Name: Tufan Kundu

Registration No.: 24MDT0184

VIT®

Vellore Institute of Technology

(Deemed to be University under section 3 of UGC Act, 1956)

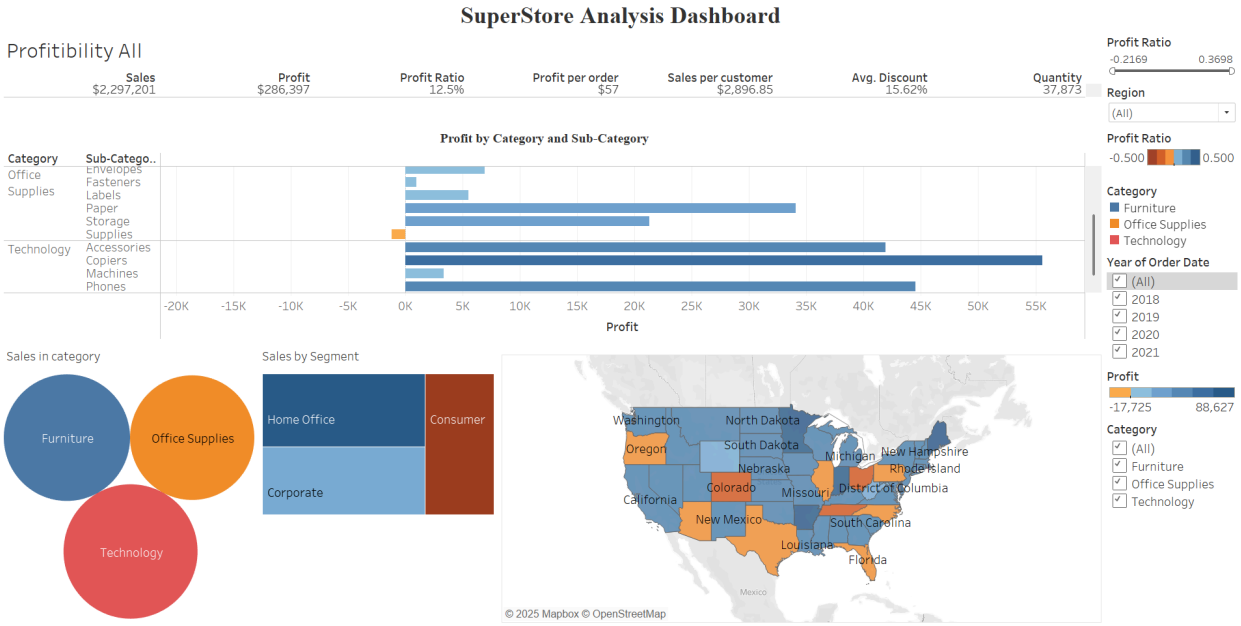
School of Advanced Sciences (SAS)

Course: Exploratory Data Analysis Lab
Course code: PMDS604P

Digital Assessment-4

Superstore Dataset Dashboard in Tableau

Introduction



This document presents an interactive dashboard created in Tableau using the Superstore dataset, titled "**SuperStore Analysis Dashboard**." The dashboard visualizes sales, profit, and profitability metrics across categories, regions, segments, geography, and time. Below, I describe the visualizations, the data they represent, and my design choices. The dashboard is published on Tableau Public.

[Click here](#) to view the published dashboard.

Visualizations and Design Choices

1. Key Performance Indicators (KPIs)

Sales	Profit	Profit Ratio	Profit per order	Sales per customer	Avg. Discount	Quantity
$2,297,201	$286,397	12.5%	$57	$2,896.85	15.62%	37,873

Shows total sales ($2,297,201), profit ($286,397), profit ratio (12.5%), profit per order ($57), sales per customer ($2,996.85), average discount (15.62%), and quantity (37,873).

Design Choice: I included KPIs to provide a quick overview of performance metrics, placed at the top for visibility.

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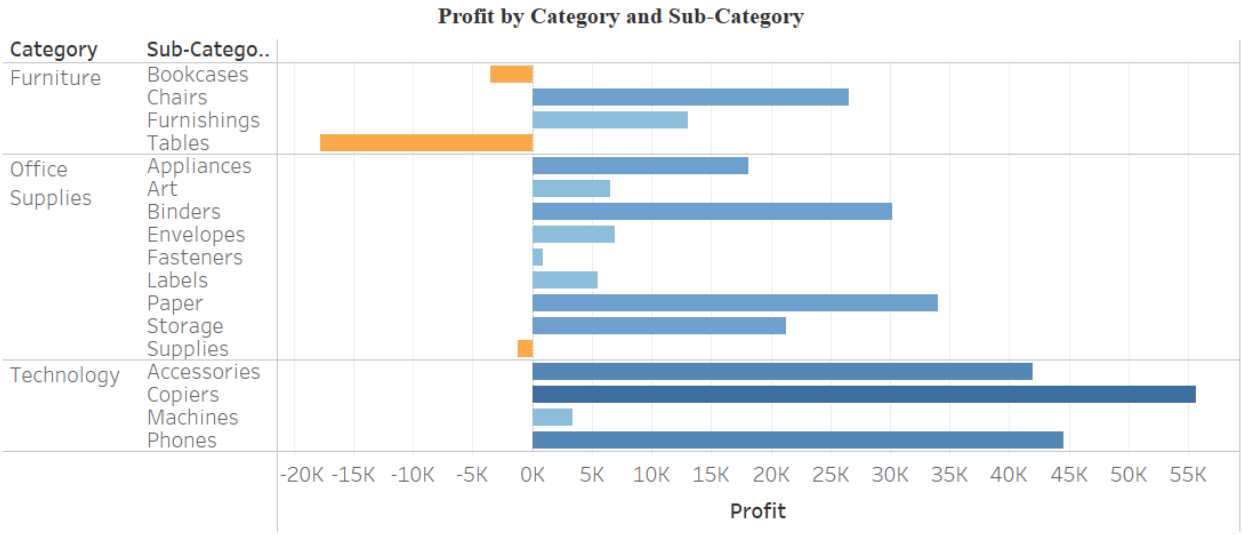
2. Horizontal Bar Chart: Profit by Category and Sub-Category



Displays profit by sub-category within Furniture, Office Supplies, and Technology. Bookcases and Tables show negative profits (-15K to -20K), while Copiers (55K) and Binders (50K) are highly profitable. Colors range from orange (negative) to blue (positive).

Design Choice: I used a bar chart for easy comparison, with a color gradient to highlight profitability and identify underperforming sub-categories.

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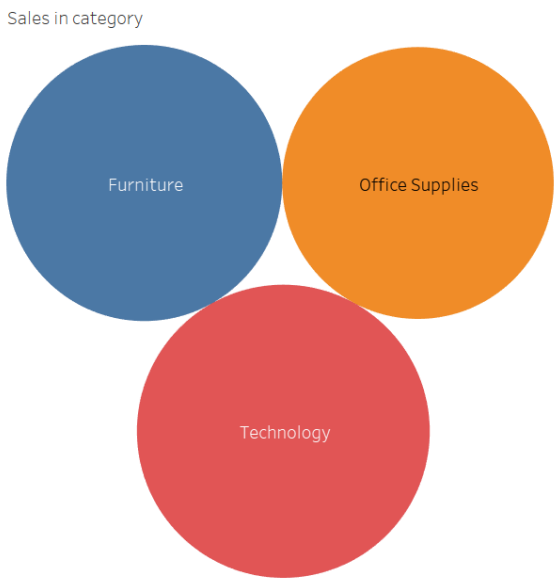
3. Bubble Chart: Sales in Category



Shows sales by category (Furniture: blue, Office Supplies: orange, Technology: red), with bubble size representing sales. Technology has the highest sales.

Design Choice: I chose a bubble chart for a quick visual sales comparison, using size and color to differentiate categories.

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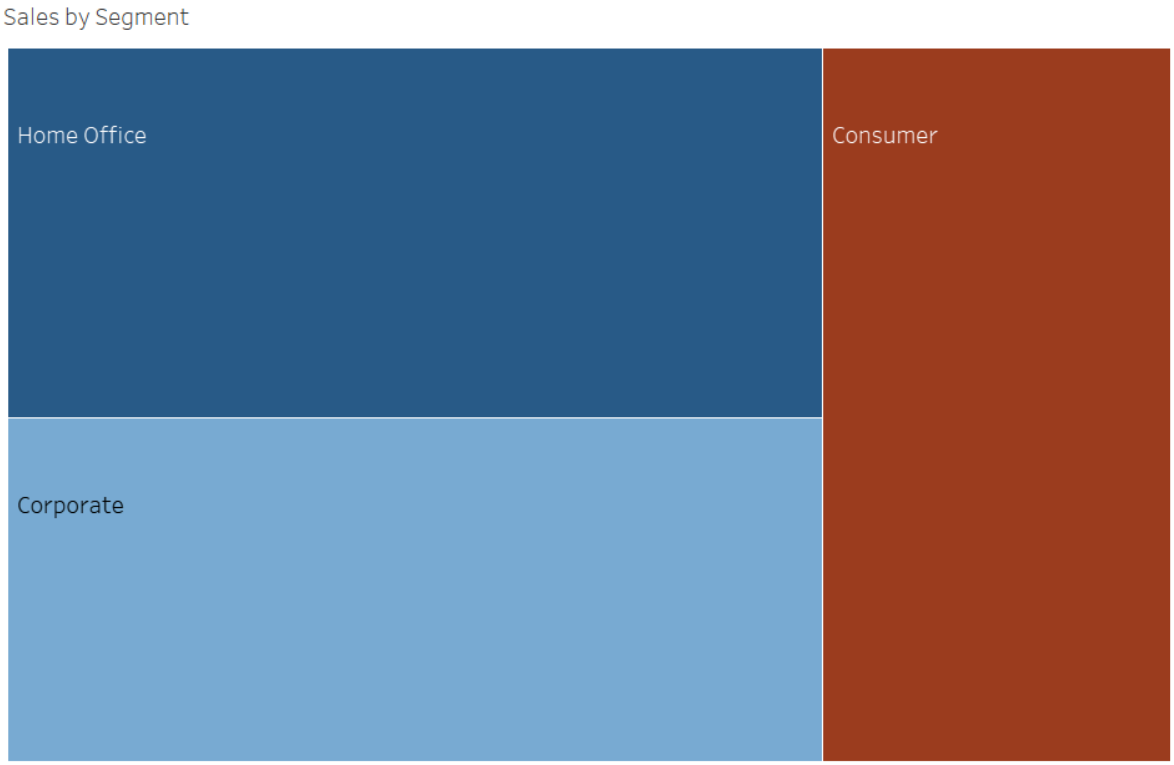
4. Treemap: Sales by Segment



Visualizes sales by segment (Consumer, Corporate, Home Office) in the U.S. Each rectangle represents a segment, with size corresponding to sales volume. The Consumer segment has the largest rectangle, indicating the highest sales.

Design Choice: I used a treemap to show sales proportions across segments, with rectangle size emphasizing the Consumer segment's dominance in a clear, hierarchical format.

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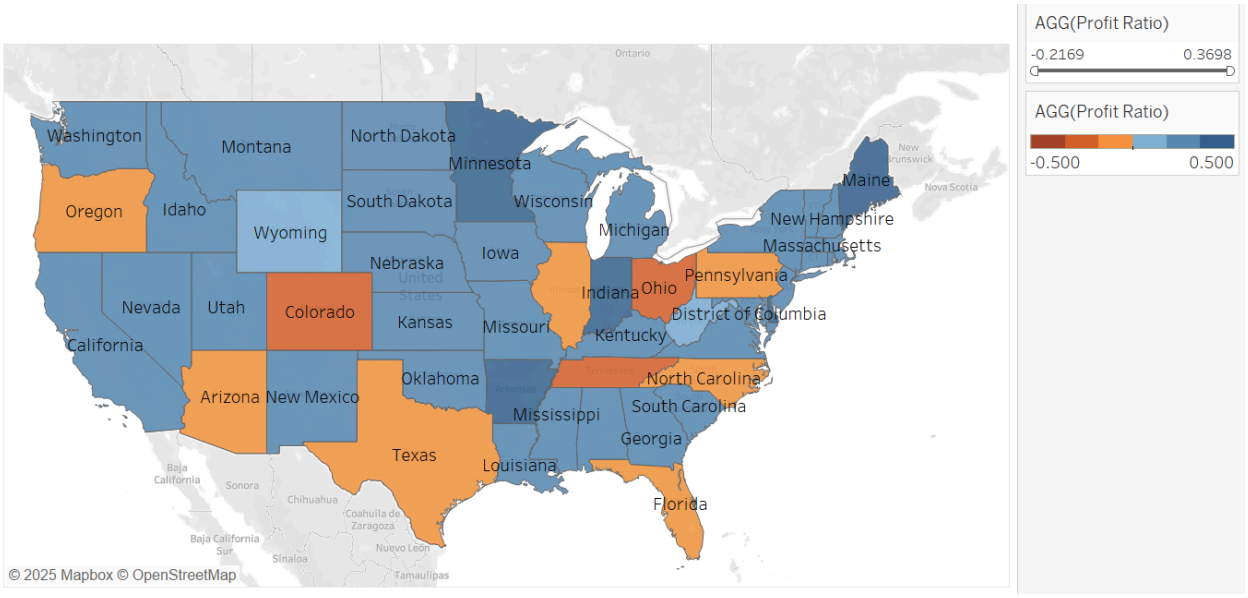
5. Map: Profit Ratio by Geography



A choropleth map of the U.S. showing profit ratio by state, with orange (negative) to blue (positive). Ohio and Pennsylvania have negative ratios; California and New York are positive.

Design Choice: I included a map to show geographic profitability trends, using a color gradient to highlight areas needing attention.

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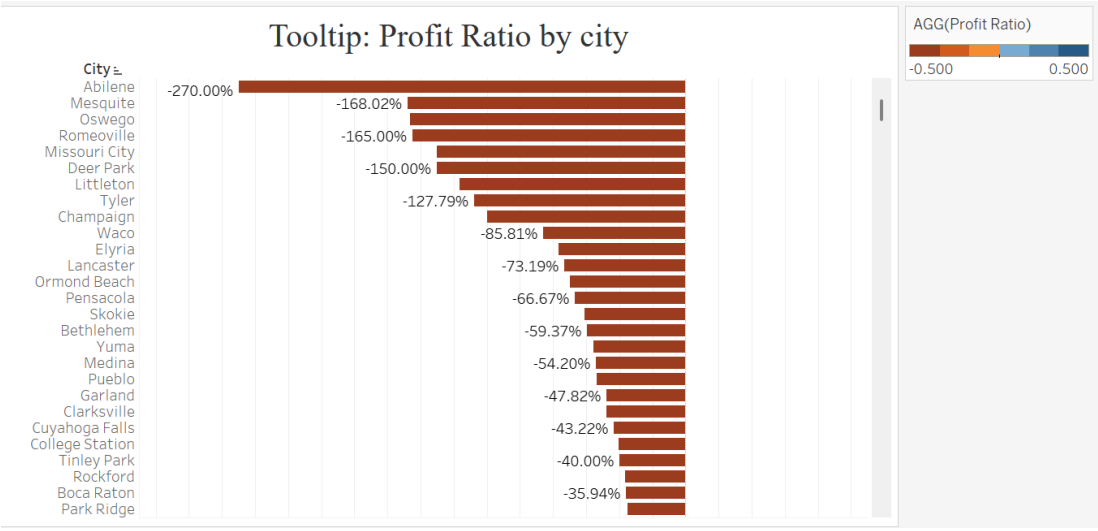
6. Bar Chart: Profit Ratio by City (Tooltip)



A tooltip on the map showing the profit ratio by city.

Design Choice: I added this as a tooltip to provide city-level detail without cluttering the dashboard, using a bar chart for easy comparison.

Interactivity Features

The dashboard includes filters for Category, Year of Order Date, and Segment, allowing users to focus on specific data subsets. A tooltip action on the map displays city-level profit ratios, enhancing drill-down capabilities.

Design Choice: I added filters and tooltip actions to make the dashboard interactive, enabling users to explore data dynamically and gain deeper insights.

Insights Deduced

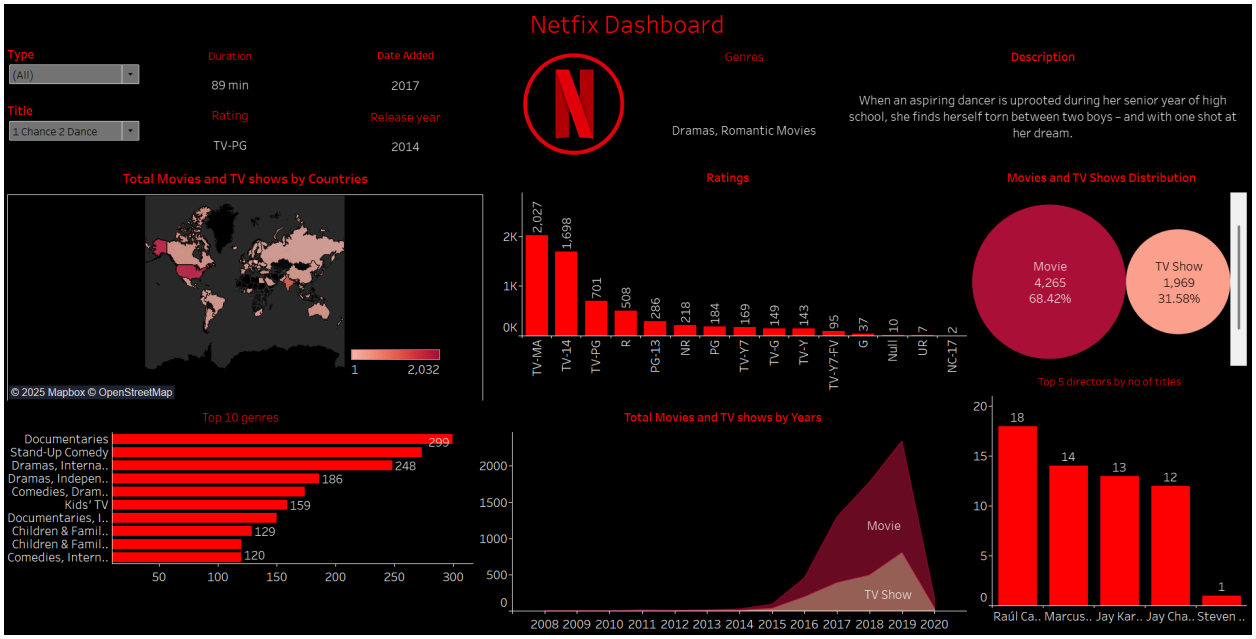
1. **High-Level KPIs**: Total sales of $2.29M and profit of $286K with a 12.5% profit ratio.
2. **Sub-Category Profitability**: Copiers and Binders are highly profitable, while Bookcases and Tables incur losses.
3. **Segment Dominance**: The Consumer segment drives the highest sales.
4. **Geographic Disparities**: California and New York perform well, but Ohio and Pennsylvania show negative profit ratios.

Conclusion

The Superstore dashboard uses KPIs, bar charts, a bubble chart, a Treemap, and a map to analyze sales, profit, and profitability. These visualizations provide insights into category performance, regional trends, geographic disparities, and temporal patterns, helping identify areas for improvement.

Netflix Titles Dashboard in Tableau

Introduction

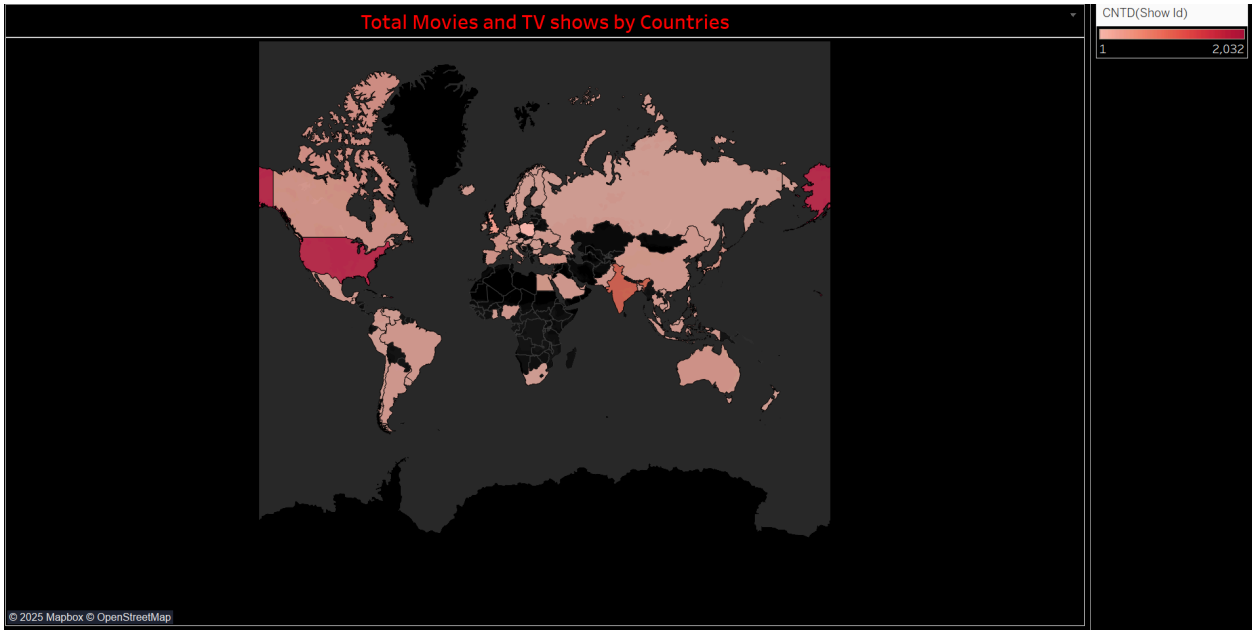


This document presents an interactive dashboard created in Tableau using the Netflix Titles dataset, titled "**Netflix Dashboard**." The dashboard visualizes the distribution of movies and TV shows across countries, genres, ratings, years, and directors. Below, I describe the visualizations, the data they represent, and my design choices. The dashboard is published on Tableau Public.

Click here to view the published dashboard.

Visualizations and Design Choices

1. Map: Total Movies and TV Shows by Country



A choropleth map showing the number of movies and TV shows by country, with a color gradient from light (1 title) to dark red (2,032 titles). The U.S. has the highest count (2,032), followed by India and the UK.

Design Choice: I used a map to visualize geographic distribution, with a color gradient to highlight countries with the most content, making it easy to identify key markets like the U.S.

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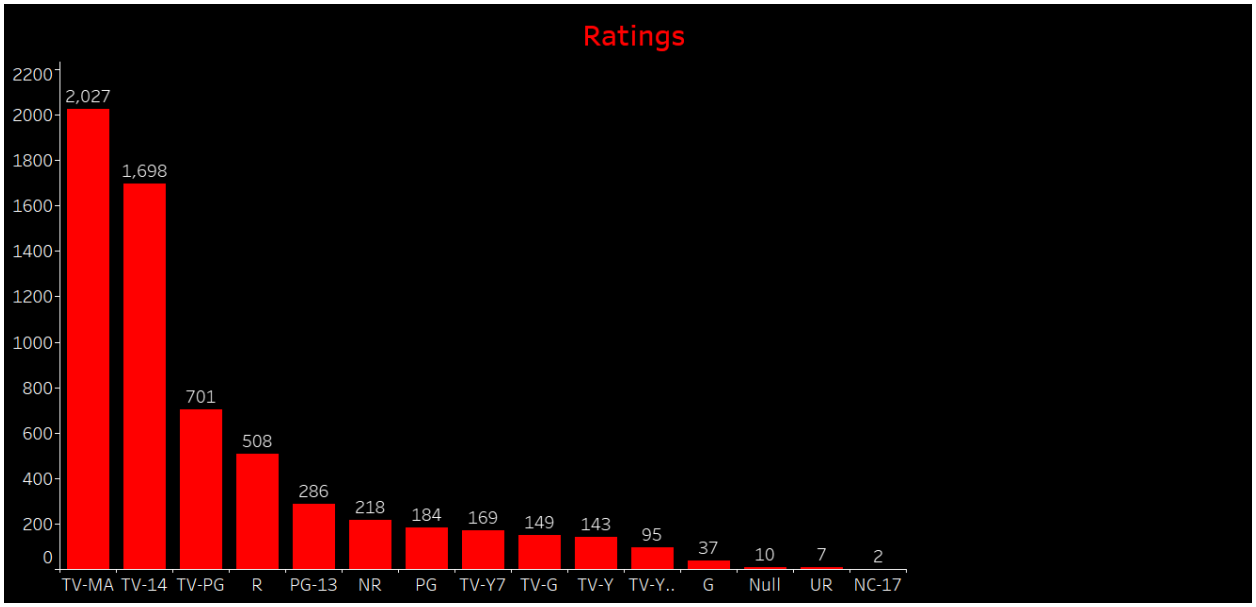
2. Bar Chart: Ratings



Displays the count of titles by rating (e.g., TV-MA: 2,027, TV-14: 1,698, R: 701). TV-MA is the most common rating.

Design Choice: I chose a bar chart to compare the frequency of ratings, providing a clear view of the most common content ratings on Netflix.

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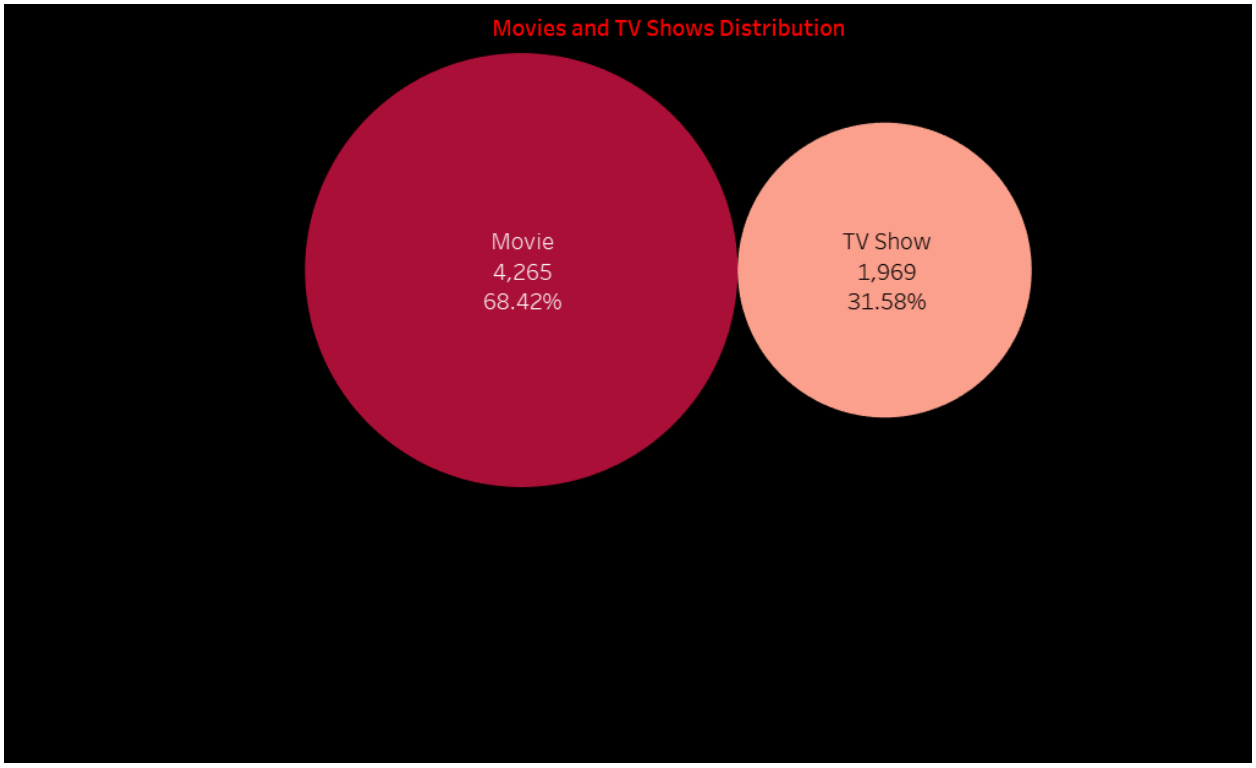
3. Bubble Chart: Movies and TV Shows Distribution



Shows the split between movies (4,265, 68.42%) and TV shows (1,969, 31.58%), with movies in red and TV shows in beige. Bubble size represents the count of titles.

Design Choice: I used a bubble chart to visually compare movies versus TV shows, with bubble size emphasizing the dominance of movies on Netflix and colors for clarity.

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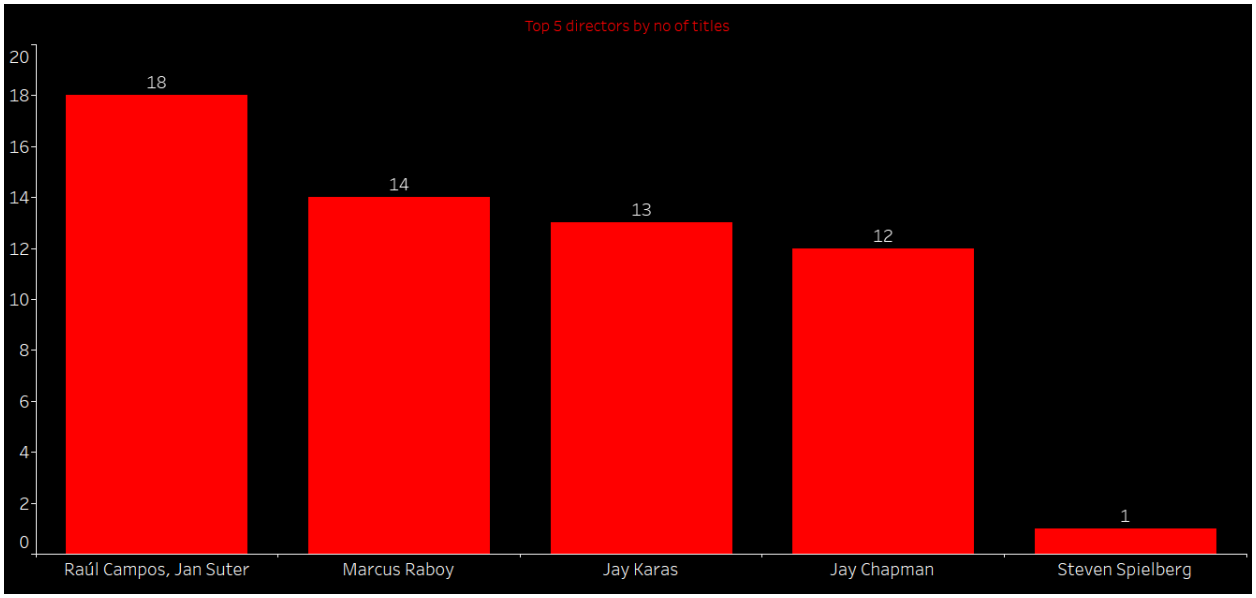
4. Bar Chart: Top 5 Directors by Number of Titles



Lists the top 5 directors by title count: Raúl Campos (18), Marcus Raboy (14), Jay Karas (13), Jay Chapman (12), and Steven Spielberg (1).

Design Choice: I included a bar chart to highlight the most prolific directors, helping identify key contributors to Netflix's content.

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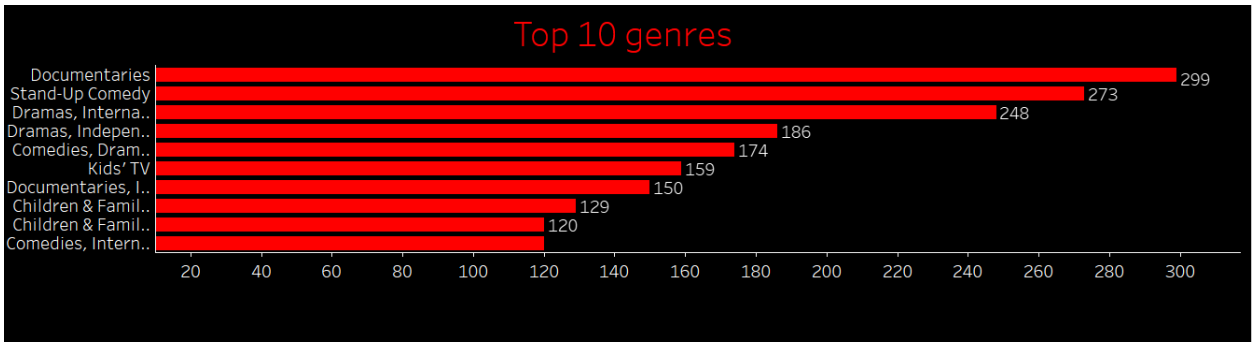
5. Bar Chart: Top 10 Genres



Shows the top 10 genres by title count: Documentaries (299), Stand-Up Comedy (298), Dramas, International (186), Comedies, Dramas (159), and others.

Design Choice: I used a bar chart to display the most popular genres, making it easy to see viewer preferences, with Documentaries and Stand-Up Comedy leading.

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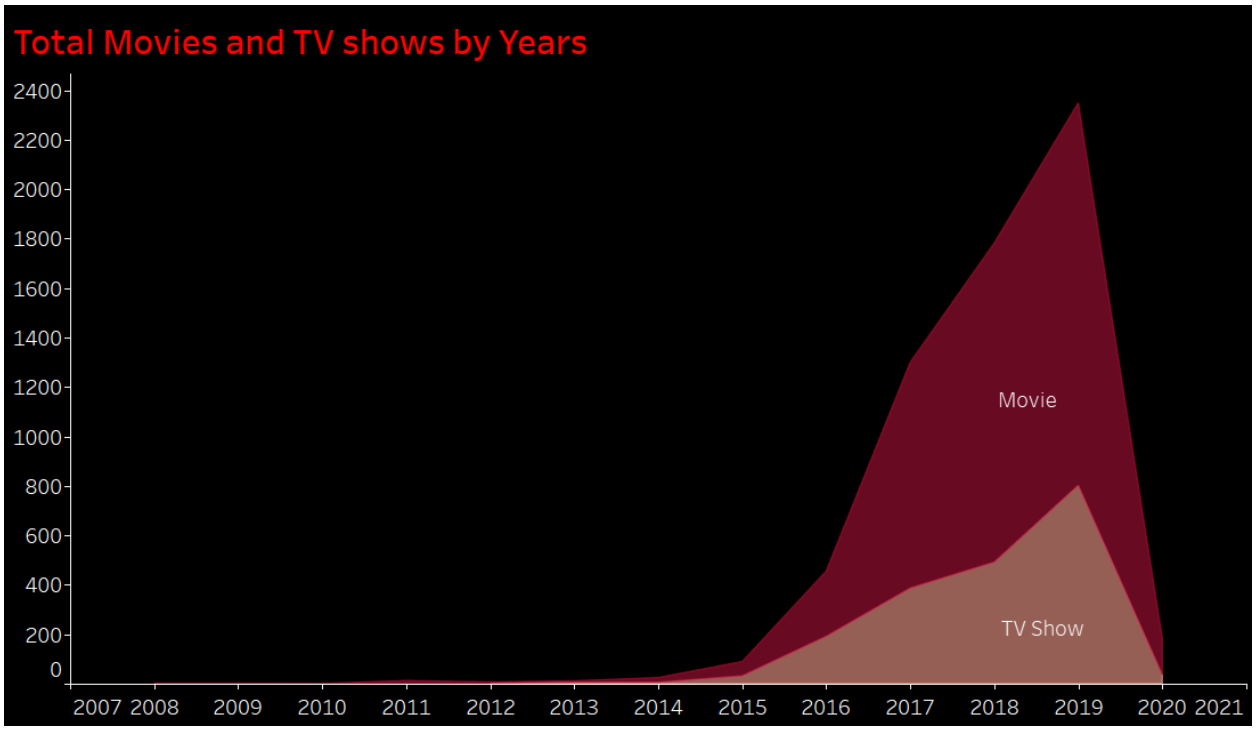
6. Area Chart: Total Movies and TV Shows by Years



Visualizes the number of movies (red) and TV shows (beige) released from 2008 to 2020. Both peak around 2018–2019, with movies consistently outnumbering TV shows.

Design Choice: I chose an area chart to show trends over time, with stacked areas to compare the growth of movies and TV shows, highlighting a peak in content production.

Insights Deduced

1. **Content Distribution**: The U.S. leads with 2,032 titles, followed by India and the UK.
2. **Dominant Content-Type**: Movies account for 68.42% of content, significantly outnumbering TV shows.
3. **Top Ratings**: TV-MA and TV-14 are the most common content ratings.
4. **Genre Popularity**: Documentaries and Stand-Up Comedy dominate in terms of title count.
5. **Content Peak Period**: Content production peaked between 2018–2019, with a decline in recent years.

Conclusion

The Netflix dashboard uses a map, bar charts, a bubble chart, and an area chart to analyze the distribution of movies and TV shows by country, ratings, type, directors, genres, and years. These visualizations provide insights into content distribution, audience preferences, and production trends.