**Link of colab notebook**

# INSIGHTS:

There are total 8807 rows and 12 columns.

**Columns are**-- 'show_id', 'type', 'title', 'director', 'cast', 'country', 'date_added', 'release_year', 'rating', 'duration', 'listed_in', 'description'

The TVshows/Movies are present in this dataset, was released in between Year '1925' to Year '2021'.

Highest number of TV shows/Movies releases in the year 2018, followed by 2017 and 2019.

**Missing Values in dataset**

29.91 % (2634) of 'director' column followed by 'country' 9.44 % (831) and 'cast' 9.37% (825) column is missing values.

Others are 0.19 %( 17) i.e.; 'date_added', 'rating' and 'duration' columns.

'Duration' of a Movie or TV show is an important parameter, if it's null then it is not important to take that movie/TVshow in count. So, dropping it from dataset for further analysis.

Also drop the missing values of 'date_added' column from dataset for making the analysis in easiest way.

Remaining missing values of columns 'director', 'country', 'cast' and 'rating' changes to 'No director', 'Unknown', 'No Cast' and 'No rating' respectively.

Final shape of the data frame is 8794 rows and 12 coloumns.
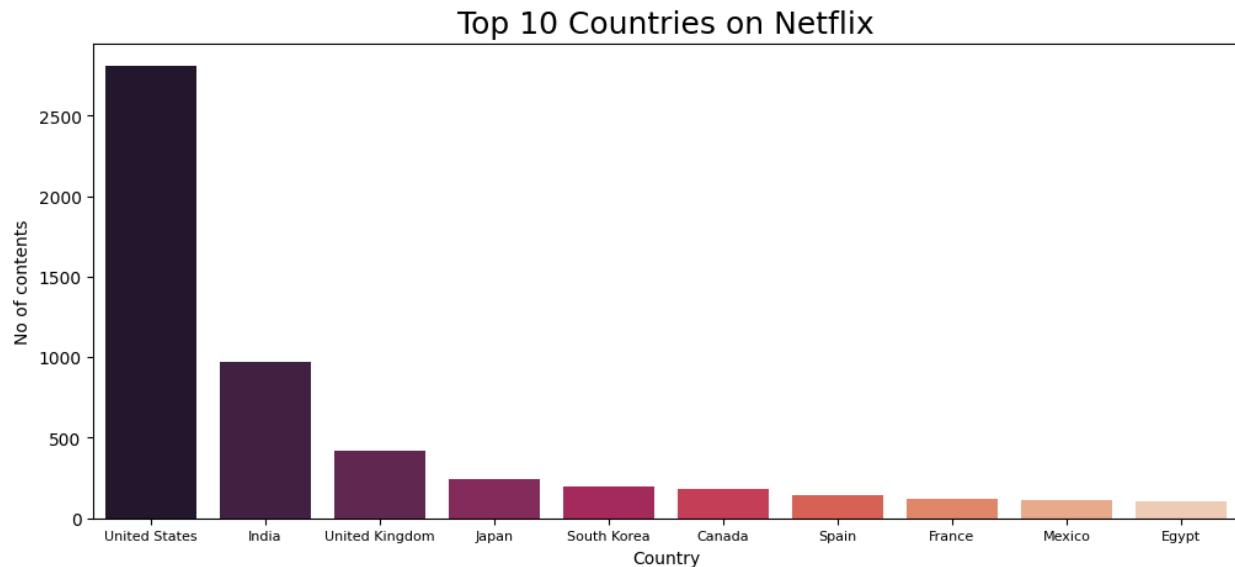
**Adding Day, Month and Year columns**

Making the separate columns of 'year', 'month' and 'day' from extracting the values of 'date_added' column. It will help to analysis the data in easiest way.

**Content in different countries**

From the dataset, we can analysis the United States in the first position with more than 2500 Netflix content, followed by India with nearly 1000 content.

Top 10 countries are as follows:
United States, India, United Kingdom, Japan, South Korea, Canada, Spain, France, Mexico and Egypt.
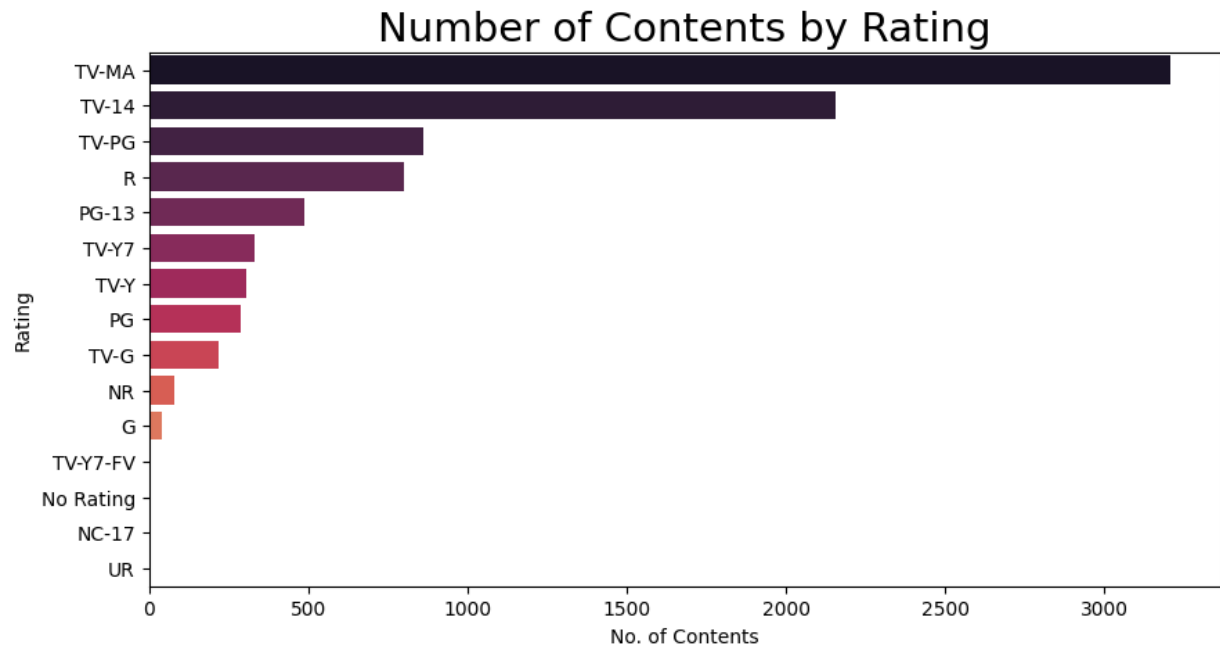


The rating with the largest number of content titles is **TV-MA**, TV-MA stands for "TV Mature Audience". It is a television rating that indicates the program is intended for mature audiences and may not be suitable for children under the age of 17.

The rating with the smallest number of content titles is **NC-17** (no children under 17 admitted).

"NR" or "UR" simply means the film has not been submitted for a rating, for whatever reason.
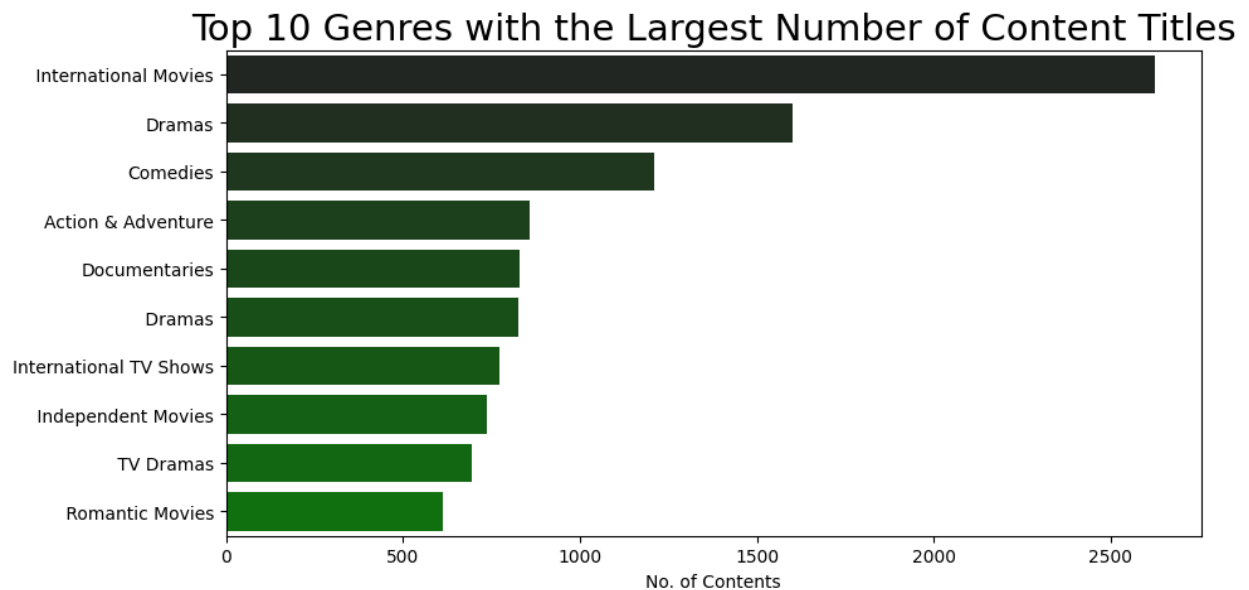
From whole observation, we can say that Netflix content is based on adult, not for children.

## Number of Contents by Rating



The top 10 genres with the largest number of content titles are:
The first rank is International Movies with more than 2500 content titles followed by Dramas and Comedies are second and third respectively.
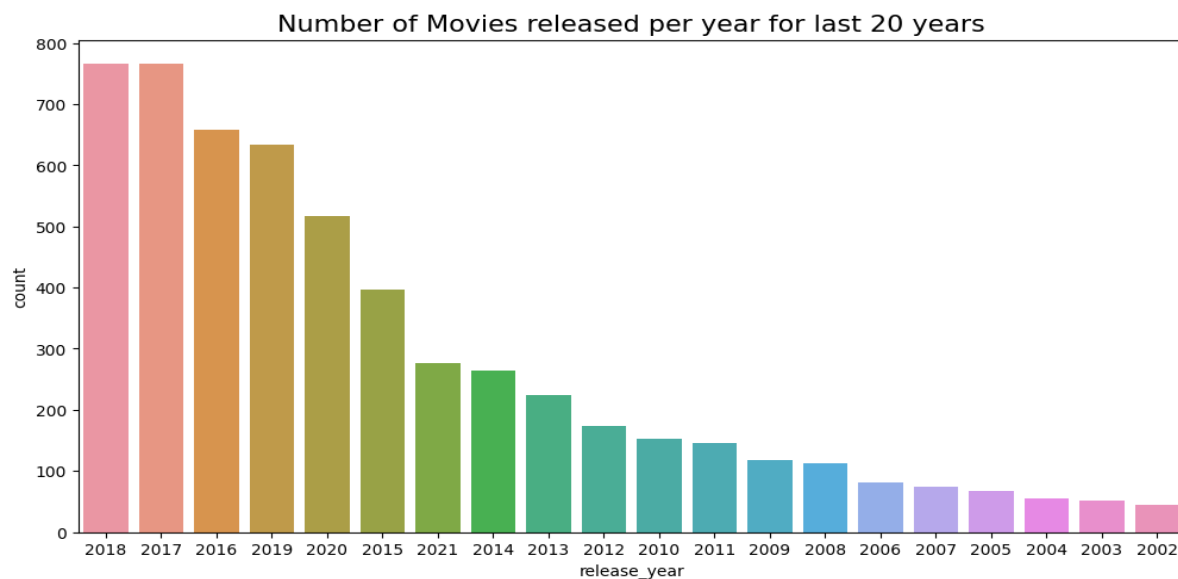
It means that the public like to watch International Movies in Netflix.

## Top 10 Genres with the Largest Number of Content Titles

**The number of movies released per year changed over the last 20-30 years**

We can analysis from dataset that the no of movies released per year was increases with year by year (approximately) but after year 2018 we can see, there is a sudden drop in movies.

May be this was happened due to covid-19. Restrictions of covid-19 effects on movie release and for that since 2018 the number of movie release was decreases with year by year.
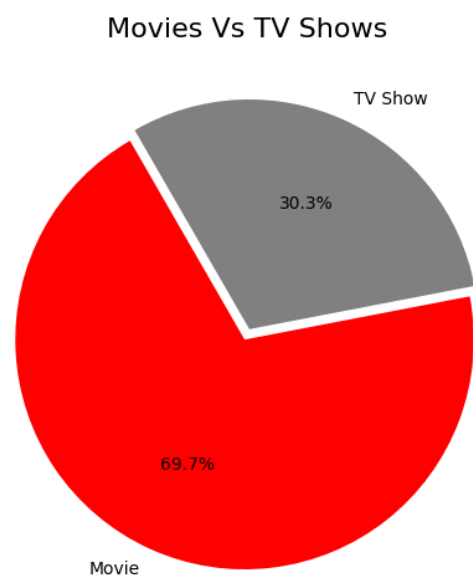


**Movies Vs TV Shows**

Total No. of Movies are 6128 and Total No. TV Shows are 2666.

The shortest movie 'title' is 'Silent' and duration is 3 minutes. It's an animated "Sci-Fi & Fantasy" short film for Children & Family. Added to the Netflix on 2019.

The longest movie "Black Mirror: Bandersnatch" and duration is 312 minutes. It's "Sci-Fi & Fantasy" movie, added to the Netflix on 2018.

The number of TV show having only 1 episode is 1793.

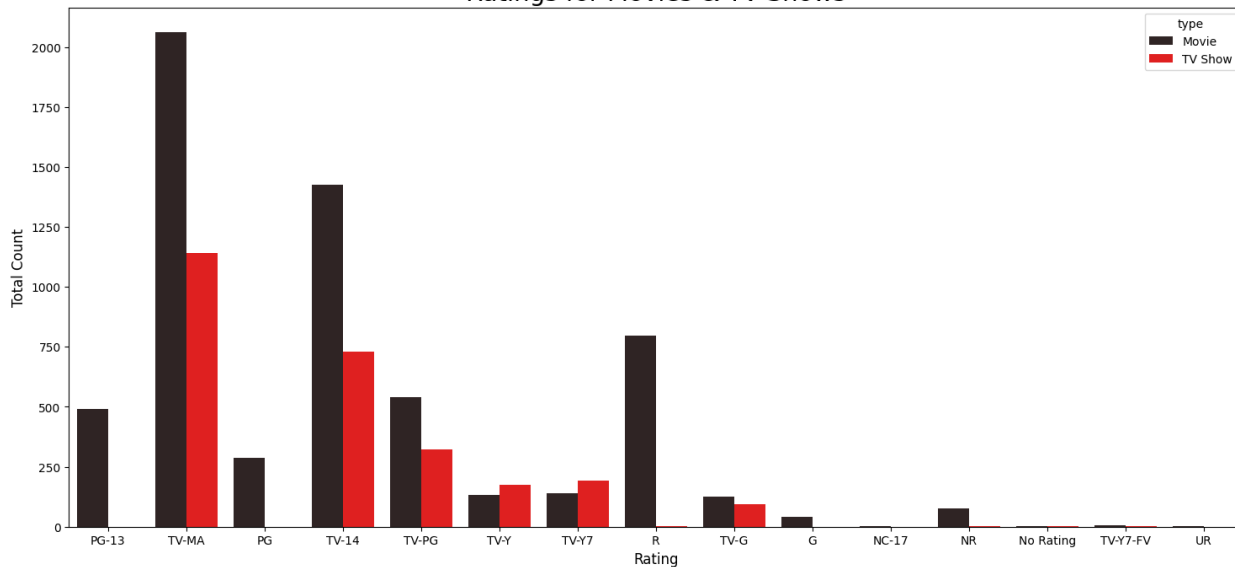The longest TV show with 17 episodes is "Grey's Anatomy".

## Distribution of Duration for Movie and TV Shows



Distribution of Duration for Movies

Distribution of Duration for TV Shows

Analyzing the movie box plot, we can see that most movies fall within a reasonable duration range, with few outliers exceeding approximately 2.5 hours. This suggests that most movies on Netflix are designed to fit within a standard viewing time range from nearly 1 hour to 2.5 hours.

For TV shows, the box plot reveals that the most shows have one to three seasons, with very few outliers having longer durations. This trend, indicating that Netflix focuses on shorter series formats.

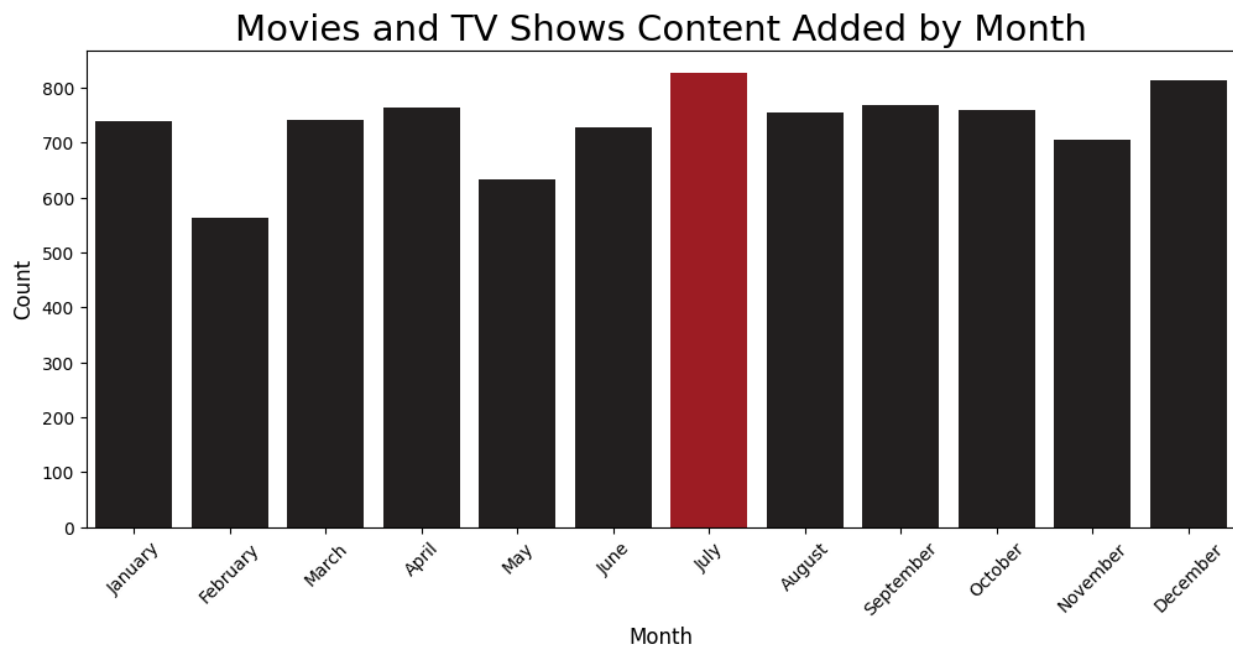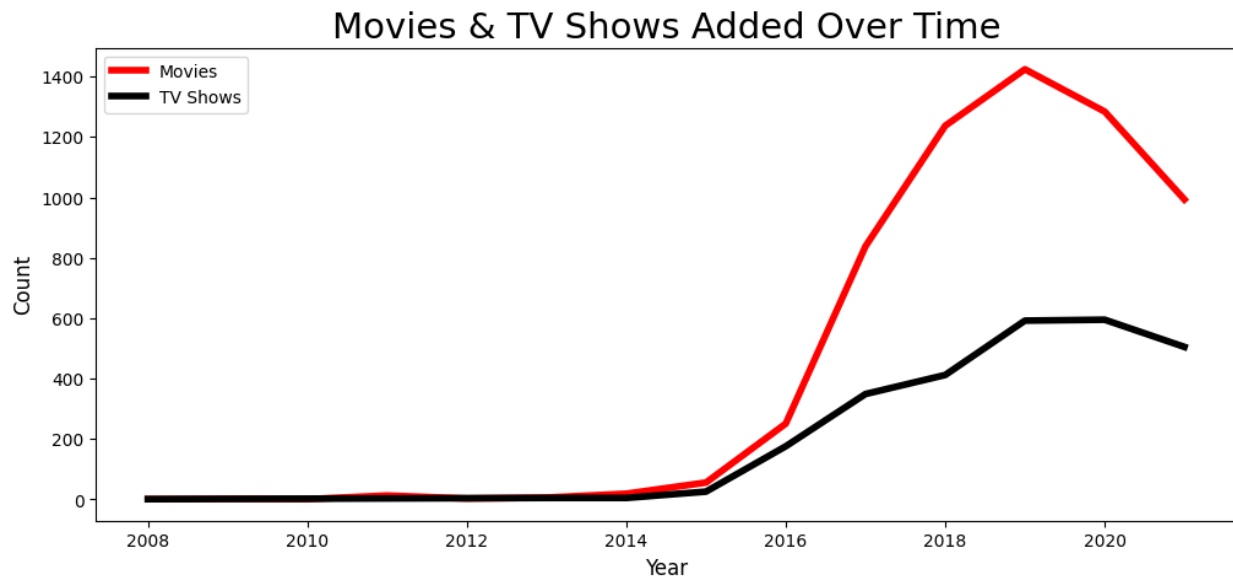## Ratings for Movies & TV Shows



From rating distribution by movie and TV shows, we observe that some ratings are only applicable to Movies. i.e.; PG-13, PG, R, G etc.

The most common for both Movies & TV Shows are TV-MA, followed by TV-14 and TV-PG.
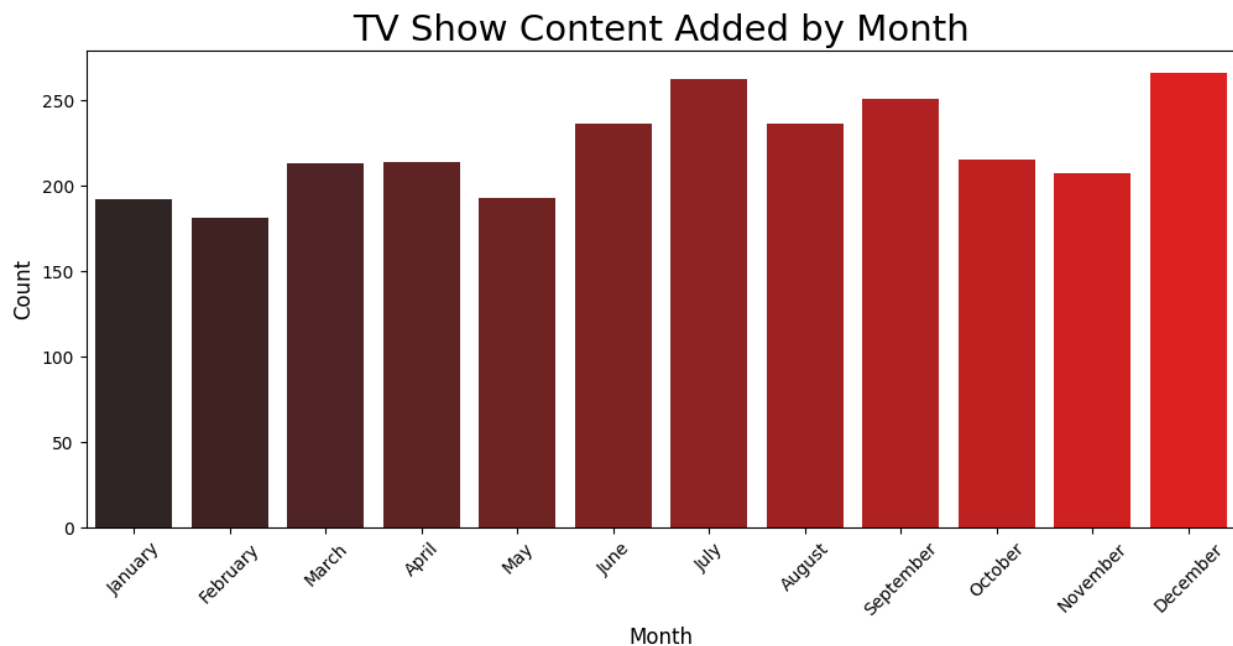
**The best time to launch a TV show**

Netflix real growth starting from the year 2015 and peak in 2019, but it is interesting that the content addition dropped in 2020. This could be due to the pandemic situation

Also we can observe that Netflix has focused more on Movie content than TV Shows.

From the above bar chart we can observe that July and December are the months when Netflix adds the most content. On the basis of this information we can be anticipate that July and December months are preferable months for Netflix to added new contents.


TV Show Content Added by Month
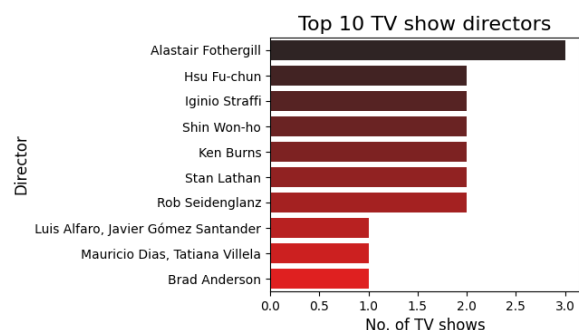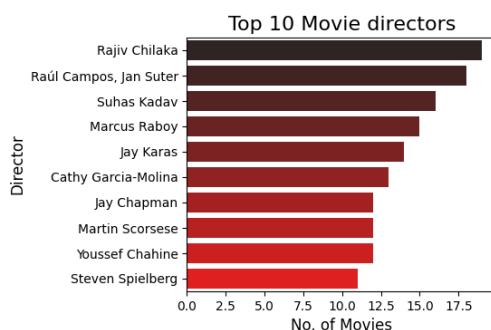
Finally, we can observe that December & June are definitely the best months to launch for new content of TV shows.
February is the worst.

**Analysis of actors/directors of different types of shows/movies.**
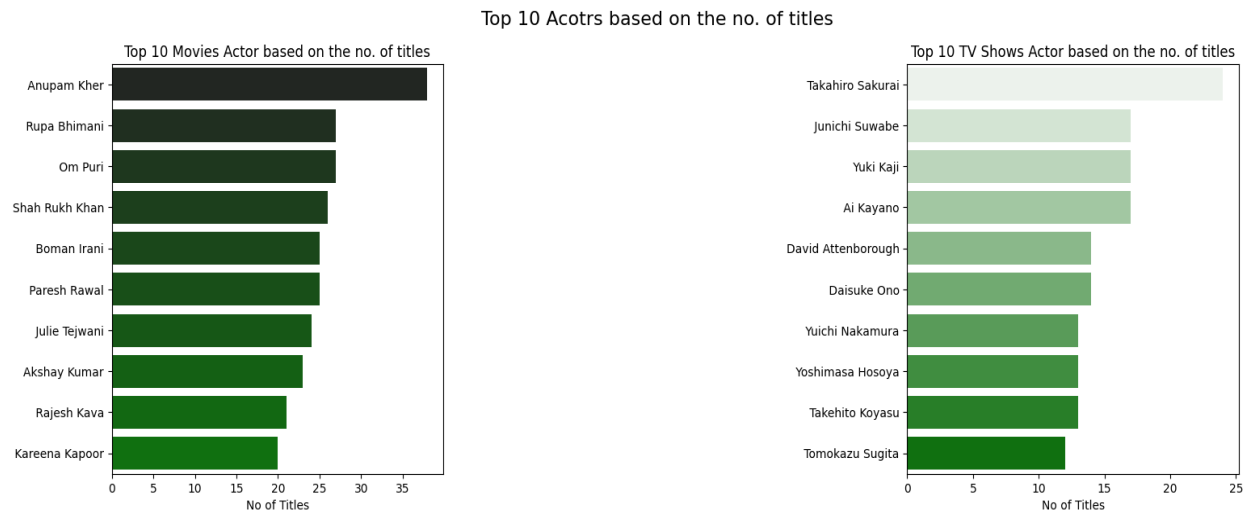
Total number of director is 4528.


Top 10 Directors

The chart above shows that the top 10 directors of Movies and TV shows with the largest number of content titles on Netflix.

Top 3 Movie's directors are Rajib Chilaka, Raul Campos & jan Suter, Suhas Kadav. The first position is occupied by Rajib Chilaka who has directed 19 number of content titles on Netflix.

Alastair Fothergill is the top of TV show's director chart, who has directed 3 TV shows on Netflix.

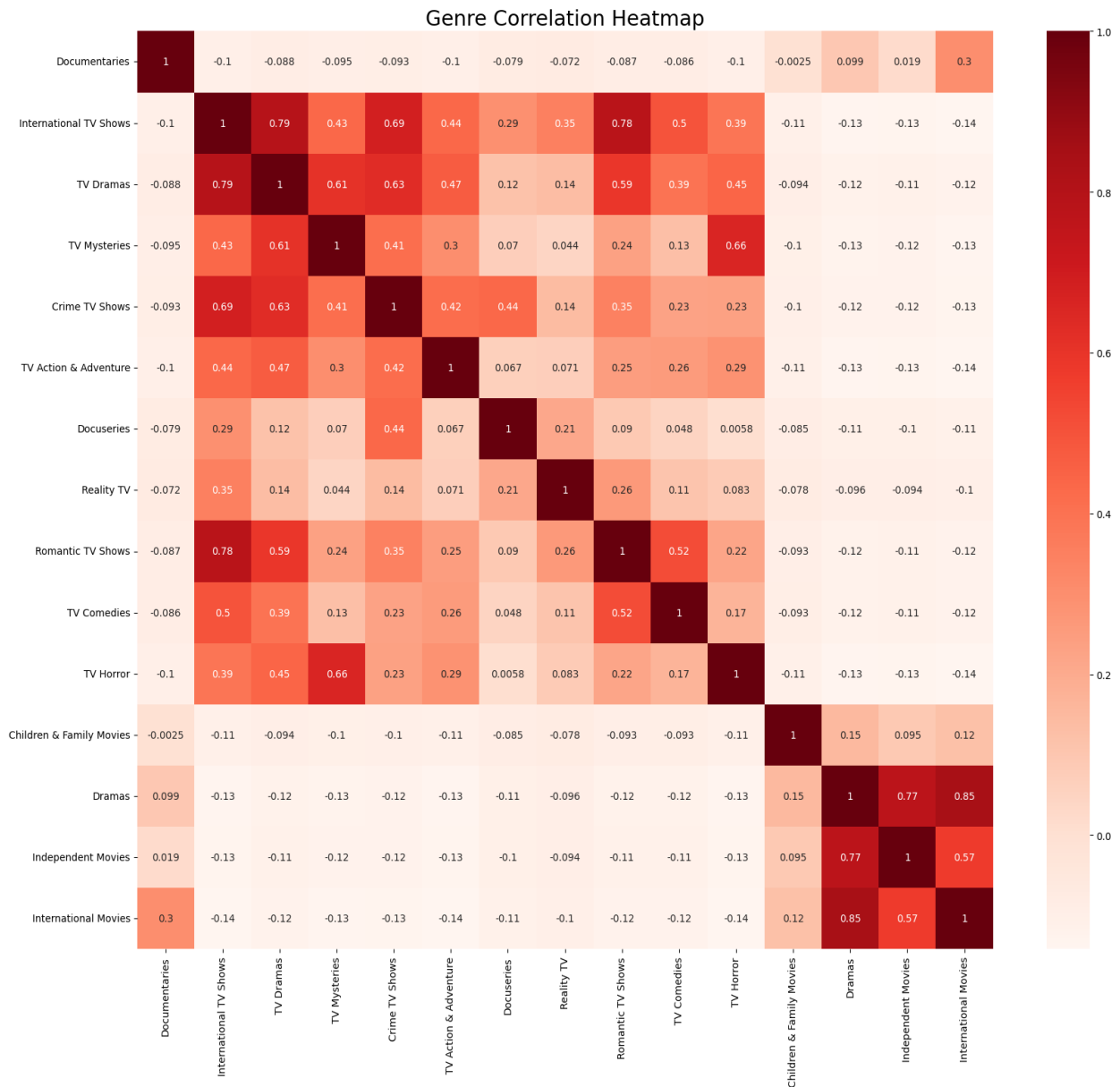Top 10 Acotrs based on the no. of titles



The 10 actors of Movies and TV shows with the largest number of content titles on Netflix can be seen in the image above.

The first position in Movie's chart is occupied by Anupam Kher with more than 35 movies, followed by Rupa Bhimani and Om Puri.
The first position in TV show's chart is occupied by Takahiro Sakurai with 24 tv shows, followed by  Junichi Suwabe and Yuki Kaji.
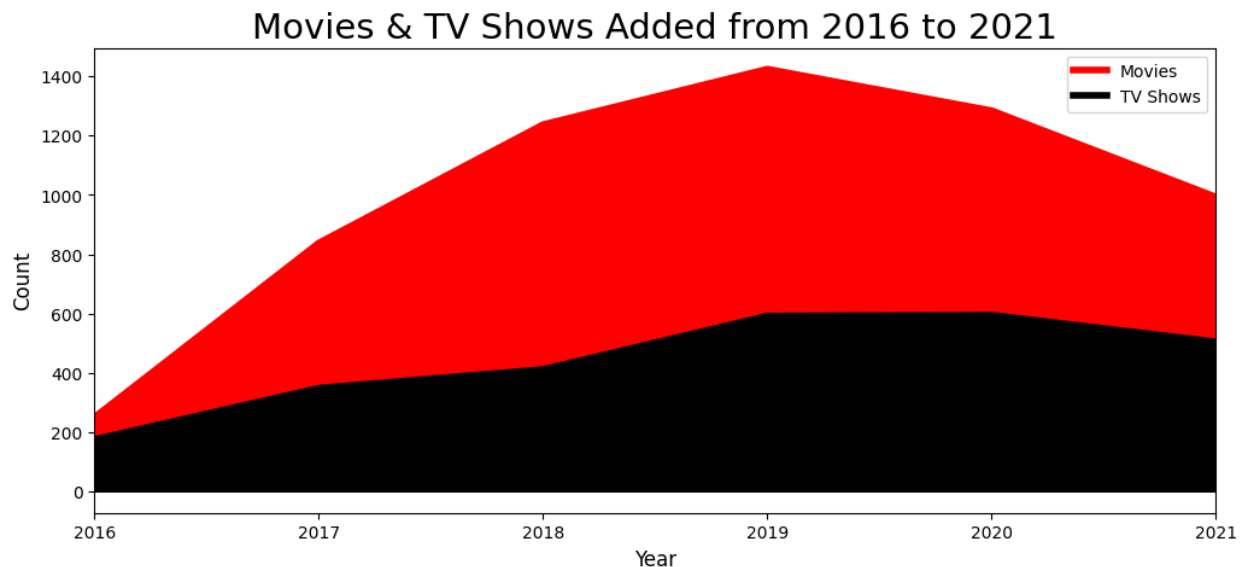
## Genre Correlation



Genre Correlation Heatmap

The heatmap demonstrates the correlation between different genres. By analyzing the heatmap, we can identify strong positive correlations between specific genres, such as TV Dramas and International TV Shows, Romantic TV Shows, and International TV Shows.

It is interesting that Independent Movies tend to be Dramas.
International Movies are rarely in the children genre.

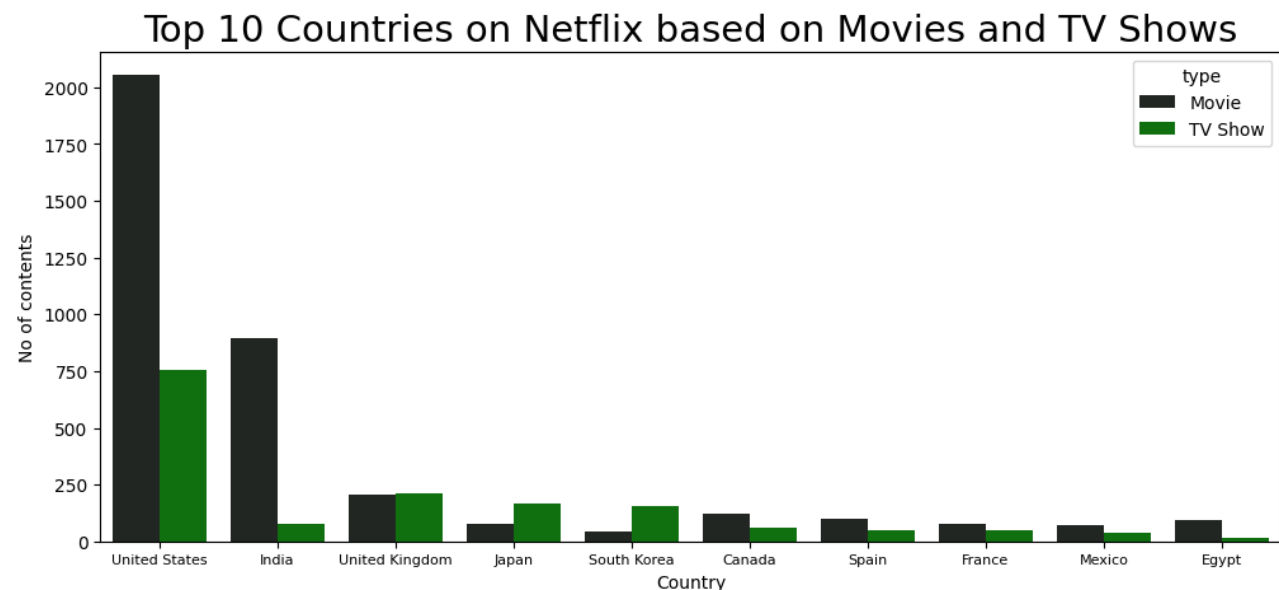**Does Netflix has more focus on TV Shows than movies in recent years**



From the above chart we can closely analyze the difference of the total no of content for Movies and TV shows added in last 6 years.

We can observe that the no of movies higher than tv shows and increasing rapidly year by year but after 2019 movies trend line are decreasing rapidly till the end of 2021.

However, the no of tv shows increasing a systematic way over year by year. May be there is a little bit down in line from year 2020 to 2021 due to covid-19 pandemic effect. But we can neglect it and confidently say that Netflix focusing on TV shows.

**Content is available in different countries**

From the above chart, we can observed that United Sates is in top of country list on producing of Movies as well as TV shows in Netflix.
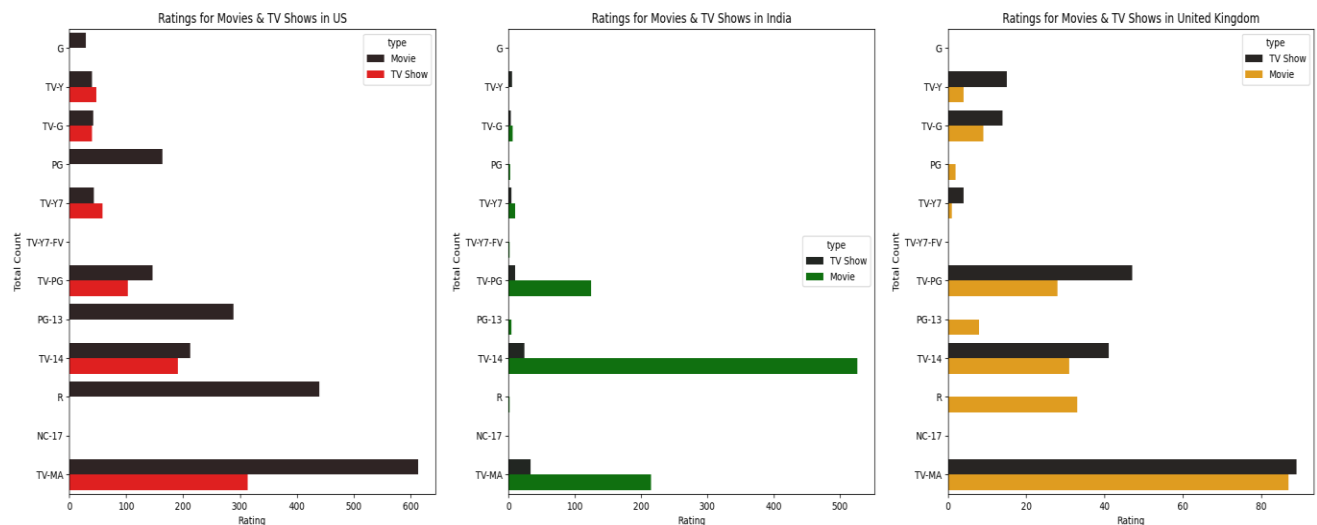
In second position India, where the no of production is high. But observable thing is in India if we compare the Movies Vs TV shows than the production of TV shows is very less than Movies.

The rest of countries in top 10 list is United Kingdom, where no of movies and tv shows are nearly same.

Then in list Japan, South Korea, Canada, Spain, France, Mexico and Egypy as per their rank respectively.

Comparison of TOP 3 Countries Rating



Comparison of TOP 3 Countries Rating based on Movies and TV Shows

From the picture above, we can see that the United States produces more numbers of TV Show content than India and United Kingdom.

We also know that the rating with the largest number of Movies and TV Shows content in the Unites States and also in the United Kingdom is TV-MA, while the rating with the largest number of Movies content in India is TV-14 and TV shows content in India is TV-MA.

Content rated TV-14 contain material that parents or adults may find unsuitable for children under the age of 14 and content rated TV-MA is intended to be viewed by mature, adult audiences and may be unsuitable for children under 17.

So, we can say that India produces more Netflix content for those aged 14 years and over, while the United States produces more Netflix content for those aged 17 years and over.

**Link of colab notebook**

https://colab.research.google.com/drive/1R2rAlF7Y6dJQwKRsKqiTV1ZVKuCndBli?usp=sharing