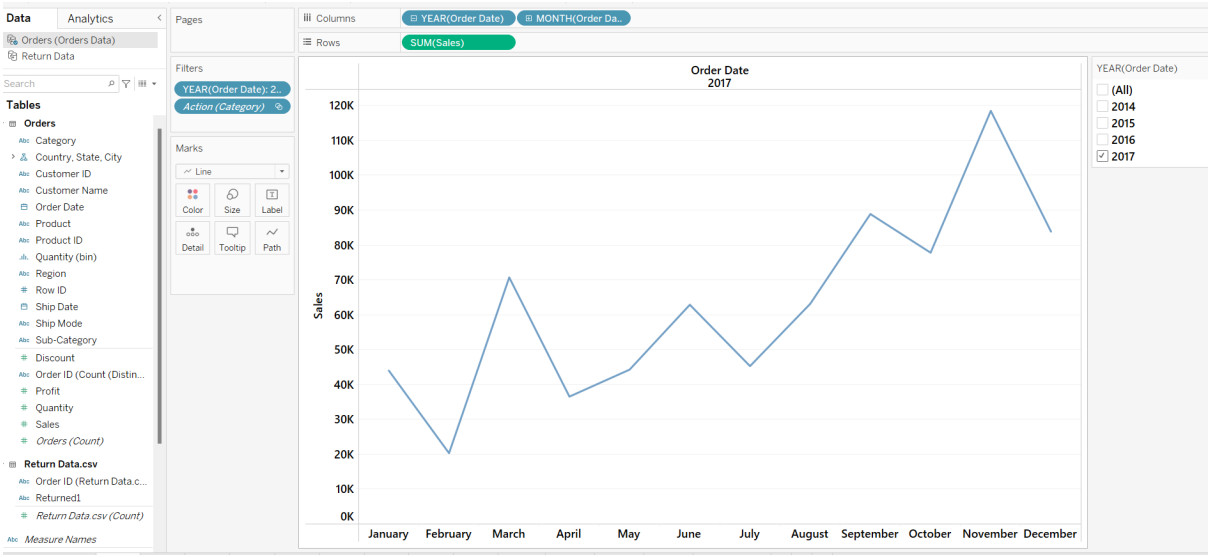
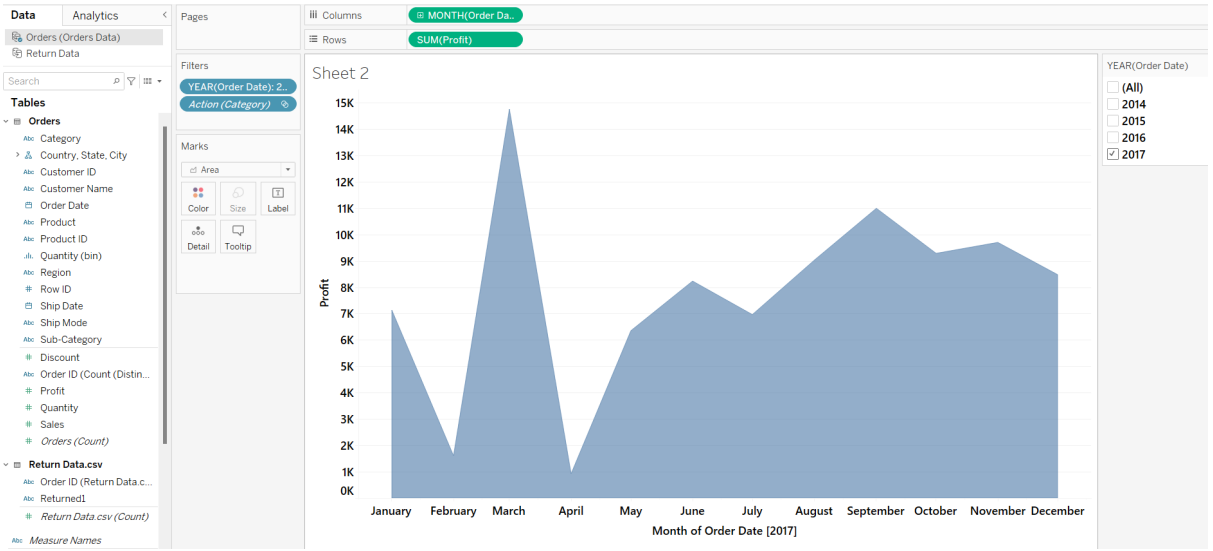
Sale Analysis

Performing data visualizations:

1. Analyze the *Sales/Profit* for all the months of 2017 as a continuous line chart and an area chart

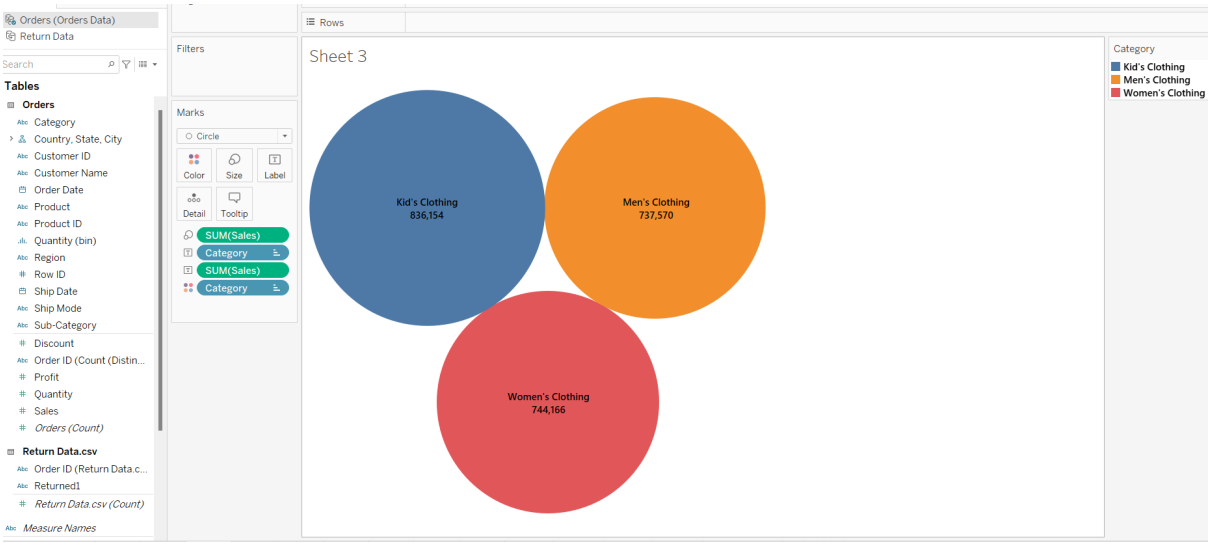


October-December sales for 2017 significantly increased, demonstrating a positive trend for the month. This boost in sales can be attributed to various factors such as marketing efforts, customer demand, or seasonal influences.



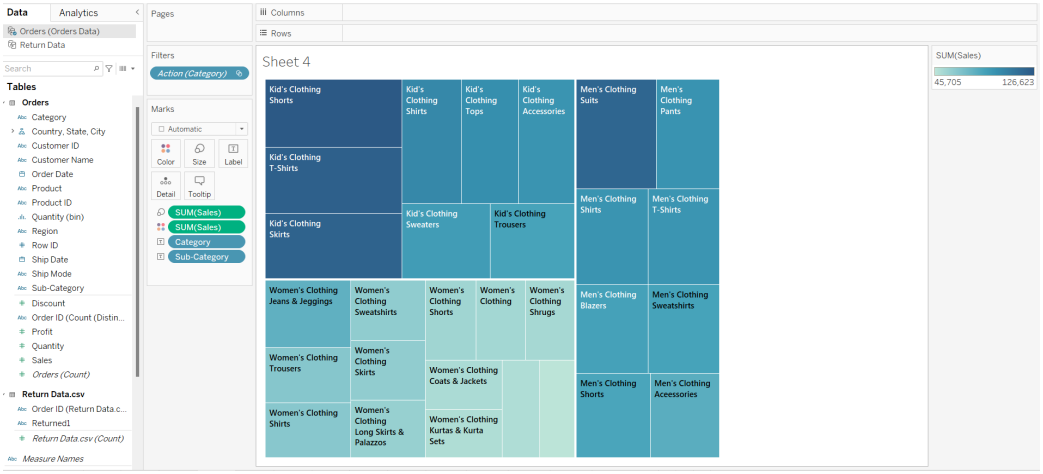
The profit for March in the year 2017 exceeded expectations, indicating a strong financial performance during that particular month. This could be due to various factors such as cost management, increased revenue, or successful business strategies.

2. Show *Category*-wise *Sales* as Packed Bubbles Chart suggesting categories with highest to lowest sales.

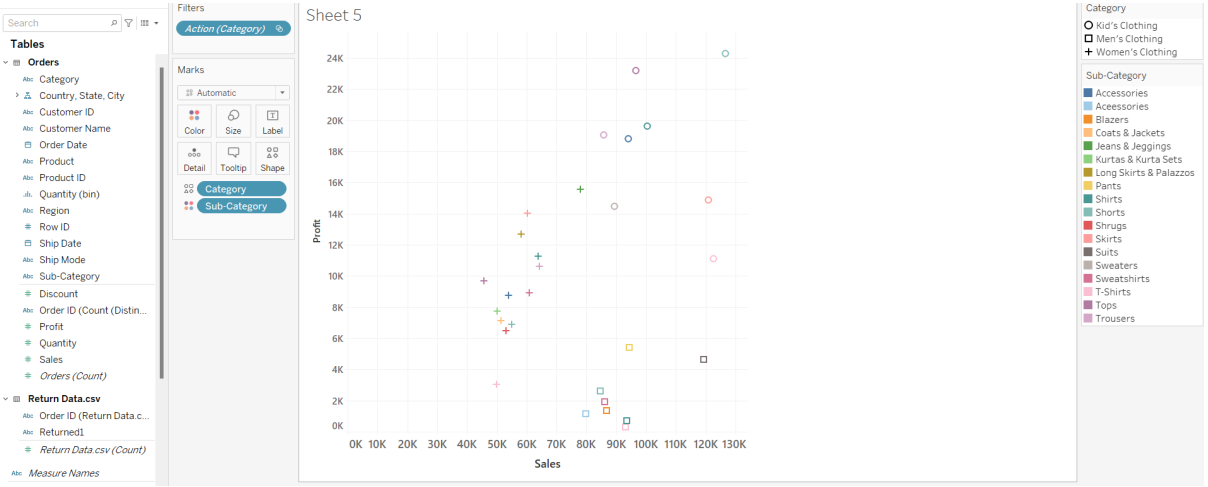


Here, kid's clothing had the highest sales, followed by women's clothing, and then men's clothing. Kid's Clothing has sales of 36,154, Women's Clothing has sales of 744,166, and Men's Clothing has sales of 737,570.

3. Create a Treemap chart showing *Sales* by *Category* and *Sub-Category*.

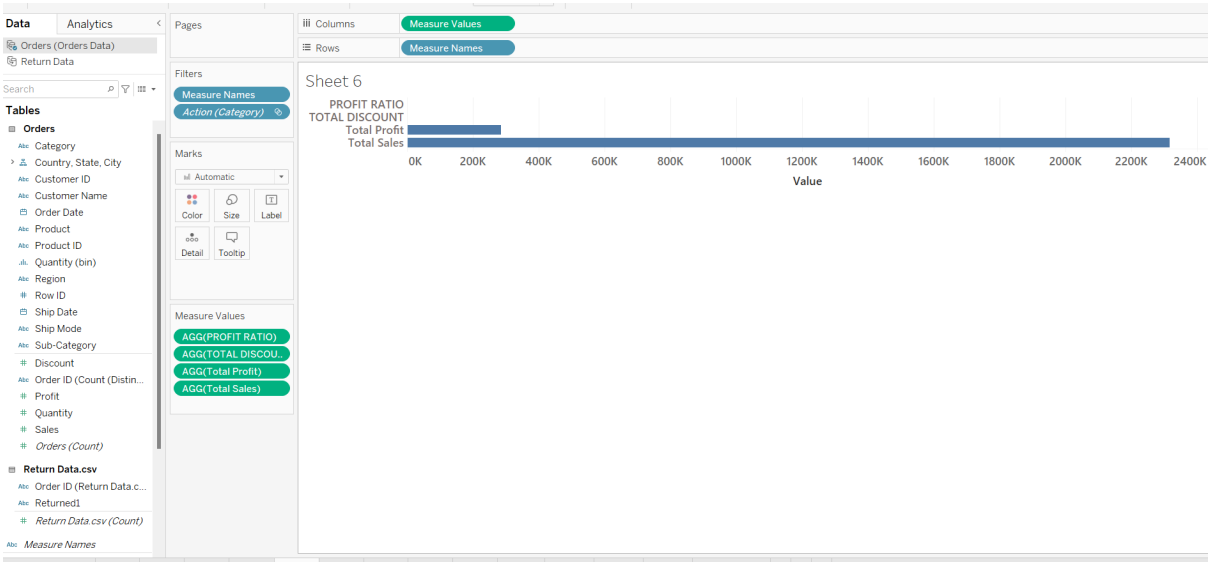


4. Visualize *Sales* vs *Profit* on a Scatter Plot with *Category* and *Sub-Category* breakdown.

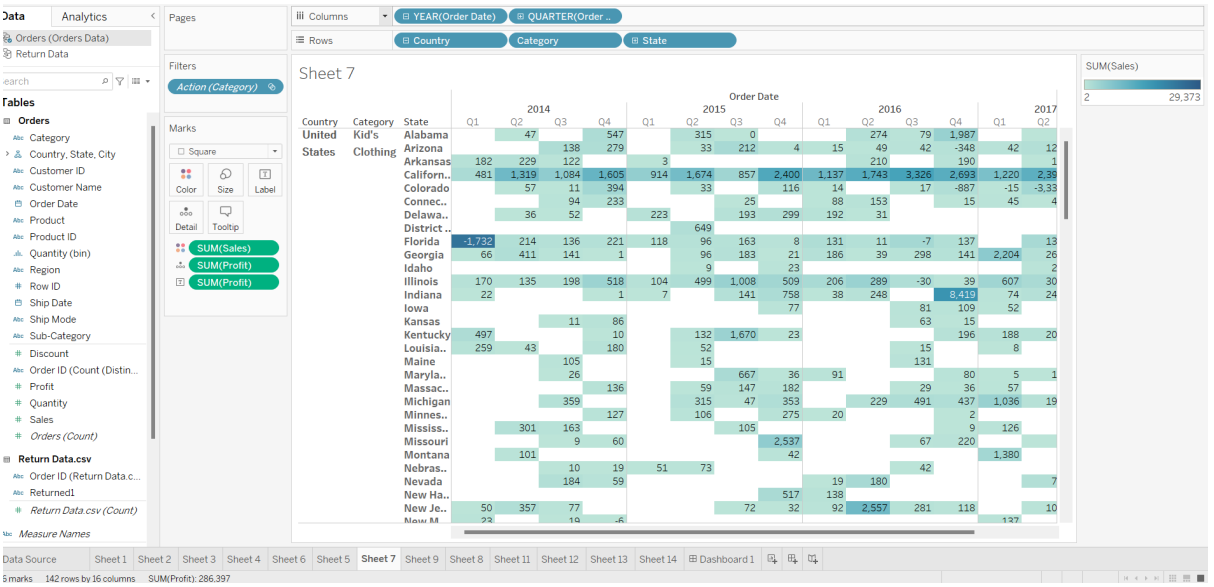


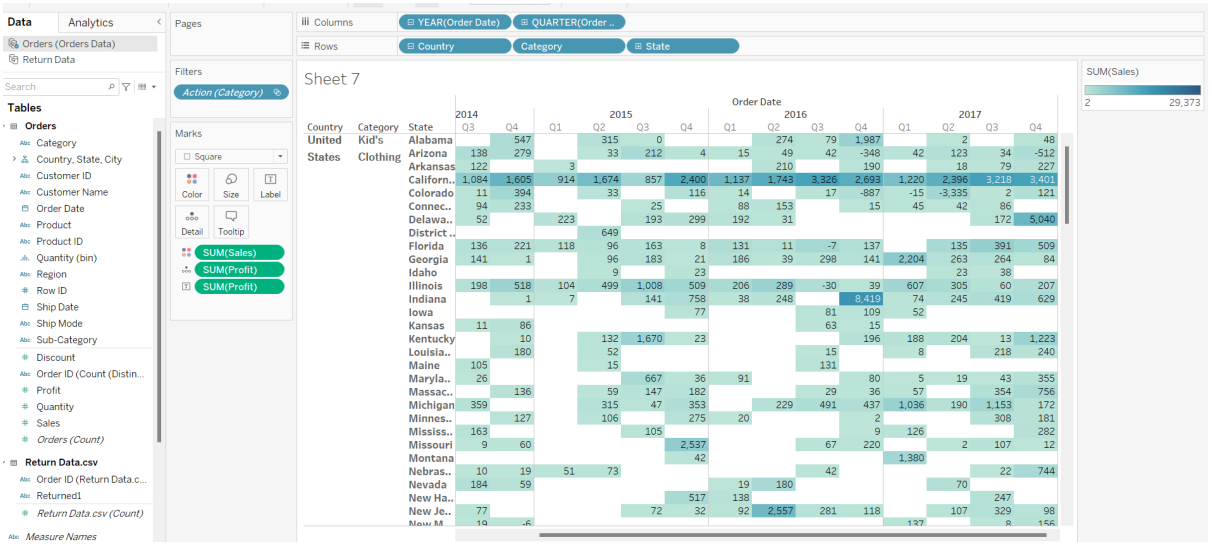
Kid's clothing has the highest profit, followed by women's clothing and men's clothing.

5. Compute aggregated values for all Sales KPIs like *Total Sales, Profit, Profit Ratio, and Discount* in a Table view.



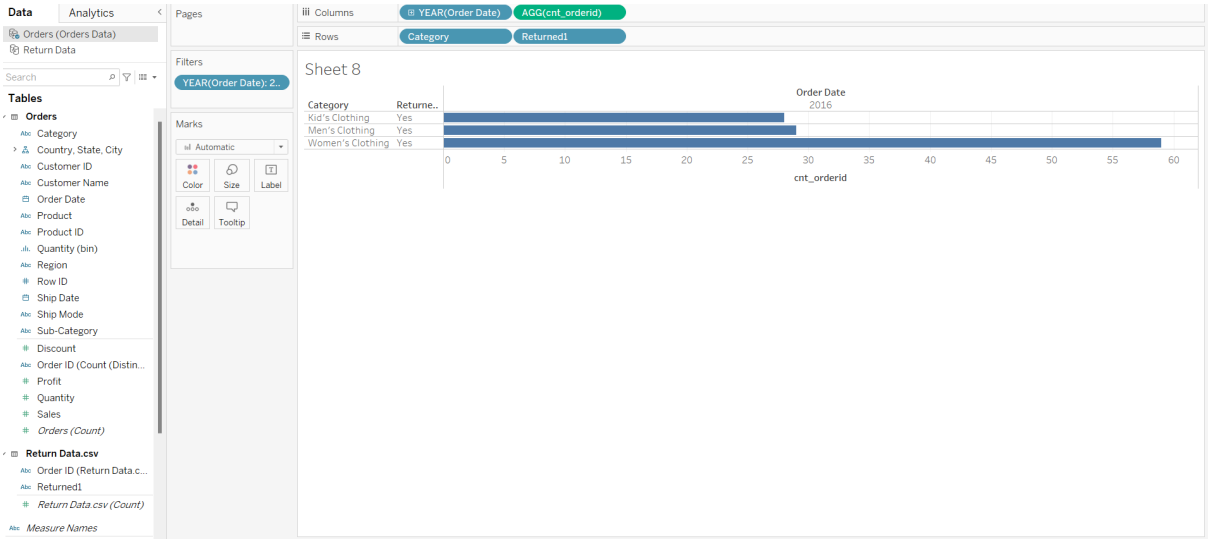
6. Analyse the *Sales* for all the quarters of all the years across *State*, and *Category* as a Highlight Table. Highlight the columns by Profit.





In the fourth quarter (Q4) of 2017, New York's Kid's Clothing category experienced high profits. This indicates that the Kid's clothing segment in New York was particularly successful during that period.

7. Connect to the *return data* dataset and blend it with *order* data to compute the *number of orders returned* for each product *category* in 2016.



It appears that in the year 2016, the return rate for women's Clothing was higher compared to the return rates for Men's Clothing and Kid's Clothing. Specifically:

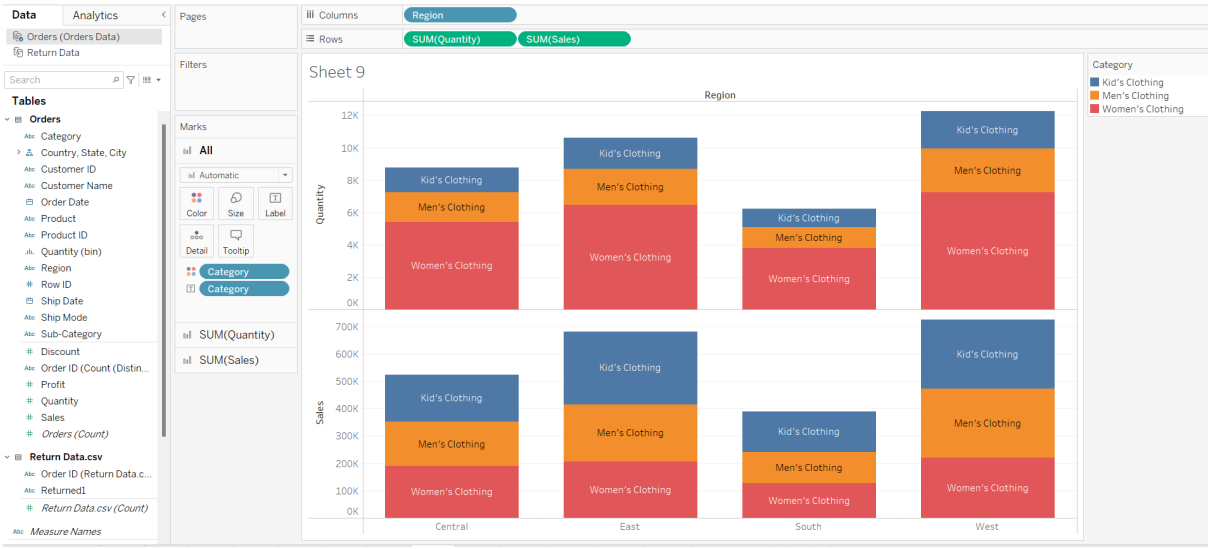
- Women's Clothing had 59 orders returned.

- Men's Clothing had 29 orders returned.

- Kid's Clothing had 28 orders returned.

This indicates that a higher percentage of orders for women's clothing were returned in 2016, which may be due to various factors such as sizing issues, product dissatisfaction, or other reasons. Analyzing the reasons behind these returns can help businesses improve product quality, size accuracy, and customer satisfaction for women's clothing.

8. Show *Sales/Quantity* of Product *Category* in each *Region* as a Stacked Bar Chart.

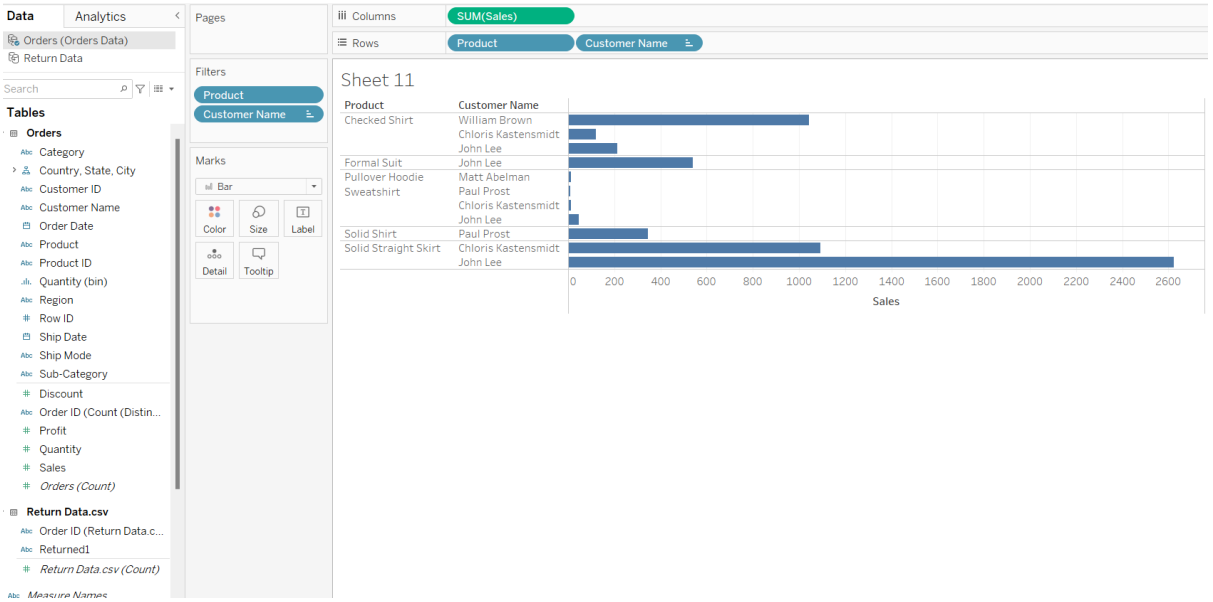


It's clear from the stacked chart that the East and West Region has a significant quantity of Women's Clothing and high sales in this category. This observation suggests that Women's Clothing is a popular and successful product category in the East and the West Region.

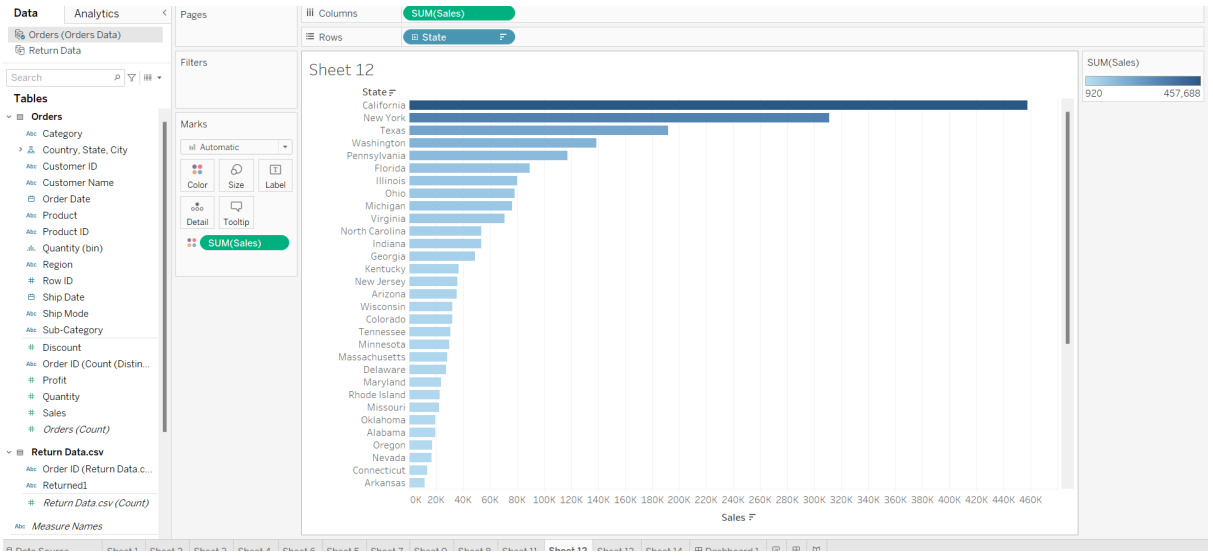
The West Region has both a higher quantity and higher sales for men's clothing. This indicates that men's clothing is a popular and successful product category in the West Region. Businesses can use this information to focus on maintaining and potentially expanding their offerings of men's clothing in the West Region to further capitalize on the demand for this category.

The West Region has a higher quantity of Kid's Clothing, while the East Region has higher sales of Kid's Clothing. This suggests that there is a larger inventory or demand for Kid's Clothing in the West Region, but the East Region is more successful in terms of selling this category. Businesses can use this information to optimize their inventory management and marketing strategies, potentially increasing sales in the West Region to match the quantity of inventory available or exploring the reasons behind the higher sales in the East Region to replicate that success.

9. Determine the top 5 *products* and top 5 *customers* by *Sales*, i.e., *Products* and *Customers* that are generating the highest revenue as a bar chart.



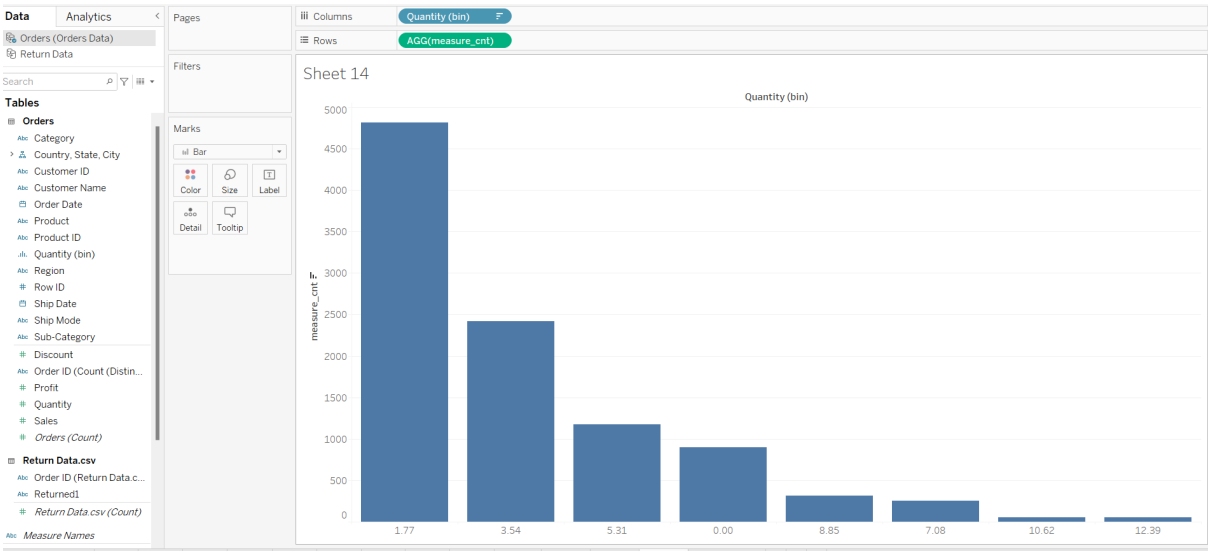
10. Visualize *Sales* by *State* where the sales variation is highlighted by color as a Map Chart



11. Visualize Sales & *Profit* analysis by *Customer* on a Scatter Plot.

The customer's name is Tamara Chand, with a high profit of 8,981 and sales of 19,052.

12. Represent the *Number of orders* received by *Quantity* bins as a Histogram.



It appears that **Women's Clothing** performed well in different time periods in California in the year 2017:

1. Women's Clothing had high sales and profit in Q4 (fourth quarter) of 2017 for the state of California. This indicates a strong performance for this category during that specific quarter.

2. Women's Clothing also had high sales and profit in the month of September for the year 2017. This suggests that September was a particularly successful month for Women's Clothing in California in that year.

It appears that in **Men's Clothing** in October 2017, the profit was negative, which suggests that expenses exceeded revenue during that month. On the other hand, in November 2017, sales were higher, indicating an increase in revenue.

1. A negative profit in October could be due to various factors such as increased costs, lower sales, or one-time expenses. The higher sales in November could be a positive sign, potentially offsetting the negative profit from the previous month.

2. To improve profitability, it's important to analyze the reasons behind the negative profit in October and identify areas for cost control or revenue enhancement. Additionally, understanding the factors contributing to increased sales in November can help businesses continue to grow their revenue.

Kid's Clothing in the Year 2017:

1. Kid's Clothing had high profits in the fourth quarter (Q4) of 2017 in New York, indicating strong financial performance for that period in that region.

2. Kid's Clothing also had high profits in the month of March for the year 2017.

3. In April 2017, Kid's Clothing experienced negative profit, suggesting that expenses exceeded revenue during that specific month.

4. Kid's Clothing had high sales in November 2017 for the year 2017, indicating a strong demand for this category during that month.