



Analyzing Sales Performance

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INTRO

Introduction

We are working with a dataset that consists of three different sources: Customer, Product, and Order data.

Our goal is to clean this data and prepare it for analysis by identifying and handling missing values, removing duplicates, and ensuring proper data types for effective analysis.





Key Steps



Cleaning Process

Analysis Process

Tableau

Conclusion

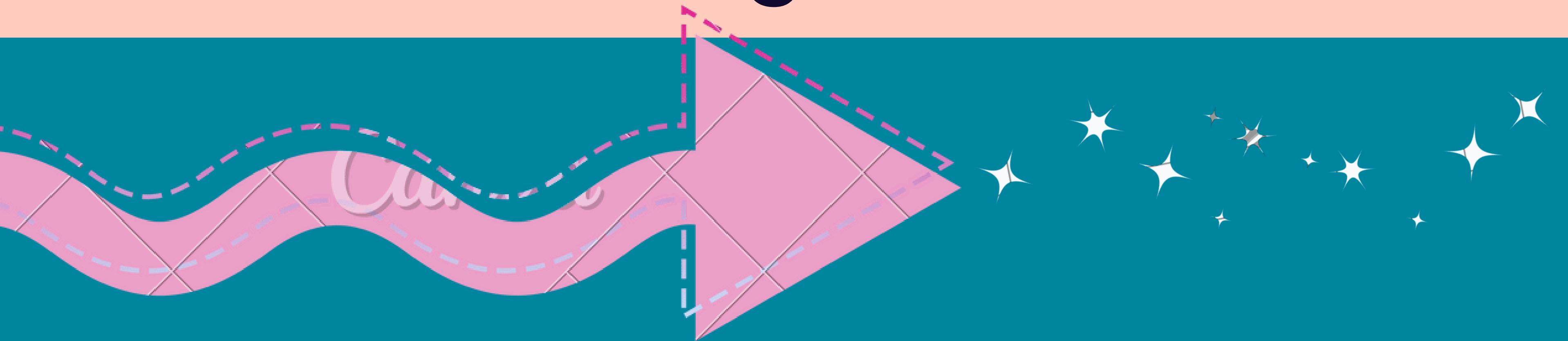


START

Completion

First Step

Cleaning Process



Cleaning

Importing Libraries



PANDAS

For data manipulation and analysis



NUMPY

For numerical operations and array management

```
import pandas as pd  
import numpy as np  
import matplotlib.pyplot as plt  
import seaborn as sns
```



MATPLOTLIB .PYPLOT

For visualizations

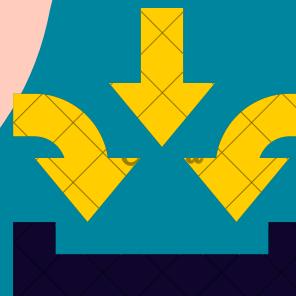
SEABORN

For statistical visualizations

Loading the Data



- To load the dataset, I used the pandas library's `read_csv()` function to import CSV files into dataframes.
- This allows me to easily work with the data and inspect its structure.
- Each CSV file contains data related to customers, orders, and products, and they were read using the appropriate file paths and encoding.



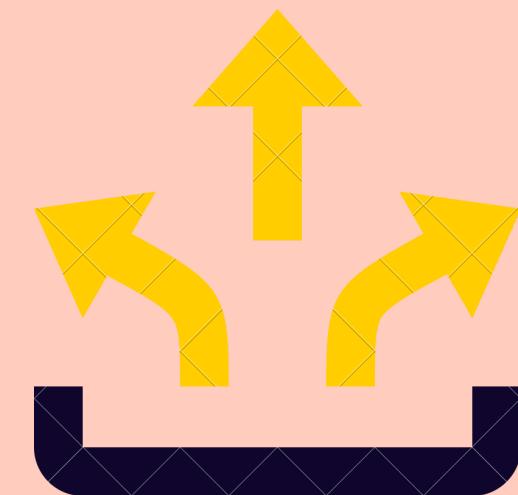
Input

```
# Load the datasets  
df1 = pd.read_csv('/kaggle/input/bussiness1/Customer-Raw Data - Business Data Set (Copy-csv)2 - Copy.csv', encoding='ISO-8859-1')  
df2 = pd.read_csv('/kaggle/input/bussiness1/Del Col- Raw Data - Business Data Set.csv', encoding='ISO-8859-1')  
df3 = pd.read_csv('/kaggle/input/bussiness1/Product- Raw Data - Business Data Set (Copy-csv) - Copy.csv', encoding='ISO-8859-1')
```

```
# Display the first 10 rows  
print(df2.head(10))
```

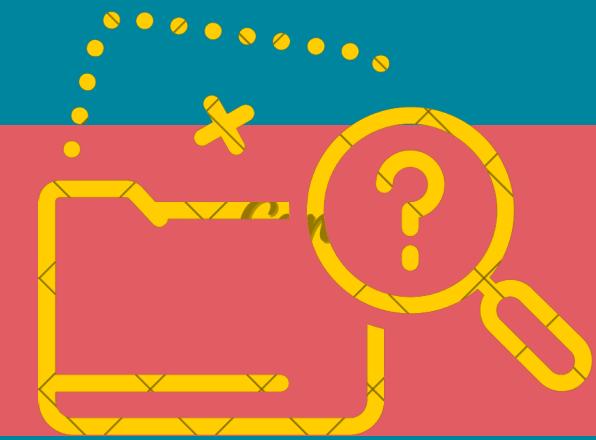


Output



Cleaning

Check for Missing Data



- We use the `isnull().sum()` function to check for missing values in each column.
- The dataset may have missing values in key columns like "Sales", "Quantity", and "Profit."

```
df1.isnull().sum()  
  
df3.isnull().sum()  
  
df2.isnull().sum()
```

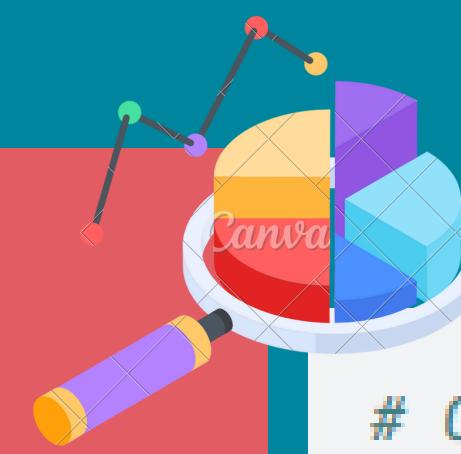
```
In [9]: df1.isnull().sum()  
  
Out[9]: Customer ID      0  
Customer Name      0  
dtype: int64  
  
In [10]: df3.isnull().sum()  
  
Out[10]: Product ID      0  
Product Name       0  
dtype: int64
```

```
In [11]: df2.isnull().sum()  
  
Out[11]: Order ID          0  
Order Date         0  
Ship Mode        1284  
Customer ID      0  
Product ID       0  
country           0  
city              0  
State             0  
Postal Code       0  
Region            0  
Category          0  
Sub-Category     0  
Sales             1596  
Quantity          558  
Discount          0  
profit            1921  
dtype: int64
```

Cleaning

Handling Missing Data

- We calculate the percentage of missing data in each column using a simple formula.
- Based on the percentage, we decide whether to drop the column or clean it (fill/drop rows).
- If missing values exceed a threshold (e.g., 60%), we drop the column.



```
# Calculating percentage of missing values
null_percentage = (df2.isnull().sum() / len(df2)) * 100
print(null_percentage)
```

```
df_cleaned = df2.loc[:, null_percentage < 60]
```

```
# Dropping rows with missing values
df2_cleaned = df2.dropna()
```

```
# Checking if missing values are removed
print(df2_cleaned)
```

Cleaning

Output



```
1: null_percentage = (df2.isnull().sum() / len(df2)) * 100  
print(null_percentage)
```

```
Order ID      0.000000  
Order Date    0.000000  
Ship Mode     12.847709  
Customer ID   0.000000  
Product ID    0.000000  
country       0.000000  
city          0.000000  
State          0.000000  
Postal Code   0.000000  
Region         0.000000  
Category       0.000000  
Sub-Category   0.000000  
Sales          15.969582  
Quantity       5.583350  
Discount       0.000000  
profit         19.221533  
dtype: float64
```

	Order ID	Order Date	Ship Mode	Customer ID	\		
2	CA-2016-138688	6/12/2016 0:00	Second Class	DV-13045			
4	US-2015-108966	10/11/2015 0:00	Standard Class	SO-20335			
7	CA-2014-115812	6/9/2014 0:00	Standard Class	BH-11710			
14	US-2015-118983	11/22/2015 0:00	Standard Class	HP-14815			
21	CA-2016-137330	12/9/2016 0:00	Standard Class	KB-16505			
...		
9989	CA-2014-110422	1/21/2014 0:00	Second Class	TB-21400			
9990	CA-2017-121258	2/26/2017 0:00	Standard Class	DB-13060			
9991	CA-2017-121258	2/26/2017 0:00	Standard Class	DB-13060			
9992	CA-2017-121258	2/26/2017 0:00	Standard Class	DB-13060			
9993	CA-2017-119914	5/4/2017 0:00	Second Class	CC-12220			
	Product ID	country	city	State	\		
2	OFF-LA-10000240	United States	Los Angeles	California			
4	OFF-ST-10000760	United States	Fort Lauderdale	Florida			
7	TEC-PH-10002275	United States	Los Angeles	California			
21	OFF-AR-10000246	United States	Fremont	Nebraska			
...		
9989	FUR-FU-10001889	United States	Miami	Florida			
9990	FUR-FU-10000747	United States	Costa Mesa	California			
9991	TEC-PH-10003645	United States	Costa Mesa	California			
9992	OFF-PA-10004041	United States	Costa Mesa	California			
9993	OFF-AP-10002684	United States	Westminster	California			
	Postal Code	Region	Category	Sub-Category	Sales	Quantity	\
2	90036	West	Office Supplies	Labels	14.620	2.0	
4	33311	South	Office Supplies	Storage	22.368	2.0	
7	90032	West	Technology	Phones	907.152	6.0	
14	76106	Central	Office Supplies	Appliances	68.810	5.0	
21	68025	Central	Office Supplies	Art	19.460	7.0	
...
9989	33180	South	Furniture	Furnishings	25.248	3.0	
9990	92627	West	Furniture	Furnishings	91.960	2.0	
9991	92627	West	Technology	Phones	258.576	2.0	
9992	92627	West	Office Supplies	Paper	29.600	4.0	
9993	92683	West	Office Supplies	Appliances	243.160	2.0	
	Discount	profit					
2	0.0	6.8714					
4	0.2	2.5164					
7	0.2	90.7152					
14	0.8	-123.8580					
21	0.0	5.0596					
...					
9989	0.2	4.1028					
9990	0.0	15.6332					
9991	0.2	19.3932					
9992	0.0	13.3200					
9993	0.0	72.9480					

Cleaning

Checking for Duplicates

- Duplicates are checked and removed from the dataset to avoid redundant data affecting the analysis.



```
# Count the number of duplicate entries in the DataFrame df2  
df2.duplicated().sum()
```

```
In [16]: df2.duplicated().sum()  
Out[16]: 0
```

```
# Remove duplicate entries from the DataFrame df2_cleaned  
df2_cleaned = df2_cleaned.drop_duplicates()
```

Cleaning

Data Formatting & Preprocessing

- Convert columns to appropriate data types (e.g., date format).
- Strip any whitespace from column names.

Input & Output

```
# Remove leading and trailing whitespace from column names  
df2_cleaned.columns = df2_cleaned.columns.str.strip()
```

```
In [17]: df2_cleaned = df2_cleaned.drop_duplicates()
```

```
In [18]: df2_cleaned['Order Date'] = pd.to_datetime(df2_cleaned['Order Date'])
```

```
In [19]: print(df2_cleaned.head())
```

	Order ID	Order Date	Ship Mode	Customer ID	Product ID
2	CA-2016-138688	2016-06-12	Second Class	DV-13045	OFF-LA-10000240
4	US-2015-108966	2015-10-11	Standard Class	SO-20335	OFF-ST-10000760
7	CA-2014-115812	2014-06-09	Standard Class	BH-11710	TEC-PH-10002275
14	US-2015-118983	2015-11-22	Standard Class	HP-14815	OFF-AP-10002311
21	CA-2016-137330	2016-12-09	Standard Class	KB-16585	OFF-AR-10000246

	country	city	State	Postal Code	Region
2	United States	Los Angeles	California	90036	West
4	United States	Fort Lauderdale	Florida	33311	South
7	United States	Los Angeles	California	90032	West
14	United States	Fort Worth	Texas	76106	Central
21	United States	Fremont	Nebraska	68025	Central

	Category	Sub-Category	Sales	Quantity	Discount	Profit
2	Office Supplies	Labels	14.620	2.0	0.0	6.8714
4	Office Supplies	Storage	22.368	2.0	0.2	2.5164
7	Technology	Phones	987.152	6.0	0.2	90.7152
14	Office Supplies	Appliances	68.810	5.0	0.8	-123.8580
21	Office Supplies	Art	19.460	7.0	0.0	5.0596

Cleaning

Checking for Zeros in Key Columns



- The code checks for zero values in the specified columns and provides a simple report on their presence or absence.
- The code snippet you provided checks for missing (null) values in the DataFrame df2_cleaned and prints the columns that have missing values, along with the count of those missing values.

In [22]:

```
zeros_in_col_sales = (df_cleaned['Sales'] == 0).any()
zeros_in_col_ship_mode = (df_cleaned['Ship Mode'] == 0).any()

if not zeros_in_col_sales and not zeros_in_col_ship_mode:
    print("لا يوجد اصوات في المبيعات و Ship Mode.")
else:
    if zeros_in_col_sales:
        print("يوجد اصوات في المبيعات")
    if zeros_in_col_ship_mode:
        print("يوجد اصوات في Ship Mode.")
```

لا يوجد اصوات في المبيعات و Ship Mode.

In [23]:

```
null_counts = df2_cleaned.isnull().sum()
print(null_counts[null_counts > 0])
```

Series([], dtype: int64)

Cleaning

Identifying Outliers

What is IQR?

The IQR represents the middle 50% of your data, which lies between the first quartile (Q1) and the third quartile (Q3). It helps in understanding the spread of the bulk of your data.

Q1 (First Quartile)

The value below which 25% of the data falls.

Q3 (Third Quartile)

The value below which 75% of the data falls.

IQR Calculation

$$\text{IQR} = Q3 - Q1$$

Identifying Outliers

Outliers are data points that fall outside the typical range of your dataset. Using the IQR method, we define outliers as values that are:

1. Less than $Q1 - 1.5 * \text{IQR}$
(Lower bound)
2. Greater than $Q3 + 1.5 * \text{IQR}$
(Upper bound)

Cleaning

Output



```
Q1 = df2['Sales'].quantile(0.25)
Q3 = df2['Sales'].quantile(0.75)
IQR = Q3 - Q1
```

```
lower_bound = Q1 - 1.5 * IQR
upper_bound = Q3 + 1.5 * IQR
```

```
outliers = df2[(df2['Sales'] < lower_bound) | (df2['Sales'] > upper_bound)]
print(outliers)
```

```
Order ID      Order Date     Ship Mode Customer ID \\
3   US-2015-108966  10/11/2015 0:00 Standard Class  SO-28335
7   CA-2014-115812   6/9/2014 0:00 Standard Class  BH-11710
11  CA-2014-115812   6/9/2014 0:00           NaN  BH-11710
27  US-2015-150630   9/17/2015 0:00 Standard Class  TB-21520
35  CA-2016-117598  12/8/2016 0:00 First Class   GH-14485
...
9931 CA-2015-104948  11/13/2015 0:00 Standard Class  KH-16510
9942 CA-2014-143371  12/28/2014 0:00 Standard Class  MD-17350
9947 CA-2017-121559   6/1/2017 0:00 Second Class  HW-14935
9948 CA-2017-121559   6/1/2017 0:00 Second Class  HW-14935
9968 CA-2017-153871  12/11/2017 0:00 Standard Class  RB-19435
```

```
Product ID      country       city      State \\
3   FUR-TA-10008577 United States Fort Lauderdale Florida
7   TEC-PH-10002275 United States Los Angeles California
11  TEC-PH-10002033 United States Los Angeles California
27  FUR-BO-10004834 United States Philadelphia Pennsylvania
35  TEC-PH-10004977 United States Richardson Texas
```

```
9931 FUR-BO-10004357 United States San Bernardino California
9942 OFF-ST-10001128 United States Anaheim California
9947 FUR-CH-10003746 United States Indianapolis Indiana
9948 OFF-AP-10002945 United States Indianapolis Indiana
9968 OFF-BI-10004600 United States Plainfield New Jersey
```

Postal Code	Region	Category	Sub-Category	Sales	Quantity
3	33311	South	Furniture	Tables	957.5775
7	90032	West	Technology	Phones	907.1520
11	90032	West	Technology	Phones	911.4248
27	19140	East	Furniture	Bookcases	3083.4300
35	75080	Central	Technology	Phones	1097.5440
...
9931	92484	West	Furniture	Bookcases	683.3320
9942	92804	West	Office Supplies	Storage	998.8200
9947	46203	Central	Furniture	Chairs	1925.8800
9948	46203	Central	Office Supplies	Appliances	2405.2000
9968	7060	East	Office Supplies	Binders	735.9800
...
9931	92484	West	Furniture	Bookcases	683.3320
9942	92804	West	Office Supplies	Storage	998.8200
9947	46203	Central	Furniture	Chairs	1925.8800
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9968	7060	East	Office Supplies	Binders	735.9800
...
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9942	92804	West	Office Supplies	Storage	998.8200
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...
9931	92484	West	Furniture	Bookcases	683.3320
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9947	46203	Central	Furniture	Chairs	1925.8800
9948	46203	Central	Office Supplies	Appliances	2405.2000
9968	7060	East	Office Supplies	Binders	735.9800
...
9931	92484	West	Furniture	Bookcases	683.3320
9942	92804	West	Office Supplies	Storage	998.8200
9947	46203	Central	Furniture	Chairs	1925.8800
9948	46203	Central	Office Supplies	Appliances	2405.2000
9968	7060	East	Office Supplies	Binders	735.9800
...
9931	92484	West	Furniture	Bookcases	683.3320
9942	92804	West	Office Supplies	Storage	998.8200
9947	46203	Central	Furniture	Chairs	1925.8800
9948	46203	Central	Office Supplies	Appliances	2405.2000
9968	7060	East	Office Supplies</		

Cleaning

Pivot Table Creation for Sales Summary

In this step, we created a pivot table to summarize sales data by region and category. This allows us to easily analyze the total sales performance of different product categories across various regions.

Code Overview:

We used the `pivot_table` function in Python to group sales by region and category.

The table aggregates the total sales for each category in each region.

Purpose:

To provide a clear overview of how different regions perform in terms of sales, helping us identify trends and opportunities.

Cleaning

Output



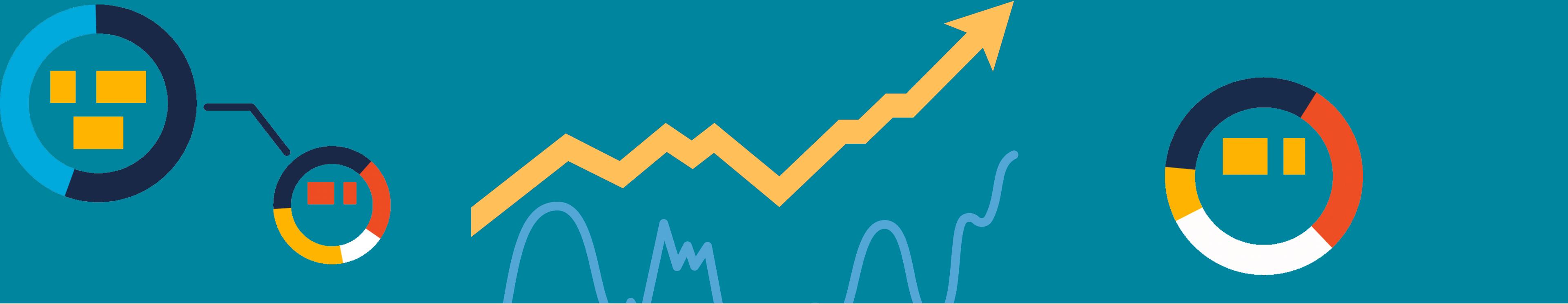
In [29]:

```
pivot_table = df2.pivot_table(  
    values='Sales',  
    index='Region',  
    columns='Category',  
    aggfunc='sum',  
    fill_value=0  
)
```

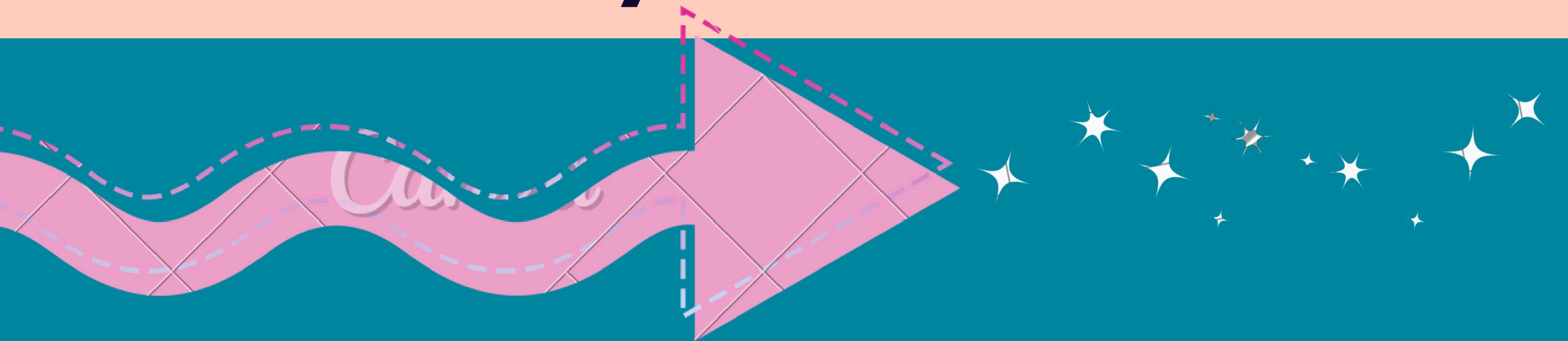
In [30]:

```
print(pivot_table)
```

Category	Furniture	Office Supplies	Technology
Region			
Central	143028.5072	147617.447	141641.242
East	182563.8010	171074.916	223227.764
South	98250.8980	100359.534	130533.251
West	214482.4985	192492.751	215061.682

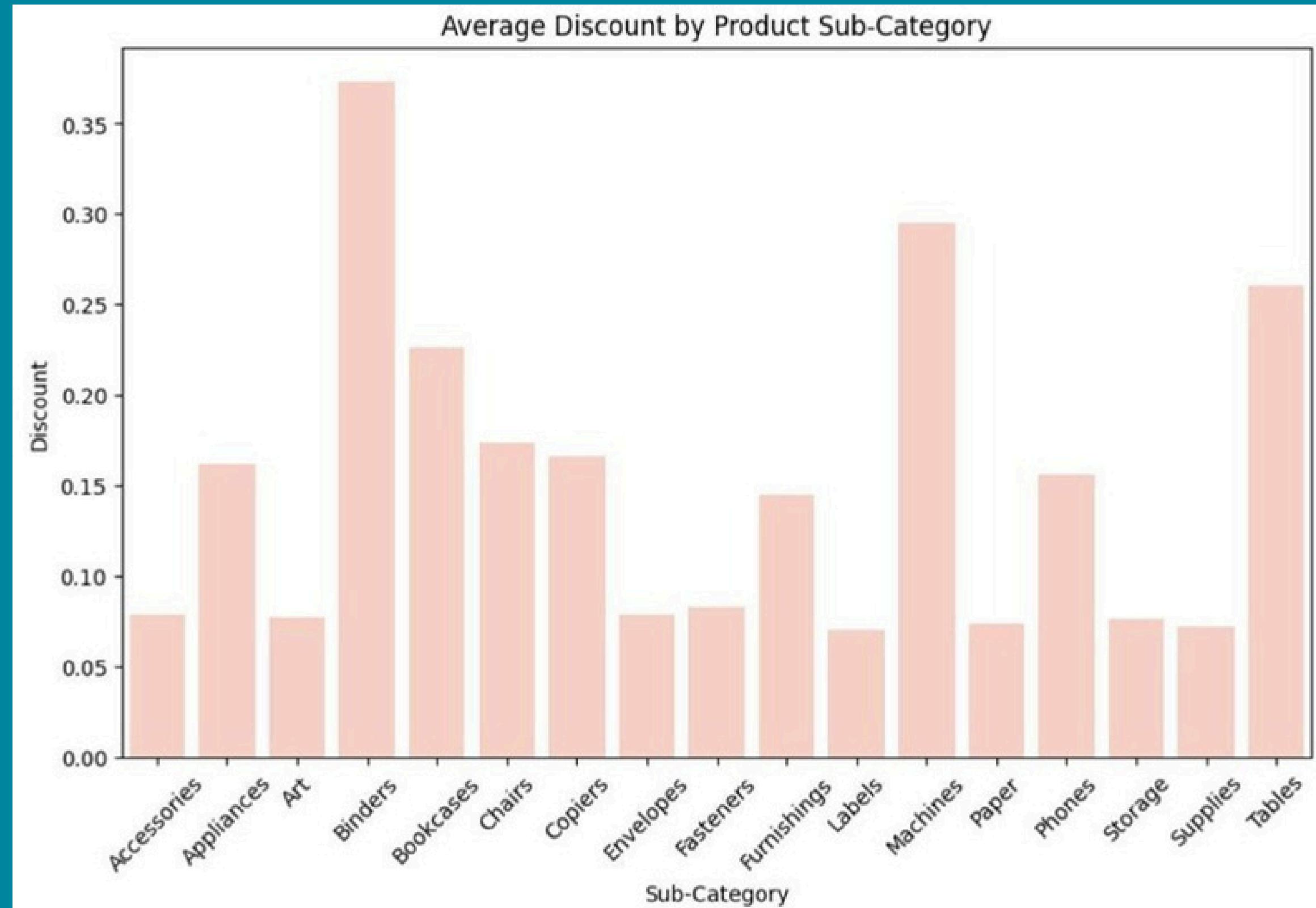


NEXT, **Analysis Process**

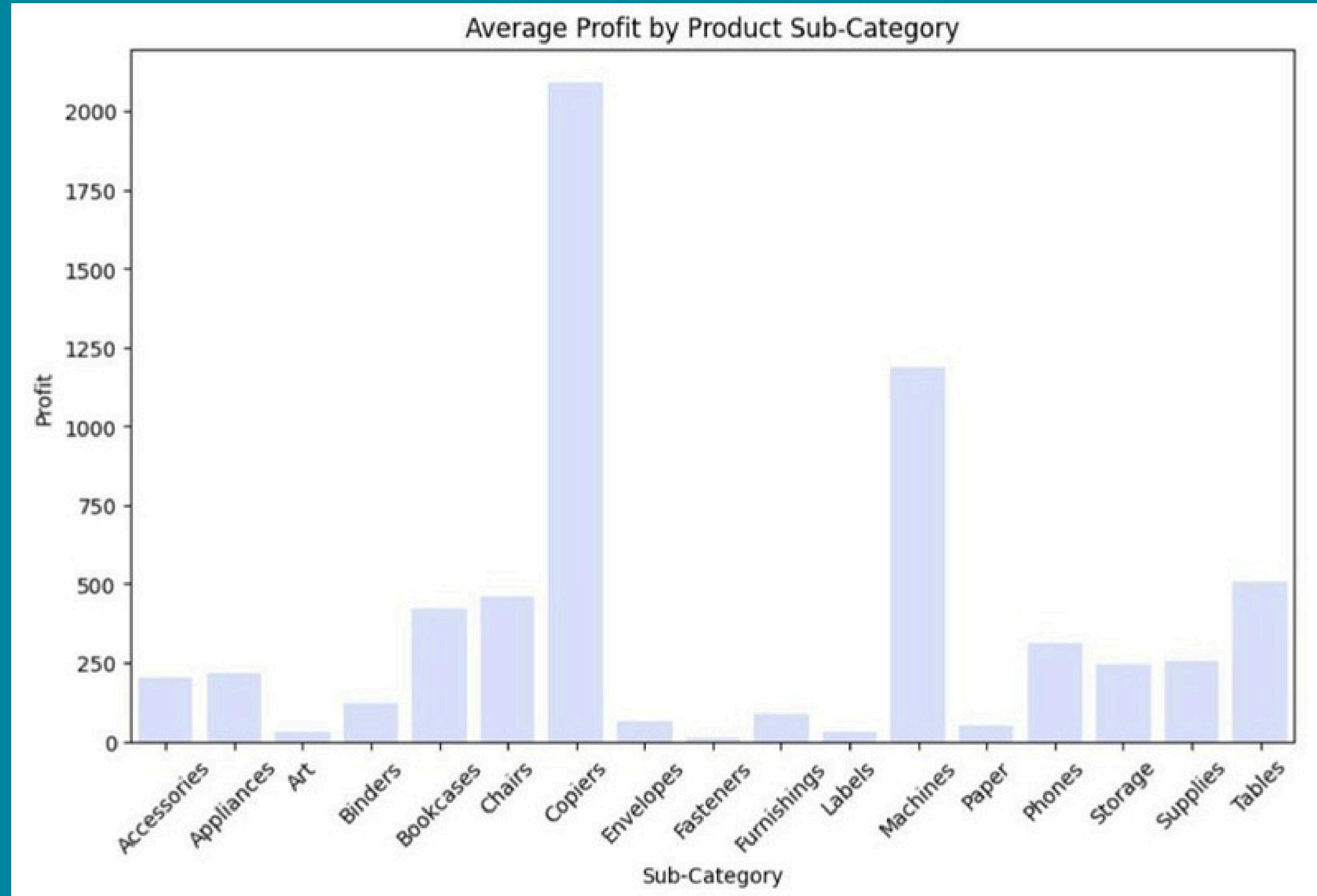




Average Discount by product Sub-Category



Average Profit by Product Sub-Category





Sales by ship mode, region, category and sum category

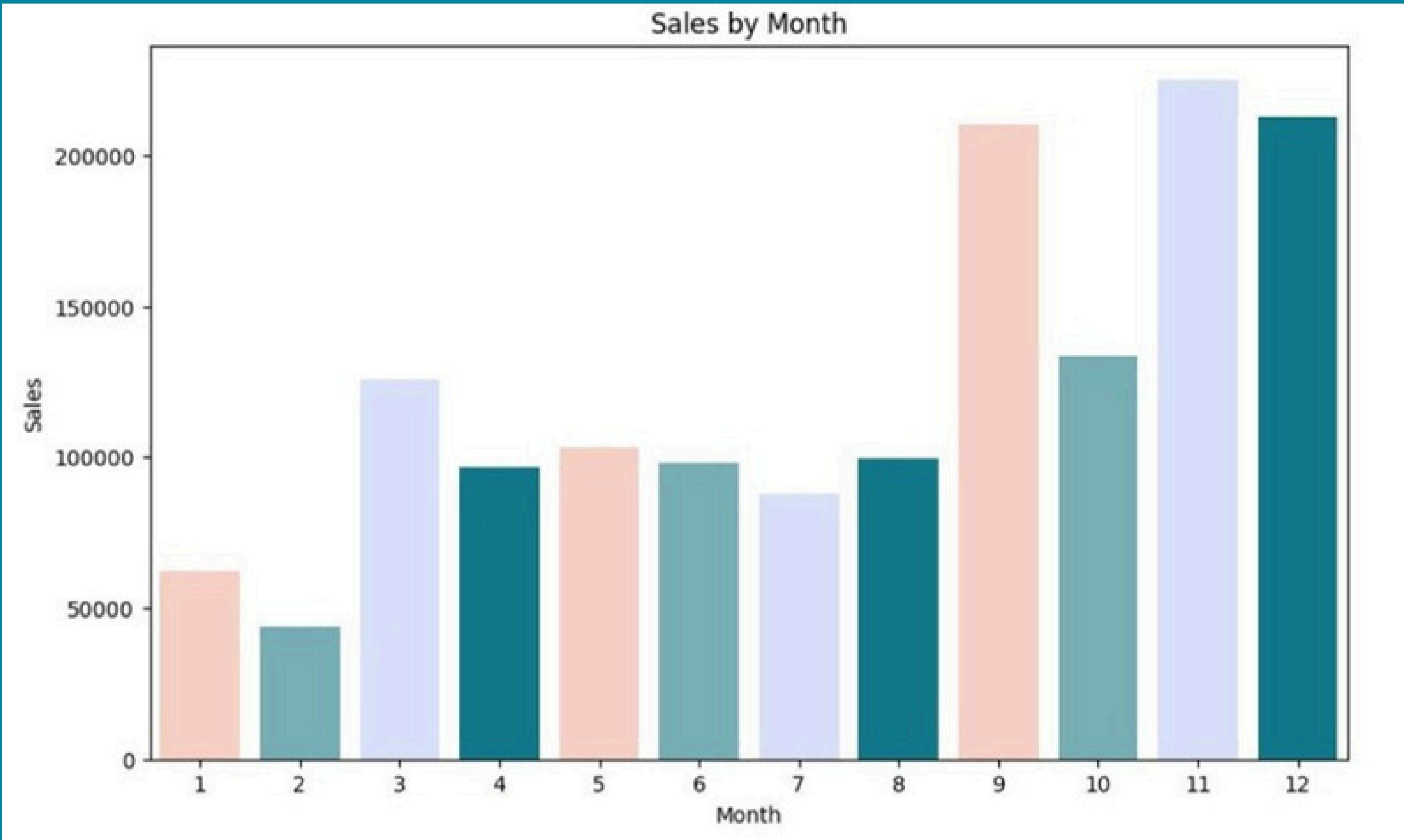


	Category	Sub-Category	Sales
0	Furniture	Bookcases	75575.7316
1	Furniture	Chairs	220596.9850
2	Furniture	Furnishings	60520.3760
3	Furniture	Tables	134581.4235
4	Office Supplies	Appliances	71819.0080
5	Office Supplies	Art	16422.4040
6	Office Supplies	Binders	147734.7850
7	Office Supplies	Envelopes	10994.4200
8	Office Supplies	Fasteners	1786.0060
9	Office Supplies	Labels	7527.6700
10	Office Supplies	Paper	48728.9860
11	Office Supplies	Storage	137795.9540
12	Office Supplies	Supplies	34682.6460
13	Technology	Accessories	110385.7580
14	Technology	Copiers	110168.6400
15	Technology	Machines	105446.6030
16	Technology	Phones	204767.9860

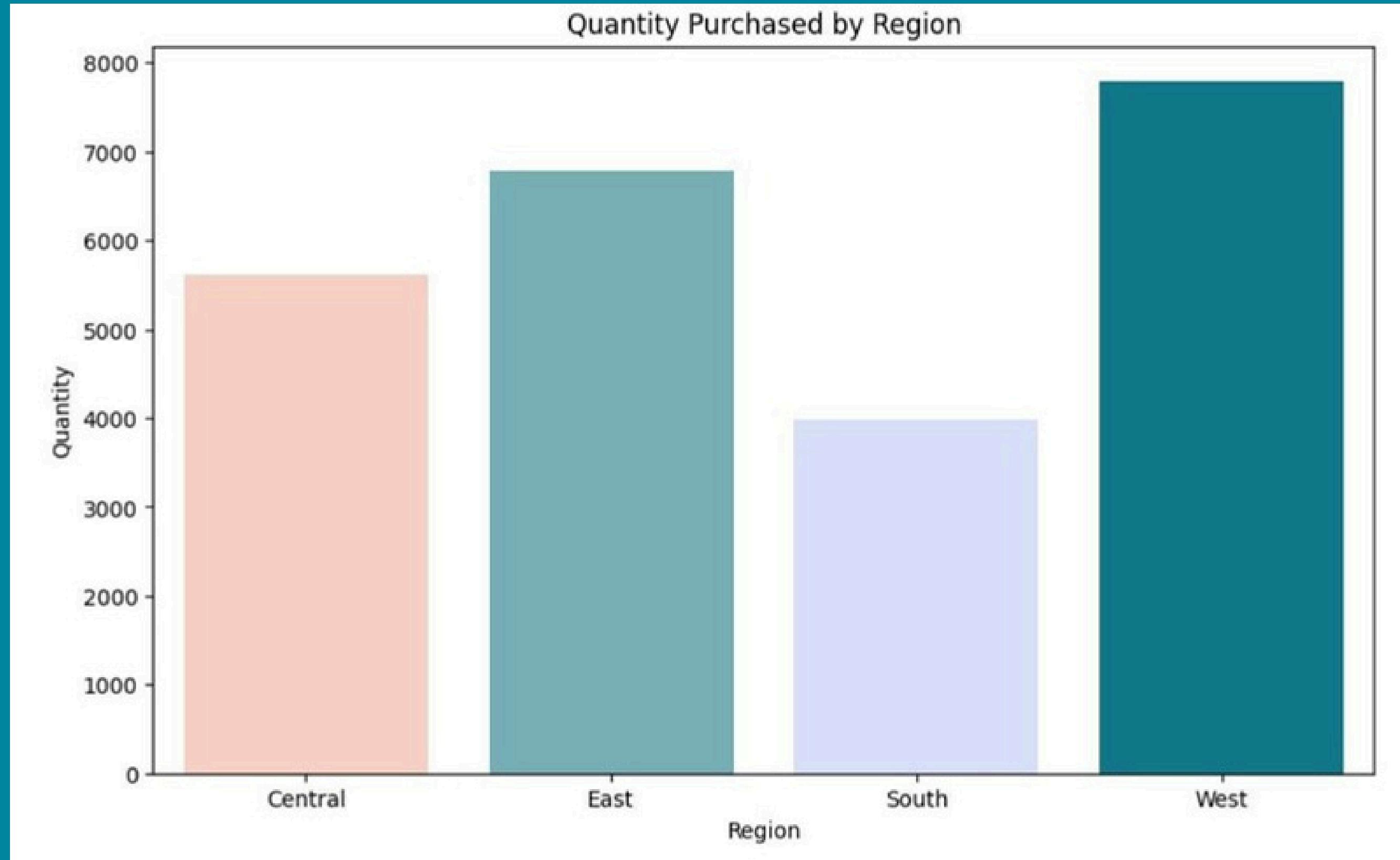
	Region	Sales
0	Central	342225.6916
1	East	463223.3870
2	South	230533.2635
3	West	463553.0400

	Ship Mode	Sales
0	First Class	224116.7439
1	Same Day	76555.2320
2	Second Class	299994.1230
3	Standard Class	898869.2832

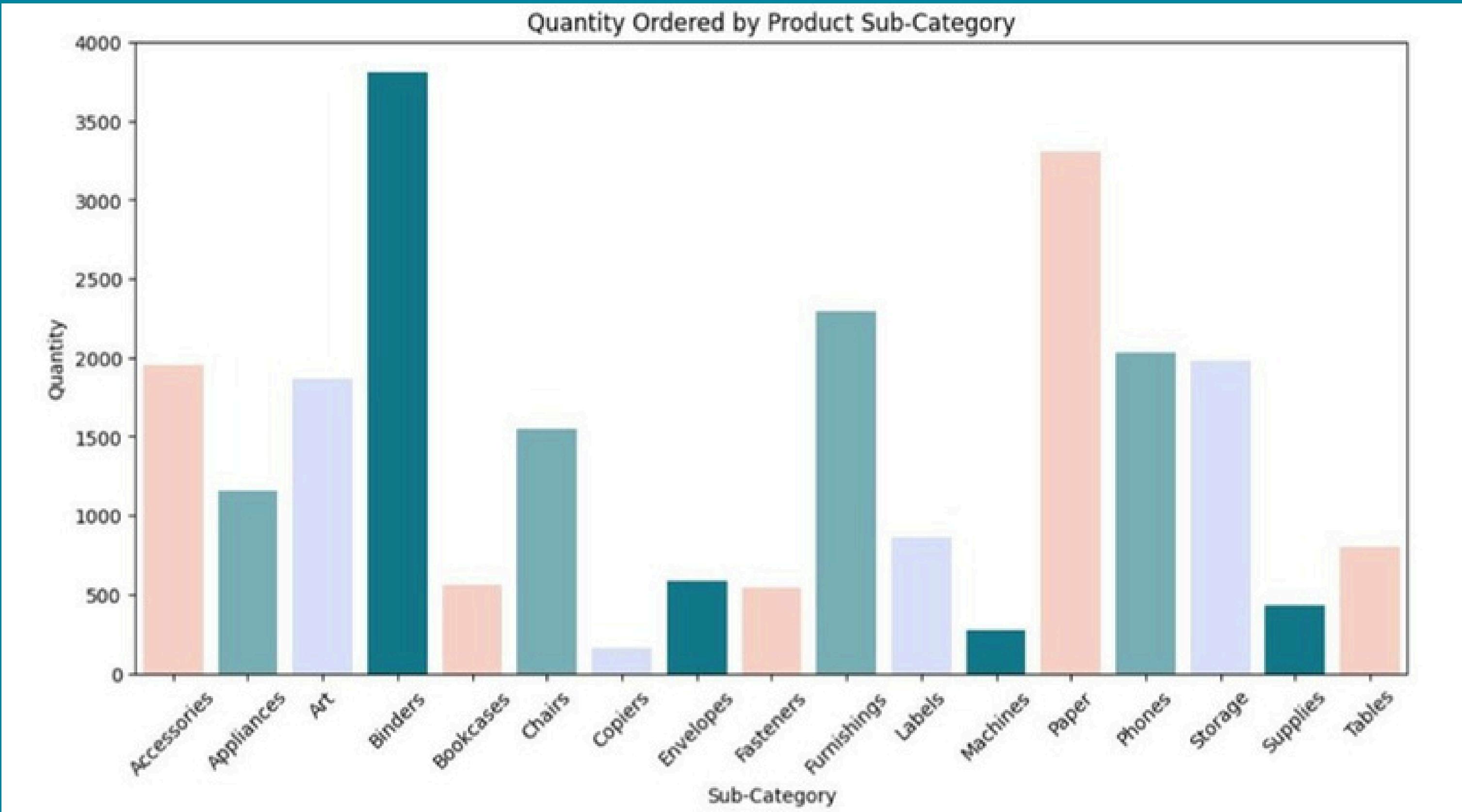
Sales by Month



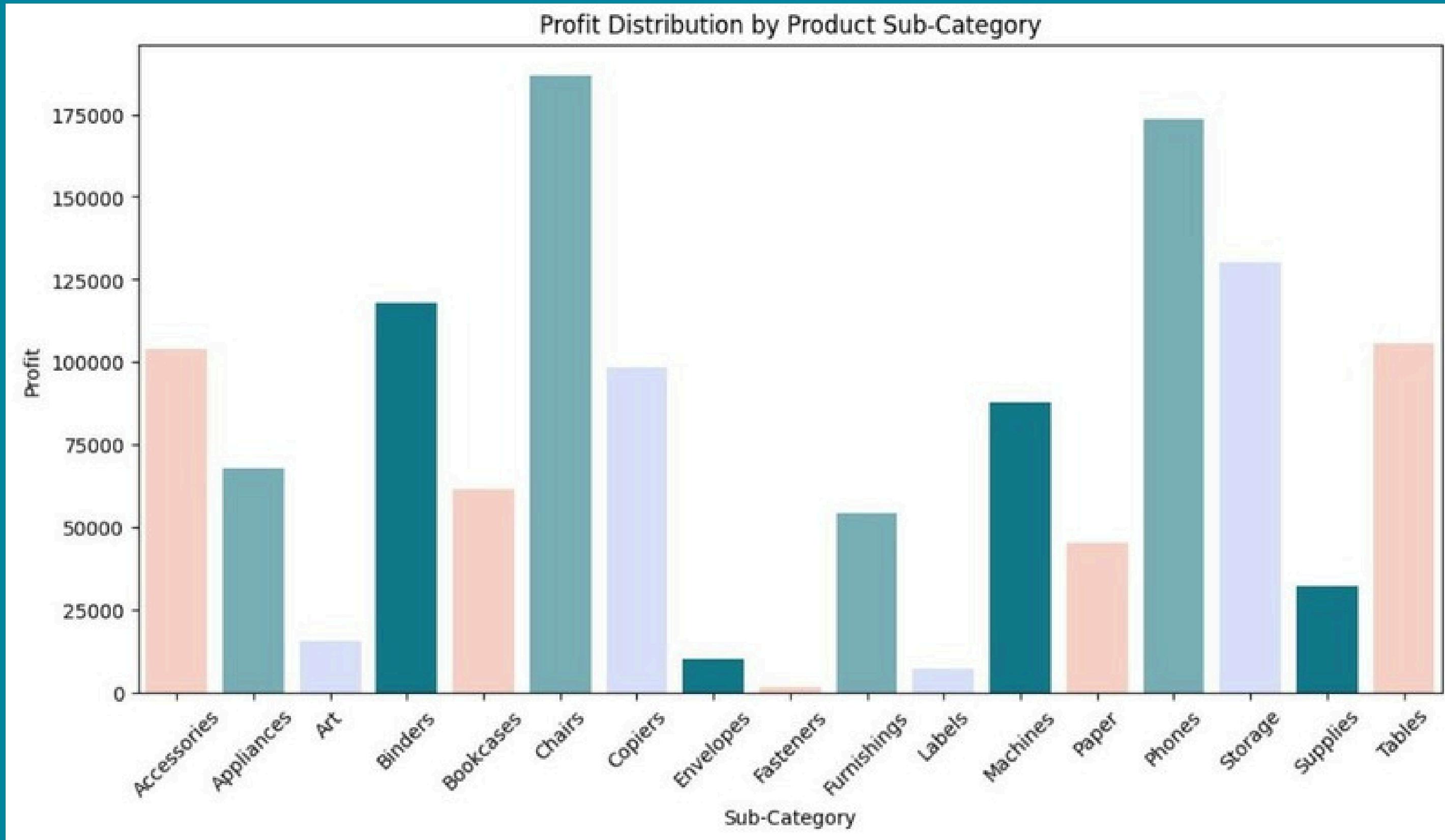
Quantity Purchased by Region



Quantity Ordered by Product Sub-Category

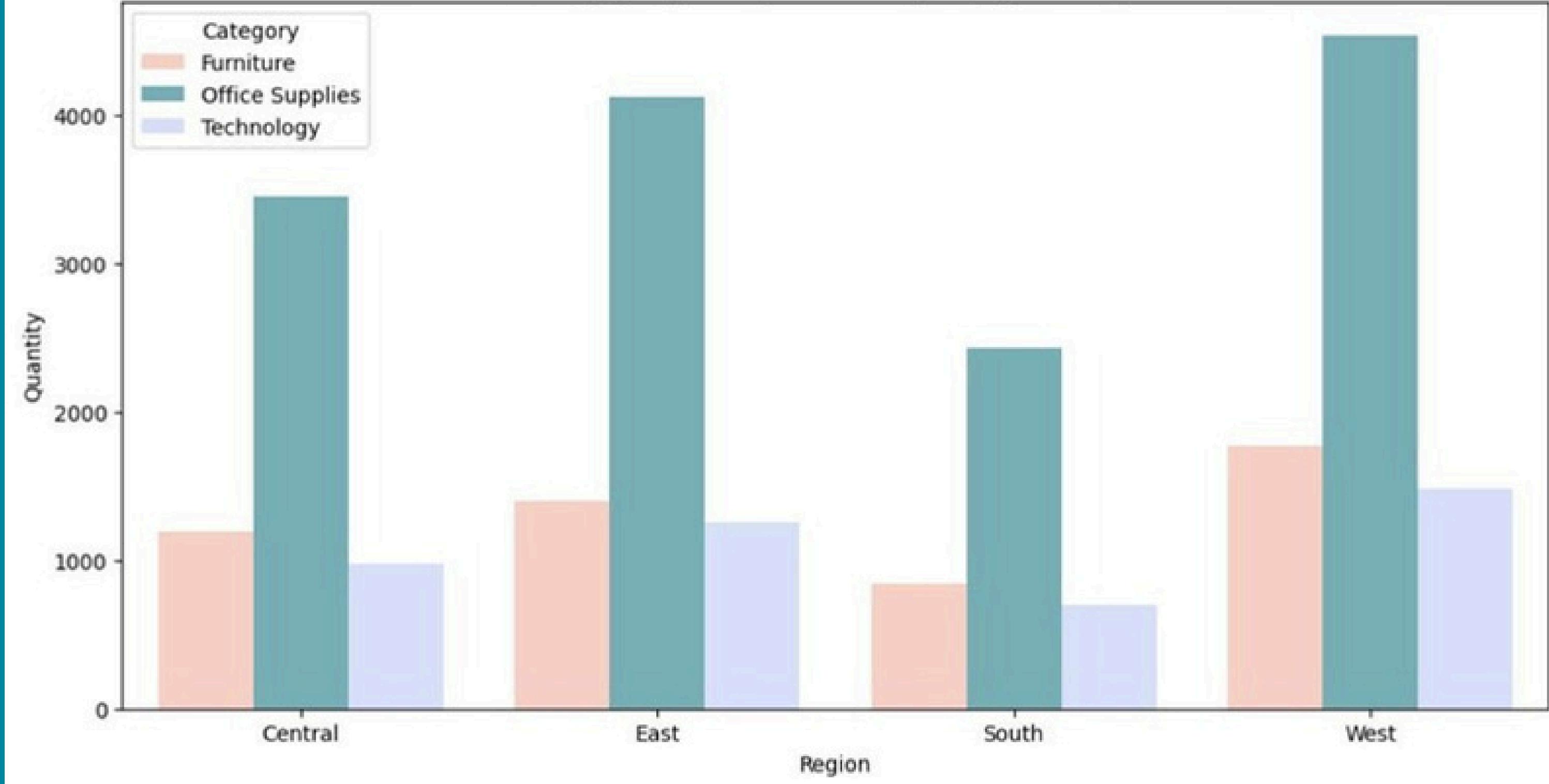


Profit Distribution by Product Sub-Category

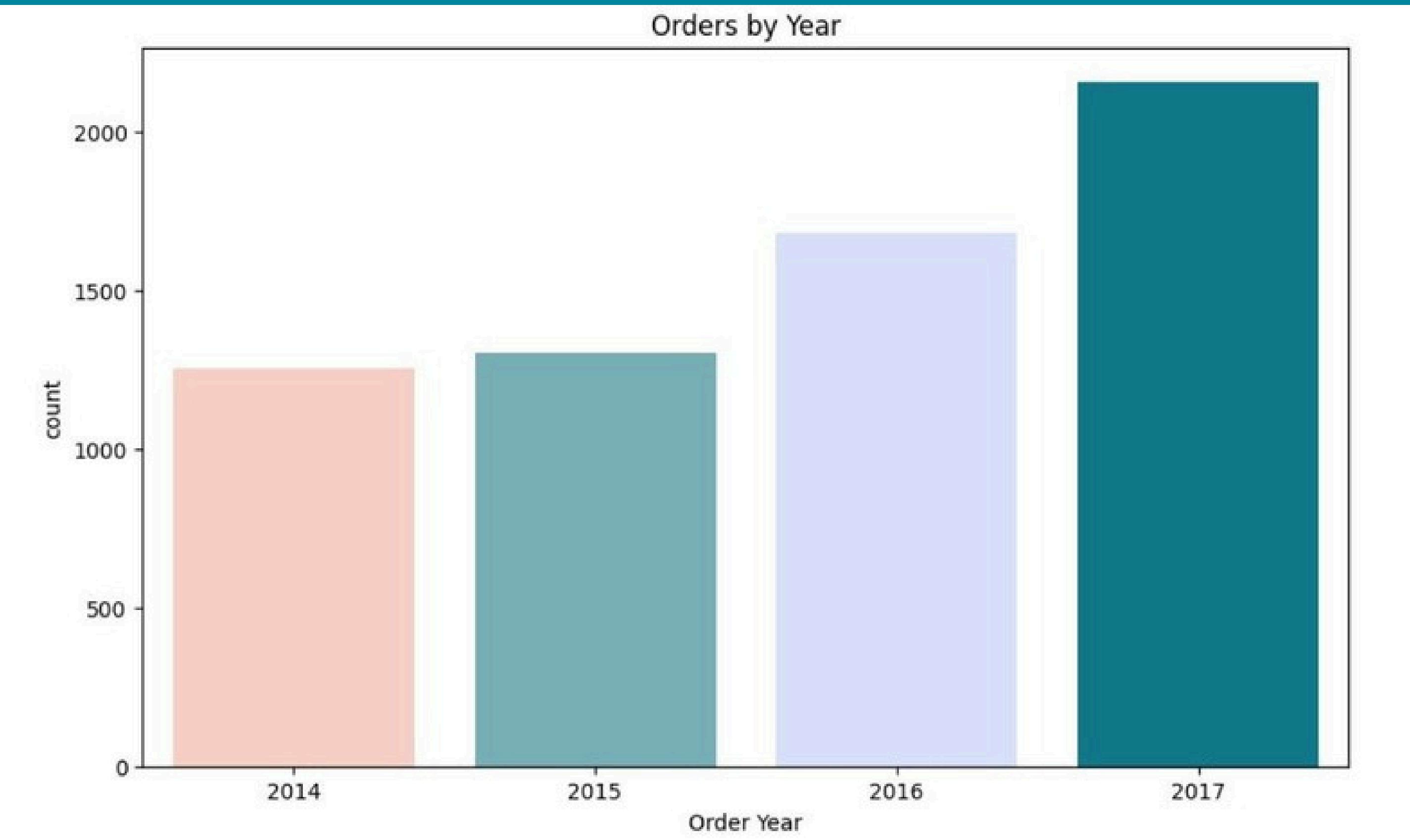


Product Category Popularity in each Region

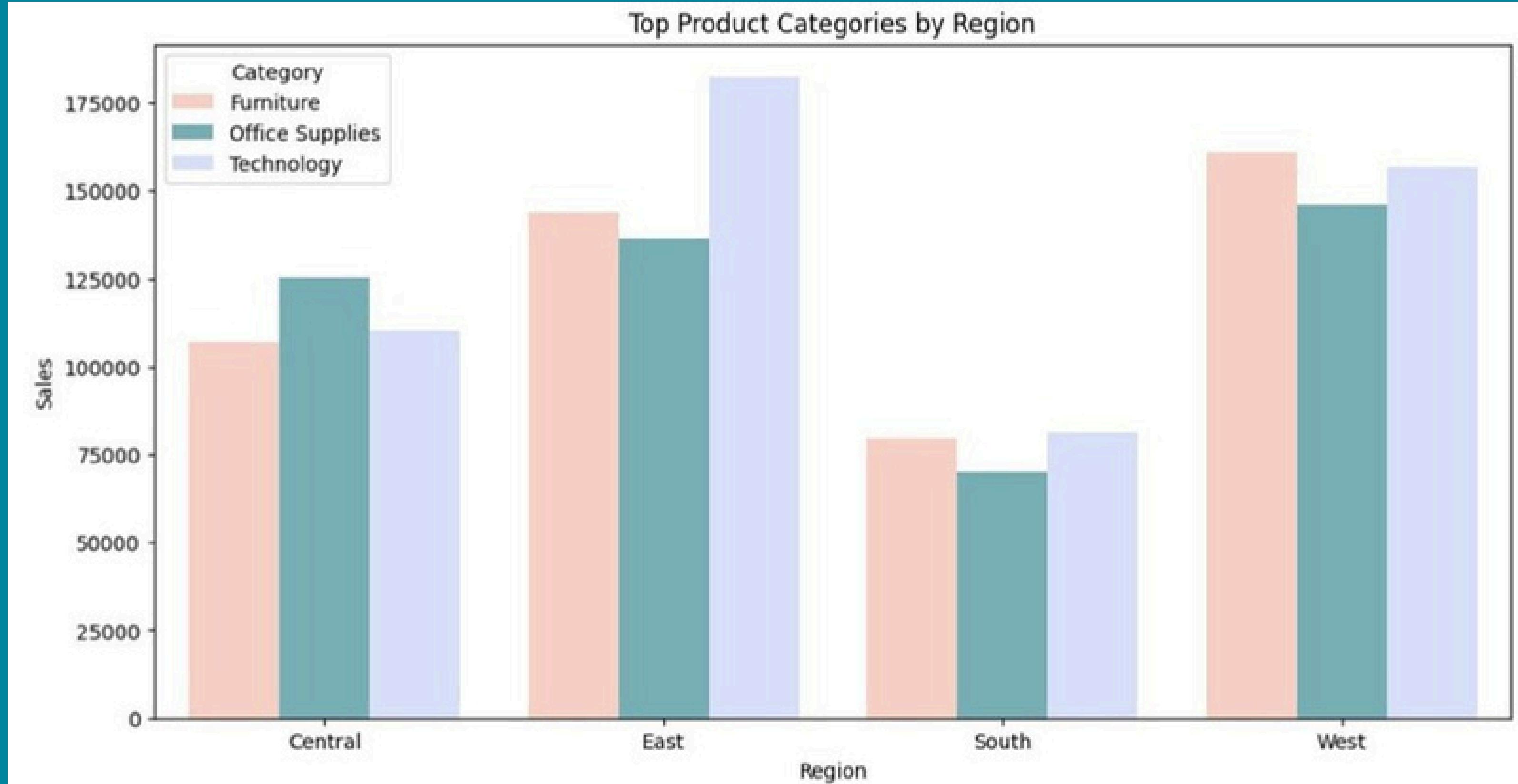
Product Category Popularity in Each Region (by Quantity Ordered)



Orders by Year

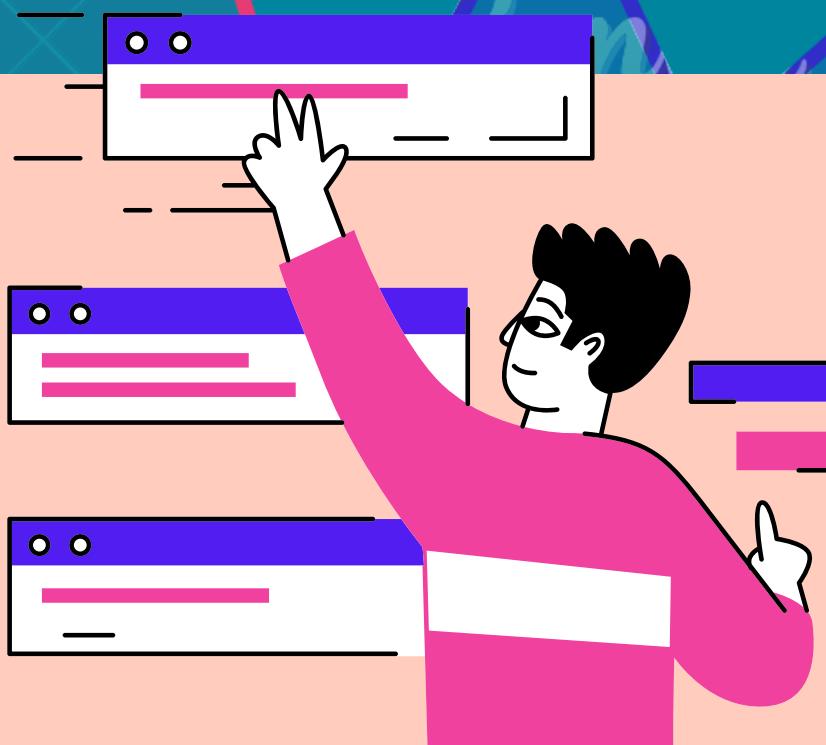


Top Product Categories by Region





Finally,
Tableau



Tableau

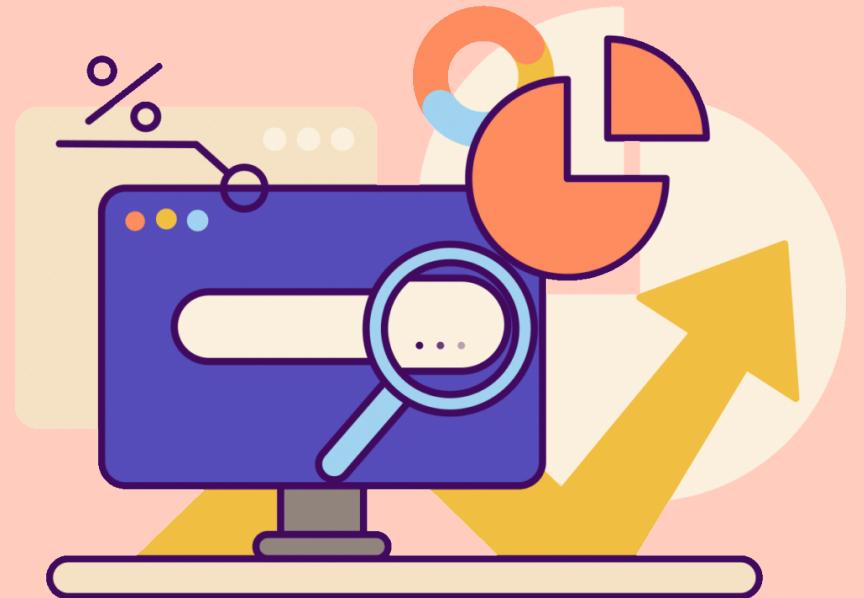
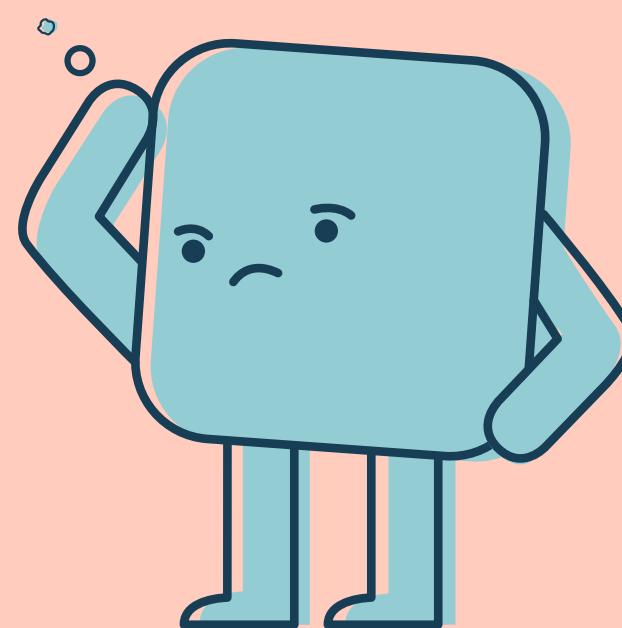
+tableau+public

INSIGHTS

DASHBOARD

**VISUALIZATION
TRENDS**

ANALYSIS



Step 1

Step 2

Step 3

Requirements

Connect to data

Build charts

Choose the right charts

Build data model

Create calc fields

Decide on colours

Check data types

Check format

• Requirements

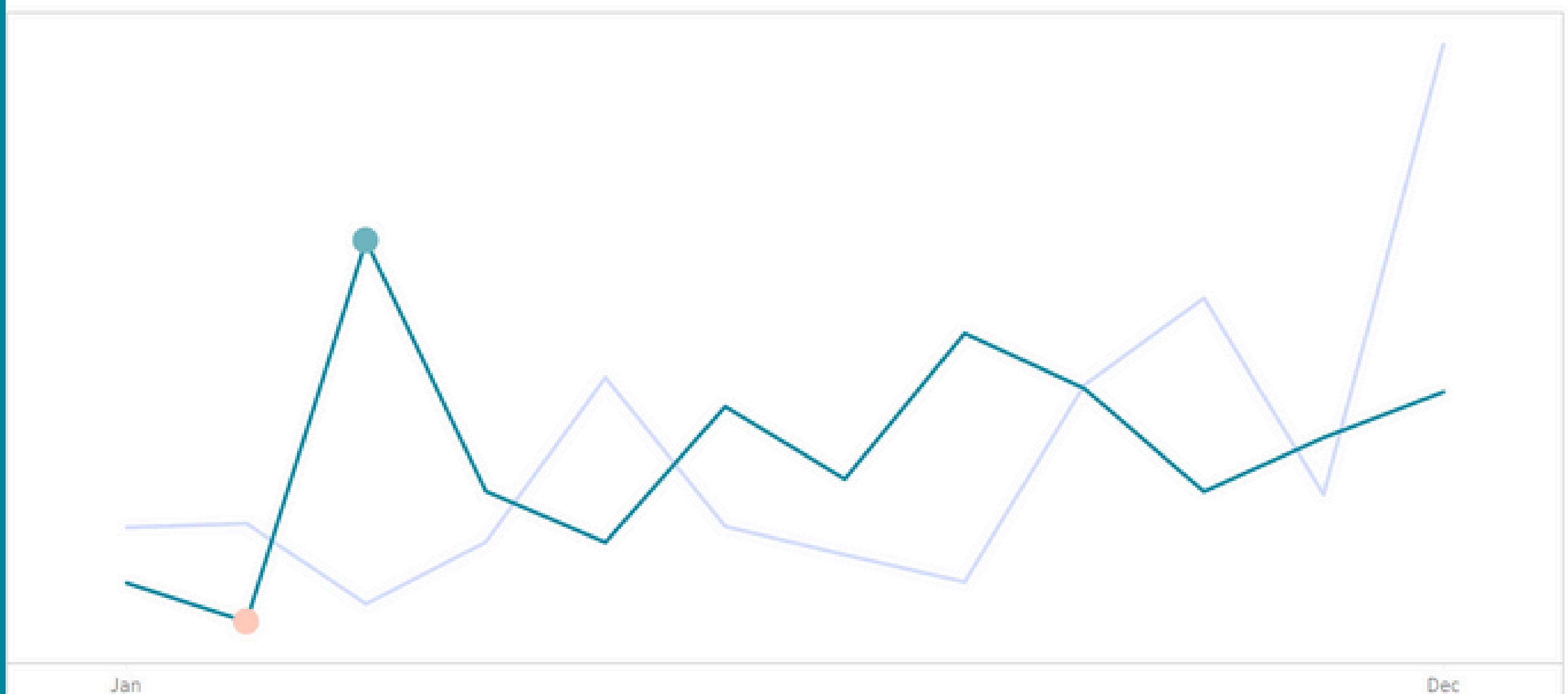
Present the data for each KPI on a monthly basis for both the current year and the previous year, identify months with highest and lowest sales, profits and quantity and make them easy to recognize.



parameter

Current and last year

Max / Min for current year

TOTAL PROFITS**CURRENT 6.74M****LAST 6.56M****DIFF ▲ 2.64%**

select year

2017

Measure Names

CY profits

LY profits

AGG(min / max profit)

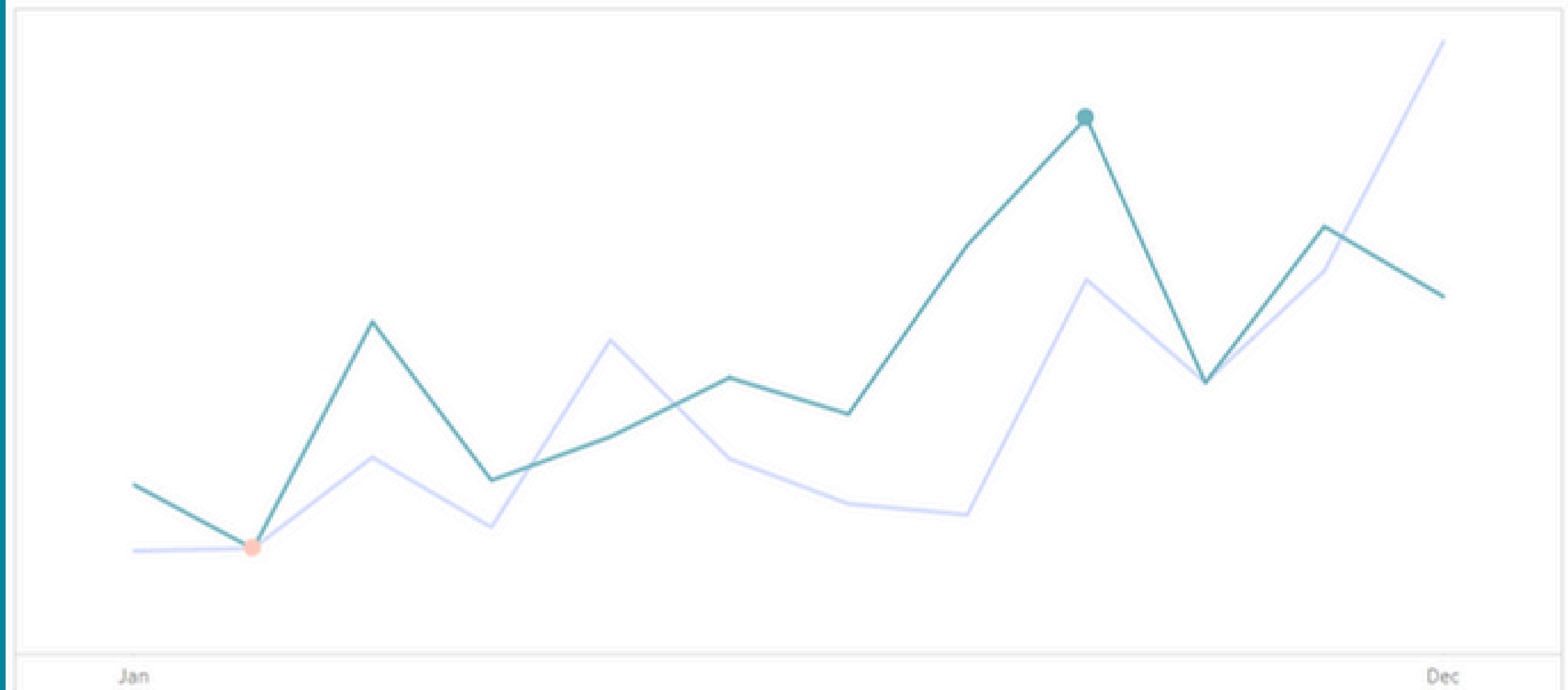
-1,266,707 1,266,707

Insights

- There is a slight increase in total profits Compared to last year
- The highest profit was in March and the lowest in February. After that, there was a fluctuation in profits until they rose again slightly in December.
- In March, profits were the highest, unlike last year, when profits were the lowest in March.

Recommendations

- Focus on improving stability in the early months
- Capitalize on end-of-year growth
- Analyze the factors causing large fluctuations

TOTAL SALES**CURRENT 50.89M****LAST 43.04M****DIFF ▲ 18.24%****Measure Names**

CY sales

LY Sales

select year

2017

AGG(min/max sales)

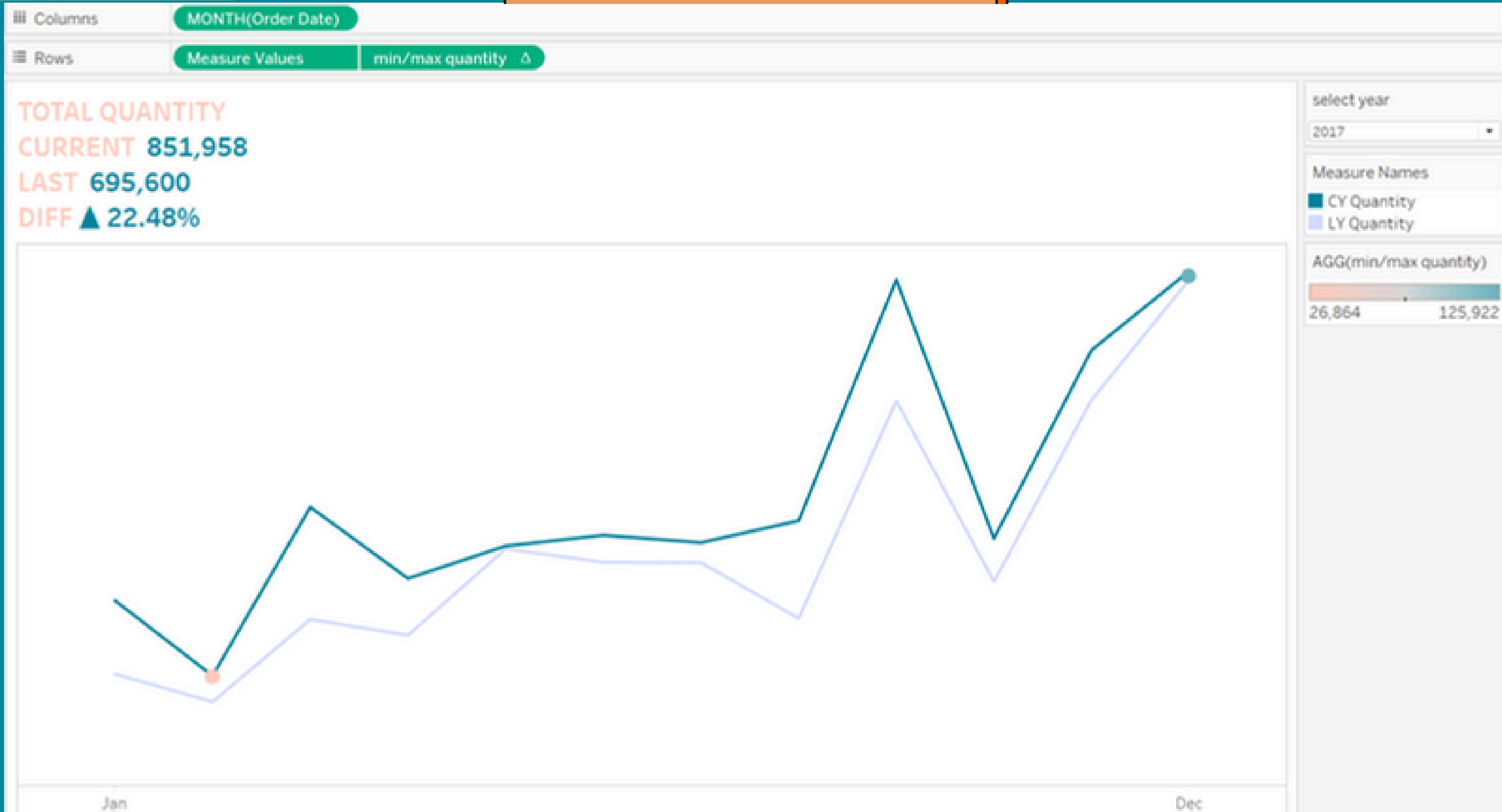
1,529,434 7,759,267

Insights

- There is a significant increase in total sales Compared to last year
- Highest sales in September and lowest in February
- Relative stability in other months: In the other months, despite some minor fluctuations, sales remained relatively stable without sharp drops, reflecting overall stability throughout the year.

Recommendations

- The sales strategy can be improved in the last and first months.
- Capitalize on end-of-year growth
- Improve performance in weaker periods and Analyze the factors causing large fluctuations



Insights

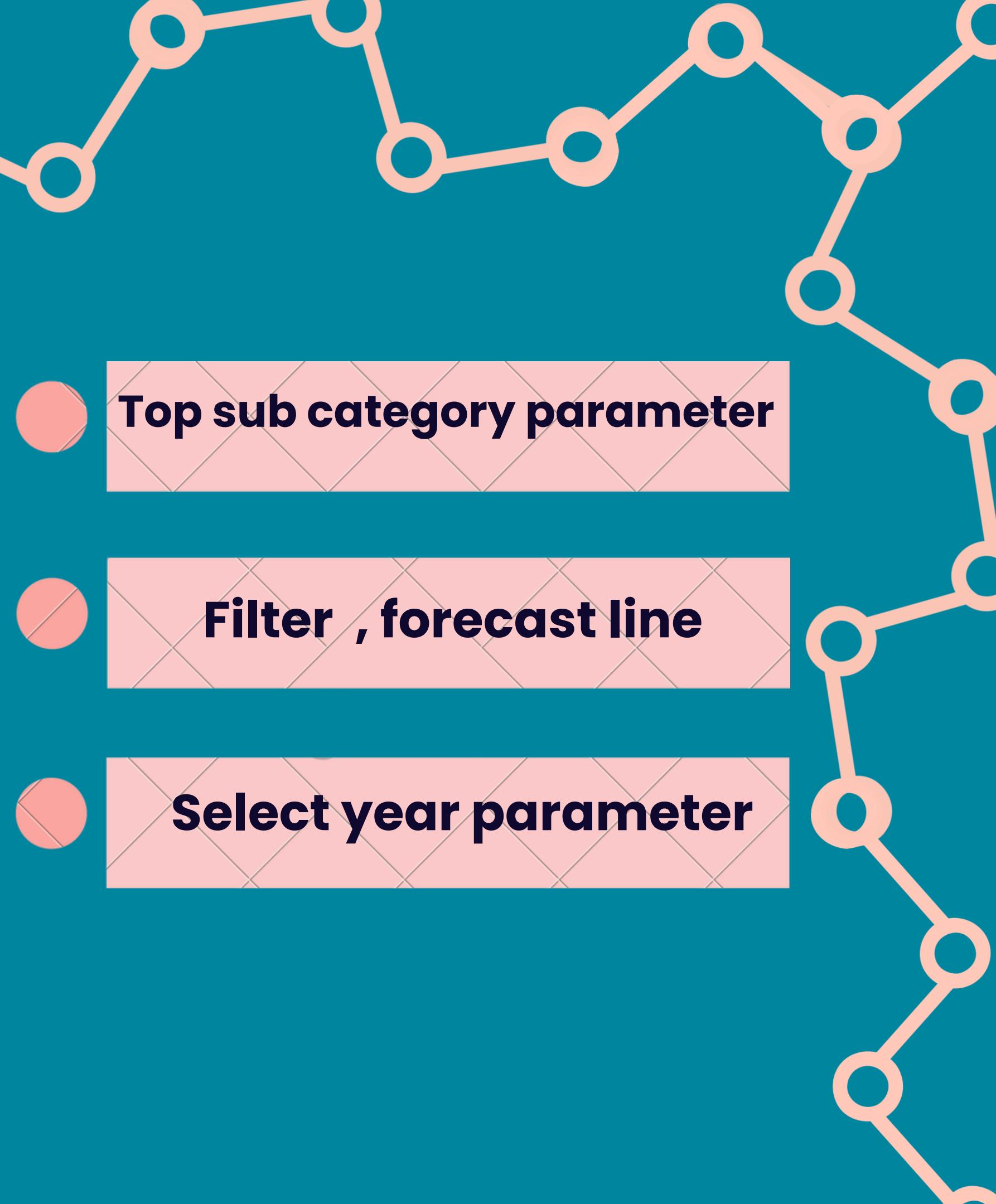
- There is a slight increase in quantities compared to last year
- The highest quantity was in December and the lowest in February
- There was stability in the middle of the year and the quantity increased at the end of the year by a large percentage

Recommendations

- Focus on maximizing production specially in the first and middle of the year
- Capitalize on end-of-year growth
- Investigate June's High Demand:

• Requirements

- Comparison between sales and profits of products monthly
- Comparison between sales and profits of sub category monthly
- Monthly trend, prediction by sales and quantity



• **Top sub category parameter**

• **Filter , forecast line**

• **Select year parameter**

PRODUCTS COMPARISON , SORT BY PROFITS



select year	2017
top products by profits	27
SUM(CY sales)	183,589 2,066,127

Insights

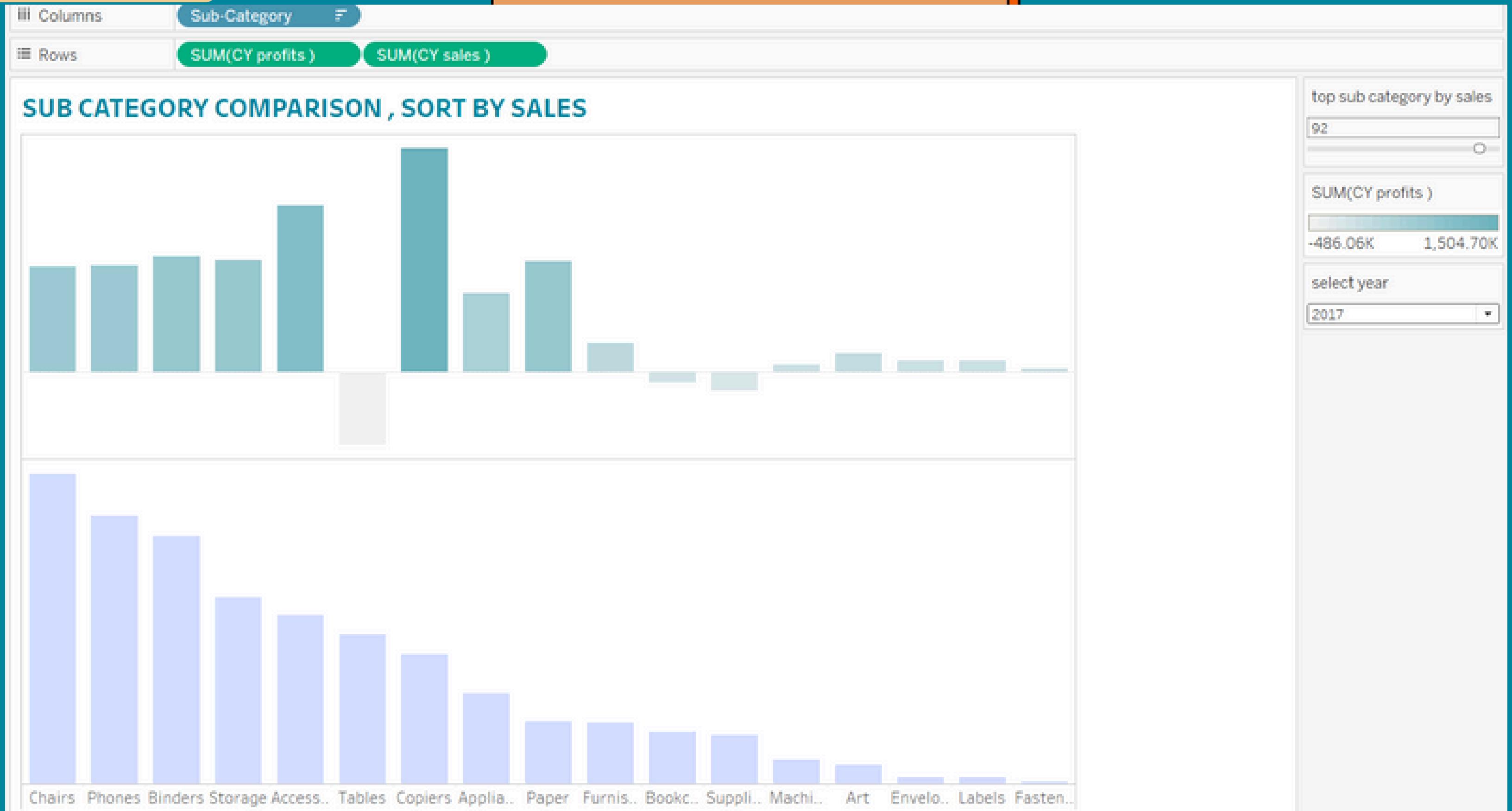
- High profit products ranked from high to low
- Products that are dark in color have a high percentage of sales, while products that are light in color have a low percentage of sales
- Top Profitable Products: Canon image CLASS 2200

Recommendations

- Focus on High-Profit Products: Invest more in marketing and promoting the top-profit products
- Reevaluate Low-Profit Products: For products with lower profits, it may be necessary to reassess pricing, distribution strategies, or even discontinue them if they do not add value.
- Diversify Product: Since profits are heavily concentrated in a few products, consider diversifying the product portfolio and improving the performance of mid-tier products to reduce risk and increase overall profitability.

Tableau

Sub category



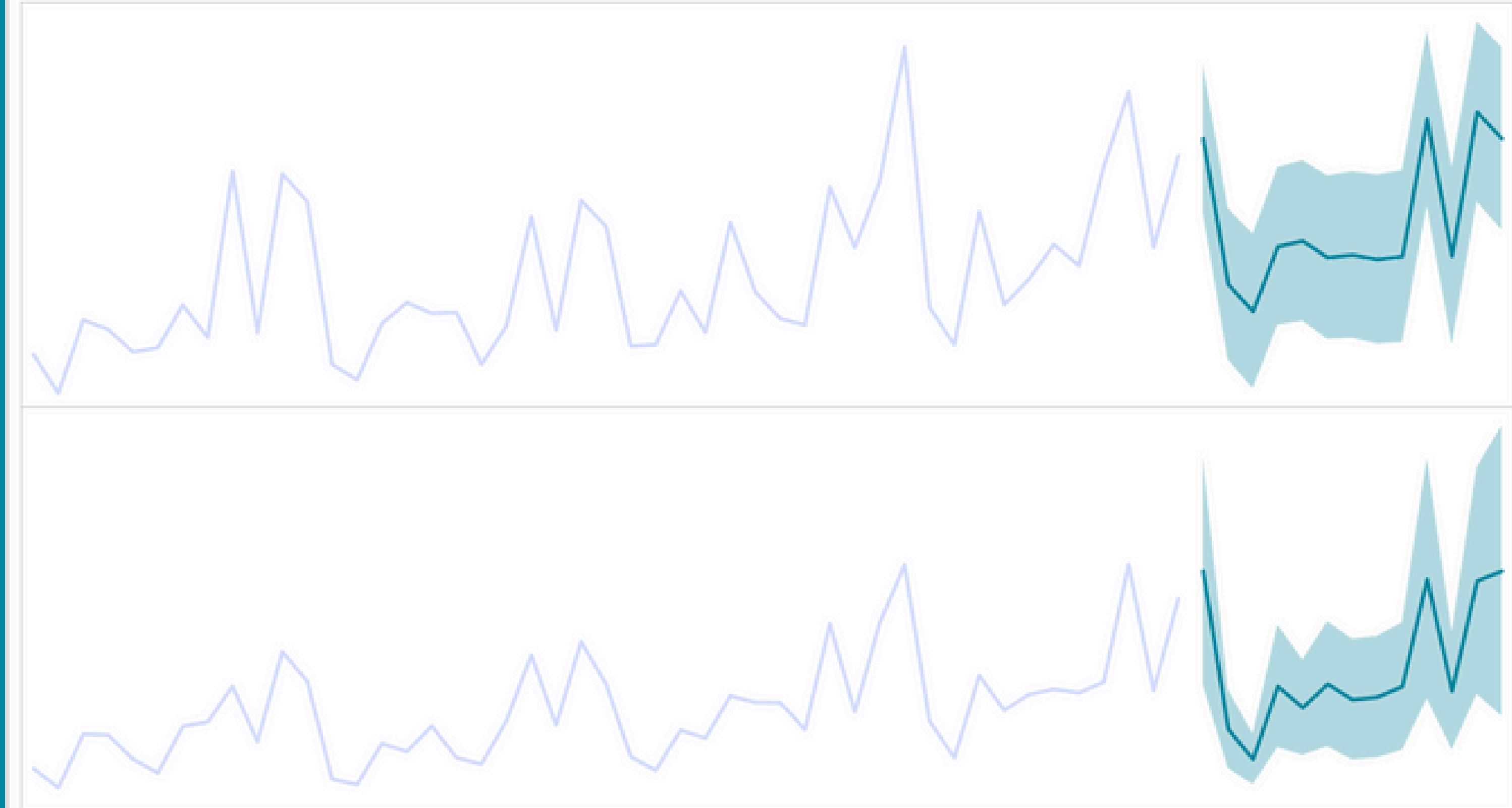
Insights

- High sales sub category ranked from high to low
- Sub category that are dark in color have a high percentage of profit , while products that are light in color have a low percentage of profit
- Top sales of Sub category: chairs

Recommendations

- **Enhance Best-Selling Categories:** Invest in promoting categories like Tables and Copiers through stronger marketing campaigns to boost sales and profits.
- **Reduce Losses:** Analyze the reasons for profit losses in categories like Binders and Storage Access, and work on improving efficiency or reducing costs.

MONTHLY TREND , PERDICTION BY SALES AND QYANTITY



Forecast indicator

Actual

Estimate

sales

Quantity

Insights

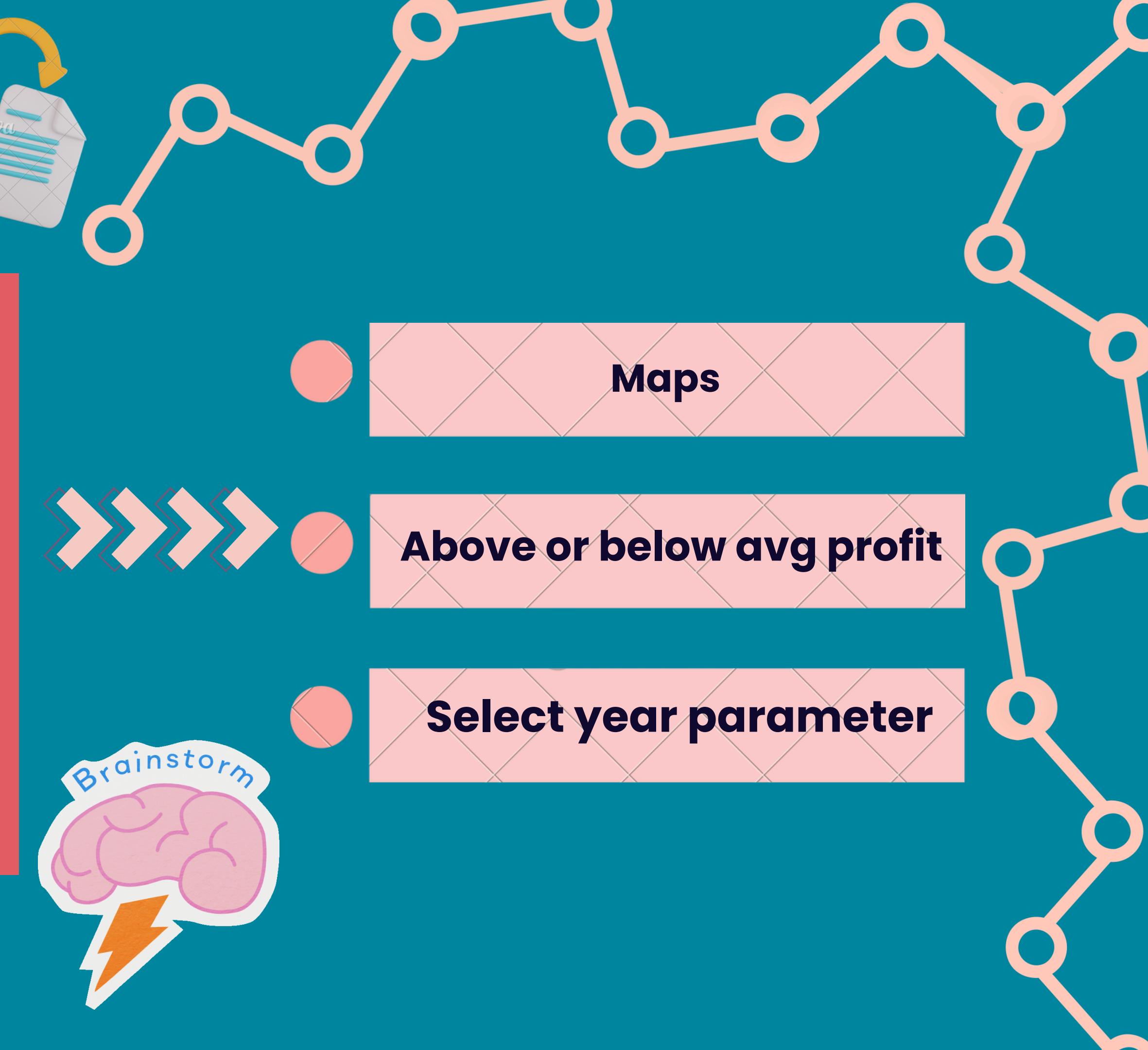
- During the years since 2014, fluctuations in production and profits
- According to the forecast line in Tableau, the first month of 2018 will have large profits and production,
- and after that, it will decrease in varying proportions and increase again at the end of the year.

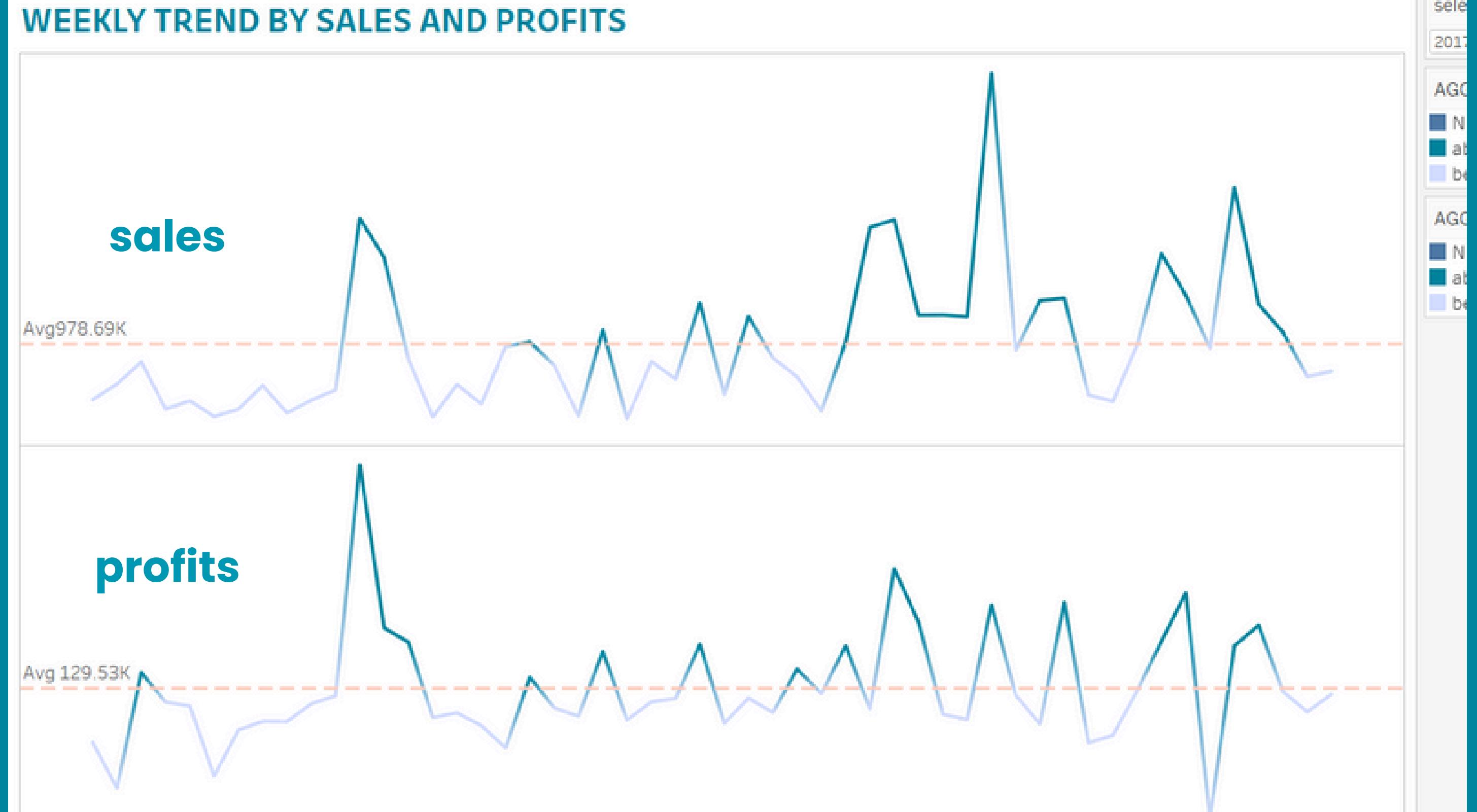
Recommendations

- Follows up the reasons for the decline in production and profits
- Through the forecast line of the tableau, be careful of the middle months of the year because a decline is expected in them.

• Requirements

- Weekly trend by sales and profits
- Top products by state
- Top customers by profit
- Sales by category





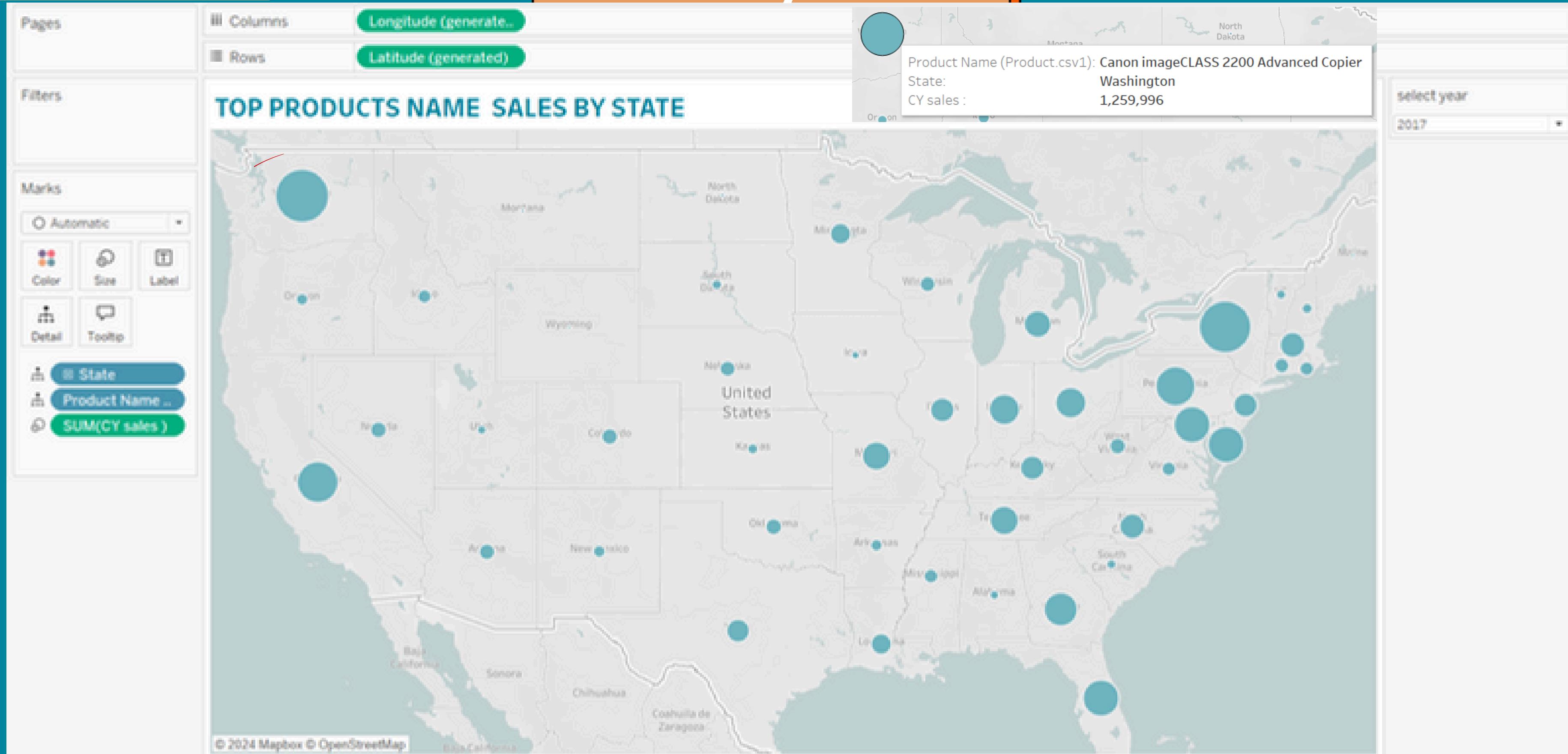
Insights

- Those above the average line are sales that are above the average and are considered to have made a good sales and profit
- Below the average line are sales and profit that are below the average and are considered to have made a small profit
- There are fluctuations in profits and sales during the weeks

Recommendations

- Follows up the reasons for the decline in sales and profits
- Try out a variety of sales and marketing strategies.

Top products sales by state



Insights

- Washington and New York top sales in canon image advanced copier and electric bending system
- state with large circles have high sales and vice versa.

Recommendations

- Increase production and change the marketing, sales and advertising strategy in areas with low sales.
- The 2 top products are considering the best seller in states Develop their profits to maintain the same level of profit.

Tableau

Top customers

Filters

Marks

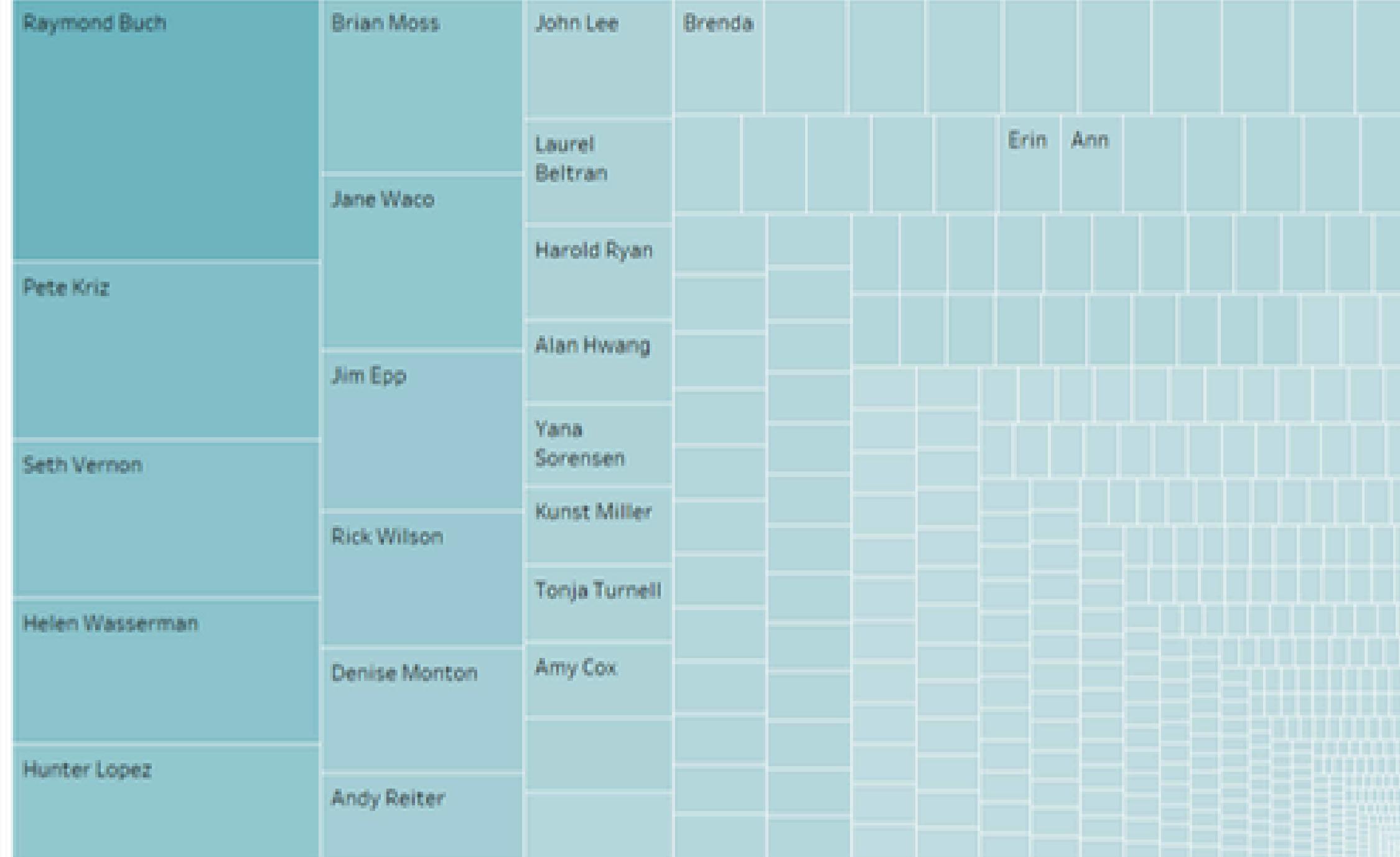
Automatic

 Color
 Size
 Label

 Detail
 Tooltip

 SUM(CY profit..
 SUM(CY profit..
 Customer Nam..

TOP CUSTOMERS BY PROFIT



SUM(CY profits)

-329.27K 607.67K

select year

2017

Insights

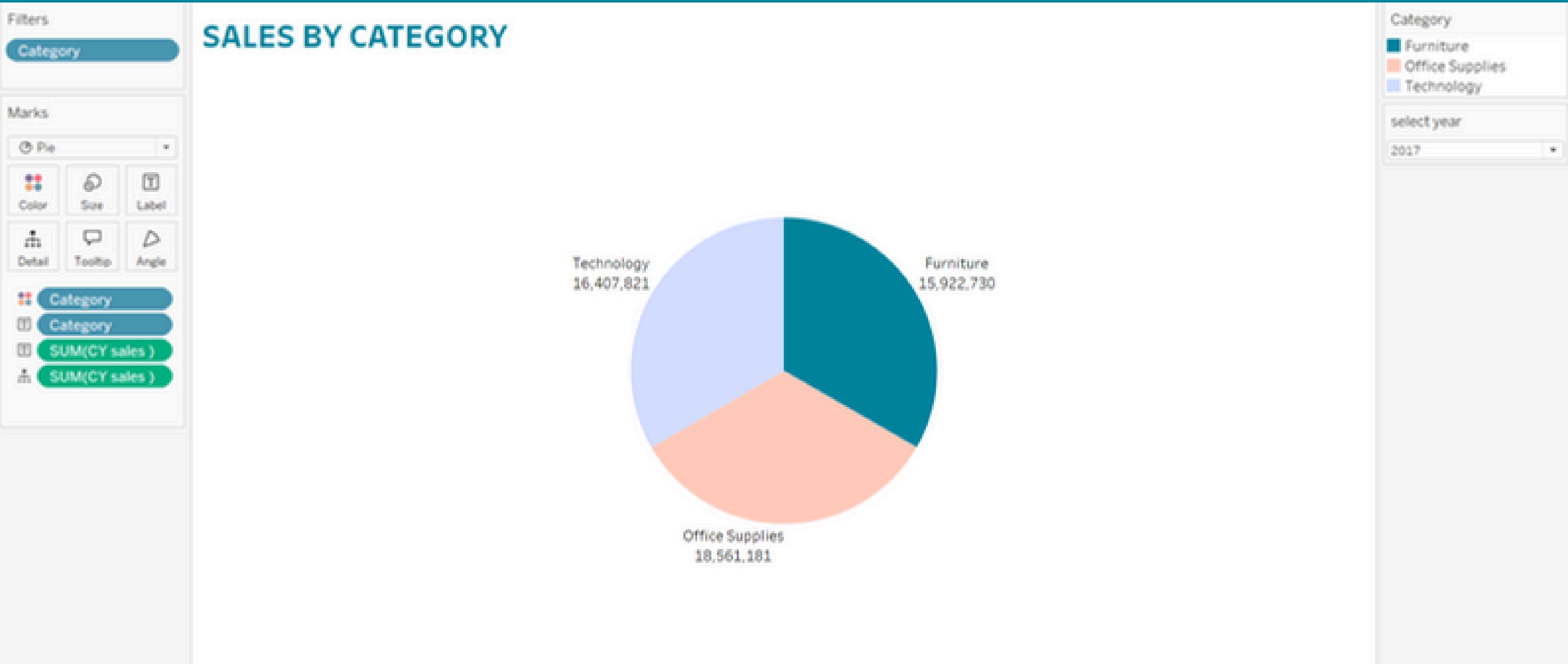
- Larger squares have higher customers' profits and vice versa
- The darker the color, the more that this customer make a big profit

Recommendations

- I keep customers who make a good profit and make a discount to ensure that they will always remain my customers
- I try to make a voucher, coupon, for whose profits are small

Tableau

Sales by category



Insights

Top sales:

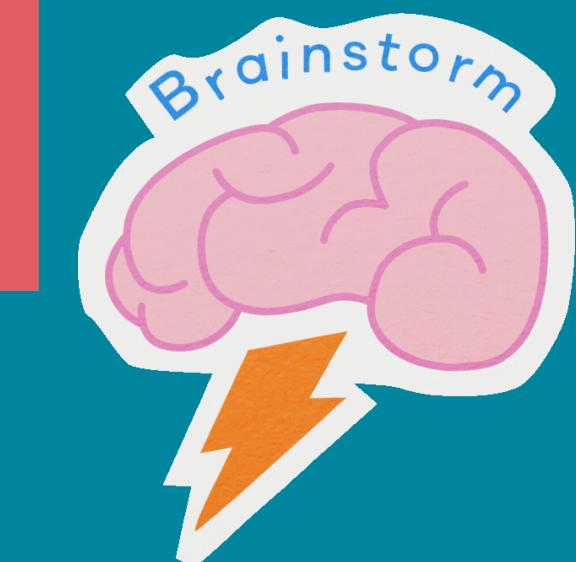
1. Office supplies then technology and furniture at the end
2. Technology
3. Furniture at the end

Recommendations

- Develop a furniture sales strategy, marketing method and advertising
- And keep the strategy of office supplies and technology

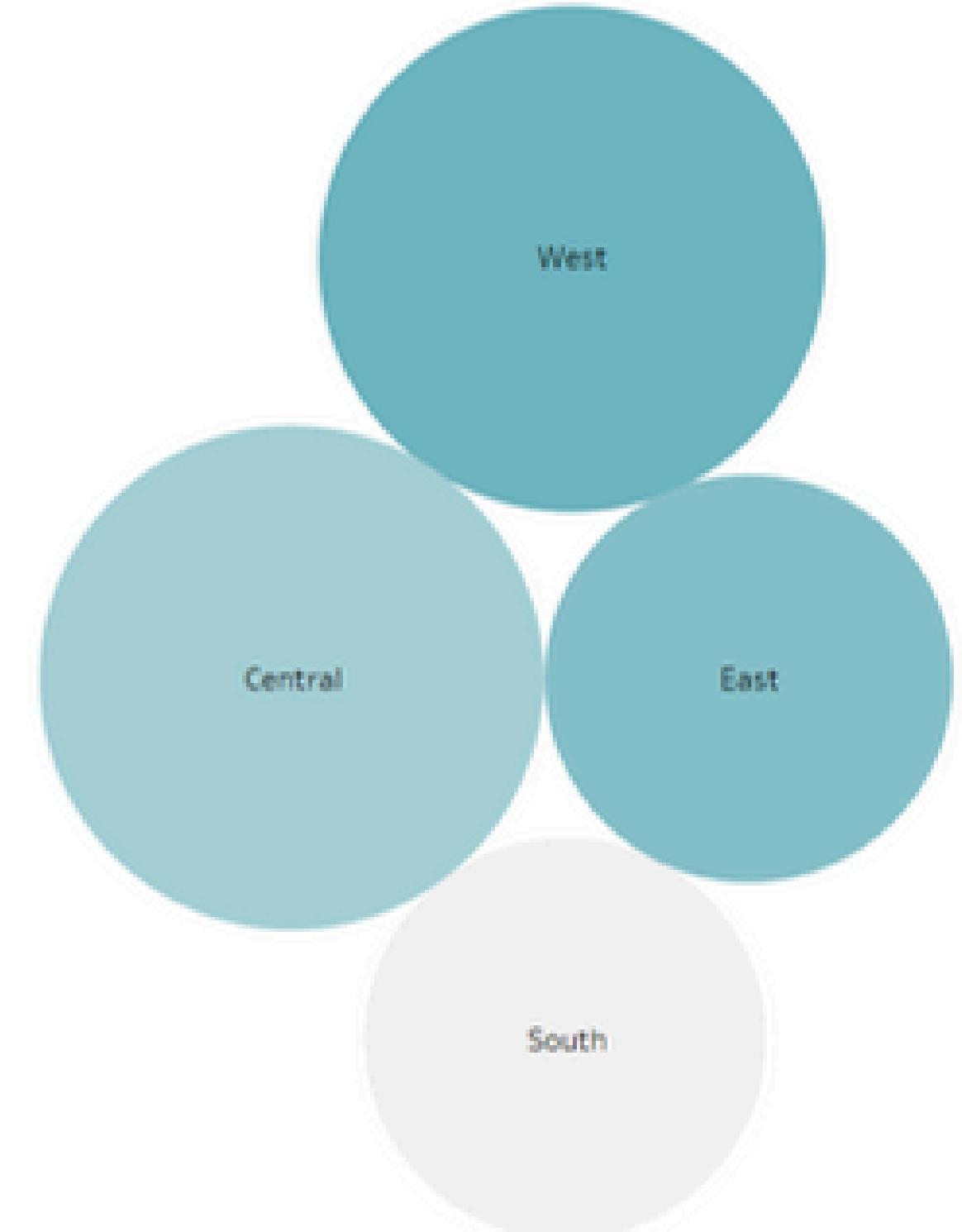
• Requirements

- Region comparison by sales
in first 6 month , countd
order id and product name
- COUNTD of orders by sub
category in cities
- Profits based on discount
- Sales by ship mode



Region sales

REGION COMPARISON BY SALES IN FIRST 6 MONTHS



MONTH(Order Date)

- (All)
- January
- February
- March
- April
- May
- June
- July
- August
- September
- October
- November
- December

select year

2017

CNTD(Order ID)

224 381

Insights

- The highest sales were in the West and central
- The lowest sales were in the east and central
- The West region has many orders, unlike the South

Recommendations

- Develop a south sales strategy, marketing method and advertising
- And keep the strategy of office west and central
- to ensure their top sales

Filters:

Marks:

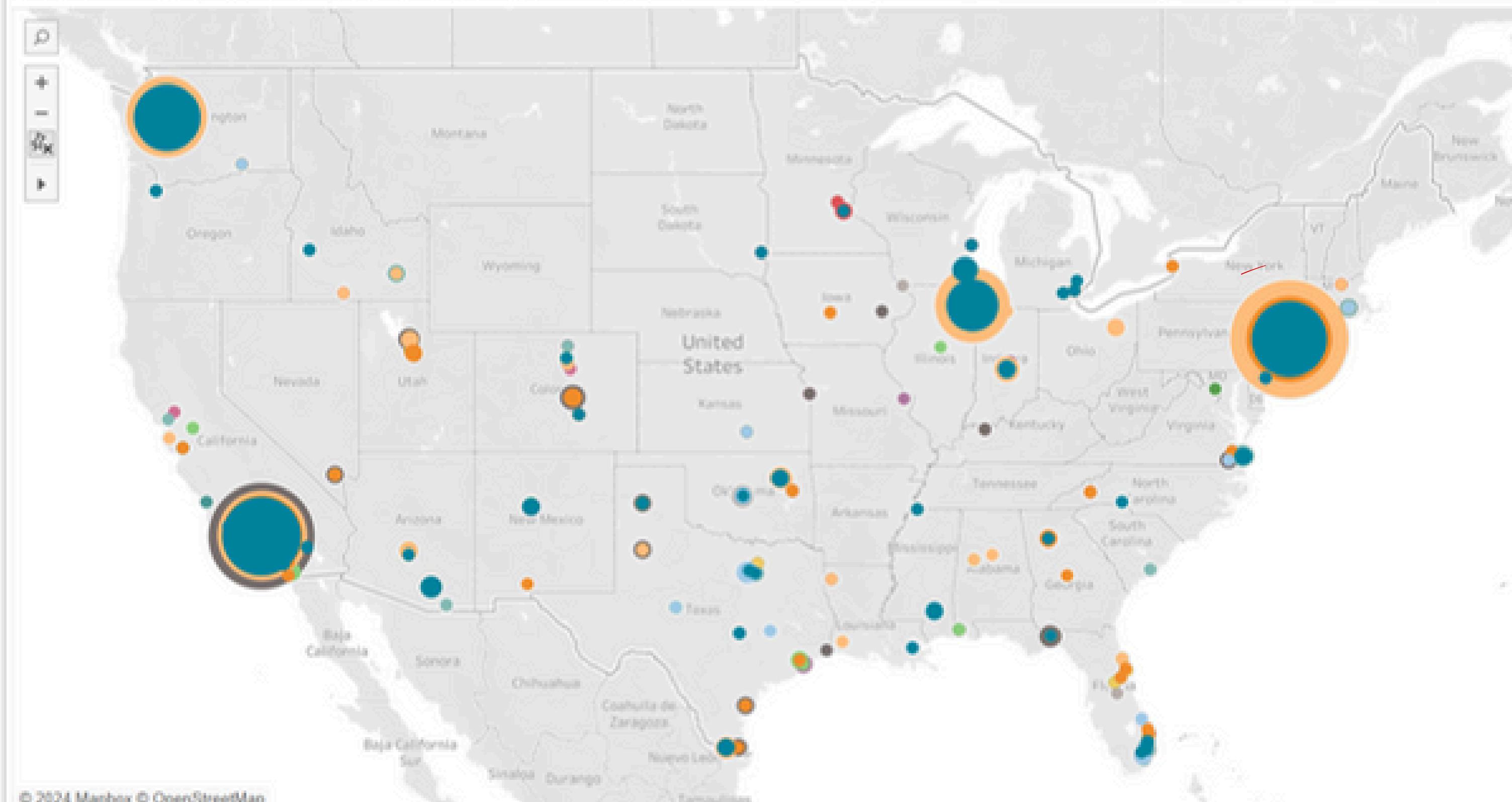
- Circle
- Color
- Size
- Label
- Detail
- Tooltip

Sub-Category

AGG(COUNTD(...)

City

COUNTD OF ORDERS BY SUB CATEGORY IN CITIES



AGG(COUNTD(...))
Sub-Category
Accessories
Appliance
Art
Binders
Bookcases
Chairs
Copiers
Envelopes
Fasteners
Furnishing
Labels
Machines
Paper
Phones
Storage
Supplies
Tables

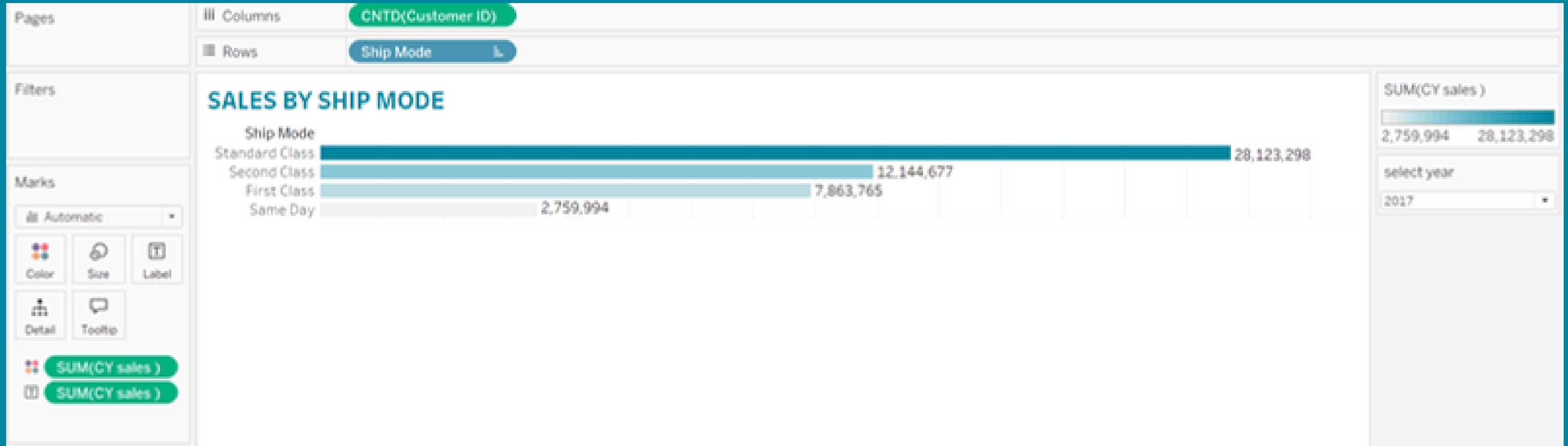
Insights

- The larger the circle, the more count of orders based on sub category
- New York has the largest number of orders : blinder

Recommendations

- Focus on areas with a small circles and on sales methods and strategies there
- And keep the strategy of New York l to ensure their top orders

Sales by ship mode



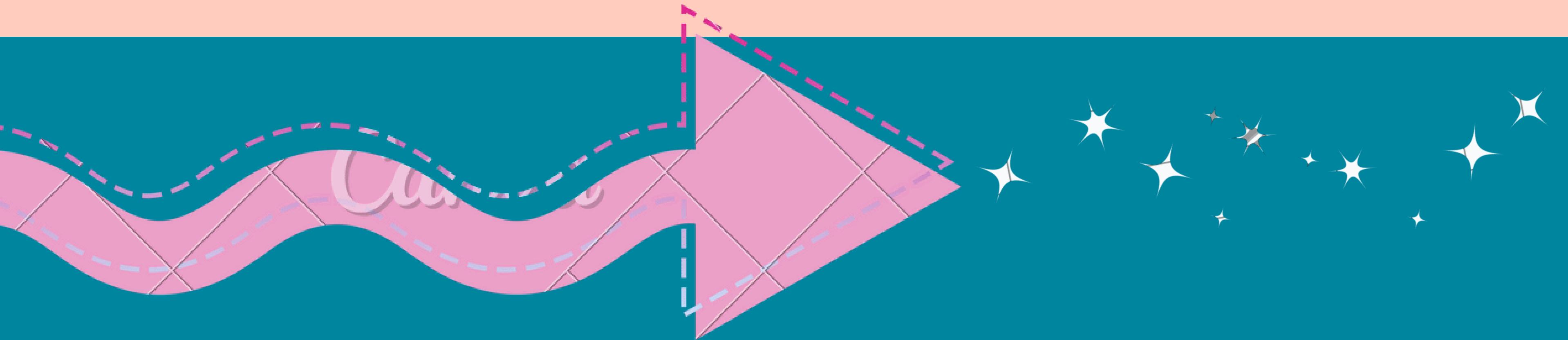
Insights

- Standard class is the highest sales then second class
- first class is the lowest sales then same day
- Also the Standard class is the highest count of customers then second class
- first class is the lowest sales then same day

Recommendations

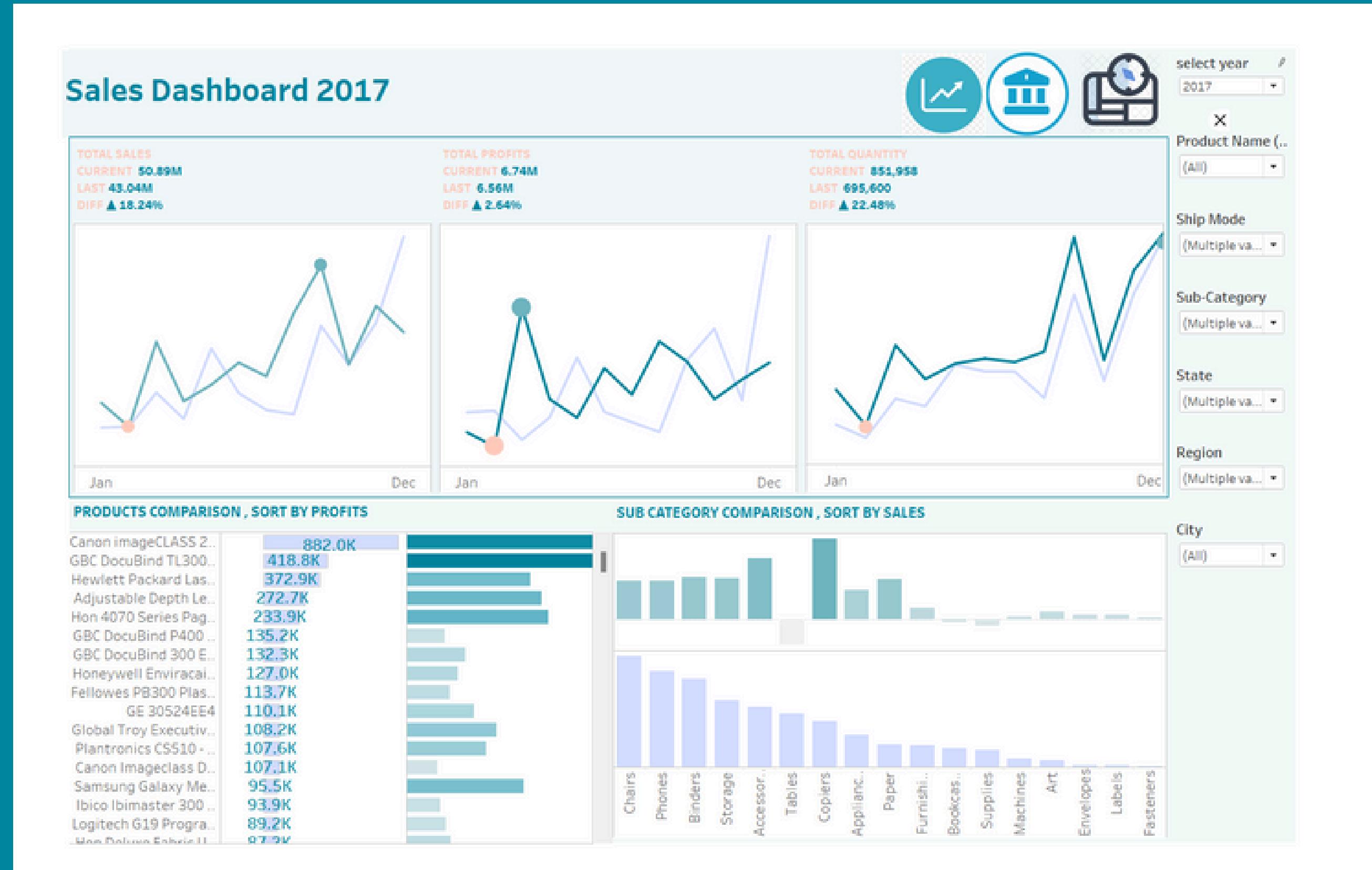
- Focus on count of customers in first class and same day, try to find new strategies for them
- And keep the strategy of standard class l and second class

Tableau Dashboards

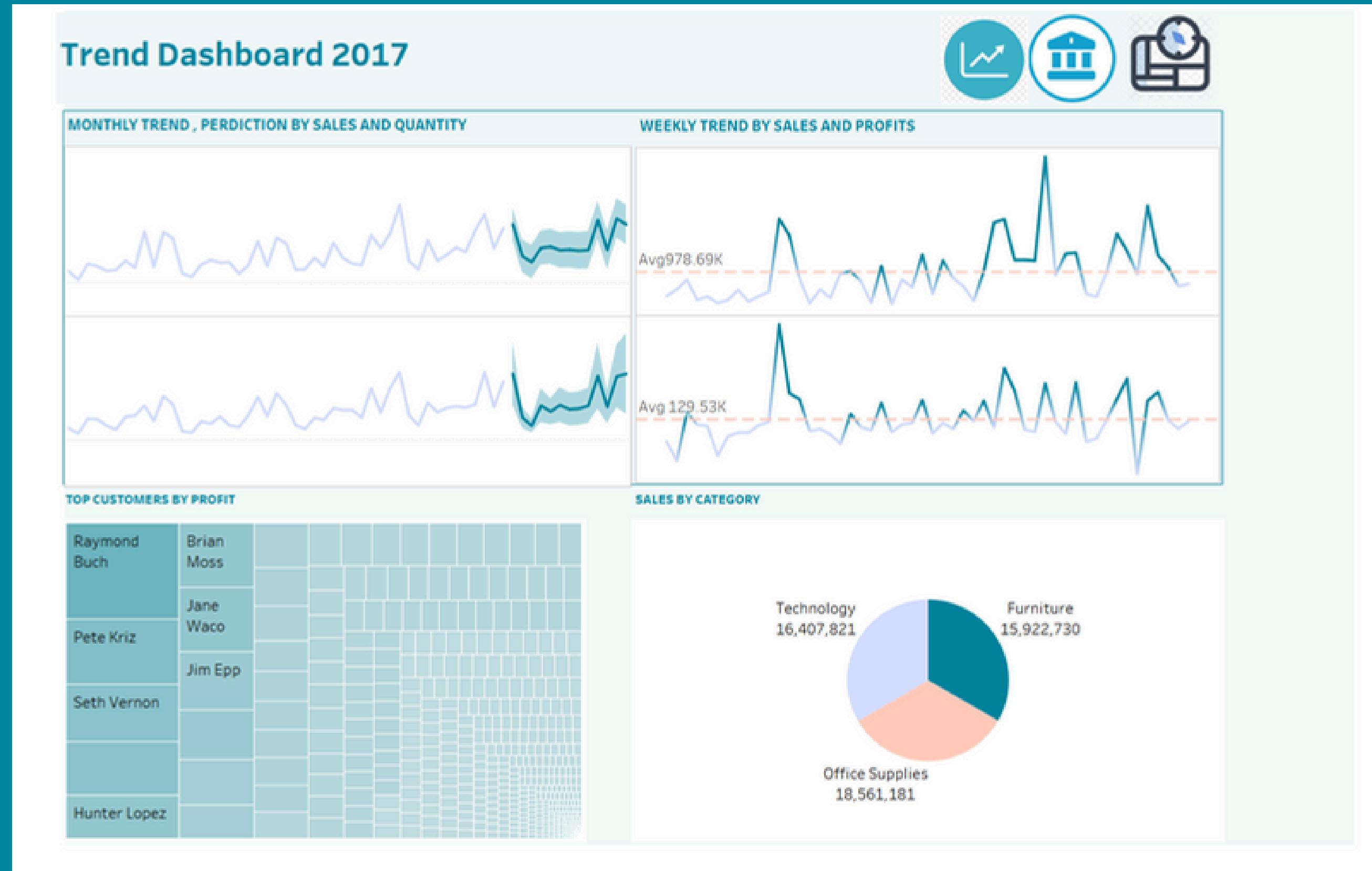


Tableau

Sales Dashboard Analysis

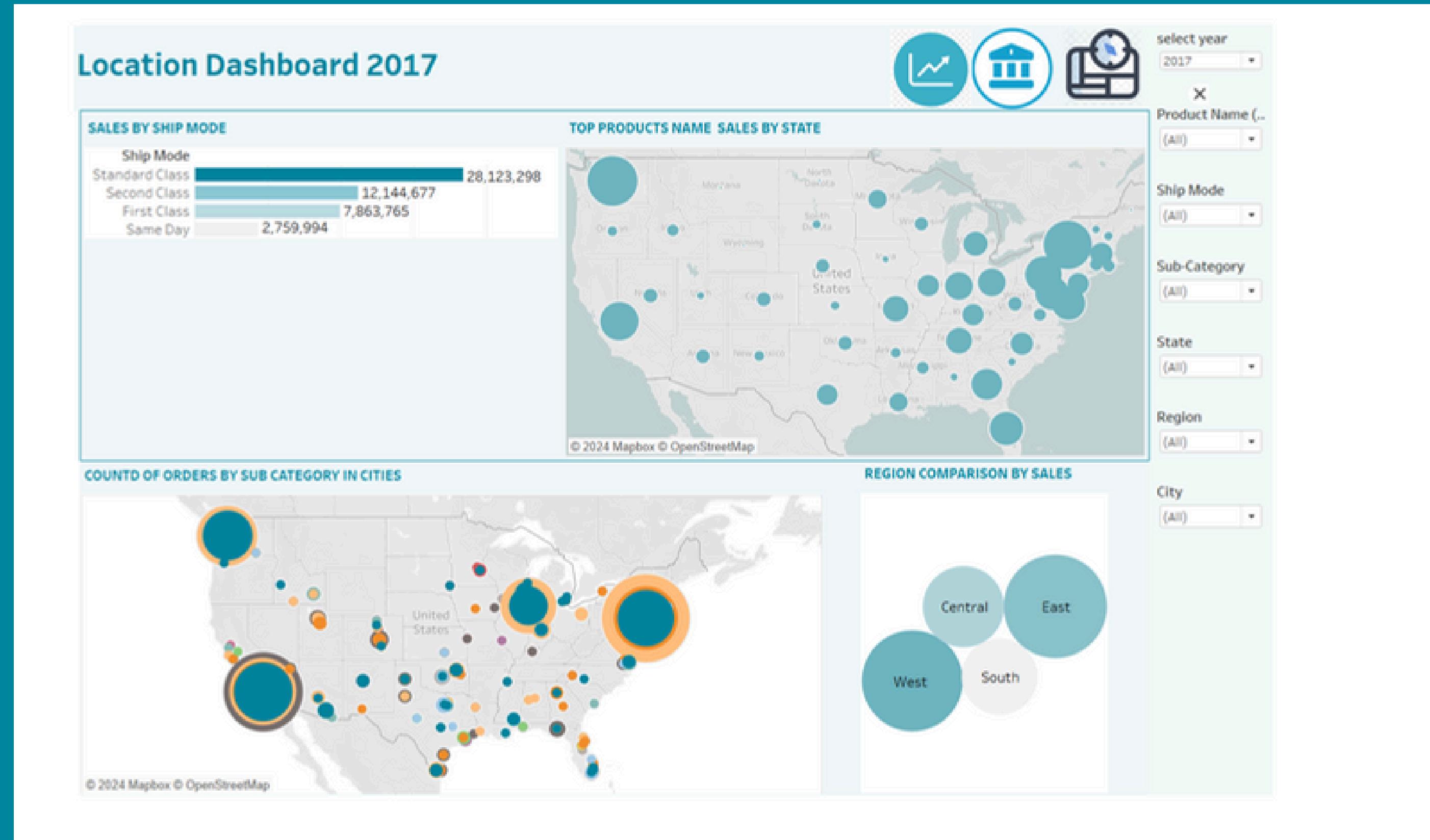


Tops & Trends



Tableau

Location Dashboard



Dashboard Details

- **Horizontal Bars:** Horizontal Containers used to group elements side by side.
- **Vertical Bars:** Vertical Containers used to group elements in a vertical layout.
- **Blanks:** Empty objects used to create space for better layout and spacing.
- **Filters:** Allow users to filter data on the dashboard based on specific criteria.

Conclusion

- In this project, we successfully analyzed the data to uncover key insights and trends. Our findings highlight significant patterns that can inform decision-making and strategy development. By leveraging advanced analytical techniques, we provided actionable recommendations that can enhance operational efficiency and drive growth. Future work should focus on continuous data monitoring and further refinement of our models to adapt to changing conditions.



Resources

<https://www.assaal.com/file-share/fa740f32-9b0d-404d-b155-594c31c827a9>

THANKS
TO YOU