"Unveiling the Netflix Universe: Exploring Content Trends and Preferences"

A Report Presented to the College of Business

California State University, Long Beach

For the partial fulfillment of the course

MASTER OF SCIENCE

In

INFORMATION SYSTEMS

By

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DATA SOURCE:

Dataset Link: https://www.kaggle.com/shivamb/netflix-shows

Description of Dataset and Variables:
I have sourced this Netflix dataset from Kaggle and consists of comprehensive information on Netflix with 8807 rows and 12 columns.

It encompasses a wide range of variables:

Title: The name of the show or movie.
Type: Distinguishes between movies and TV shows.
Director: Names of the directors.
Cast: List of cast members.
Country: The country where the content was produced.
Date Added: The date the content was added to Netflix.
Release Year: The original release year of the content.
Rating: Classification according to Netflix.
Duration: Length of the content (minutes for movies, seasons for TV shows).
Listed In: Genre categories.
Description: A brief synopsis of the content.

A Sample representation of our data.

```
In [4]: import numpy as np # linear algebra
        import pandas as pd # for data preparation

        dff=pd.read_csv('netflix_titles.csv')
        dff.shape
Out[4]: (8807, 12)

In [6]: dff.head(15)
Out[6]:
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in	description
0	s1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	2020	PG-13	90 min	Documentaries	As her father nears the end of his life, filmm...
1	s2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban...	South Africa	September 24, 2021	2021	TV-MA	2 Seasons	International TV Shows, TV Dramas, TV Mysteries	After crossing paths at a party, a Cape Town t...
2	s3	TV Show	Ganglands	Julien Leclercq	Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi...	NaN	September 24, 2021	2021	TV-MA	1 Season	Crime TV Shows, International TV Shows, TV Act...	To protect his family from a powerful drug lor...
3	s4	TV Show	Jailbirds New Orleans	NaN	NaN	NaN	September 24, 2021	2021	TV-MA	1 Season	Docuseries, Reality TV	Feuds, flirtations and toilet talk go down amo...
4	s5	TV Show	Kota Factory	NaN	Mayur More, Jitendra Kumar, Ranjan Raj, Alam K...	India	September 24, 2021	2021	TV-MA	2 Seasons	International TV Shows, Romantic TV Shows, TV ...	In a city of coaching centers known to train l...

POTENTIAL STORIES:

Animated Trend Analysis: How has the number of TV shows and movies added to the platform changed over the years?

Animated Trend Analysis: TV Shows and Movies Over Time
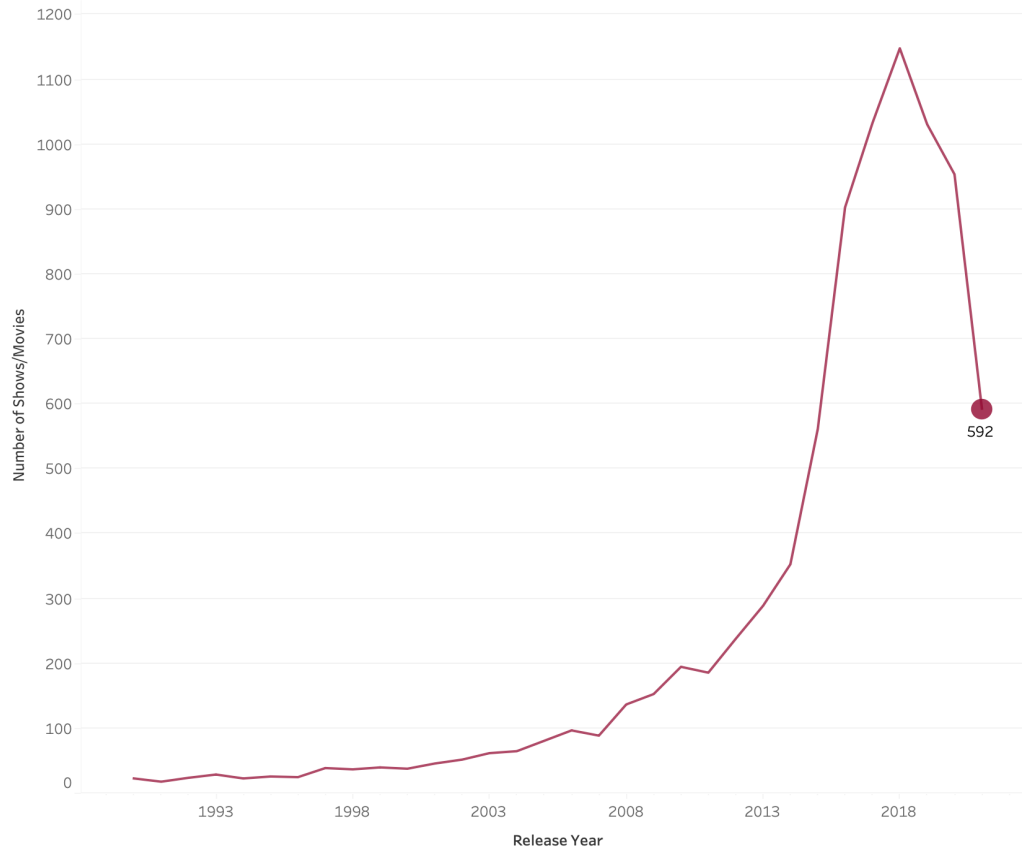
The plot of count of Show Id for Release Year. The data is filtered on Type, which keeps Movie and TV Show. The view is filtered on Release Year, which ranges from 10/6/1989 to 1/1/2021 and keeps Null values.

The Trend Analysis worksheet I created in Tableau helps us see how Netflix's collection of TV shows and movies has changed over the years. The dashboard has this cool line chart that shows us the number of new shows and movies added each year. Plus, I have added the **animation** feature, so you can see how things have changed over time! I also added a filter so we can switch between TV shows and movies easily. It's like a little button that lets us focus on one type of content at a time. And when you play with the chart, it moves and shows you how Netflix's library has grown over the years.

Overall, this dashboard is a handy tool for anyone who wants to understand how Netflix's content has evolved. Whether you're studying trends or just curious about Netflix's history, this dashboard has all the info you need in a fun and easy-to-understand way.

My Findings: The trend line tells a story of Netflix's growing library, with a steep climb in titles starting around 2013, peaking just before 2020. This surge likely reflects Netflix's ramp-up in content to attract a broad audience. The subsequent drop hints at a shift in strategy.

Content Distribution: What are the most common genres of content available? Is there a difference in genre preferences between TV shows and movies?

Genre Distribution: TV Shows and Movies
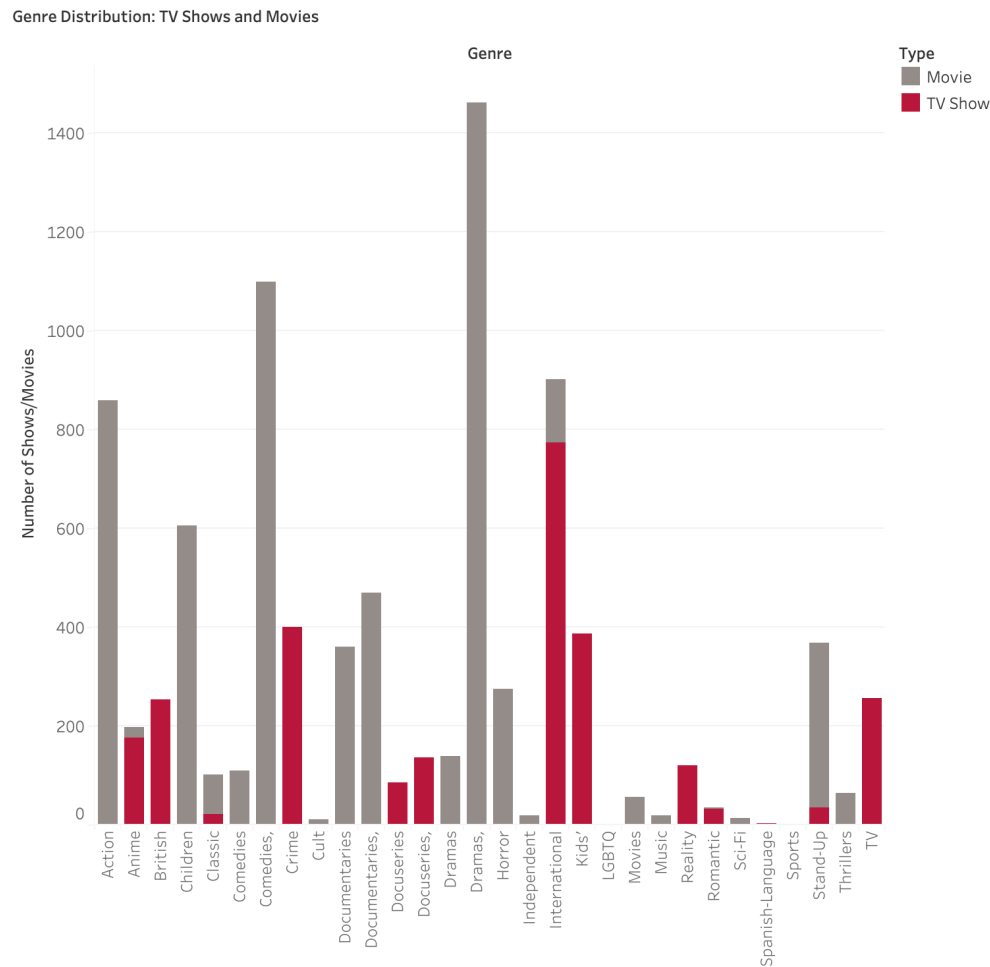
Count of Show Id for each Genre. Color shows details about Type. The view is filtered on Genre, which keeps 30 of 30 members.
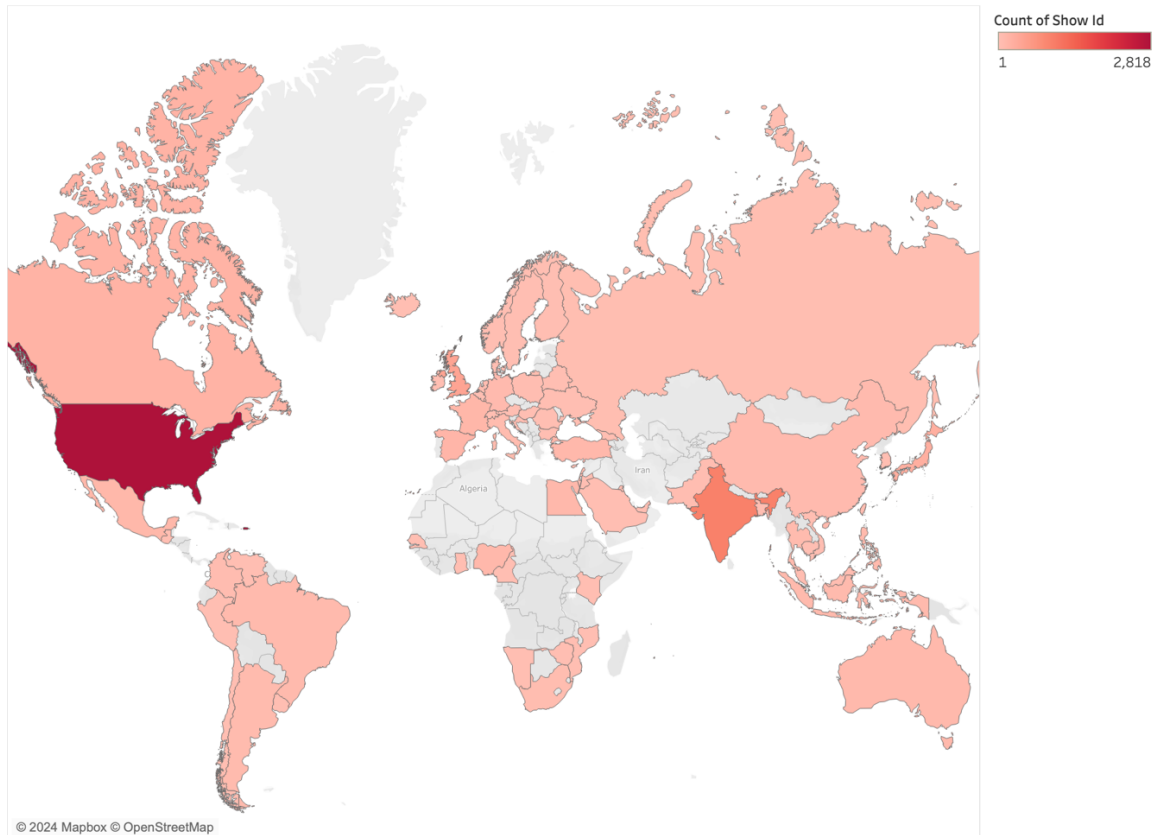
So, I created this Genre Distribution worksheet in Tableau for our Netflix dataset. It's all about exploring which genres are most popular for TV shows and movies. Basically, there's this stacked bar chart that shows you the different genres, like Comedy, Action, Drama, etc., and how many TV shows and movies are in each genre.

I made sure to add labels and instructions to make it super easy to understand. So, if you're interested in seeing which genres have the most TV shows and movies on Netflix, this dashboard has got you covered! It's a pretty neat way to explore genre preferences and trends, especially if you're into analyzing data or just curious about what's available to watch on Netflix.

My Findings: This bar chart highlights a significant variety of genres, with movies generally outnumbering TV shows across most categories, emphasizing Netflix's extensive movie library compared to its collection of TV series.

Regional Analysis: Which countries produce the most content? Are there regional preferences in terms of content types or genres?

Regional Analysis: Content Distribution by Country

Map based on Longitude (generated) and Latitude (generated). Color shows count of Show Id. Details are shown for Country.

I have created this Regional Analysis worksheet in Tableau for our Netflix dataset. It's all about figuring out which countries produce the most content.

Created a world map visualization that shows the distribution of content by country. Basically, it's a map with different colors for each country based on the number of shows and movies they have.

Added tooltips to the map so you can hover over each country and see details about their production. You know, stuff like the country's name and the total number of shows and movies they've made.

My findings: This map visualization indicates the geographical distribution of Netflix content by country, with the United States showing the highest concentration of titles. The varying shades of red across the countries reflect the count of shows available, illustrating Netflix's strong presence in North America, parts of Europe, and increasingly in regions like India and Brazil, suggesting a strategic focus on both established and emerging markets.

Distribution of content ratings on Netflix: How does the distribution of content ratings on Netflix impact viewer engagement and subscriber retention?

Distribution of content ratings on Netflix
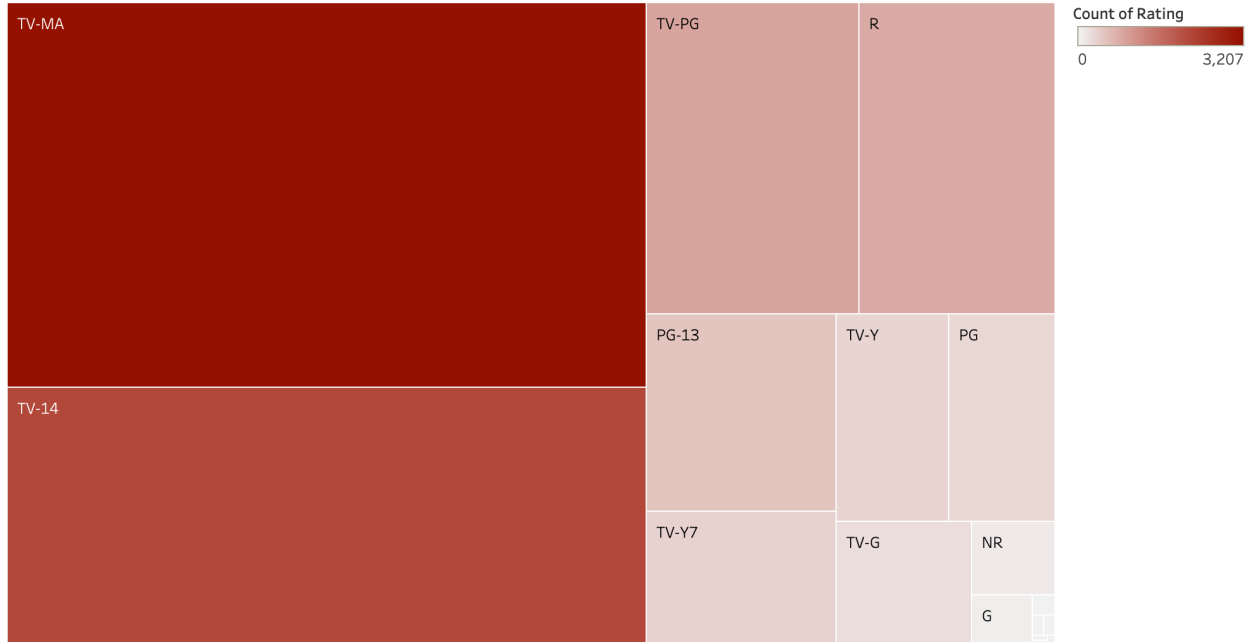
Rating. Color shows count of Rating. Size shows count of Rating. The marks are labeled by Rating.
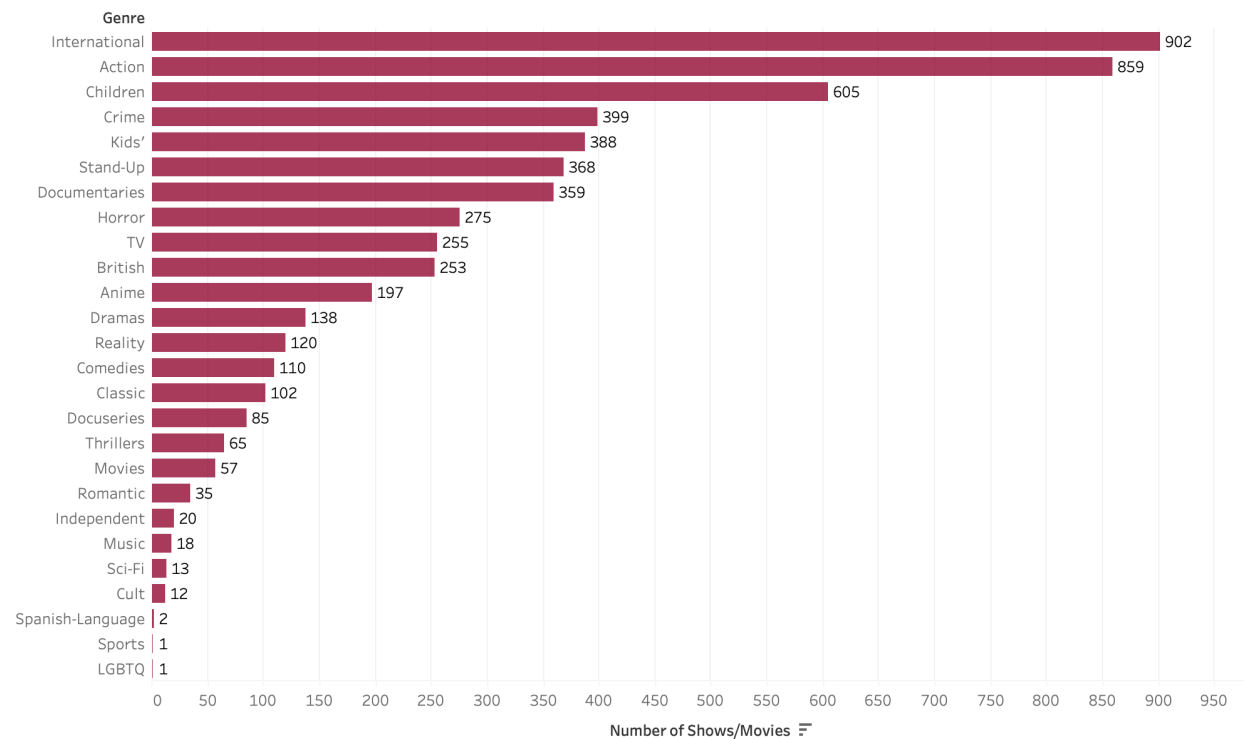
In this worksheet, I've constructed a interactive tree map visualization to analyze the distribution of Netflix content based on their rating categories. My objective was to uncover the types of content that Netflix prioritizes for its diverse subscriber base. The tree map offers a straightforward representation of this distribution, with varying box sizes and shades indicating the quantity of content in each rating classification. **Plus, I have added the links to each rating wiki data to help the ones trying to understand the terms.**

The data employed in this worksheet categorizes Netflix shows and movies into standard rating groups such as TV-MA, TV-14, and more. I used the count of titles within each rating to determine the size and color intensity of each box in the treemap, which makes the prevalence of each category immediately apparent.

My findings: A substantial portion of Netflix's content is targeted at mature audiences, as indicated by the predominance of the TV-MA rating. Content suitable for teens, denoted by the TV-14 rating, also makes up a large section of the platform, suggesting Netflix's intent to engage this younger demographic. The smaller presence of children's content ratings such as TV-Y and G reflects a more modest selection for young viewers. The assortment of ratings including R, PG-13, and PG reveals that there is also a focus on content that can be enjoyed by a wider family audience.

Interactive Genre Dynamics on Netflix: How does the variety and evolution of genres on Netflix correlate with subscriber engagement and content strategy effectiveness?

Genre Distribution: Number of Titles per Genre

Genre	Number of Shows/Movies
International	902
Action	859
Children	605
Crime	399
Kids'	388
Stand-Up	368
Documentaries	359
Horror	275
TV	255
British	253
Anime	197
Dramas	138
Reality	120
Comedies	110
Classic	102
Docuseries	85
Thrillers	65
Movies	57
Romantic	35
Independent	20
Music	18
Sci-Fi	13
Cult	12
Spanish-Language	2
Sports	1
LGBTQ	1

Number of Shows/Movies

Count of Show Id for each Genre. The view is filtered on Genre, which excludes Comedies,, Documentaries,, Docuseries, and Dramas,.

In creating this bar chart, I wanted to capture the rich tapestry of Netflix's content spread across various genres. It's fascinating to see 'International' leading the pack, which really speaks to Netflix's embrace of diverse stories from around the globe. Genres like 'Action' and 'Children' have their own robust presence, hinting at a mix of thrill-seekers and family movie nights.

What's really cool about this chart is its interactivity – just click on any genre, and it'll take you to another worksheet that lists all the shows and movies from that category. Plus, it'll adjust the trend analysis worksheet to show how the popularity of that genre has changed over time. It's like having the ability to zoom in on the heartbeat of each genre's life on Netflix.

Detailed Genre Cataloging on Netflix: How can the distribution of titles across various genres inform Netflix's content acquisition and production strategy to optimize viewer satisfaction and retention?

Titles: Grouped by Genres & Type

Genre	Title		Type
Action	Goli Soda 2	Movie	◻ Movie
	3 Days to Kill	Movie	◼ TV Show
	5 Cowok Jagoan	Movie	
	6 Bullets	Movie	
	6 Days	Movie	
	6 Underground	Movie	
	9	Movie	
	10,000 B.C.	Movie	
	14 Blades	Movie	
	16 Blocks	Movie	
	24 Hours to Live	Movie	
	25 Kille	Movie	
	27, el club de los m..	Movie	
	30 Minutes or Less	Movie	
	2012	Movie	
	2307: Winter's Dre..	Movie	
	A Bridge Too Far	Movie	
	A Choo	Movie	
	A Flying Jatt	Movie	
	A Wednesday	Movie	
	A.X.L.	Movie	
	Aakhri Adaalat	Movie	
	Abdo Mota	Movie	
	Act of Valor	Movie	
	Act of Vengeance	Movie	
	Acts of Vengeance	Movie	
	Acts of Violence	Movie	
	Addicted to Life	Movie	
	Adrift	Movie	
	Æon Flux	Movie	
	Aftershock	Movie	
	Air Force One	Movie	
	Air Strike	Movie	
	Aiyaary	Movie	
	Ala Vaikunthapurr..	Movie	
	Ali Baba ve 7 Cücel..	Movie	
	Alibaba Aur 40 Chor	Movie	
	Alien Warfare	Movie	
	All Because of You	Movie	
	All the Devil's Men	Movie	
	Altered Carbon: Re..	Movie	

This worksheet serves as an expansive directory, meticulously cataloging Netflix titles by genre, presenting a detailed breakdown that aids in analyzing content distribution. As a student analyzing streaming services, this detailed classification provides an insightful perspective into how content is curated to cater to diverse viewer preferences.

The list goes on long. Hence, have cropped it to make it report friendly.

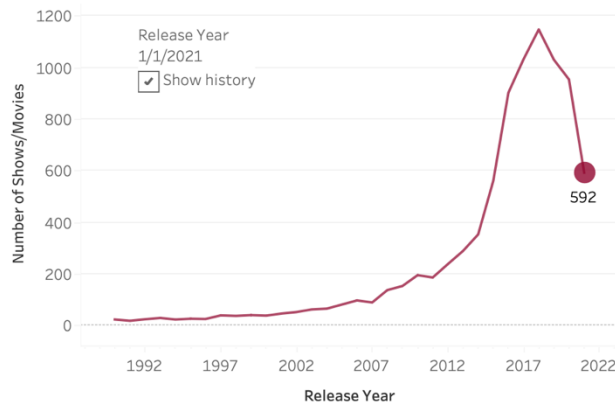**Interactive Exploration Dashboard: Netflix Content Trends and Popularity**
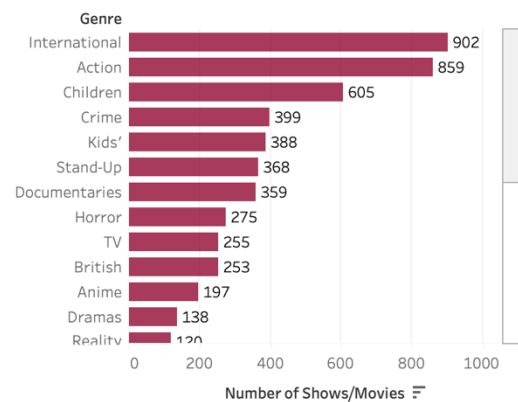
Netflix Analysis Dashboard

Upon selection of the Genre in the bar chart, you can see the change in the trend of the genre over the years and the list filtered by the selected genre.

Download PDF

Animated Trend Analysis: TV Shows and Movies Over Time

Release Year
1/1/2021
☑ Show history

592

Number of Shows/Movies (y-axis): 0, 200, 400, 600, 800, 1000, 1200

Release Year (x-axis): 1992, 1997, 2002, 2007, 2012, 2017, 2022

Genre Distribution: Number of Titles per Genre

Genre	Number of Shows/Movies
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Anime	197
Dramas	138
Reality	120

Number of Shows/Movies (axis): 0, 200, 400, 600, 800, 1000

Titles: Grouped by Genres & Type

■ Movie
■ TV Show

Genre	Title	
Action	Goli Soda 2	Movie
	3 Days to Kill	Movie
	5 Cowok Jagoan	Movie
	6 Bullets	Movie
	6 Days	Movie
	6 Underground	Movie
	9	Movie
	10,000 B.C.	Movie
	14 Blades	Movie
	16 Blocks	Movie
	24 Hours to Live	Movie
	25 Kille	Movie
	27, el club de los malditos	Movie
	30 Minutes or Less	Movie
	2012	Movie

In piecing together this dashboard for my project on Netflix's content trends, I've infused it with a touch of interactivity to make our data exploration a bit more engaging. The bar chart isn't just a static display of genres; it's a gateway to a deeper dive. When you select a genre, say 'Action', the dashboard comes alive, narrowing down the titles to those heart-pumping movies and shows, while the trend line above reshapes to show how the action genre has waxed or waned over time on Netflix. It feels almost like having a conversation with the data, where each click reveals a new layer of Netflix's storytelling journey.
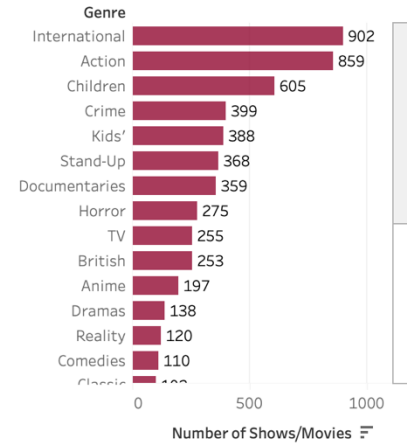
Global Tapestry of Netflix Content and Audience Insights
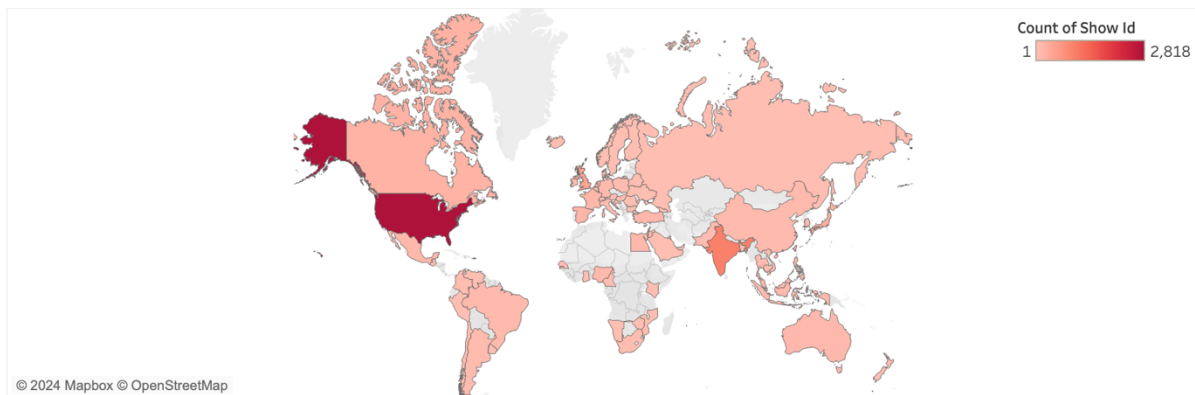
Netflix Content and Ratings

Distribution of content ratings on Netflix
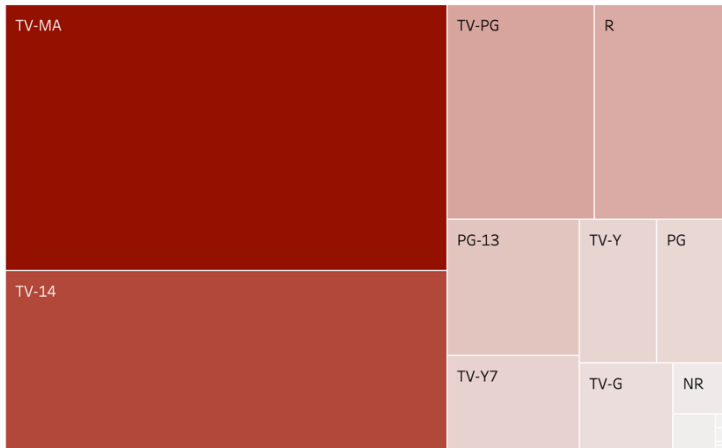
Genre Distribution: Number of Titles per Genre

Genre

Genre	Number of Shows/Movies
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British	253
Anime	197
Dramas	138
Reality	120
Comedies	110

Number of Shows/Movies

Regional Analysis: Content Distribution by Country

Count of Show Id
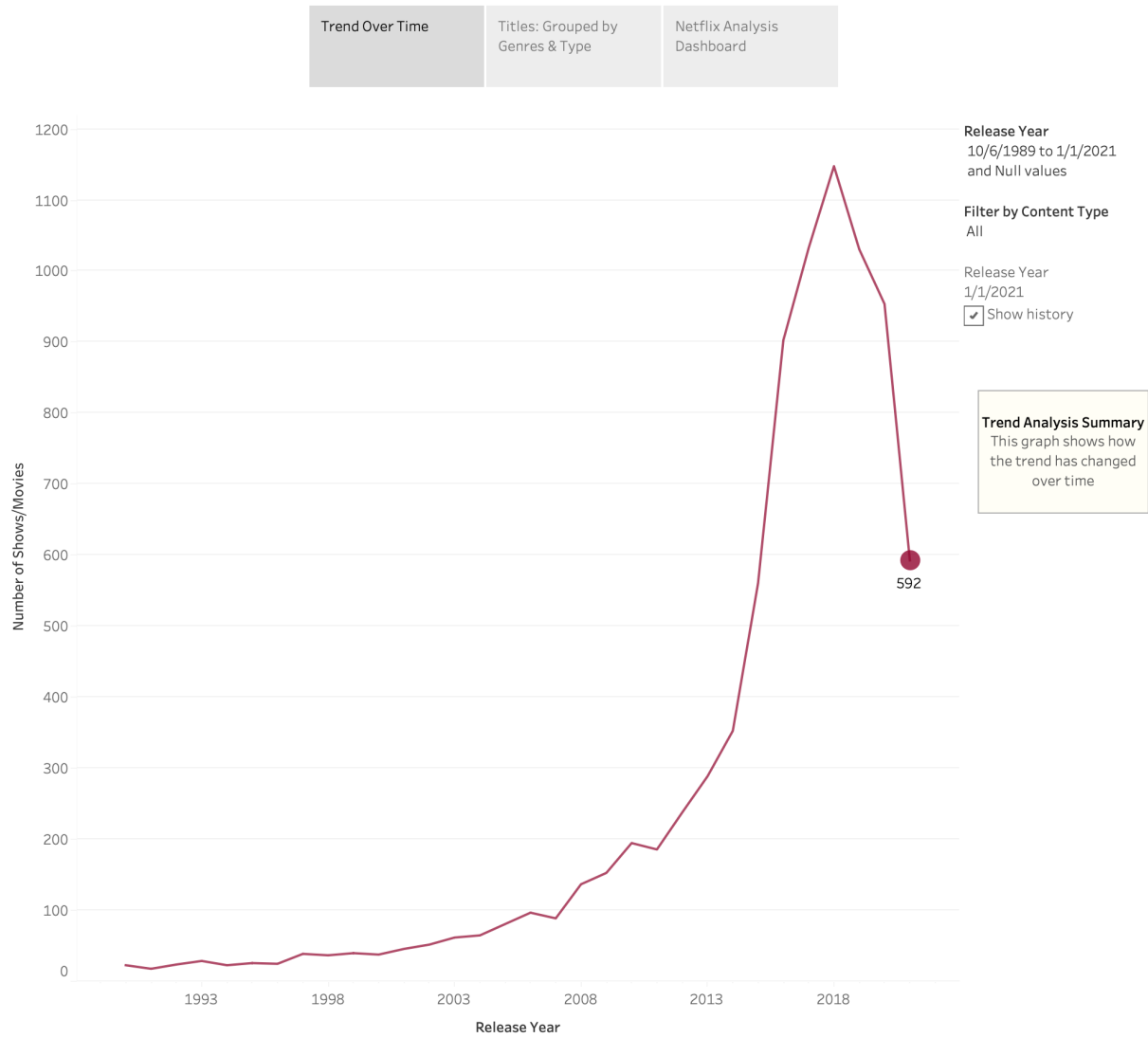1 — 2,818

© 2024 Mapbox © OpenStreetMap

I put together another dashboard that explores the variety of Netflix's offerings, highlighting how content ratings and genres spread across the globe. The centerpiece is a treemap that shows which ratings are most common, like TV-MA for mature audiences—something a lot of us are familiar with. I've added a practical touch to this: clicking a rating square takes you to a Wikipedia page that explains what each rating means, which I think is handy for anyone curious about the content they're watching.

Then there's the genre bar chart, which clearly shows how popular 'International' and 'Action' movies and shows are. And the world map? It paints a picture of Netflix's reach, showing where all these stories originate.

STORIES:

Story of Netflix

Trend Over Time	Titles: Grouped by Genres & Type	Netflix Analysis Dashboard

Release Year
10/6/1989 to 1/1/2021
and Null values

Filter by Content Type
All

Release Year
1/1/2021
☑ Show history

Trend Analysis Summary
This graph shows how
the trend has changed
over time

Story of Netflix

Trend Over Time	Titles: Grouped by Genres & Type	Netflix Analysis Dashboard

Genre	Title	
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	Aakhri Adaalat	Movie
	Abdo Mota	Movie
	Act of Valor	Movie
	Act of Vengeance	Movie
	Acts of Vengeance	Movie
	Acts of Violence	Movie
	Addicted to Life	Movie
	Adrift	Movie
	Æon Flux	Movie
	Aftershock	Movie
	Air Force One	Movie
	Air Strike	Movie
	Aiyaary	Movie
	Ala Vaikunthapurr..	Movie
	Ali Baba ve 7 Cücel..	Movie
	Alibaba Aur 40 Chor	Movie
	Alien Warfare	Movie

Type
- ⬛ Movie
- 🟥 TV Show

This table here lists the titles grouped by genres and the content type
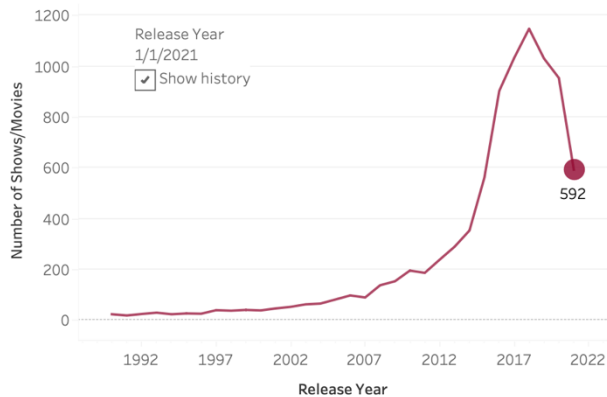
Story of Netflix

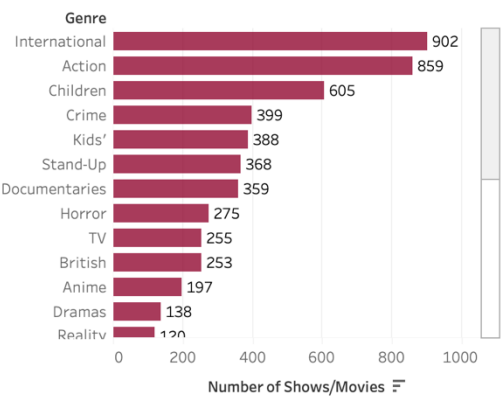## Netflix Analysis Dashboard N

Upon selection of the Genre in the bar chart, you can see the change in the trend of the genre over the years and the list filtered by the selected genre.

Download PDF

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1/1/2021
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	27, el club de los maldi..	Movie
	30 Minutes or Less	Movie
	2012	Movie

Business implications and recommendations based on results:

1. Animated Trend Analysis:
    Implication: Watching how the number of shows and movies grows on Netflix over time can help Netflix decide what kinds of shows to make more of.
    Recommendation: Netflix should keep making more shows and movies based on what people seem to like watching the most. It's like following a trend to stay popular!

2. Content Distribution:
    Implication: Seeing where most shows and movies come from can help Netflix figure out where to focus its attention and make more shows.
    Recommendation: Netflix should make sure to have lots of shows and movies from different countries to keep everyone happy and interested in watching.

3. Regional Analysis:
    Implication: Finding out which countries make the most shows and movies can help Netflix decide where to look for new ideas and shows to put on their platform.
    Recommendation: Netflix should work with people from different countries to make shows that everyone around the world will enjoy watching.

4. Distribution of Content Ratings on Netflix:
    Implication: Knowing what kind of shows people like to watch the most can help Netflix suggest shows that people will enjoy.
    Recommendation: Netflix should suggest shows based on what people have liked before, so they keep watching and stay happy with their Netflix subscription.

5. Interactive Genre Dynamics on Netflix:
    Implication: Understanding what kinds of shows are popular can help Netflix decide what new shows to make and put on their platform.
    Recommendation: Netflix should keep an eye on what kinds of shows people are enjoying the most and make more shows like those to keep everyone entertained.

6. Detailed Genre Cataloging on Netflix:
    Implication: Sorting shows into different categories can help people find shows they want to watch more easily.
    Recommendation: Netflix should make sure to organize shows into categories that make sense, so it's easier for people to find shows they'll enjoy watching.

THANK YOU