Superstore Returns Analysis

Date: 3rd November 2024

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Introduction

Purpose: Provide insights into factors driving returns at Superstore and propose solutions to reduce return rates.

- Objectives:
- Identify key drivers of high return rates.
- Offer actionable strategies to improve quality and customer experience.
- Equip stakeholders with a dashboard for ongoing return monitoring.

Sales and Returns Correlation

Graph: Scatterplot of total sales vs. total returns by product subcategory.

Detail: Categories like storage and phones subcategories show a high correlation, suggesting a quality control focus may reduce returns in high-sales categories.

Correlation Between Total Sales and Total Returns
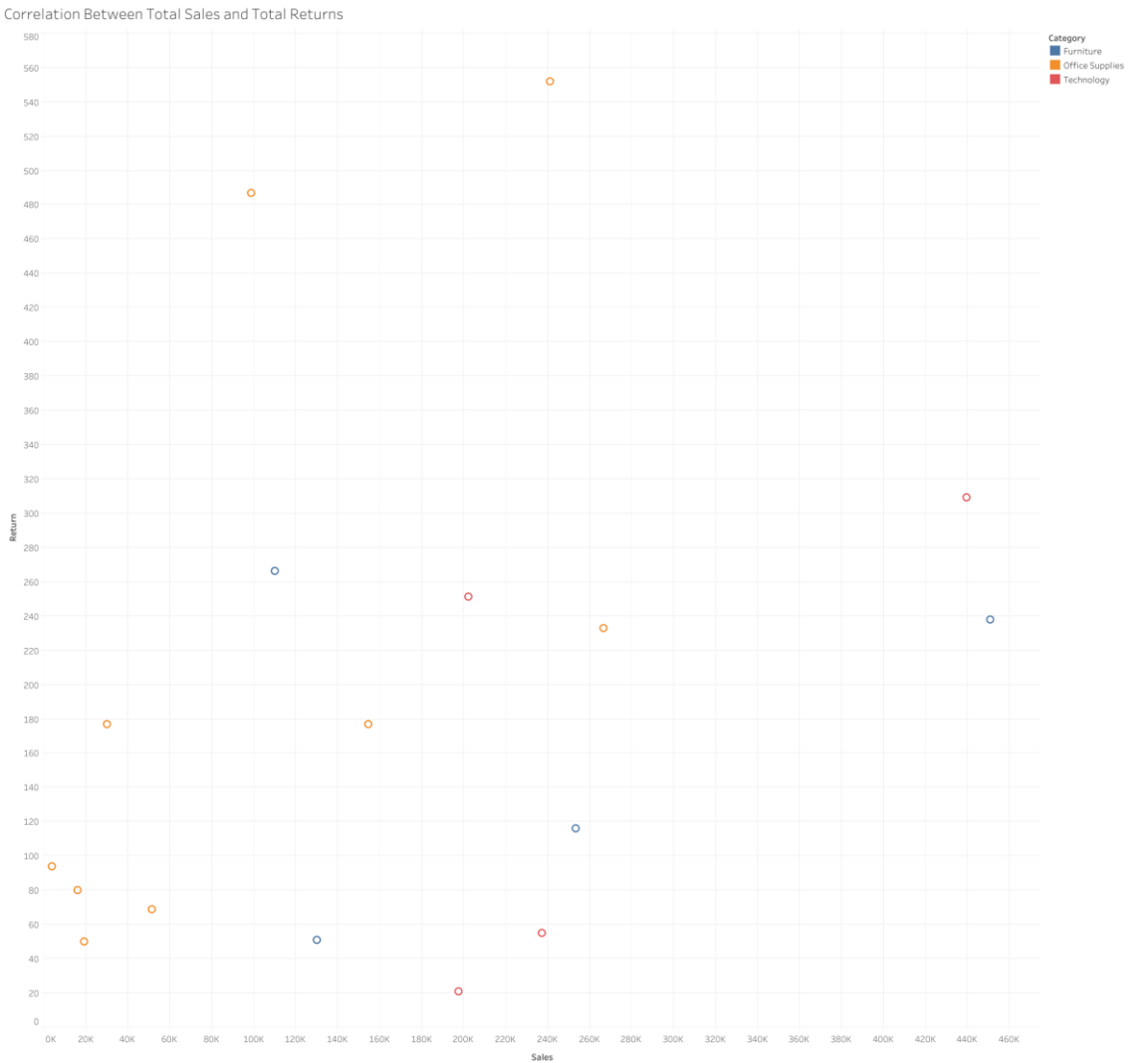
Return Rate by Product Category

Graph: Bar chart showing return rates across product categories.

Detail: Technology, Office Supplies, and Furniture have the highest return rates, highlighting areas for product quality improvements.
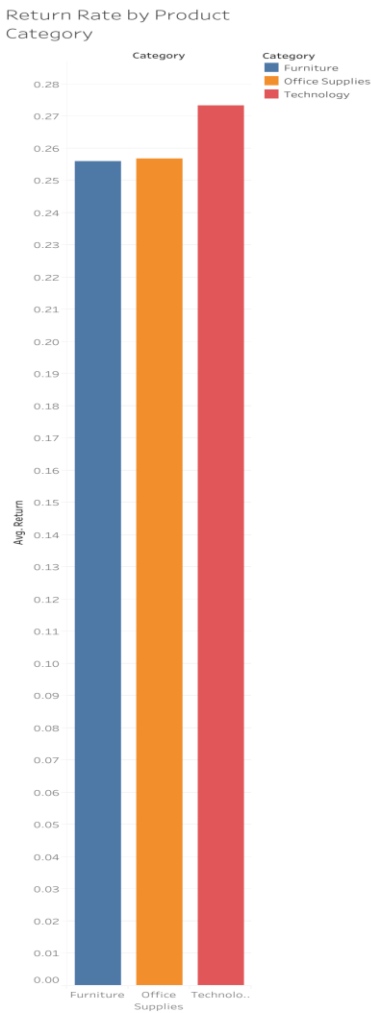
Customer Return Behavior

Graph: Return rate by customer, excluding those with only one order.

Detail: Frequent returners display consistent patterns. Targeting these customers with personalized support may reduce their return rates.
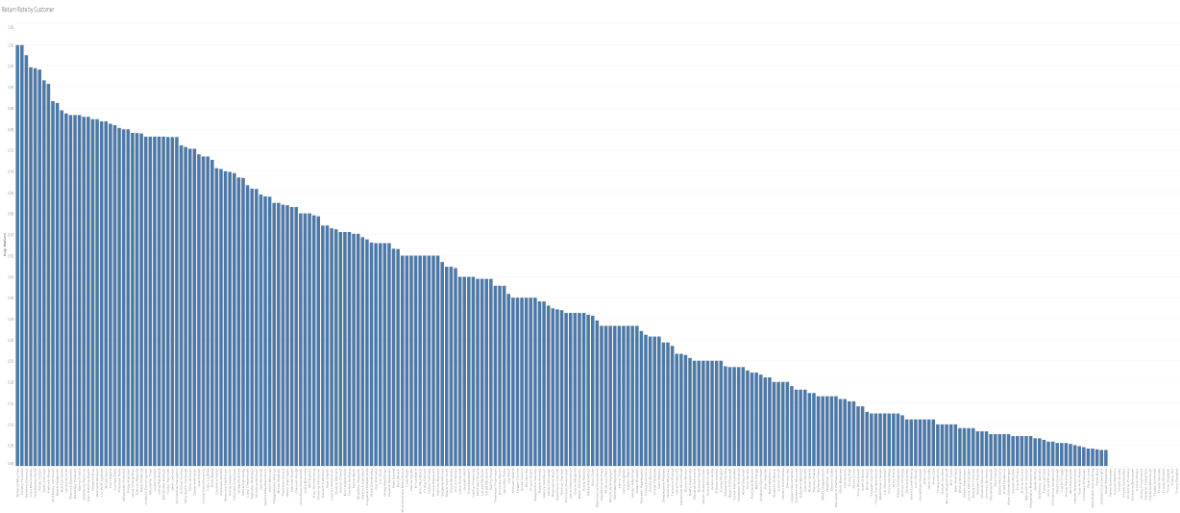
Geographic Return Trends

Graph: Map of return rates by state.

Detail: States like California, Utah, and Oregon have high return rates, indicating potential regional issues such as fulfillment or delivery challenges.
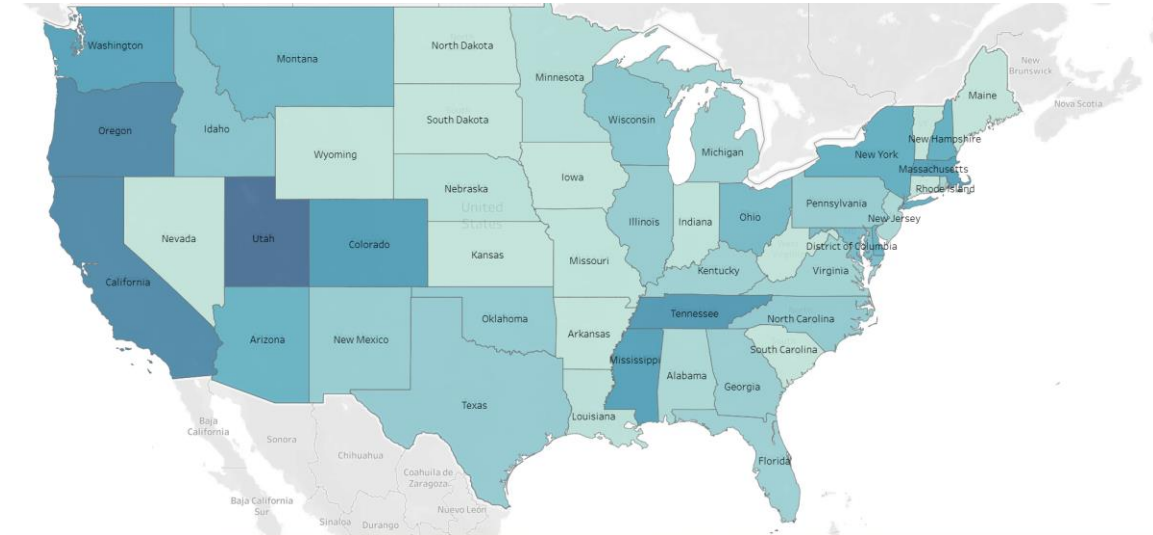
Seasonal Return Patterns

Graph: Line chart of monthly return rates.

Detail: Peak returns in August, September, and December coincide with back-to-school and holiday seasons, suggesting a need for seasonal return strategies.

Return Rate by Some Measure of time

Order Date
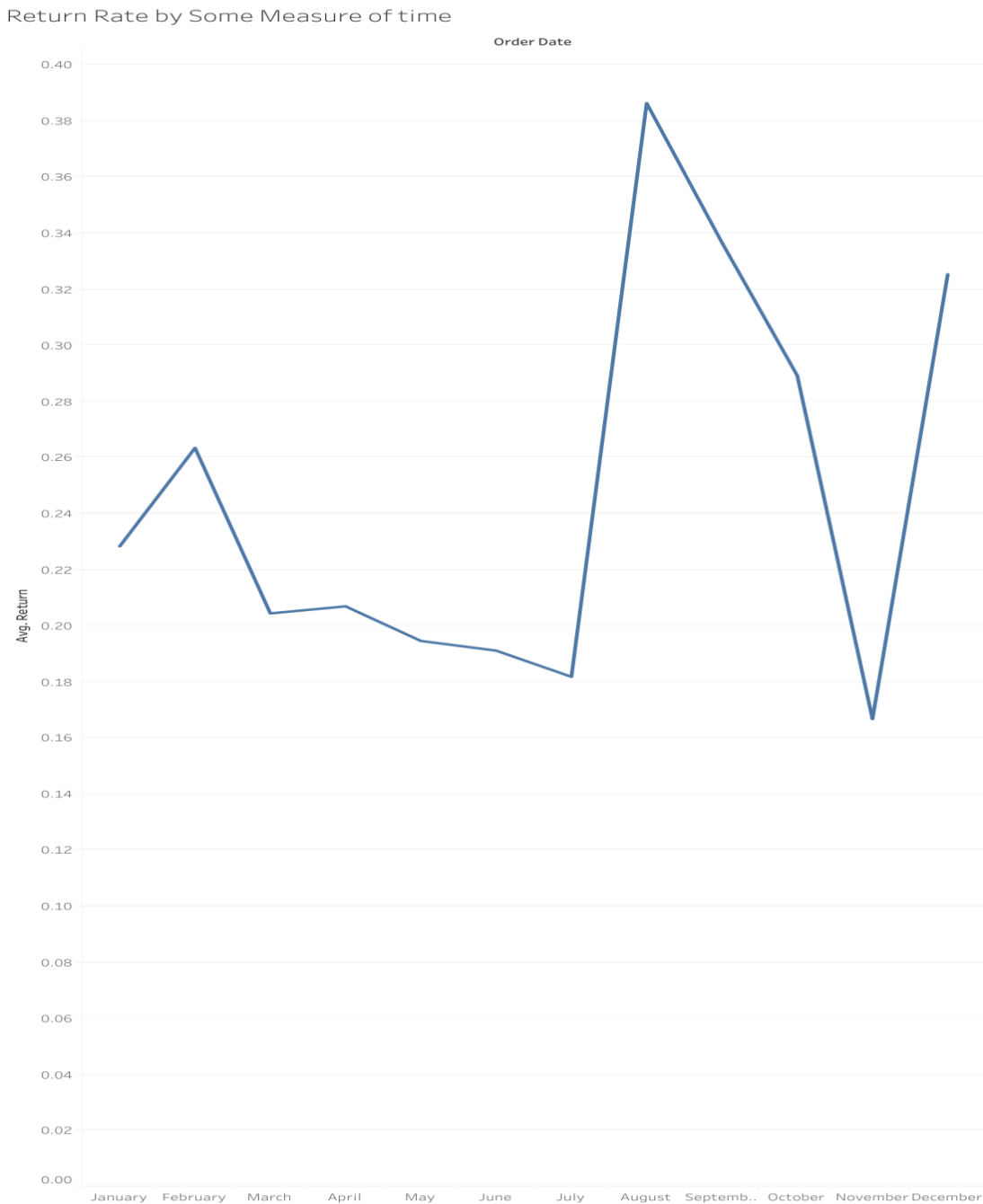
Category and Geographic Trends

Graph: Composite chart of return rates by category and region.

Detail: Furniture in California and Technology in New Hampshire show particularly high return rates, suggesting targeted interventions in these areas.

Relationship Between Return Rate by Category and State

| | Category | | |
State1	Furnitu..	Office Supplies	Tech..
New Hampshire	38%	0%	67%
Tennessee	31%	35%	60%
Oregon	30%	42%	58%
Utah	40%	60%	50%
New York	29%	23%	40%
Idaho	29%	0%	40%
Delaware	11%	25%	39%
California	45%	47%	39%
Washington	32%	34%	35%
Massachusetts	24%	37%	35%
Colorado	29%	40%	33%
Ohio	24%	18%	31%
Maryland	29%	17%	25%
Alabama	0%	0%	25%
Arizona	21%	30%	23%
Pennsylvania	16%	8%	20%
Rhode Island	12%	0%	20%
New Mexico	25%	8%	20%
Virginia	22%	1%	20%
Kentucky	22%	4%	15%
Illinois	9%	15%	14%
Florida	13%	9%	13%
New Jersey	0%	7%	13%
North Carolina	17%	15%	11%
Texas	7%	16%	10%
Wisconsin	17%	19%	8%
Georgia	24%	10%	8%

Relationship Between Return Rate by Category and State

| | Category | | |
State1	Furn..	Office Supplies	Technol..
California	45%	47%	39%
Utah	40%	60%	50%
New Hampshire	38%	0%	67%
Washington	32%	34%	35%
Tennessee	31%	35%	60%
Oregon	30%	42%	58%
Colorado	29%	40%	33%
New York	29%	23%	40%
Maryland	29%	17%	25%
Idaho	29%	0%	40%
New Mexico	25%	8%	20%
Massachusetts	24%	37%	35%
Georgia	24%	10%	8%
Ohio	24%	18%	31%
Kentucky	22%	4%	15%
Virginia	22%	1%	20%
Arizona	21%	30%	23%
Wisconsin	17%	19%	8%
North Carolina	17%	15%	11%
Pennsylvania	16%	8%	20%
Minnesota	14%	3%	0%
Florida	13%	9%	13%
Rhode Island	12%	0%	20%
Delaware	11%	25%	39%
Illinois	9%	15%	14%
Indiana	9%	0%	3%
Texas	7%	16%	10%

Conclusions and Recommendations

- Quality Improvements: Prioritize quality checks and product improvements in high-return categories, especially Technology and Office Supplies.
- Customer Communication: Offer clear product descriptions and usage guides to set accurate expectations.
- Regional & Seasonal Adjustments: Address specific needs in high-return regions and prepare resources for peak return months.
- Dashboard Use: Encourage regular dashboard reviews for real-time insights and refinement of strategies.