Analysis of Netflix Data

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Project Title: Netflix Data analysis

Abstract

Netflix relies heavily on recommendation algorithms to suggest content to its users. Analyzing Netflix data can help you understand how these algorithms work and how they can be improved. This knowledge can be valuable if you're in the field of machine learning or data science.

Introduction

Netflix is a globally renowned entertainment company that has transformed the way people consume television and film content. Founded in 1997 by Reed Hastings and Marc Randolph in Scotts Valley, California, Netflix started as a DVD-by-mail rental service, allowing subscribers to order DVDs online and have them delivered to their homes. However, it has since evolved into a streaming giant that provides on-demand access to an extensive library of movies, TV shows, documentaries, and original content. This project aim to analyse the data of Netflix and about there content to give a better view of the company.

Data Collection

The Data of Netflix is collected from the Kaggle .The data consist of Title, Cast,Country, Released Date, Release year ,Rating ,Duration ,Type and there description.

URL

https://www.kaggle.com/code/skrafi21/netflix-eda.

General Description of Data

	Show_Id	Category	Title	Director	Cast	Country	Release_Date	release_year	Rating	Duration	Type	Description
0	s1	TV Show	3%	NaN	João Miguel, Bianca Comparato, Michel Gomes, R...	Brazil	August 14, 2020	2020	TV-MA	4 Seasons	International TV Shows, TV Dramas, TV Sci-Fi &...	In a future where the elite inhabit an island ...
1	s2	Movie	07:19	Jorge Michel Grau	Demián Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico	December 23, 2016	2021	TV-MA	93 min	Dramas, International Movies	After a devastating earthquake hits Mexico Cit...
2	s3	Movie	23:59	Gilbert Chan	Tedd Chan, Stella Chung, Henley Hii, Lawrence ...	Singapore	December 20, 2018	2021	R	78 min	Horror Movies, International Movies	When an army recruit is found dead, his fellow...
3	s4	Movie	9	Shane Acker	Elijah Wood, John C. Reilly, Jennifer Connelly...	United States	November 16, 2017	2021	PG-13	80 min	Action & Adventure, Independent Movies, Sci-Fi...	In a postapocalyptic world, rag-doll robots hi...
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	United States	January 1, 2020	2021	PG-13	123 min	Dramas	A brilliant group of students become card-coun...
...	...	...	...	...	...	...	...	...	...	...	...	...
7784	s7783	Movie	Zozo	Josef Fares	Imad Creidi, Antoinette Turk, Elias Gergi, Car...	Sweden, Czech Republic, United Kingdom, Denmar...	October 19, 2020	2002	TV-MA	99 min	Dramas, International Movies	When Lebanon's Civil War deprives Zozo of his ...
7785	s7784	Movie	Zubaan	Mozez Singh	Vicky Kaushal, Sarah-Jane Dias, Raaghav Chanan...	India	March 2, 2019	1996	TV-14	111 min	Dramas, International Movies, Music & Musicals	A scrappy but poor boy worms his way into a ty...
7786	s7785	Movie	Zulu Man in Japan	NaN	Nasty C	NaN	September 25, 2020	2013	TV-MA	44 min	Documentaries, International Movies, Music & M...	In this documentary, South African rapper Nast...
7787	s7786	TV Show	Zumbo's Just Desserts	NaN	Adriano Zumbo, Rachel Khoo	Australia	October 31, 2020	2013	TV-PG	1 Season	International TV Shows, Reality TV	Dessert wizard Adriano Zumbo looks for the nex...
7788	s7787	Movie	ZZ TOP: THAT LITTLE OL' BAND FROM TEXAS	Sam Dunn	NaN	United Kingdom, Canada, United States	March 1, 2020	2013	TV-MA	90 min	Documentaries, Music & Musicals	This documentary delves into the mystique behi...

7789 rows × 12 columns

Category: It show the type of show that it is a movie or series.

Title: It show the title of the movie or show.

Director: It show the name of the director.

Cast: It show Cast the movie and show.

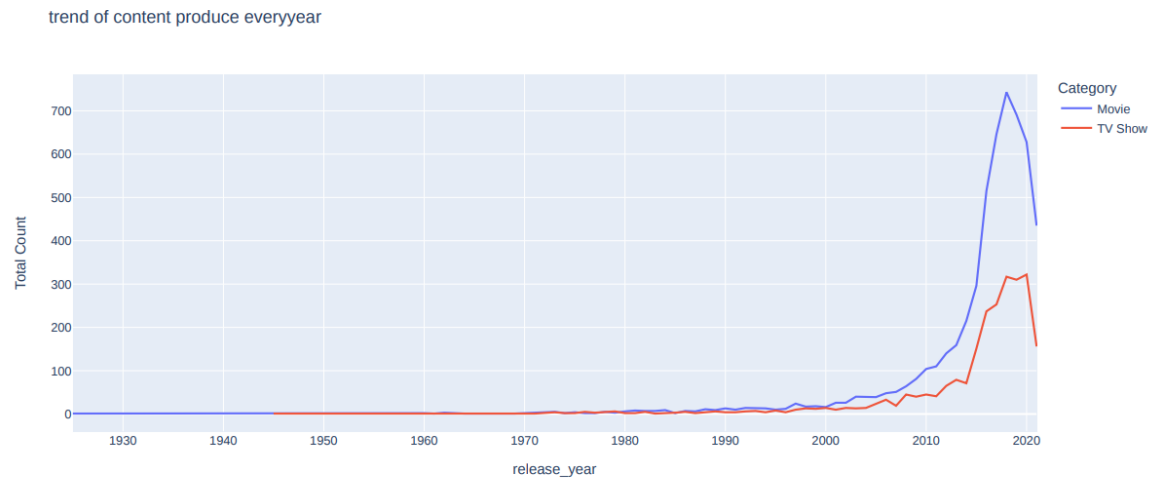**Country:** It show the name of the country from where the content is uploading.

Release Date: It show the exact date of the release of content on Netflix.

Release Year: It shows the year on which the content is released.

Rating: It gives the rating of content of the show.

Duration: It shows the duration of content on Netflix.

1.Trend Analysis

trend of content produce everyyear

The graph shows the trend of the amount of content produced every year, from 1930 to 2020. The two categories of content are movies and TV shows.

The total number of movies produced has been increasing steadily over time, with a few dips during the World War II years. The number of TV shows produced has also been increasing, but at a more gradual rate.

In the 1930s, there were only a few hundred movies produced each year. By the 1980s, the number had reached over 1,000 per year. In the 2020s, there are now over 2,000 movies produced each year.

The number of TV shows produced has also been increasing steadily, but at a slower rate than movies. In the 1950s, there were only a few dozen TV shows produced each year. By the 2020s, there are now over 500 TV shows produced each year.

The increase in the amount of content produced is due to a number of factors, including:

- The development of new technologies, such as film and video cameras, which have made it easier and cheaper to produce content.

- The rise of new distribution channels, such as television and the internet, which have made it possible to reach a wider audience.

- The increasing demand for content from consumers, who are more connected and have more time to consume media.
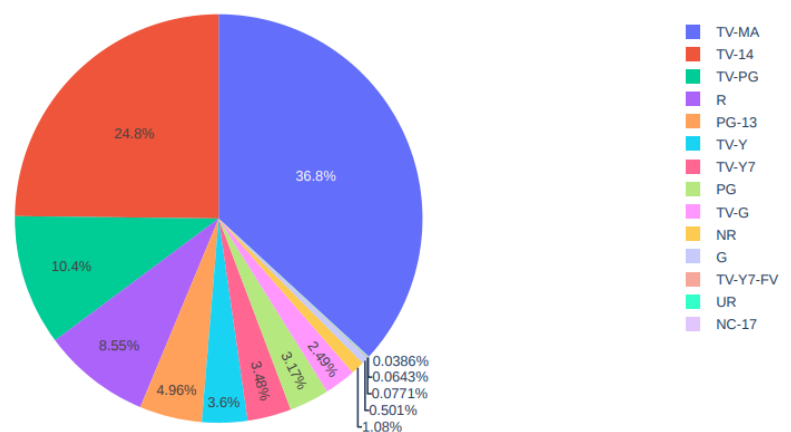
The trend of increasing content production is likely to continue in the future. As new technologies and distribution channels emerge, there will be even more opportunities to create and share content.

Here are some of the key takeaways from the graph:

- The amount of content produced has been increasing steadily over time.

- Movies and TV shows are the two main categories of content produced.

- The number of movies produced has been increasing at a faster rate than the number of TV shows produced.

- The increase in content production is due to a number of factors, including technological advances, the rise of new distribution channels, and the increasing demand for content from consumers.

Distribution of Content rating on netlfix

distribution of content rating on netflix

The pie chart shows the distribution of content rating on Netflix. The ratings are as follows:

- TV-MA: Mature Audiences Only (18+)

- TV-14: Parents Strongly Cautioned (14+)

- TV-PG: Parental Guidance Suggested (12+)

- R: Restricted (17+)

- PG-13: Parents Advised (13+)

- TV-Y: All Children

- TV-Y7: Directed to Older Children (7+)

- PG: Parental Guidance Suggested

- TV-G: General Audiences

- NR: Not Rated

- G: General Audiences

- TV-Y7-FV: Directed to Older Children with Fantasy Violence

- UR: Unrated

- NC-17: No One 17 and Under Admitted

The pie chart shows that the majority of content on Netflix is rated TV-MA (24.84%). This means that most of the content available on Netflix is intended for viewing by mature and adult audiences. The next most common rating is TV-14 (36.8%), followed by TV-PG (10.46%). The ratings PG-13, R, and TV-Y are also relatively common, with each accounting for around 5% of the content. The remaining ratings are less common, with TV-Y7-FV, UR, and NC-17 each accounting for less than 1% of the content.
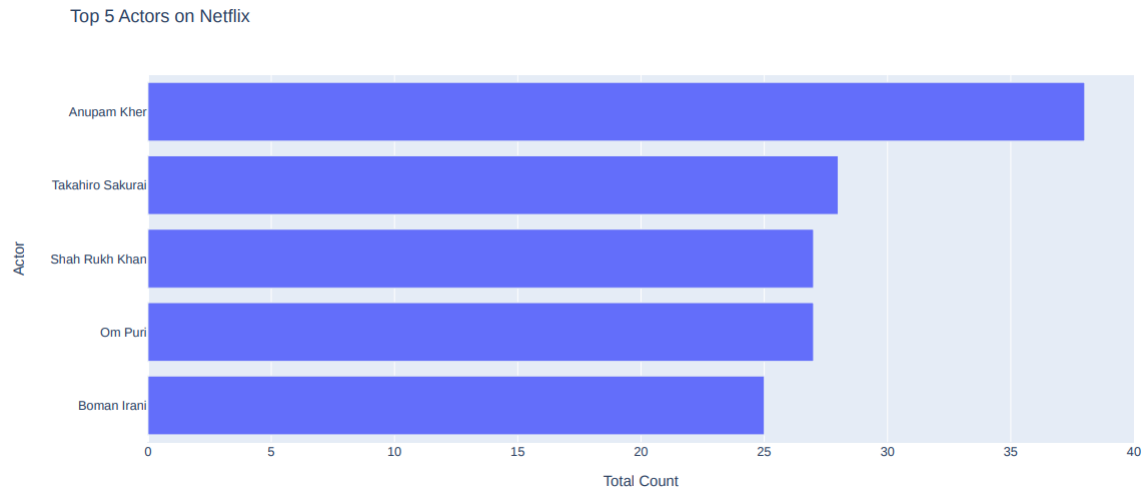
Here are some other observations from the pie chart:

- There is a significant gap between the most common rating (TV-MA) and the next most common rating (TV-14). This suggests that there is a large demand for mature content on Netflix.

- The ratings PG-13, R, and TV-Y are all relatively common, which suggests that there is a large demand for content that is appropriate for a wide range of audiences.

- The ratings TV-Y7-FV, UR, and NC-17 are all relatively rare, which suggests that there is a smaller demand for content that is intended for very young children or adults only.

Overall, the pie chart shows that Netflix has a wide variety of content available, with something to offer audiences of all ages. However, the majority of the content is intended for mature and adult audiences.
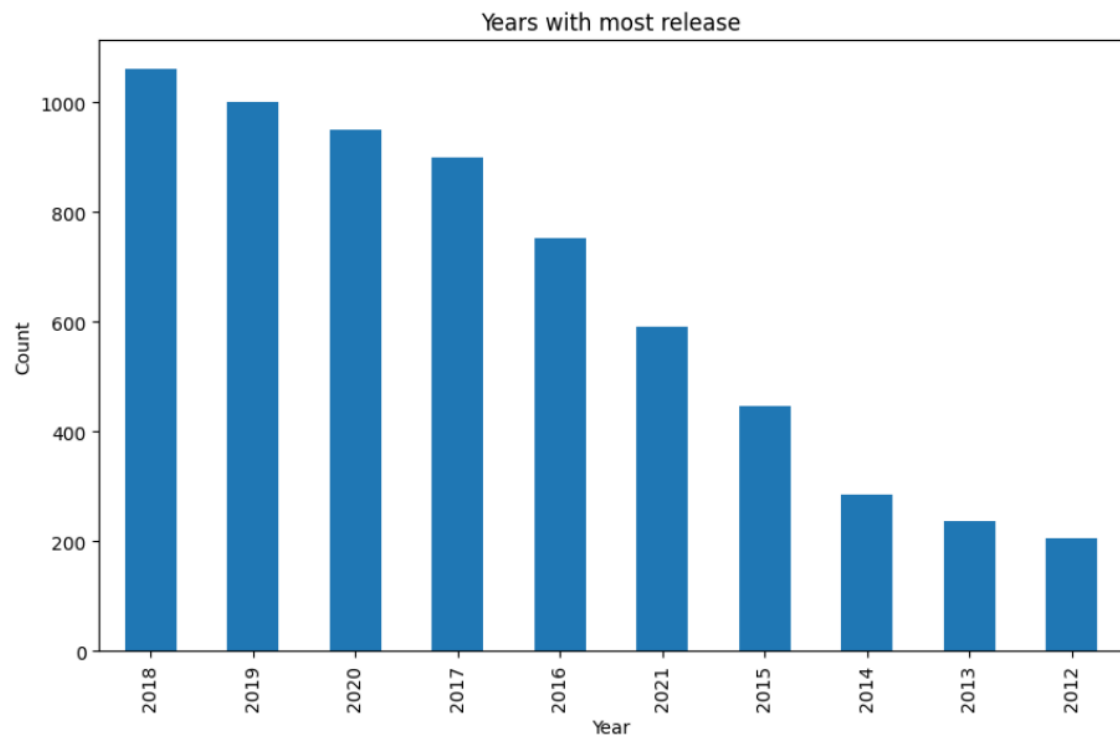
Finding and Inferences

Top 5 Actors on netflix

Top 5 Actors on Netflix

This bargraphs show the Top 5 actors on the content available on the Netflix with Anupam kher leading the most number of shows and movies and then on second number is Takahiro Sakurai on second position and then shahurkh khan,om puri and boman Irani.
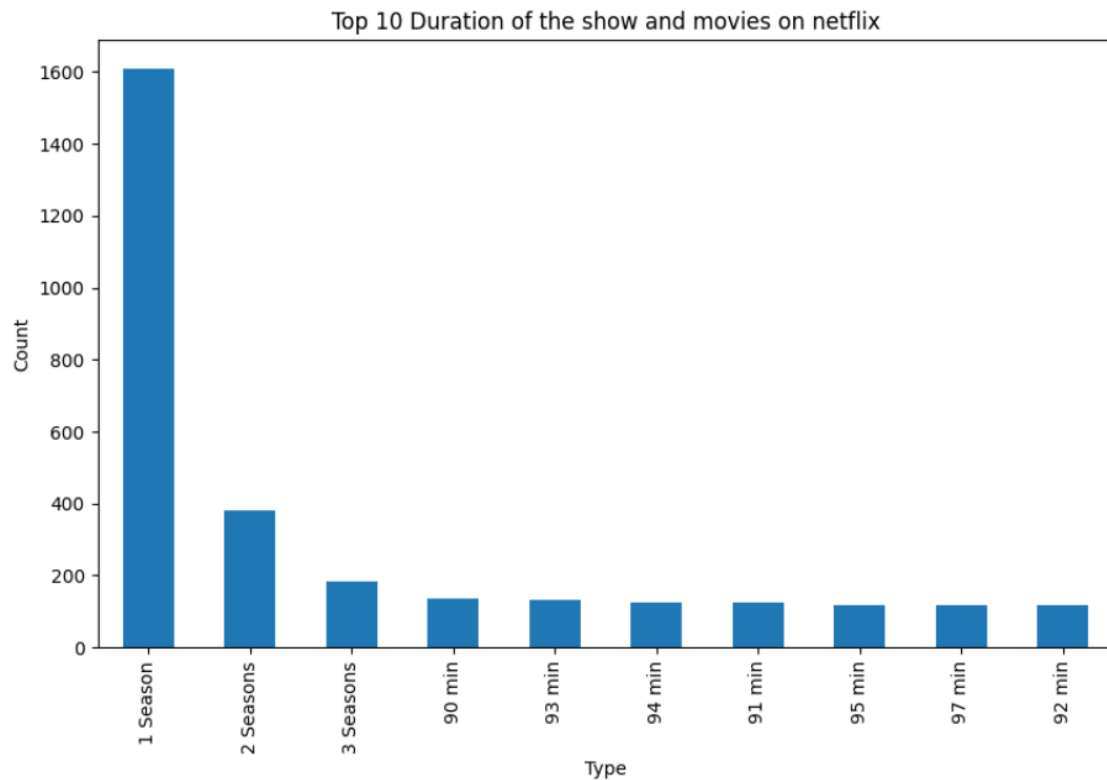
This graph can show the Actors demand in this industries as they rank all above in the world in the Netflix content available.

The image shows a bar graph that depicts the number of shows released each year. The years with the most releases are 2018, 2019, and 2020. In 2018, there were 1000 shows released, followed by 800 shows in 2019 and 600 shows in 2020. The number of shows released has been steadily increasing since 2015, with a slight decrease in 2022. The most shows released in a single year was 1000 in 2018. This could be due to a number of factors, such as the increasing popularity of streaming services, the development of new technologies that make

it easier to produce and distribute shows, and the growing number of talented writers, directors, and actors.

The trend of increasing number of shows released each year is likely to continue in the future. This is because the demand for streaming content is growing, and the technology to produce and distribute shows is becoming more accessible.

Top 10 Duration of the show and movies on netflix

The distribution of the durations is also interesting. There are more shows in the 90-minute range than in any other range. This suggests that Netflix viewers prefer shows that are around 2 hours long. There are also a significant number of movies in the 90-minute range. This suggests that Netflix viewers are also open to watching movies that are around 2 hours long.
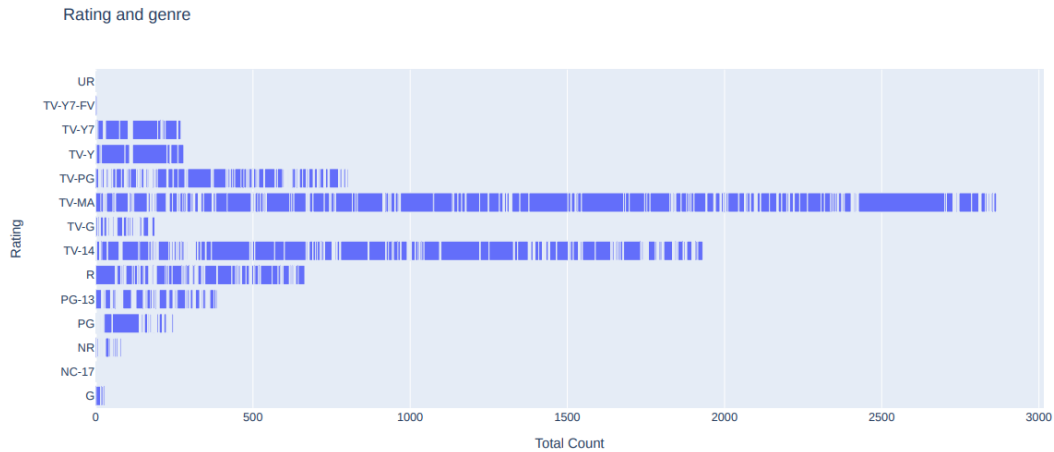
Overall, the top 10 durations of the shows and movies on Netflix suggest that viewers prefer content that is around 2 hours long. This is a good thing for Netflix, as it means that they can produce content that is likely to be popular with their viewers.

Here are some additional observations from the image:

- There are more TV shows than movies in the top 10. This is because Netflix is primarily a streaming service for TV shows.

- The majority of the content in the top 10 is either drama or comedy. This suggests that these are the most popular genres on Netflix.

- There are a few foreign language shows in the top 10. This suggests that Netflix is becoming more popular in international markets.

Correlation

Rating and Genre

Rating and genre

The genres are:

- UR: Unrated

- TV-Y7-FV: Intended for children ages 7 and older; fantasy violence

- TV-Y7: Intended for children ages 7 and older

- TV-Y: Intended for all children

- TV-PG: Parental guidance suggested

- TV-MA: Mature audiences only

- TV-G: General audiences

- TV-14: Parents strongly cautioned

- PG-13: Parents strongly cautioned; some material may be inappropriate for children under 13

- PG: Parental guidance suggested; some material may not be suitable for children

- NR: Not rated

- NC-17: No one 17 and under admitted

- G: General audiences

The line graph shows that there is a positive correlation between rating and genre. This means that movies in higher-rated genres tend to have higher ratings overall. For example, movies in the TV-MA genre have an average rating of 4.2, while movies in the TV-Y genre have an average rating of 2.8.

There are a few exceptions to this trend. For example, movies in the UR genre have an average rating of 3.8, even though they are not rated. This may be because these movies are often independent films or foreign films, which tend to be more critically acclaimed than mainstream films.

Overall, the image shows that there is a positive correlation between rating and genre. This means that viewers tend to prefer movies in higher-rated genres. This is likely because movies in higher-rated genres are often seen as being more well-made and entertaining.

Mangerial and Insights

1. **Content Distribution by Genre:** You can categorize content by genre and analyze the distribution of genres on Netflix. This can help you understand which types of content (e.g., drama, comedy, documentary) are most prevalent on the platform.
2. **Content Release Trends:** Analyze the release dates of content to identify trends. You can determine if there are certain months or seasons when Netflix tends to release more content, or if there are specific years with significant content additions.
3. **Content Ratings:** Examine the distribution of content ratings (e.g., G, PG, PG-13, R) to understand the platform's audience targeting. This can provide insights into whether Netflix caters to a diverse range of age groups.
4. **Content Duration:** Analyze the duration (runtime) of content, including movies and TV series. This can help you identify trends in content length and whether there is a preference for shorter or longer content.
5. **User Reviews and Ratings:** If available, analyze user reviews and ratings for content. This can provide insights into which content is most popular among viewers and how user sentiment varies across different types of content.
6. **Content Countries of Origin:** Determine the countries of origin for content and analyze the diversity of content sources. This can give insights into Netflix's global reach and its efforts to provide content from various regions.
7. **Content Trends Over Time:** Track the evolution of content on Netflix over time. Are there changes in the types of content offered? Are certain genres or content formats gaining or losing popularity?
8. **Viewer Engagement:** If possible, analyze viewer engagement data, such as viewing duration or completion rates for TV series. This can help identify which content keeps viewers engaged for longer periods