Story 1

Summary of Product Returns Analysis
A comprehensive analysis of product returns has been completed using data aggregated by customer, product, time, and geography. The main findings are visualized through various types of charts, each designed to highlight different patterns and correlations within the data.

Correlation Between Sales and Returns
A **scatter plot** by product sub-category was used to analyze the relationship between total sales and total returns.
Key insight: While there is a general positive correlation between sales and returns, **it is not always direct**. Some sub-categories with high sales show surprisingly low return rates.

Return Rate by Product Category
A **bar chart** revealed that certain categories, such as Technology, tend to have higher return rates compared to others like Furniture.

Return Rate by Customer
A filter was applied to exclude customers with only one order to identify **customers most likely to return products repeatedly**. This allows for targeted strategies for those profiles.

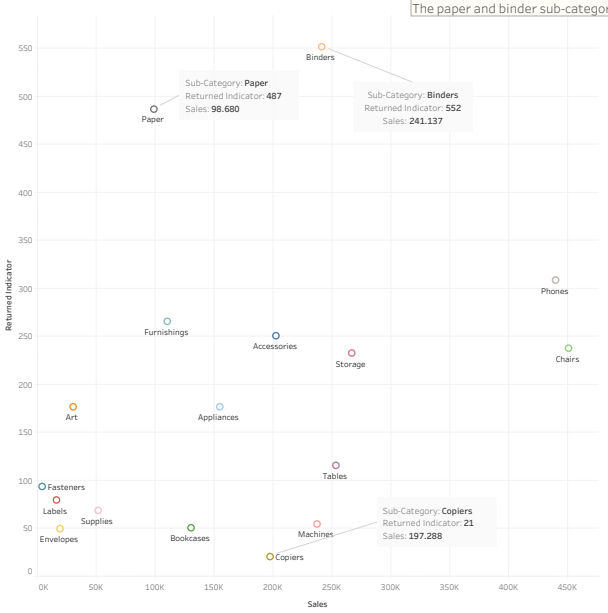
Geographic Analysis
A **map visualization** showed a **geographic concentration of returns** in certain states, which may be related to logistical issues or regional preferences.

Seasonal Effects
The time-based analysis by **month** revealed spikes in returns following major sales events, indicating a clear **seasonal component** in returns.

Story 1

Overview | Sales vs Returns | Map | Return Rate by Customer | Return Rate by Time of Year | Summary

The paper and binder sub-categories have high returns compared to their sale..



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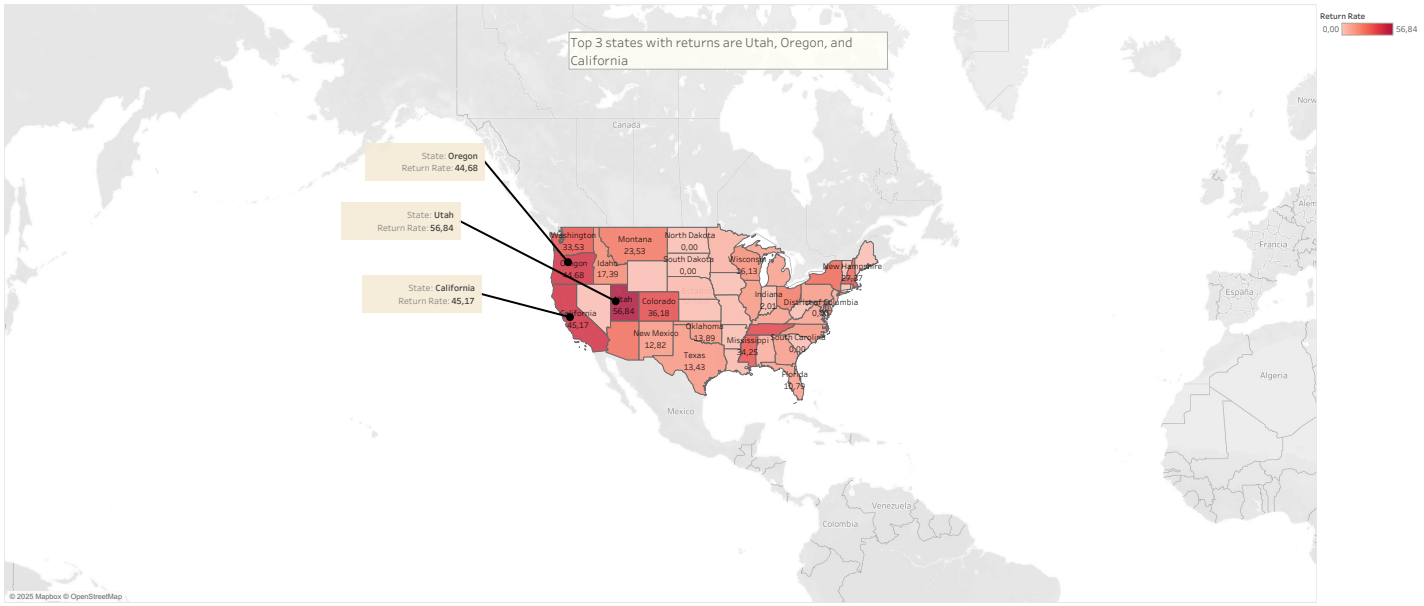
Top 3 states with returns are Utah, Oregon, and California
State: Oregon
Return Rate: 44,68
State: Utah
Return Rate: 56,84
State: California
Return Rate: 45,17
Return Rate
0,00
56,84
Canada
Mexico
Venezuela
Colombia
Algeria
Francia
España
Washington 33,53
Oregon 44,68
Idaho 17,39
Montana 23,53
North Dakota 0,00
South Dakota 0,00
Wisconsin 16,13
Indiana 2,01
New Hampshire 29,47
Utah 56,84
Colorado 36,18
California 45,17
New Mexico 12,82
Oklahoma 13,89
Texas 13,43
Mississippi 34,25
South Carolina 0,00
Florida 10,75
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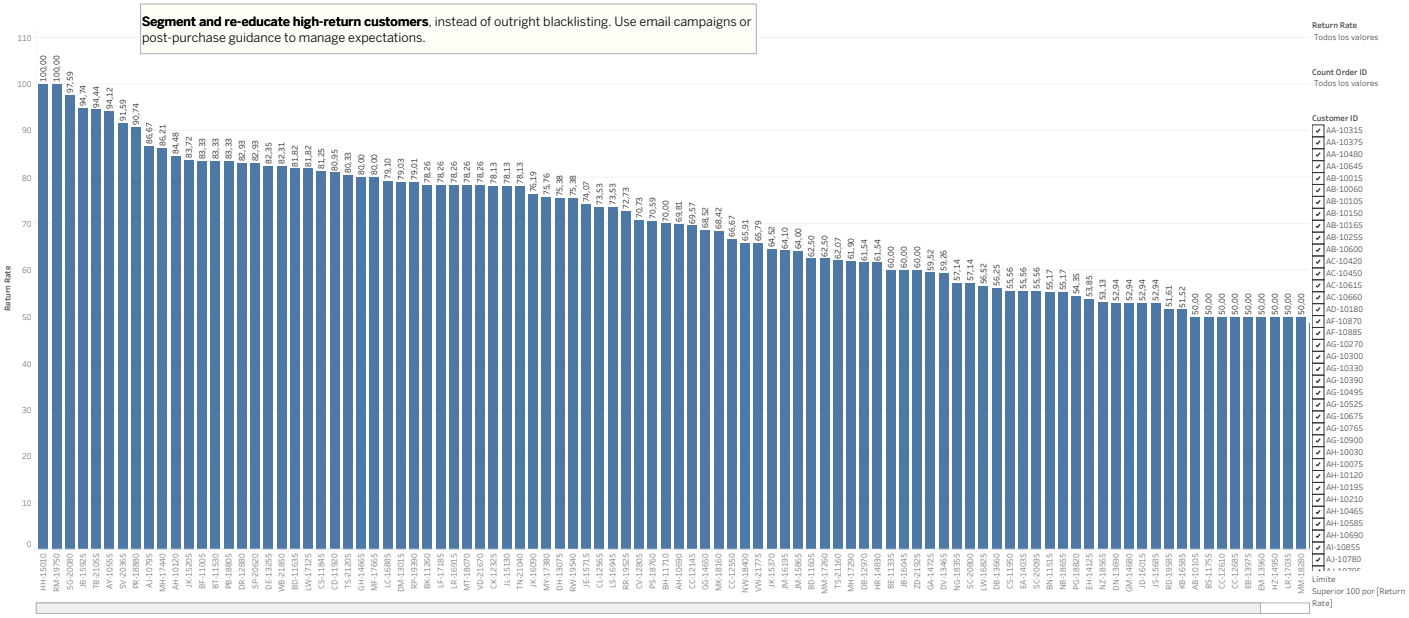
Segment and re-educate high-return customers, instead of outright blacklisting. Use email campaigns or post-purchase guidance to manage expectations.



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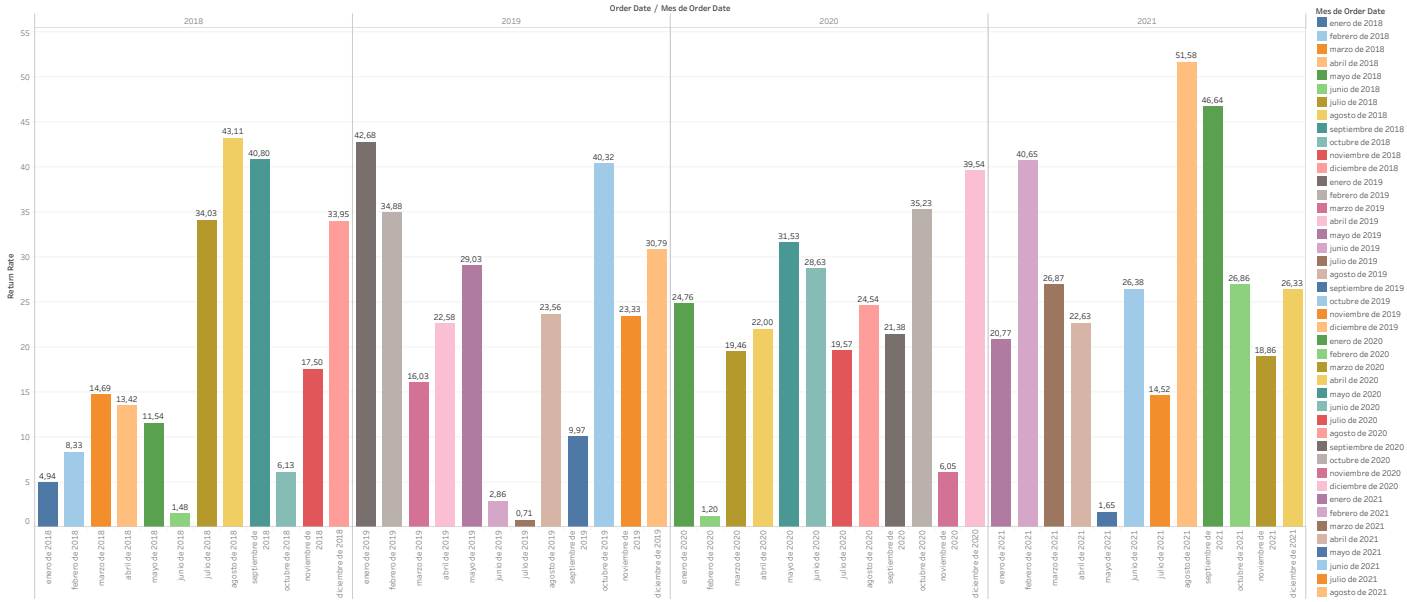

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Summary

Summary: Strategic Insights on Product Returns
□ Key Observations on Return Patterns:
Return behavior is concentrated among a small group of repeat customers.
Certain product categories consistently show above-average return rates.
Geographic clusters, particularly in urban areas, reveal higher return rates, suggesting logistical or expectation mismatches.
Return spikes occur after promotional periods, not just in August—suggesting a **promotion-driven return pattern**, not seasonality alone.

□ Recommendations to Reduce Returns :
Segment and re-educate high-return customers, instead of outright blacklisting. Use email campaigns or post-purchase guidance to manage expectations.
Improve product descriptions and images in categories with high returns—many returns may be due to misalignment in expectations rather than product faults.
A/B test different packaging and delivery methods in states with high return rates—returns may be related to transit damage or delays.
Adjust promotional messaging and return policies during sales months, especially around peak return periods like August, to reduce impulse-driven purchases.
Create predictive models to flag potentially return-prone orders before shipping, based on customer behavior and order characteristics.

□ Next Steps:
Incorporate dashboards that **monitor return rates in real time** by customer segment, region, and product category.
Set up **alerts for unusual return spikes** tied to specific campaigns, regions, or customer types.