Executive Summary

Summary Analysis:
The CEO of Superstore aims to understand the root causes of customer returns and develop strategies to reduce return volume. To achieve this, return trends will be analyzed based on the total number of returns over time. While financial impact is not the primary concern, the total cost of returns will also be examined. The return rate will serve as a key metric for comparing return trends across different regions, products, and customer segments.

Key Insights and Root Causes:
1. Geographic Trends
The Western region exhibits the highest return rates across all three product categories:
Furniture: 39.7% return rate
Office Supplies: 42.9% return rate
Technology: 37.4% return rate
The Eastern region follows closely in technology returns, with a 32.7% return rate.

2. Seasonal Trends
August experiences a significantly higher return rate than other months, despite lower-than-average sales in the preceding four months. The total number of returns peaks in September, aligning with a sales surge.

3. Customer Behavior
A small group of customers is responsible for a significant portion of returns and profit losses: 14 customers contributed 60% of total profit losses due to returns. These same customers account for 31% of total returns.
One customer alone is responsible for 23% of all profit losses and 6% of total return volume.

4. Product-Specific Issues
Certain products have exceptionally high return rates, with some reaching 100% return rates.
These high-return products often include costly or bulk-purchased items, which significantly impact overall return volume and associated financial losses.

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The next story point contains an analysis of returns by product category with 3 graphs and one filter.

Filter: The category filter is interactive and controls all 3 charts simultaneously to give a detailed look at sales, profit, return rate, and total returns aggregated by subcategory.

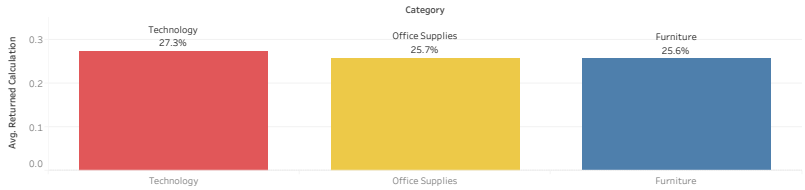
Graphs:
Return rate by product category: a Bar Graph which gives the percentage of returns for each major product category. Use this chart as a general overview of the return rate of different categories.
Profit against total returns and return rate: a horizontal bar graph with three sections profit, total returns, and average return rate aggregated by subcategory. Use this chart to compare earnings in each subcategory to return rate and total returns.
Total Sales against Total returns: a scatter plot showing total sales and total returns aggregated by subcategory. Use this chart to see a representation of the scale in our total sales against total returns by each subcategory and analyze if total sales/profit is correlated best with total returns or average return.

Implementation: With this dashboard we can see some subcategories have high total sales and total returns while others have high sales and low returns. We can use this to see where the items in our subcategories are being rejected and returned by our customers and reach out to ask them what happened to cause the returns.

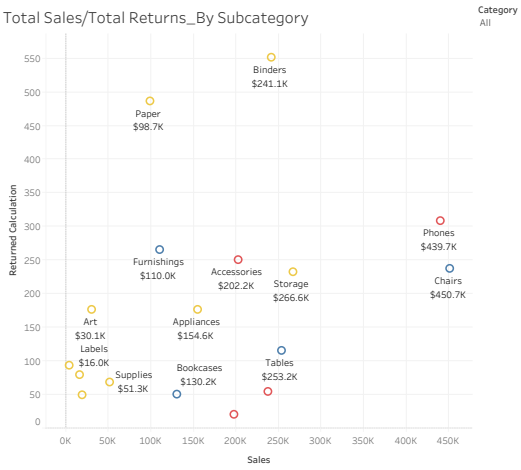
Executive Summary

Return Analysis by Categories

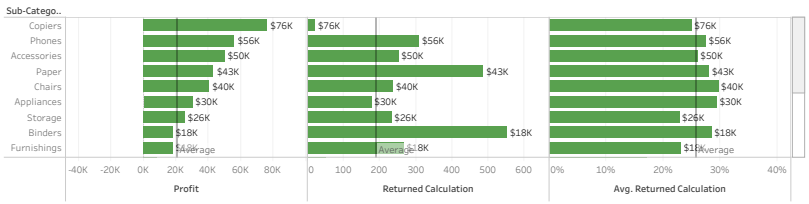
Return Rate by Product Category



Total Sales/Total Returns_By Subcategory



Profit Against Total Returns Vs. Return Rate



Executive Summary

The next story point contains an analysis of returns by state and region with 3 graphs and 4 filters.

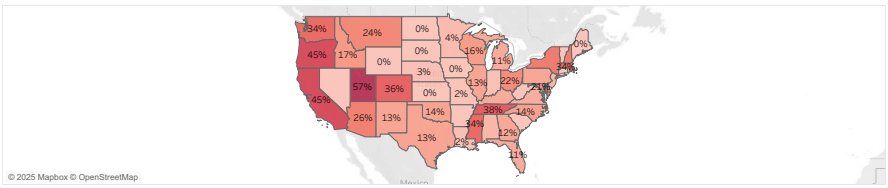
Filter: The Region, State, and Month filters are interactive and can be used to control all the graphs simultaneously to dive into detail of any state, a region as unit, and by any month of interest. The Average Return Rate slide can be used to filter the heat map to isolate states by percentages of returns.

Graphs:
Return by State: a Heat map which shows percentages of average return rate. Use this graph along with the slider of avg return rate to get a general view of which states have the greater average returns.
Return Rate by Region and Category: a horizontal bar graph which shows the return rates by region and category. Use this graph to have a general overview of which geographical region is responsible for the greatest returns and in which category. Use the Region, State and Month filter to get further details into any area of concern.
Return Rate by State and Subcategory: a horizontal bar graph which shows the return rate of all subcategories within each state. Use this graph to have a general overview of what is being returned at a greater rate within each category. Use the Region, State, and Month filter to get further details into which subcategories are returned most by any State.

Implementation: With this dashboard we can analyze which geographic region is responsible for the most returns. We can further break down those high percentage return rates into categories and subcategories to see if there are any trends on the proportion of what those high return rate states are returning and when they are returning them. We see that the Western region is overwhelmingly responsible for many of the returns. For example, we can see in the state with one of the highest return rates, California, returned 100% of all fasteners, and 89% of the copiers for the month of August. Superstore should Implement targeted interventions in the Western region by refining return policies, enhancing product quality control, and investigating underlying return drivers.

Executive Summary

Returns by State



Avg. Returned Calculation
0% 57%

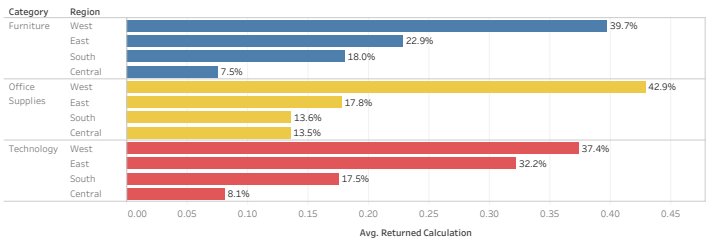
Region
All

State
All

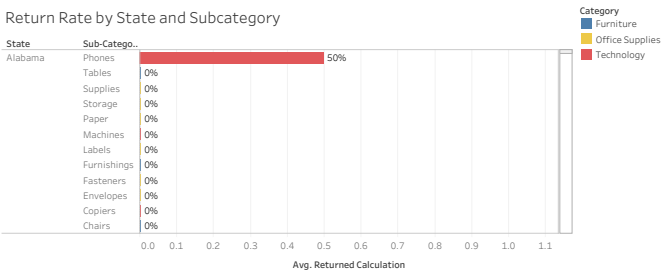
Month of Order Date
All

Avg. Returned Calculation
0 to 0.568421053

Return Rate by Region and Category



Return Rate by State and Subcategory



Executive Summary

The next story point contains an analysis of return rate by month with 3 graphs and 1 filter.

Filter: The Month filter is interactive and can be used to control the sales against returns and return rates and sales by month graphs simultaneously. Use this filter to dive into the details of sales, return rate, and total returns of subcategories by any month of interest.

Graphs:
Return Rate by Month: a line graph which shows the average return rate by month. Use this graph to get a general view of which month's return rates are highest and lowest.
Sales Against Returns: 3-line graph which shows total sales, total returns, and return rate. Use this graph for a general overview of trend lines and visualize the trend lines for returns and sales. Use the Month filter to compare return rate trends month by month, or overall.
Return Rates and Sales by Month and Subcategory: a 2-columned horizontal bar graph which compares return rates and sales of each subcategory by each month. Use this graph along with the Month filter to assess the subcategories' return rate and its effects sales in any month of interest.

Implementation: With this dashboard we can get a detailed assessment of which months have the highest return rate, total returns, and analyze what is happening in those months. We can clearly visualize that August has the highest return rate, while September has the highest total returns. September's spike in sales correlates with the spike in total returns. However, the high average return rate in august needs to be studied within context in multiple departments (like marketing) to uncover why it has such a high return rate when the previous 4 months show below average sales. For example, we can use the month filter to see during August the rates of copiers was a massive 66.7%. Superstore should strengthen return policies and provide proactive customer engagement during peak return periods (August-September) and work closely with the marketing team to understand seasonal trends, such as sales events, discounted items, and back-to-school promotions, that may contribute to increased return rates. If certain promotions drive excessive returns, adjusting return policies for these periods may be necessary.

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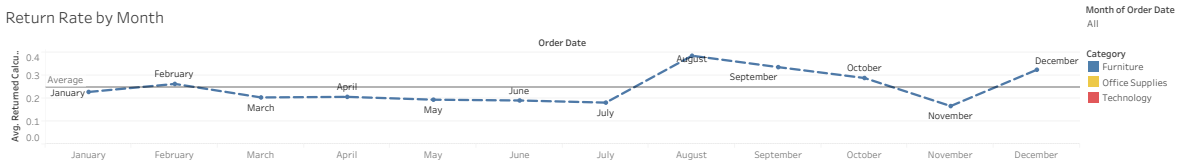
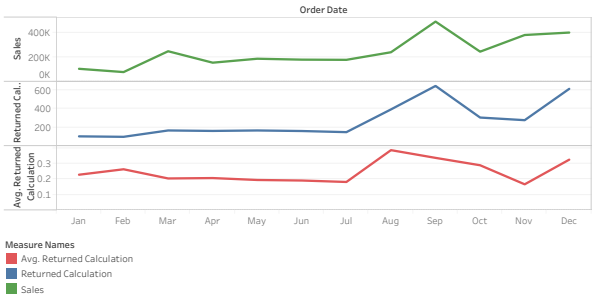
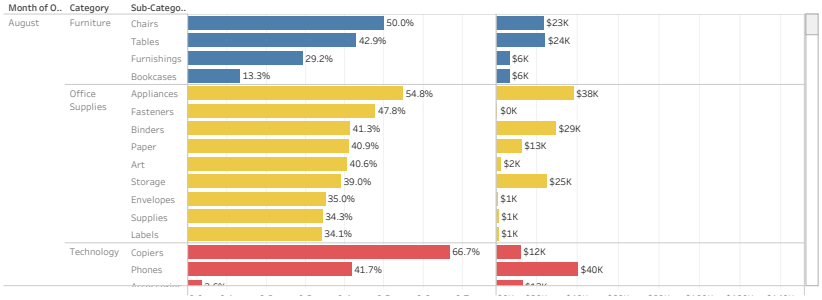
Return Rate by Month



Sales Against Returns



Return Rate and Sales by Month and Subcategory



Executive Summary

The next story point contains an analysis of the return rate by customer with 3 graphs and 1 filter.

Filter: The Month filter is interactive and can be used to control all the graphs simultaneously. Use this filter to dive into the details of the return rate and total returns of any customers by any month of interest.

Graphs:
Return Rate by Customer: a horizontal bar graph which shows the average return rate and total number of items returned for each customer. Use this graph to get a general view of which customers return rates are highest. Use the Month filter to see the return rates of customers by any month of interest.
Return Rate by Customer Outlier: a scatter plot which shows the average return rate of customers. Use this graph to visualize any customers who are outliers, having unusually high return rates and total items returned. Use the Month filter to analyze if any individual customers had a large impact on any month of interest.
Return Rate of Customer By Month: a horizontal bar graph which compares customers' return rates and total returns for each month. Use this graph along with the Month filter how customers return rates and total returns affected any month.

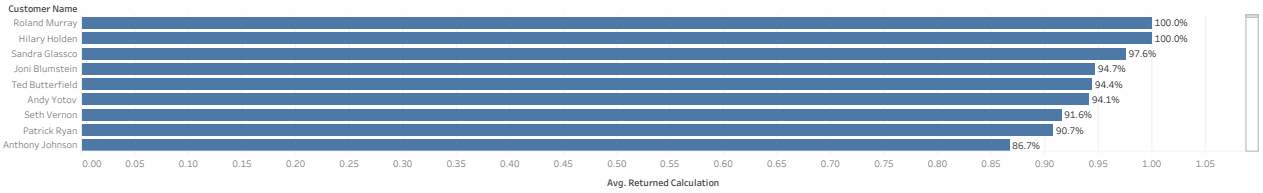
Implementation: With this dashboard we can get a detailed assessment of each customer's return rates and total number of items returned. We can also analyze if any individual customer has return trends which negatively impacted our return rate overall. For example, from the previous story point we can see that September has the highest total returns. If we set the customer returns month filter to September, we can quickly notice a massive outlier, Seth Vernon, who returned 734 items at a return rate of 98.5%. This single customer may provide the root cause of our return volume for that month. Superstore should actively monitor high-return customers and consider implementing restocking fees of 5-15% or restricting return privileges for chronic returners.

Executive Summary

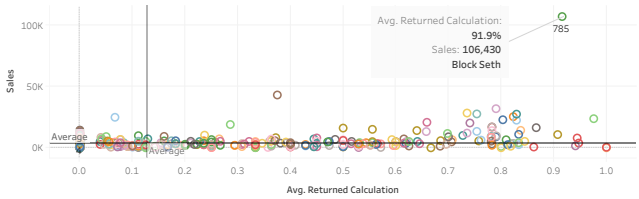
Analysis of Returns by Customers

Month of Order Date
All

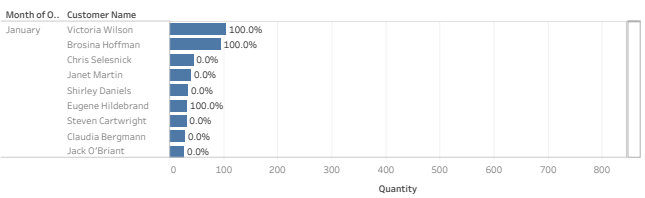
Return Rate by Customer



Return Rate by Customer Outliers



Return Rate by Customer and Month



The next story point contains an analysis of profit loss and return volume from returns as well as the proportion of responsibility that 14 bulk customers had on those profit losses and return volume with 2 graphs and no filters.

Filter: No filters.

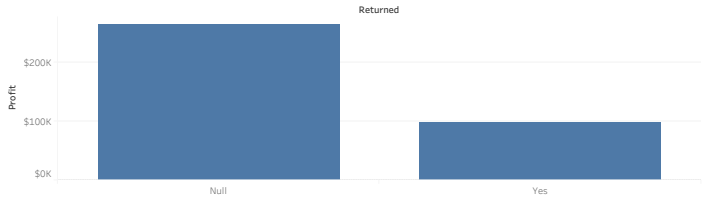
Graphs:
Profit Loss from Returns: a bar graph which illustrates the total profit loss and total return volume from all returns. Use this graph to see how returns are affecting the economic health of superstore overall.
Losses from Only 14 Bulk Customers: a bar graph which shows the total profit loss and return volume from only 14 customers with particularly high return rates and returned items. Use this graph to gauge the proportional impact certain customers have on profit loss and return volume against the total.
Seth Vernon Alone: a bar graph which shows the impact of just one customer on profit losses and total volume of returns.

Implementation: With this dashboard we can get a detailed assessment of total profit losses and return volume due to returns and then analyze the impact that our bulk customers have. The dashboard shows that of the Superstores' 800 customers, just 14 of them are responsible for 60% of all profit losses due to returns and 31% of the total volume of returns. This dashboard highlights a major root cause of returns.

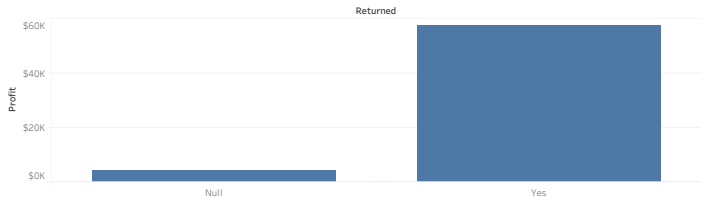
Executive Summary

Major Losses from Bulk Customers

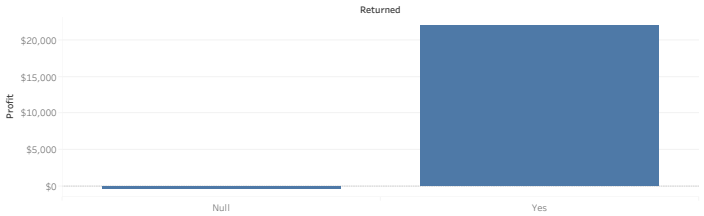
Profit Loss from Returns



Losses from Only 14 Customers



Seth Vernon Alone



Executive Summary

The next story point contains an analysis of return rate by individual products with 1 graph and 4 filters.

Filters: The Month, Category, Avg return rate slider, and Quantity slider filters are all interactive. Use this filter to dive into the details of the return rate of individual products in terms of month, category, return rate or quantity of interest.

Graphs:
Return Rate by Product Name: a horizontal bar graph which shows the return rate of all the products that superstore sells by category. Use a combination of filters to assess which individual items have the highest return rates by volume, month, and category.

Implementation: With this dashboard we can get a detailed assessment of each individual product's return rates. Some items have a high volume of sales and extremely high return rates, so perhaps Superstore should discontinue selling these items. For example, in the month of September Superstore had 30 products from office supplies, 11 products from technology, and 11 products from furniture that all had a 100% return rate. Superstore should conduct a thorough review of high-return products, collaborating with suppliers to improve quality, enhancing product descriptions, and optimizing customer expectations.

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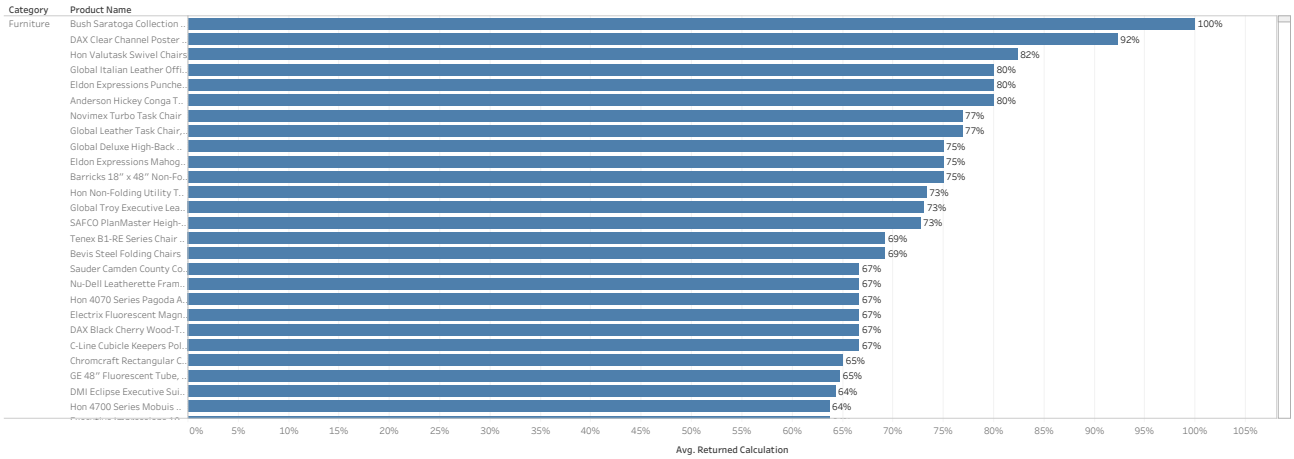
Return Rate by Product Name



Category
Furniture
Office Supplies
Technology

Month of Order Date
All

Category
All

Avg. Returned Calculation
0 to 1

Quantity
1 to 260

Executive Summary

Recommendations to Reduce Returns:

Regional Strategy: Implement targeted interventions in the Western region by refining return policies, enhancing product quality control, and investigating underlying return drivers.

Seasonal Adjustments: Strengthen return policies and provide proactive customer engagement during peak return periods (August-September).

Customer-Specific Actions: Monitor high-return customers and consider implementing restocking fees of 5-15% or restricting return privileges for chronic returners.

Product Review: Conduct a thorough review of high-return products, collaborating with suppliers to improve quality, enhancing product descriptions, and optimizing customer expectations. Perhaps discontinue sales of certain high-return products.

Marketing Coordination: Work closely with the marketing team to understand seasonal trends, such as sales events, discounted items, and back-to-school promotions, that may contribute to increased return rates. If certain promotions drive excessive returns, adjusting return policies for these periods may be necessary.

By implementing these strategies, Superstore can effectively reduce return volume, improve customer satisfaction, and mitigate profit losses linked to excessive returns.