

# Story 1

Introduction	Total Sales vs. Total Returns by Product S..	Return Rate by Product Category	Return Rate by Geography	Return Rate Overtime	Return Rate by Date and Geography	Return Rate by Product C..
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**Introduction to Analysis of Returns:**

The analysis aims to delve into the rate and underlying causes of product returns, a critical aspect of business that impacts customer satisfaction and profitability.

**Key metrics include:**

**Return Rate:** Offers a relative measure of returns against total sales, useful for detecting trends and comparing performance across time periods or product categories.

**Total Cost of Returns:** Provides a direct financial impact analysis, crucial for understanding the economic weight of returns on the business.

**Total Number of Returns:** Important for operational planning, logistics, and assessing the scale of returns management needed.

**Dashboard Component Overview:**

**Map (Return Rate by Geography):** This visual illustrates return rates across different states, allowing for quick identification of geographic patterns and potential regional issues affecting returns.

**Line Chart (Return Rate Over Time):** This chart tracks the return rate across time, revealing trends, seasonal effects, or the impact of business decisions on return rates.

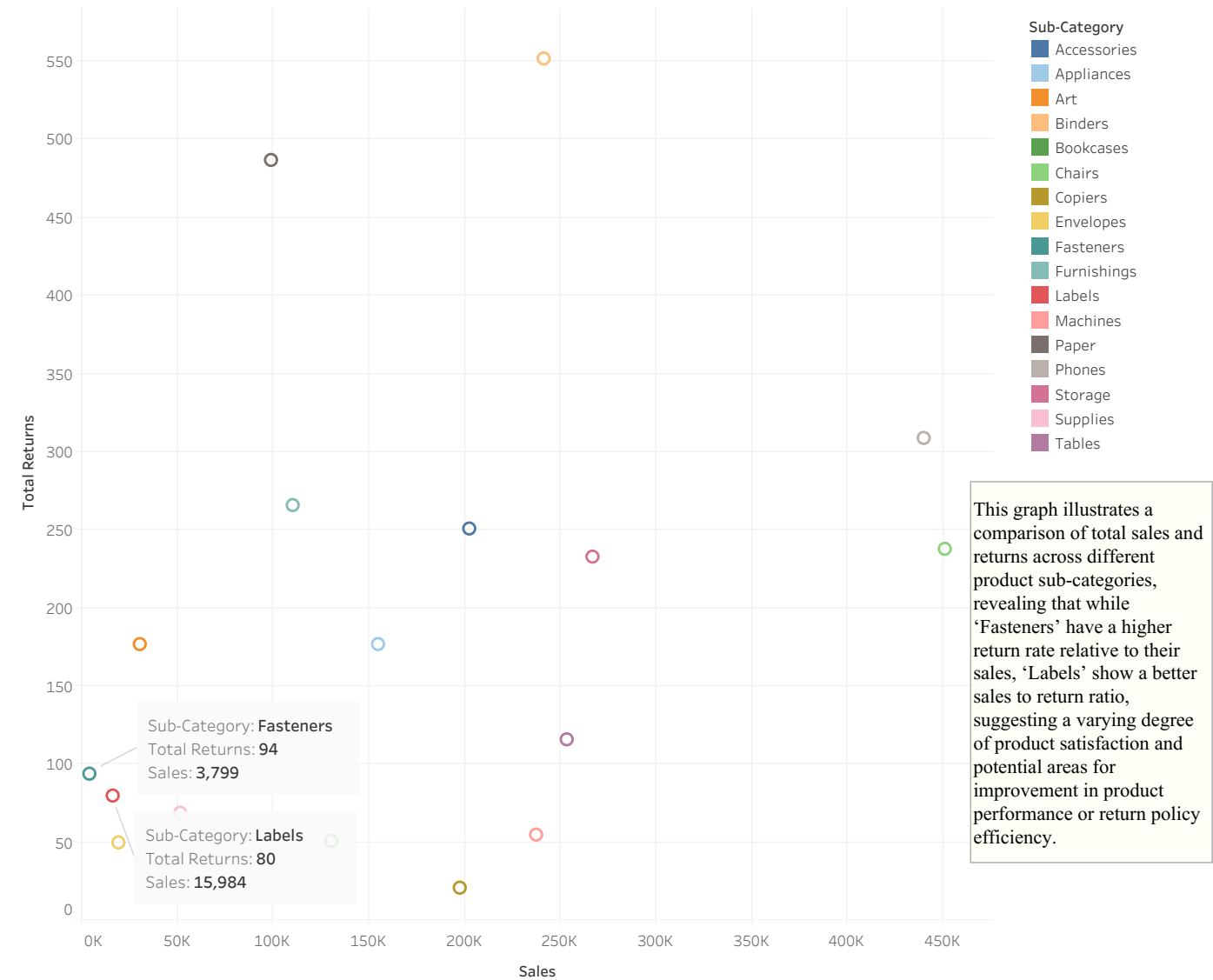
**Bar Charts (Return Rate by Date and Geography, Product Category):** These provide a detailed breakdown of returns by specific dates and states, as well as by product categories, highlighting areas with higher issues.

**Scatter Plot (Total Sales vs. Total Returns by Product Subcategory):** This plot compares sales to returns for each product subcategory, which can highlight if high sales volumes correlate with high returns in certain categories.

**Horizontal Bar Chart (Return Rate by Product Category):** This chart ranks product categories by return rate, showing which areas might require further quality checks or customer feedback analysis.

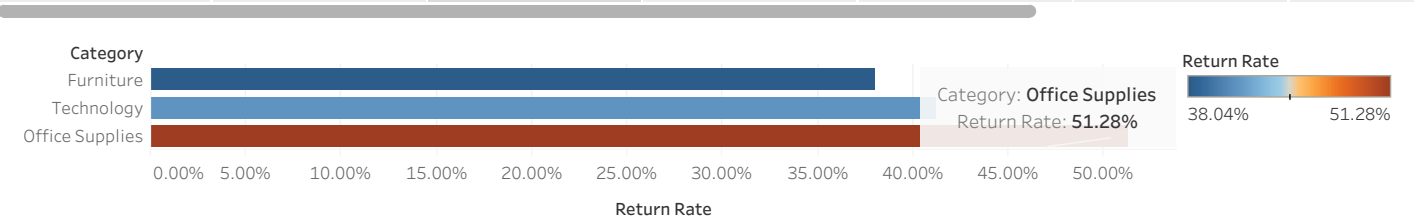
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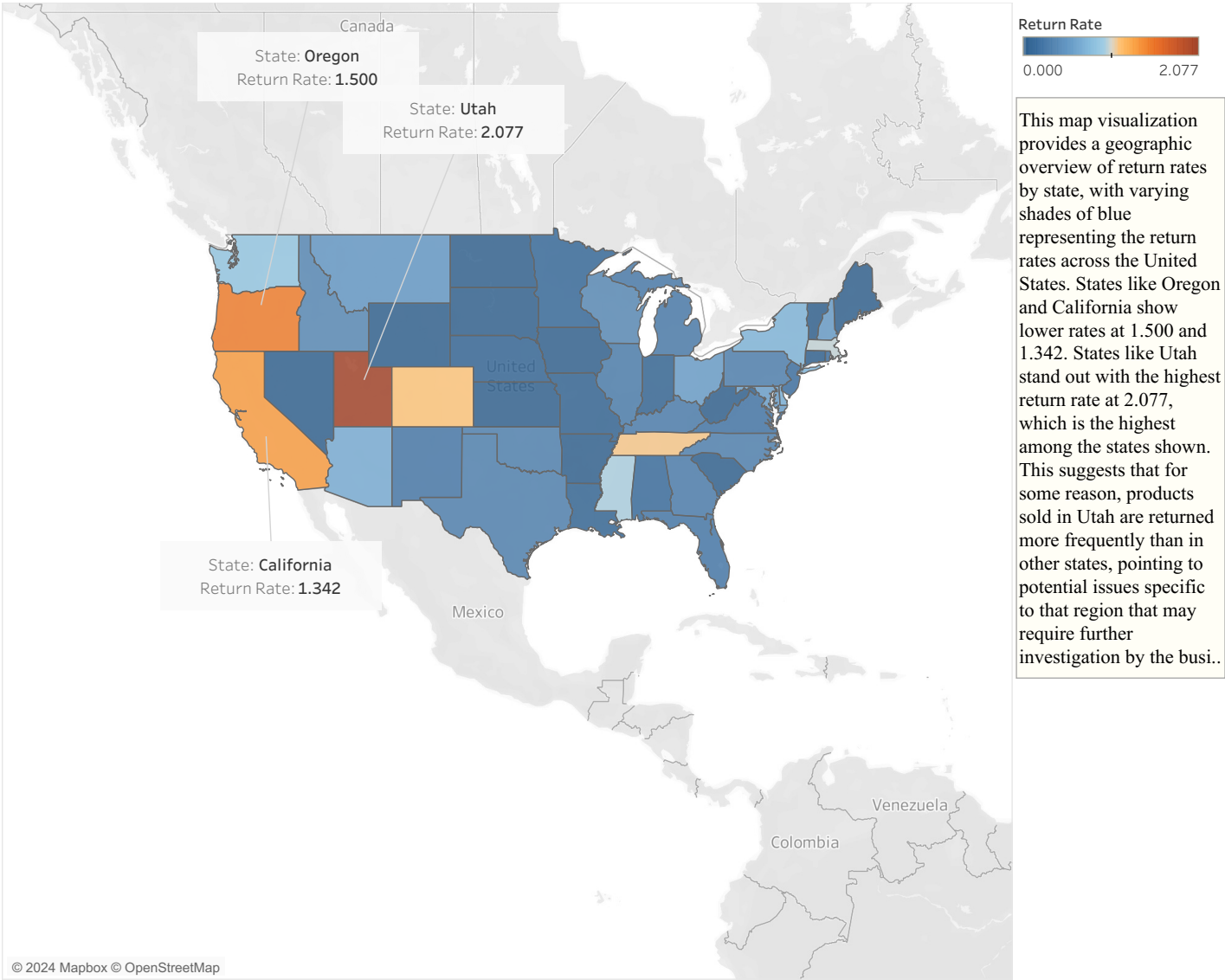
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This graph is comparing return rates across three product categories: Furniture, Technology, and Office Supplies. It reveals a stark contrast with Office Supplies exhibiting a significantly higher return rate of 51.28%, suggesting potential issues with product satisfaction or quality in this category that may require further investigation to improve customer satisfaction and reduce returns.

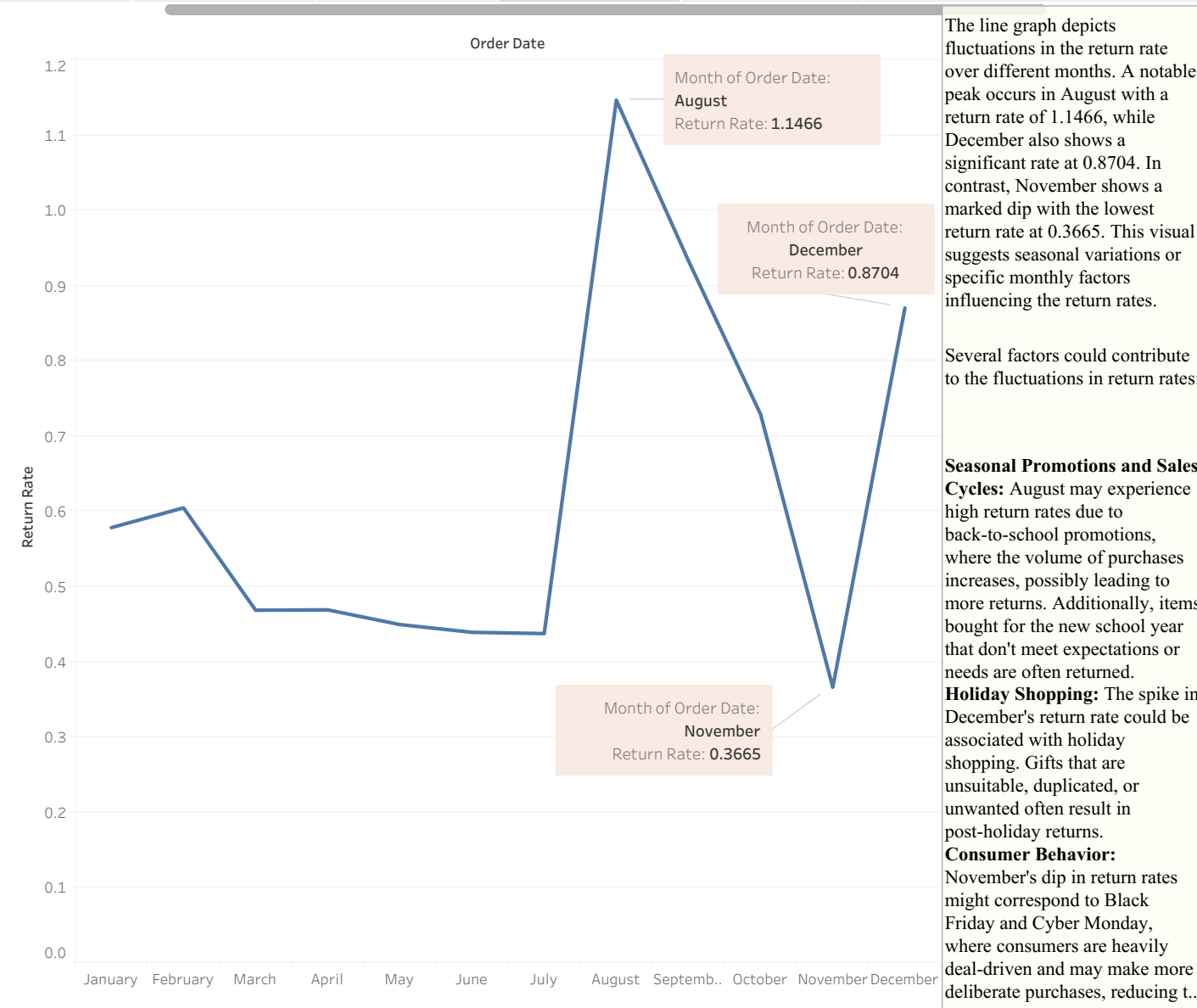
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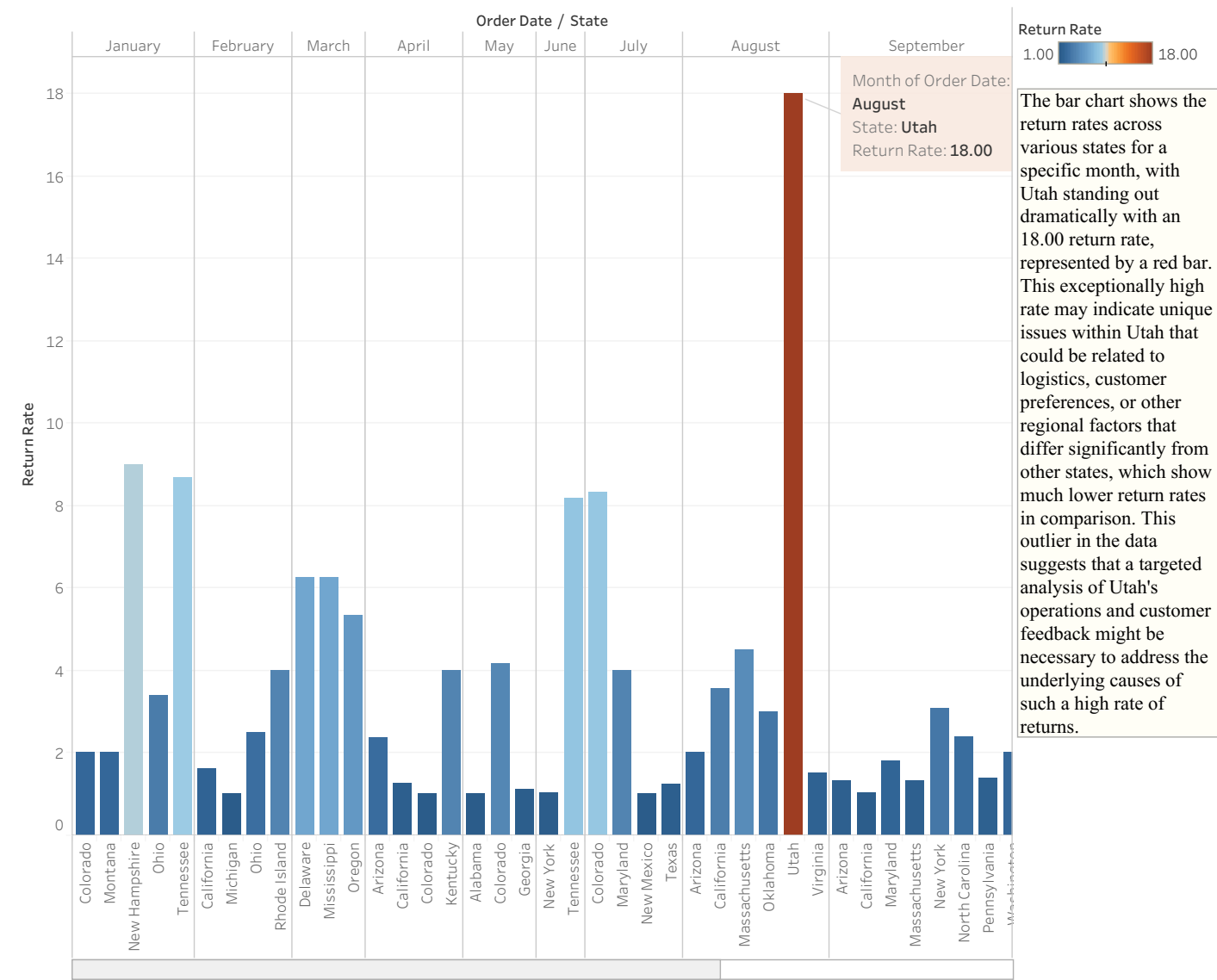
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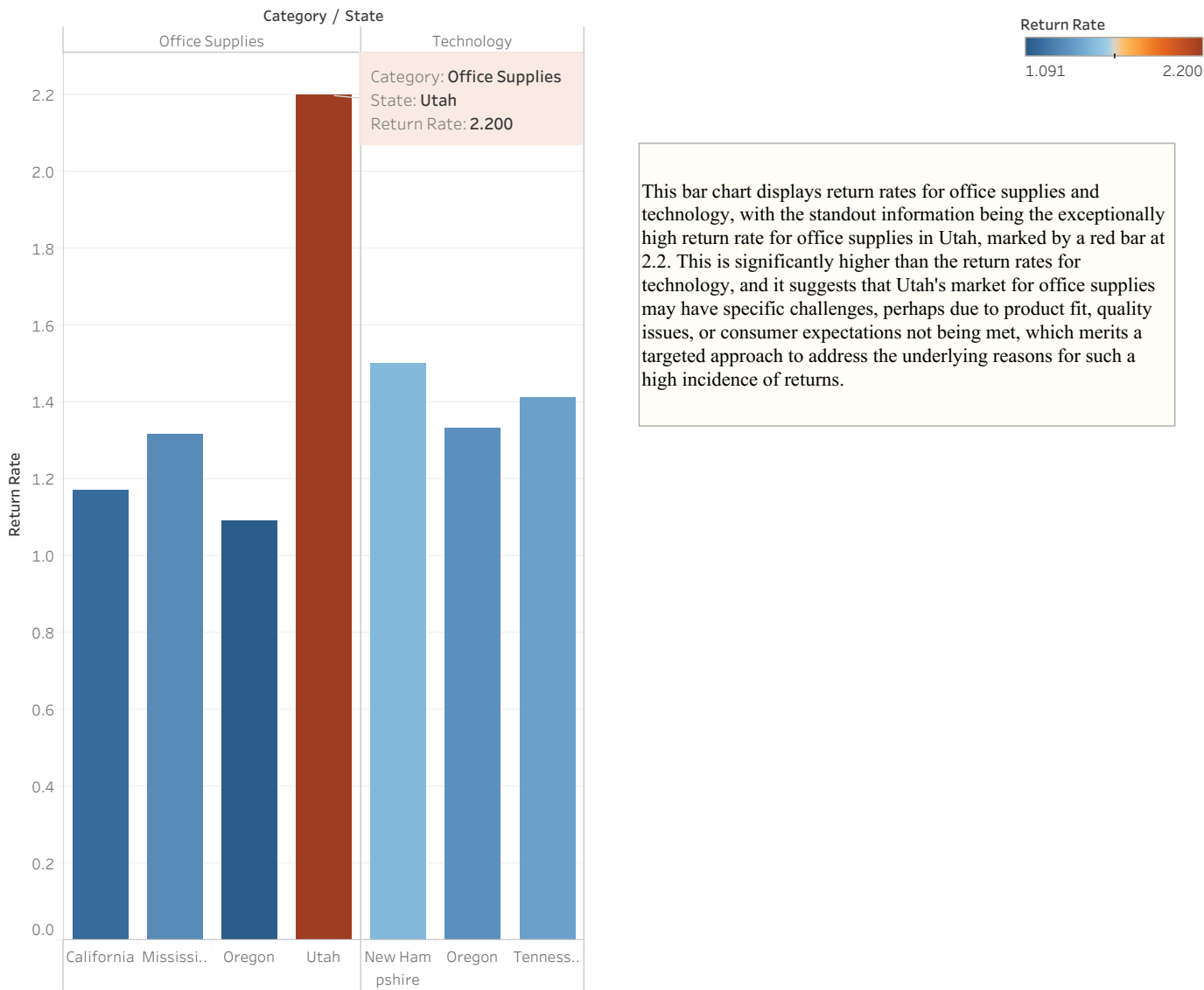
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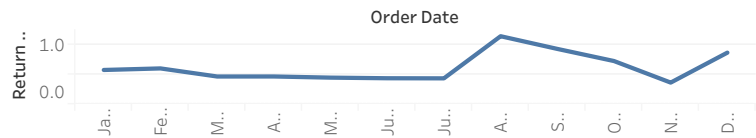
Return Rate by Product C..	Return Rate by Geography	Return Rate Overtime	Return Rate by Date and Geography	Return Rate by Product Category and..	Dashboard	Conclusion
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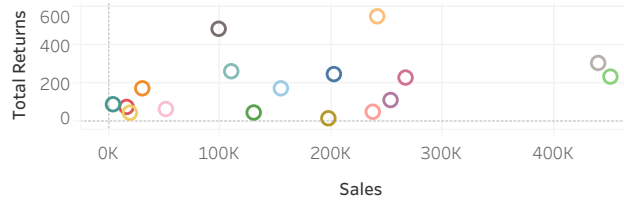
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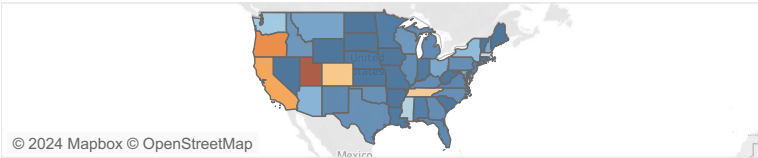
Return Rate Over Time



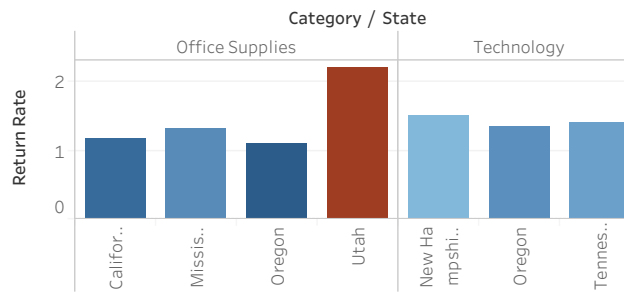
Total Sales vs. Total Returns by Product Subcategory



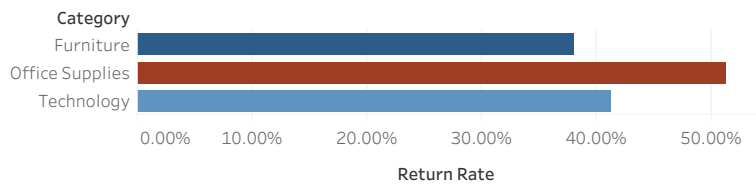
Return Rate by Geography



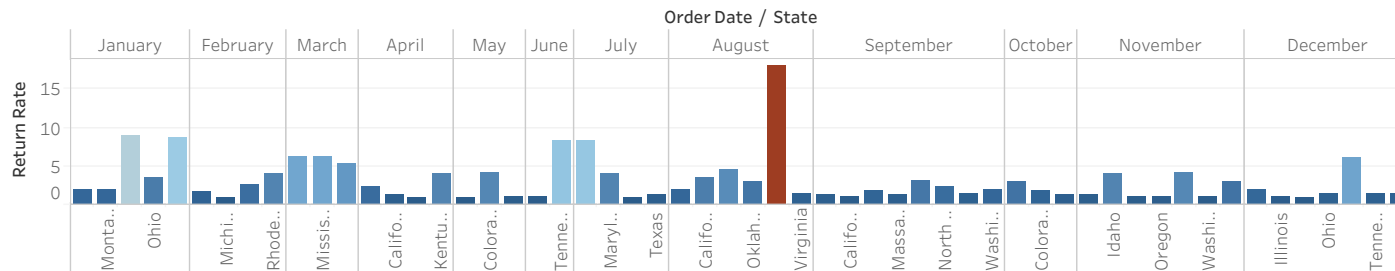
Return Rate by Product Category and Geography



Return Rate by Product Category



Return Rate by Date and Geography





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Considering all the data I would conclude:

**High Return Rates in Utah:** Across multiple visualizations, Utah consistently shows a higher return rate than other states, indicating a state-specific issue that could be related to consumer behavior, product mismatch, or logistic challenges within that region.

**Product-Specific Returns:** The return rates vary significantly by product category, with office supplies having notably high return rates, especially in Utah. This could suggest product quality issues or a mismatch between product features and consumer expectations.

**Seasonal Variations:** There appears to be seasonal fluctuation in return rates, with months like August and December experiencing higher rates. These could be linked to seasonal purchasing behaviors, such as back-to-school shopping or holiday gift returns.

**Potential for Operational Improvements:** The data might indicate that operational improvements could reduce return rates, such as better product descriptions, improved quality control, or more accurate stock to meet consumer demand.

There are distinct patterns in returns that are influenced by geography, product category, and time of year. Utah, in particular, stands out as an area needing targeted intervention to understand and reduce the return rate. Additionally, office supplies as a category might require a review of the product line, quality, or customer satisfaction policies. Finally, the seasonal trends point to the need for adaptive strategies throughout the year to anticipate and mitigate high return periods.