery

R scripting

Python scripting

Security

Privacy

Regional Settings

Updates

Usage Data

Diagnostics

Preview features

Save and Recover

Report settings

CURRENT FILE

Data Load

Regional Settings

Privacy

Auto recovery

Published dataset settings

Query reduction

Report settings

Native Database Queries

☒ Require user approval for new native database queries

Certificate Revocation ⓘ

☐ Comprehensive check ⓘ

☒ Basic check ⓘ

☐ None ⓘ

[Learn more about certificate revocation](#)

Web Preview Warning Level ⓘ

Moderate ▾

Data Extensions

☒ (Recommended) Only allow Microsoft certified and other trusted third-party extensions to load

☐ (Not Recommended) Allow any extension to load without validation or warning

[Learn more about data extensions](#)

Custom visuals

☒ Show security warning when adding a custom visual to a report

ArcGIS for Power BI

☒ Use ArcGIS for Power BI

Map and Filled Map visuals

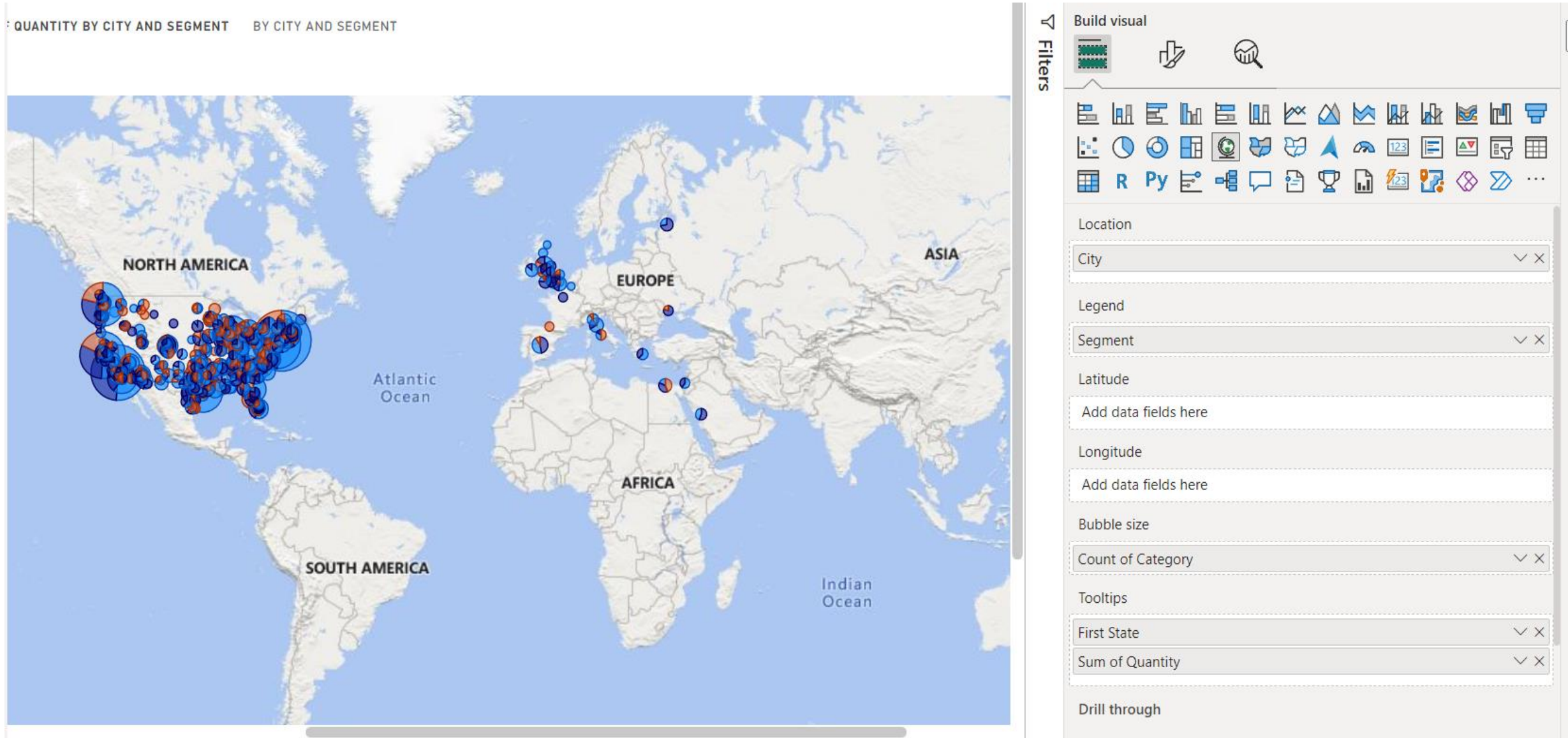
☒ Use Map and Filled Map visuals

OK

Cancel

Create a Map having Location as City, Legend as Segment, Bubble Size as Count of Category and Tooltips as State and Sum of Quantity

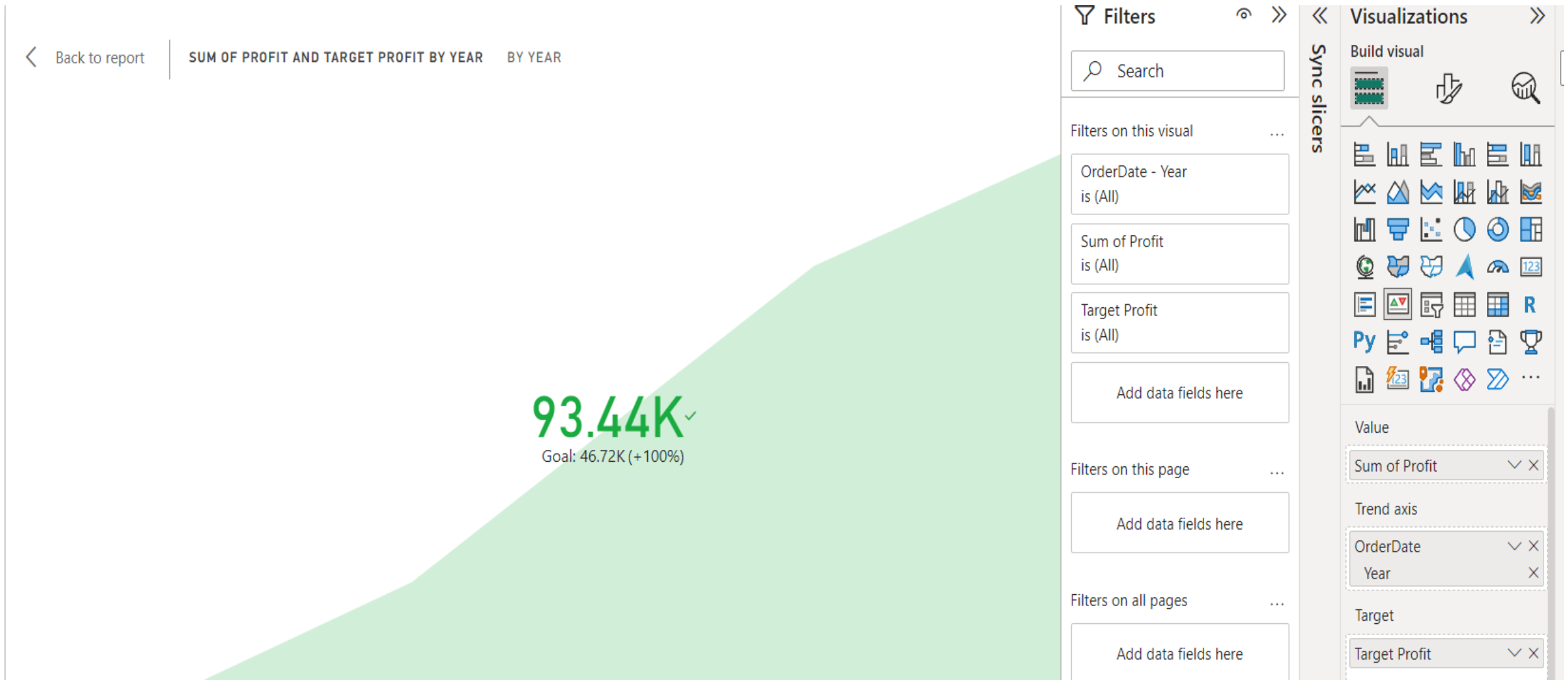
Create a Map having Location as City, Legend as Segment, Bubble Size as Count of Category and Tooltips as State and Sum of Quantity



1) Create a KPI for Values as Sum of Profit and trend axis as Year, now create a Variable name **Target_Profit= SUM(Store_Sales_Data[Profit])*1.5** and

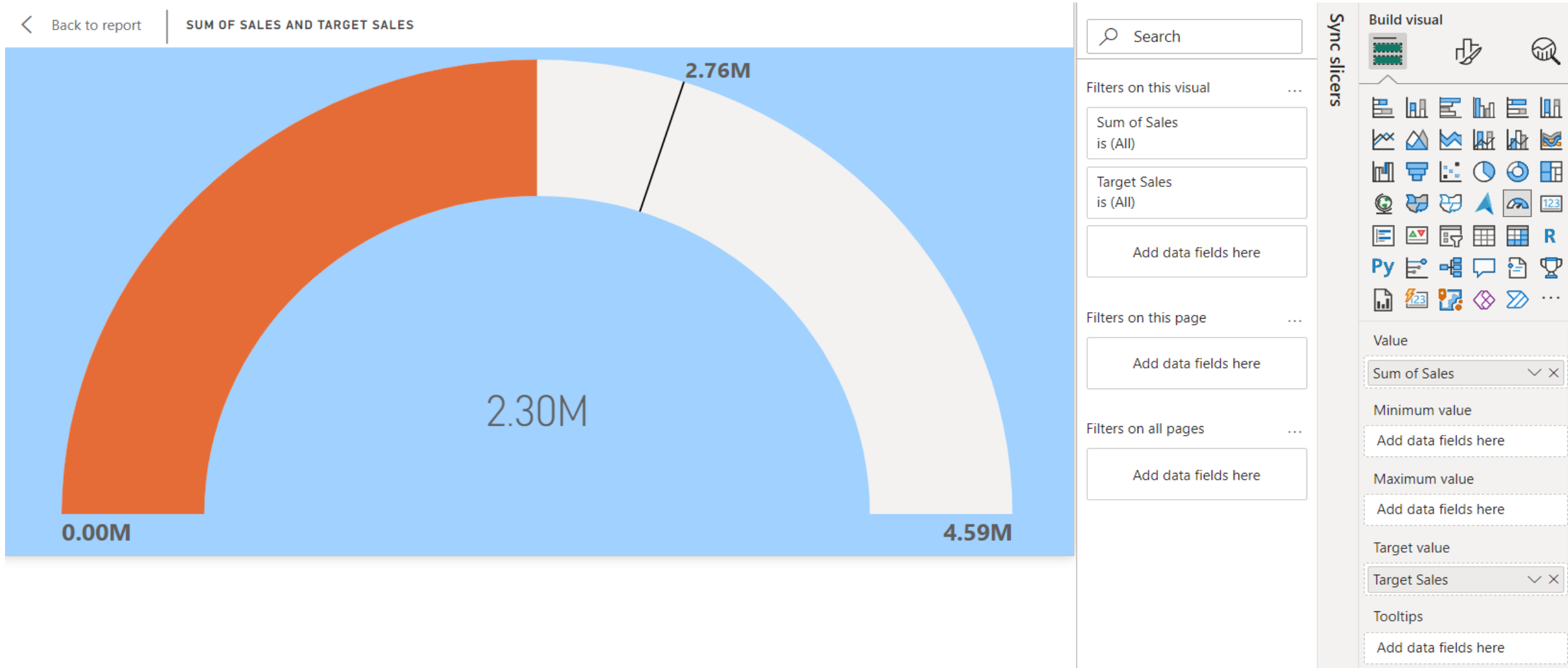
2) Then Modify its value by **Target_Profit= SUM(Store_Sales_Data[Profit])/2**

- 1) Create a KPI for Values as Sum of Profit and trend axis as Year, now create a Variable name **Target_Profit= SUM(Store_Sales_Data[Profit])*1.5** and
- 2) Then Modify its value by **Target_Profit= SUM(Store_Sales_Data[Profit])/2**



- 1) Create a Gauge for Values as Sum of Sales and Target Value as **Target Sales**, so create it , now create a Variable name **Target Sales=**
 $\text{SUM}(\text{Store_Sales_Data}[\text{Sales}]) * 1.5$ and
- 2) Then Modify its value by **Target_Profit= $\text{SUM}(\text{Store_Sales_Data}[\text{Sales}]) / 2$**

- 1) Create a Gauge for Values as Sum of Sales and Target Value as **Target Sales**, so create it , now create a Variable name **Target Sales=**
 $\text{SUM}(\text{Store_Sales_Data}[\text{Sales}]) * 1.5$ and
- 2) Then Modify its value by **Target_Profit= $\text{SUM}(\text{Store_Sales_Data}[\text{Sales}]) / 2$**



Create a table with Columns (**Category, Segment, Sales, Profit**) and format it as mentioned.

< Back to report

Category	Segment	Sum of Sales	Sum of Profit
Furniture	Consumer	391,049.31	6,991.08
Furniture	Corporate	229,019.79	7,584.82
Furniture	Home Office	121,930.70	3,875.38
Office Supplies	Consumer	363,952.14	56,330.32
Office Supplies	Corporate	230,676.46	40,227.32
Office Supplies	Home Office	124,418.43	25,933.16
Technology	Consumer	406,399.90	70,797.81
Technology	Corporate	246,450.12	44,167.00
Technology	Home Office	183,304.02	30,490.14
Total		2,297,200.86	286,397.02

Search

Filters on this visual ...

Category is (All)

Segment is (All)

Sum of Profit is (All)

Sum of Sales is (All)

Add data fields here

Filters on this page ...

Sync slicers

Build visual

Category

Segment

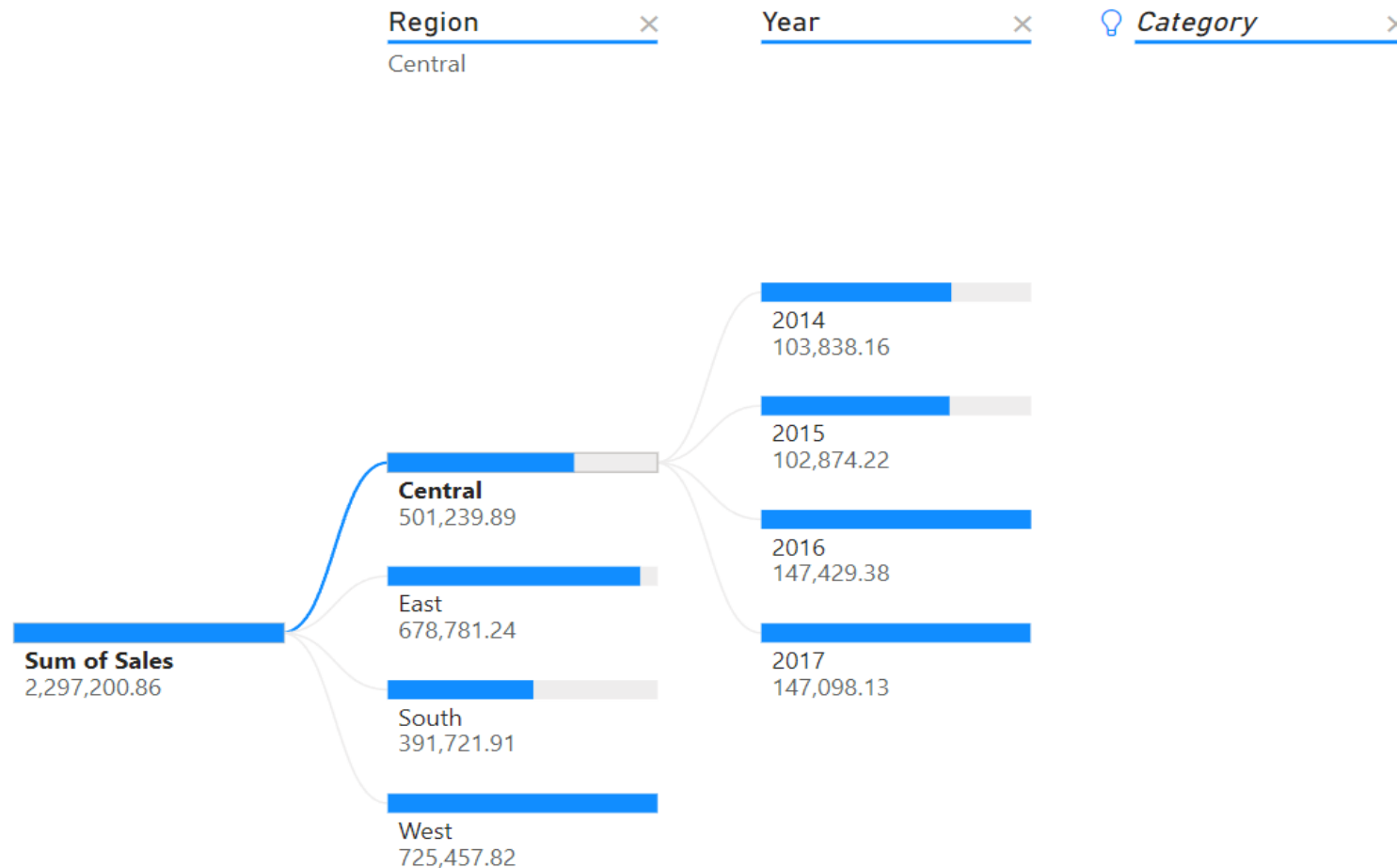
Sum of Sales

Sum of Profit

Create a Decomposition Tree having Analysis on Sales Explained by Region, Year and Category.

Create a Decomposition Tree having Analysis on Sales Explained by Region, Year and Category.

< Back to report



Filters

Search

Filters on this visual

- Category is (All)
- OrderDate - Year is (All)
- Region is (All)
- Sum of Sales is (All)

Add data fields here

Filters on this page

Add data fields here

Filters on all pages

Add data fields here

Visualizations

Build visual

Sync slicers

Analyze

Sum of Sales

Explain by

- Region
- OrderDate
- Year
- Category

Tooltips

Add data fields here

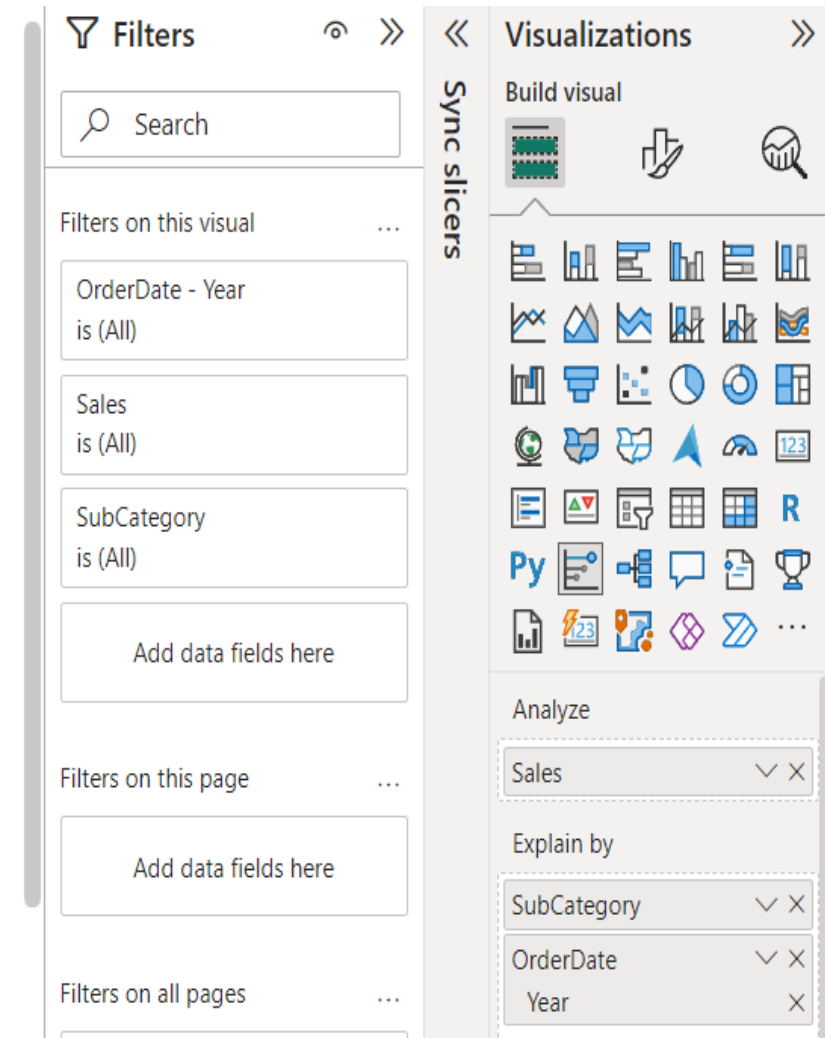
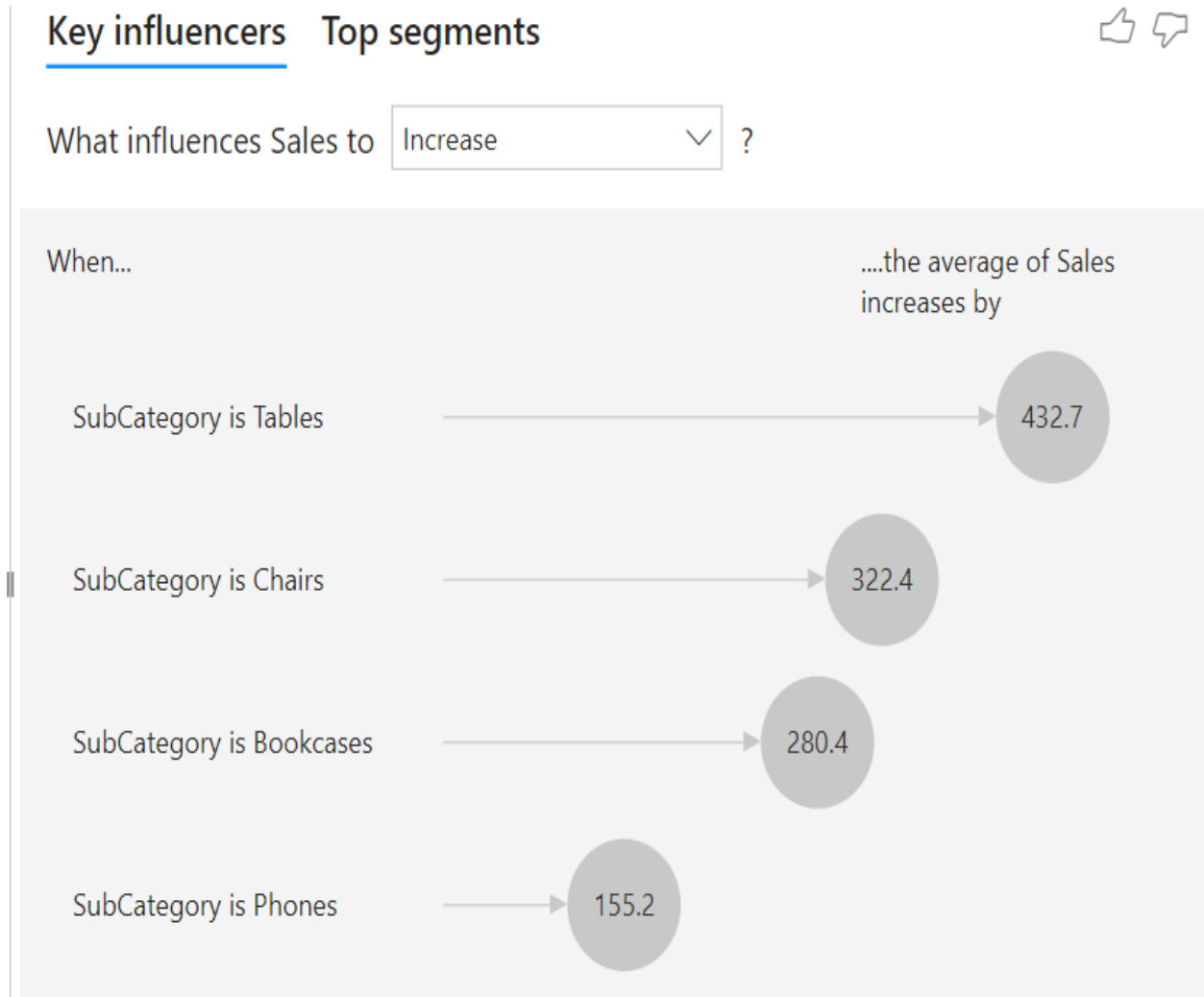
Drill through

Cross-report

Off

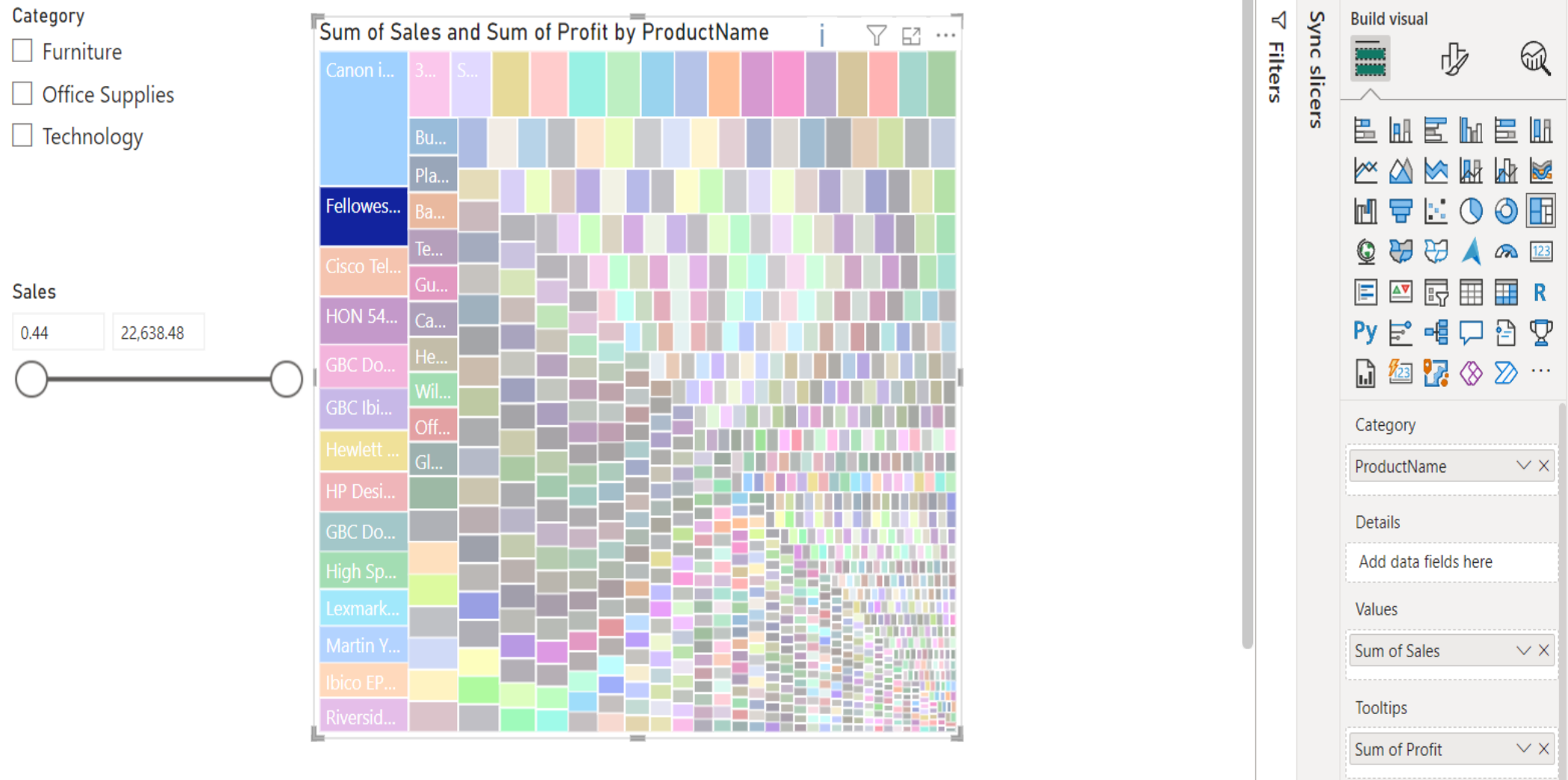
Create Key Influencer having Analysis as Sales,
explained by SubCategory and Year.

Create Key Influencer having Analysis as Sales, explained by SubCategory and Year.



1) Slicer can Take both Categorical and Continuous Values. Put 3 Slicer of Category (Categorical), Sales(Continuous Values) and Quantity(Continuous Values).

2) Change the slicer values to see the change in TreeMap.



Sync Slicers with other Pages too.

File Home Insert Modeling View Optimize Help Format Data / Drill

Themes

Page view Scale to fit

Mobile layout Mobile

Gridlines Snap to grid Lock objects Page options

Filters Bookmarks Selection Performance analyzer Sync slicers

Show panes

Category

- ☐ Furniture
- ☐ Office Supplies
- ☐ Technology

Quantity

1 14

Sales

0.44 22,638.48

Sum of Sales and Sum of Profit by Product

Product	Category	Sum of Sales	Sum of Profit
Canon i...	Technology	3...	S...
Bu...	Technology		
Pla...	Technology		
Fellowes...	Technology	Ba...	
Cisco Tel...	Technology	Te...	
HON 54...	Technology	Gu...	
GBC Do...	Technology	Ca...	
GBC Ibi...	Technology	He...	
Hewlett ...	Technology	Wil...	
HP Desi...	Technology	Off...	
GBC Do...	Technology	Gl...	
High Sp...	Technology		
Lexmark...	Technology		
Martin Y...	Technology		
Ibico EP...	Technology		
Riversid...	Technology		

Filters

Search

Filters on this visual

Sales is (All)

Add data fields here

Filters on this page

Add data fields here

Filters on all pages

Add data fields here

Sync slicers

Add and sync with all pages, or select specific pages:

Page name		
Page 10	<input type="checkbox"/>	<input type="checkbox"/>
Page 9	<input type="checkbox"/>	<input type="checkbox"/>
Page 1	<input type="checkbox"/>	<input type="checkbox"/>
Page 2	<input type="checkbox"/>	<input type="checkbox"/>
Page 3	<input type="checkbox"/>	<input type="checkbox"/>
Page 4	<input type="checkbox"/>	<input type="checkbox"/>
Page 5	<input type="checkbox"/>	<input type="checkbox"/>
Page 6	<input type="checkbox"/>	<input type="checkbox"/>
Page 7	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Page 8	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Page 11	<input type="checkbox"/>	<input type="checkbox"/>
Page 12	<input type="checkbox"/>	<input type="checkbox"/>
Page 13	<input type="checkbox"/>	<input type="checkbox"/>
Page 14	<input type="checkbox"/>	<input type="checkbox"/>
Page 15	<input type="checkbox"/>	<input type="checkbox"/>

Advanced options

Visualizations

Build visual

Field

Sales

Drill through

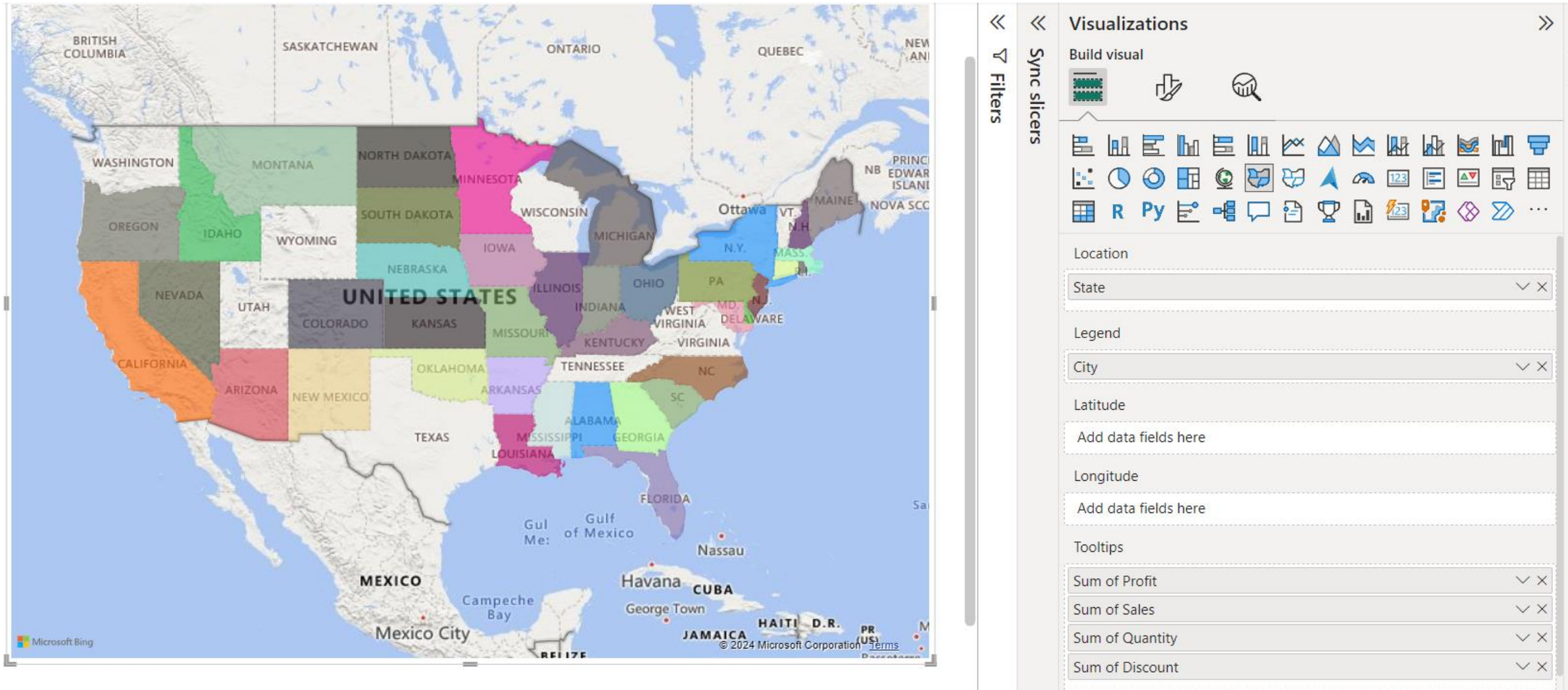
Cross-report

Keep all filters

Add drill-through field

Create filled Map having Location as State, Legend as City and Tooltips as Sum of Profit, Sum of Sales, Sum of Quantity, Sum of Discount.

Create filled Map having Location as State, Legend as City and Tooltips as Sum of Profit, Sum of Sales, Sum of Quantity, Sum of Discount.



- 1) Create a Table with Column as Subcategory and Sum of Sales
- 2) Apply filter to filter Top 5 based on Sum of Profit.

- 1) Create a Table with Column as Subcategory and Sum of Sales
- 2) Apply filter to filter Top 5 based on Sum of Profit.

SubCategory	Sum of Sales
Accessories	167,380.32
Binders	203,412.73
Copiers	149,528.03
Paper	78,479.21
Phones	330,007.05
Total	928,807.34

Filters

Search

Filters on this visual

SubCategory

top 5 by Sum of Profit

Filter type ⓘ

Top N

Show items

Top 5

By value

Sum of Profit

Apply filter

Sum of Sales is (All)

Add data fields here

Visualizations

Build visual

Columns

SubCategory

Sum of Sales

Drill through

Cross-report

Keep all filters

Add drill-through fields here

- 1) Create a Table with Column as Subcategory and Sum of Sales
- 2) Apply filter on the page: Drag and drop region

SubCategory	Sum of Sales
Accessories	33,956.08
Appliances	23,582.03
Art	5,765.34
Binders	56,923.28
Bookcases	24,157.18
Chairs	85,230.65
Copiers	37,259.57
Envelopes	4,636.87
Fasteners	778.03
Furnishings	15,254.37
Labels	2,451.47
Machines	26,797.38
Paper	17,491.90
Phones	72,403.28
Total	501,239.89



Filters

Search

Filters on this page

Region
is Central

Filter type

Basic filtering

Search

☐ Select all

☒ Central 2323

☐ East 2848

☐ South 1620

☐ West 3203

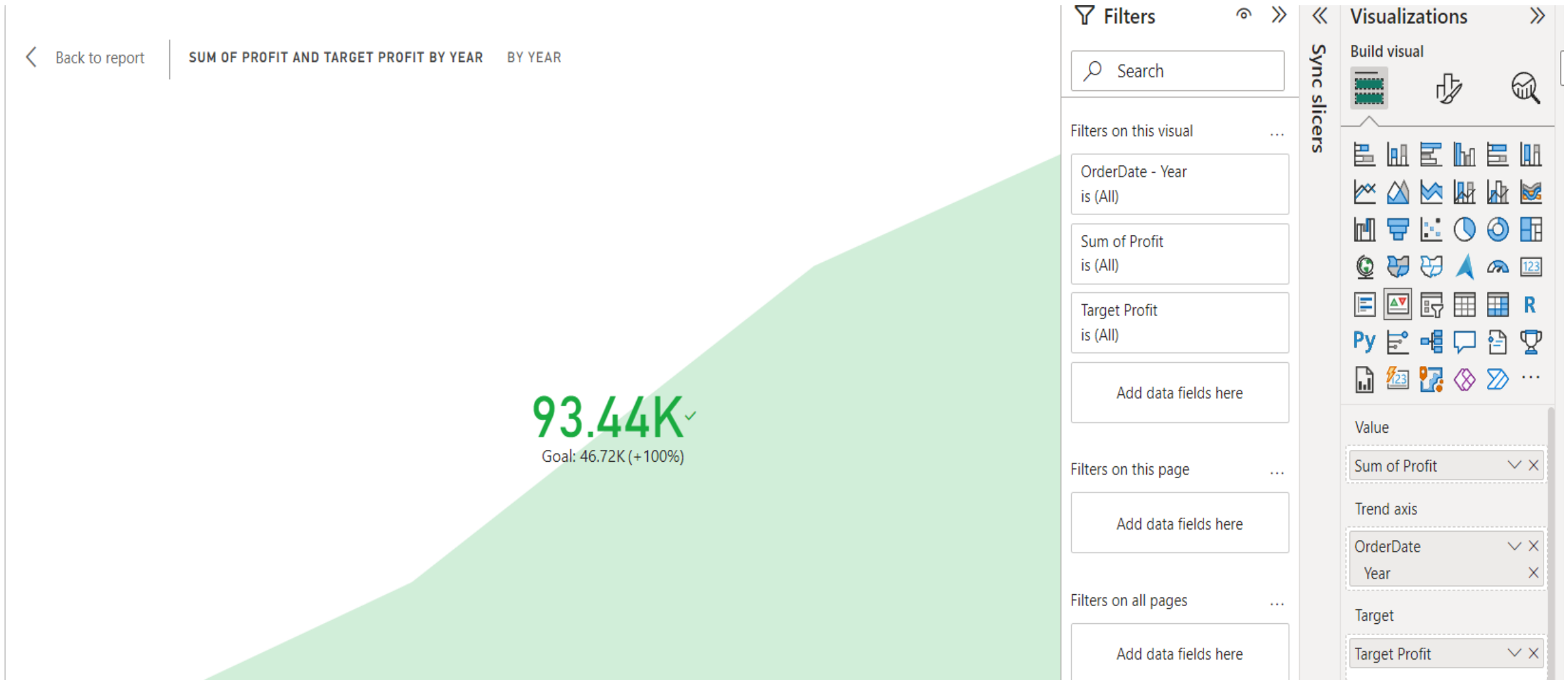
☐ Require single selection

Add data fields here

Filters on all pages

Add data fields here

- 1) Create a KPI(Using Measure) for Values as Sum of Profit and trend axis as Year, now create a Variable name **Target_Profit=SUM(Store_Sales_Data[Profit])*1.5** and
- 2) Then Modify its value by **Target_Profit= SUM(Store_Sales_Data[Profit])/2**



Count of rows for South, East, West and Central

- `Count_Total_rows = COUNTROWS('superstore')`
- `South = CALCULATE([Count_Total_rows], 'superstore'[Region]="South")`
- Create other Measures and create cards:

1620

Total_rows_South

2323

Total_Rows_Central

2848

Total_Rows_East

3203

Total_rows_West

Find Sum of Sales for South, East, West and Central

- `Sum_Sales_South = CALCULATE(SUM(superstore[Sales]), superstore[Region] = "South")`
- `Sum_Sales_East = CALCULATE(SUM(superstore[Sales]), superstore[Region] = "East")`
- `Sum_Sales_West = CALCULATE(SUM(superstore[Sales]), superstore[Region] = "West")`
- `Sum_Sales_Central = CALCULATE(SUM(superstore[Sales]), superstore[Region] = "Central")`

391.72K

Sum_Sales_South

678.78K

Sum_Sales_East

725.46K

Sum_Sales_West

501.24K

Sum_Salest_Central

Find Average of Profit for Each region

Activity:

Create:

- 1) all the charts used so far
- 2) change its variable
- 3) change the property of each chart and
- 4) put them in a single page as Dashboard.

Activity:

- 1.Divide the Table in 3 Sub-tables.**
- 2.Clean the data and see whether every rows matches correct data format.**
- 3.Find the Primary Key of all the tables.**
- 4.Create relationship.**
- 5.Create 5 Charts along with 3 slicer.**
- 6.Format the visuals in fire and ash.**

Divide the given Table in 3 Sub tables

1. Orders Table:

1. OrderID (Primary Key)
2. OrderDate
3. ShipDate
4. ShipMode
5. CustomerID (Foreign Key referencing Customers.CustomerID)
6. ProductID (Foreign Key referencing Products.ProductID)
7. Sales
8. Quantity
9. Discount
10. Profit

2. Customers Table:

1. CustomerID (Primary Key)
2. CustomerName
3. Segment
4. Country
5. City
6. State
7. PostalCode
8. Region

3. Products Table:

1. ProductID (Primary Key)
2. Category
3. SubCategory
4. ProductName

Fire and Ash background

