NETFLIX VIEWERSHIP PROJECT

Data : Netflix content viewership data was in CSV format.

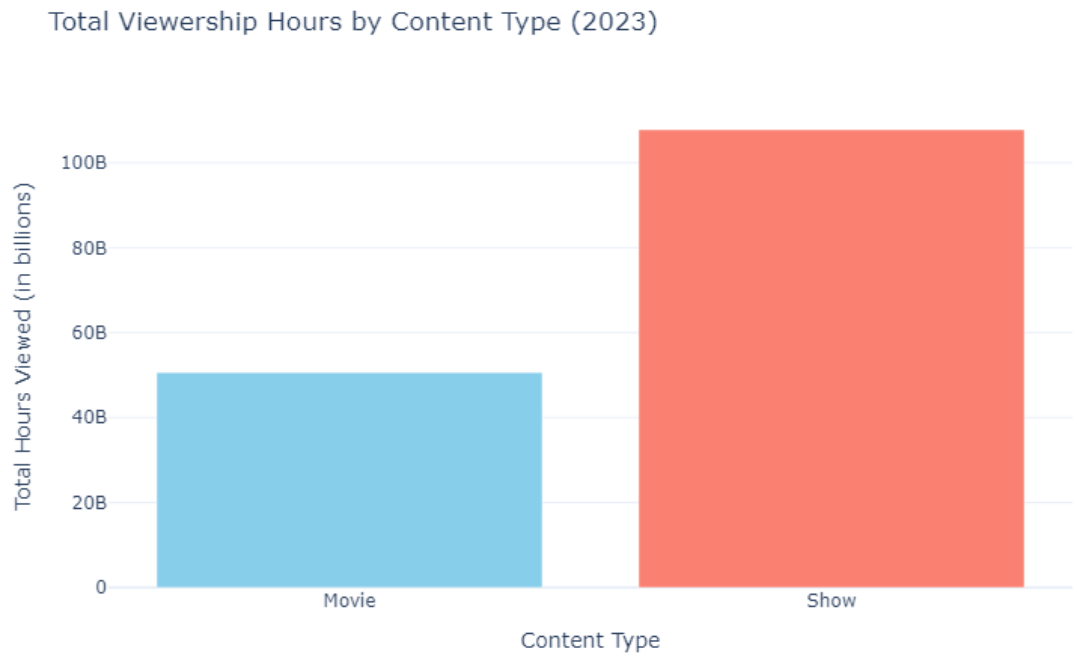
Columns are [‘Title’, ‘Available Globally?’, ‘Release Date’, ‘Hours Viewed’, ‘Language Indicator’, ‘Content Type’]

	Title	Available Globally?	Release Date	Hours Viewed	Language Indicator	Content Type
0	The Night Agent: Season 1	Yes	2023-03-23	81,21,00,000	English	Show
1	Ginny & Georgia: Season 2	Yes	2023-01-05	66,51,00,000	English	Show
2	The Glory: Season 1 // 더 글로리: 시즌 1	Yes	2022-12-30	62,28,00,000	Korean	Show

Total Viewership Hours by Content Type (2023) :

The “Hours Viewed” column has been successfully cleaned and converted to a numeric format. Now, I’ll analyze trends in content type to determine whether shows or movies dominate viewership. Let’s visualize the distribution of total viewership hours between Shows and Movies:

1. To calculating viewership content we have to group the content types by hours viewed. By using groupby function.
2. Using data visualisation library’s giving title as Total Viewership Hours by Content Type (2023).
3. X axis title as content type
4. Y axis title as Total Hours Viewed (in billions)
5. Height as 500, width as 800

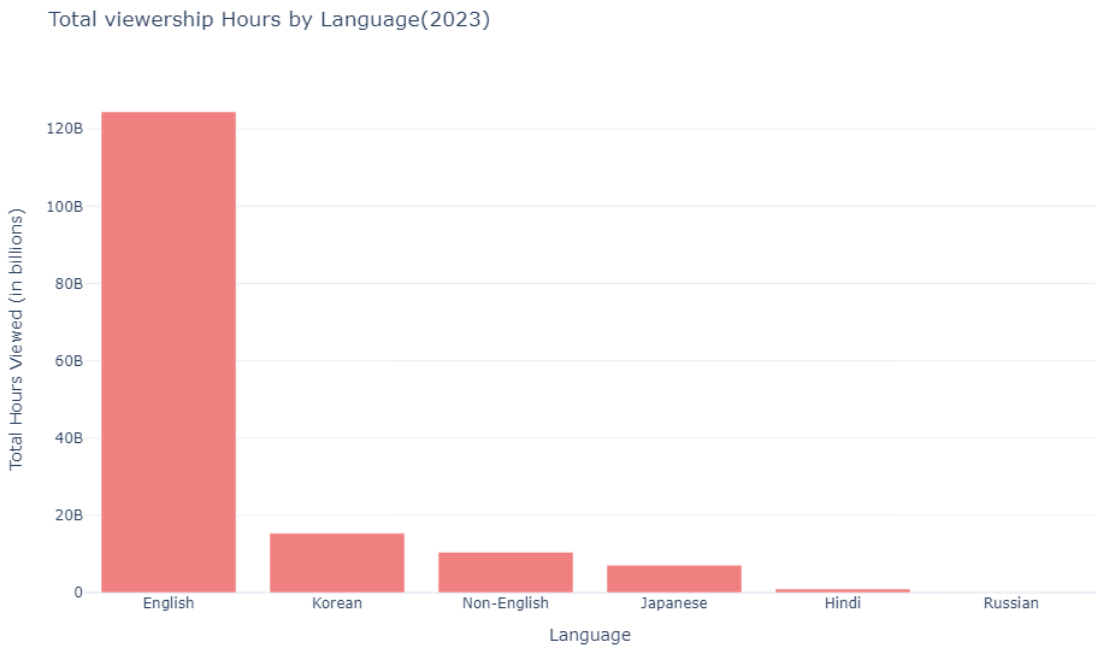


The visualization indicates that shows dominate the total viewership hours on Netflix in 2023 compared to movies. This suggests that Netflix's content strategy leans heavily toward shows, as they tend to attract more watch hours overall.

Total viewership Hours by Language :

Next, let's analyze the distribution of viewership across different languages to understand which languages are contributing the most to Netflix's content consumption:

1. To calculating viewership time by language we have to group the language by hours viewed. By using groupby function.
2. Using data visualisation library's giving title as Total viewership Hours by Language (2023).
3. X axis title as language
4. Y axis title as Total Hours Viewed (in billions)
5. Height as 600, width as 1000



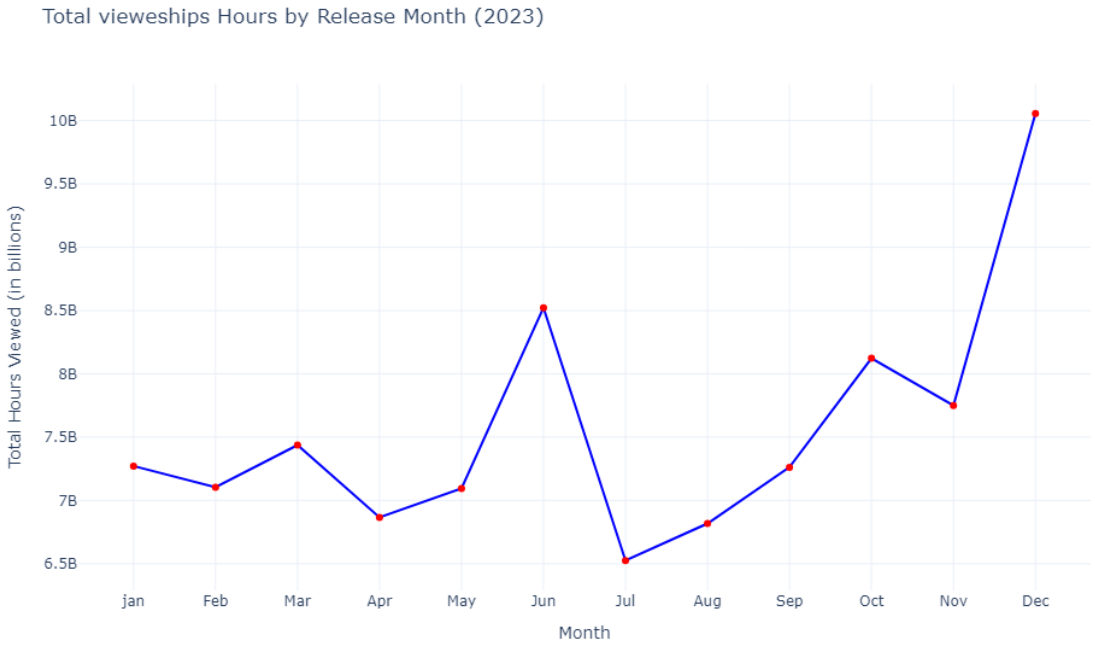
The visualization reveals that English-language content significantly dominates Netflix's viewership, followed by other languages like Korean. It indicates that Netflix's primary audience is consuming English content, although non-English shows and movies also have a considerable viewership share, which shows a diverse content strategy.

Total viewership's Hours by Release Month (2023):

Next, I'll analyze how viewership varies based on release dates to identify any trends over time, such as seasonality or patterns around specific months:

1. To converter release datas into release months by using **.dt..month** adding to csv file column**.**
2. To calculating viewership of every monthly releases we have to group the release months by hours viewed. By using groupby function.
3. Using data visualisation library's giving Total viewership's Hours by Release Month (2023).
4. X axis title as Month.
5. Y axis title as Total Hours Viewed (in billions).
6. By creating dictionary.

7. **Tickmode='array'** This tells Plotly that we will manually specify the **tick positions** and their corresponding **labels.**
8. **Tickvals=list(range(1,13))** creating list from 1 to 12 it indicates months.
9. **Ticktext=['jan',…….'dec']** text that is contents of months jan to dec.
10. Height as 600, width as 1000.



The graph shows the total viewership hours by month, which reveals a notable increase in viewership during June and a sharp rise toward the end of the year in December. It suggests that Netflix experiences spikes in audience engagement during these periods, possibly due to strategic content releases, seasonal trends, or holidays, while the middle months have a steady but lower viewership pattern.

To delve deeper, we can analyze the most successful content (both shows and movies) and understand the specific characteristics, such as genre or theme, that may have contributed to high viewership:

finding most watch time:

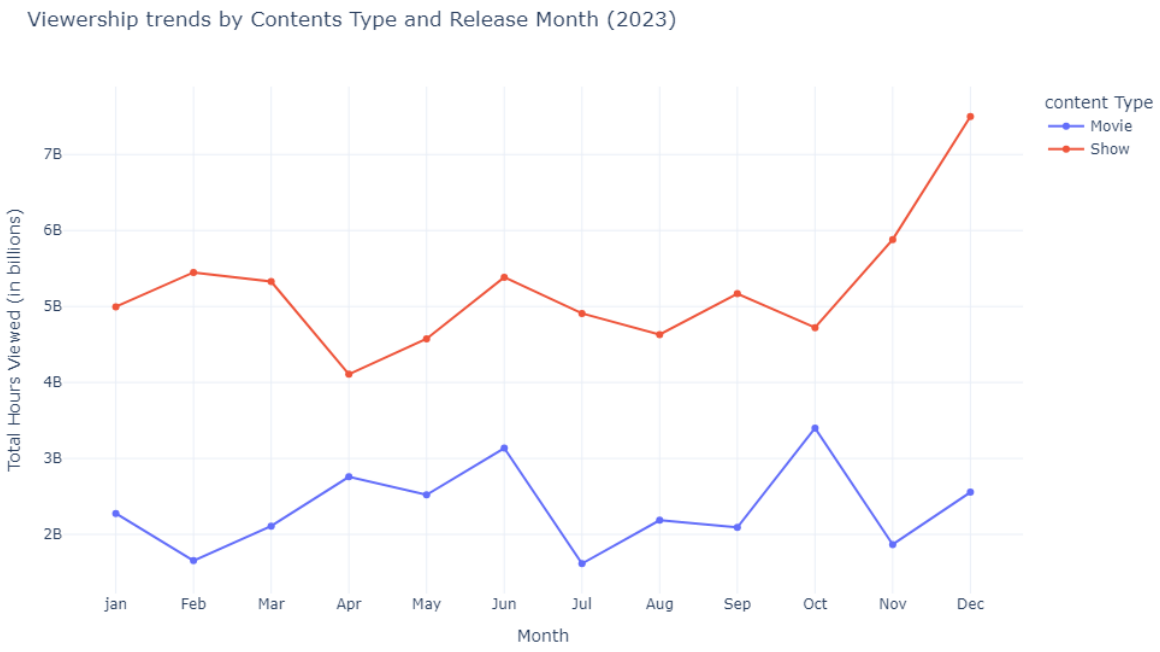
1. By using nlargest function finding lager number in in column of hours viewed.

	Title	Hours Viewed	Content Type	Release Month
0	The Night Agent: Season 1	812100000.0	Show	3.0
1	Ginny & Georgia: Season 2	665100000.0	Show	1.0
18227	King the Land: Limited Series // 킹더랜드: 리미티드 시리즈	630200000.0	Movie	6.0
2	The Glory: Season 1 // 더 글로리: 시즌 1	622800000.0	Show	12.0
18214	ONE PIECE: Season 1	541900000.0	Show	8.0

English-language shows dominate the top viewership spots. But, Korean content also has a notable presence in the top titles, which indicates its global popularity.

Viewership trends by Contents Type and Release Month (2023):
Now, let's have a look at the viewership trends by content type:

1. Creating pivot table function. Column of content type and release month and sum of viewership according month and content type.
2. To calculating viewership of every monthly releases according to content type using pivot table.
3. Using data visualisation library's giving Total viewership's trend by content type and Release Month (2023).
4. X axis title as Month.
5. Y axis title as Total Hours Viewed (in billions).
6. By creating dictionary.
7. **Tickmode='array'** This tells Plotly that we will manually specify the **tick positions** and their corresponding **labels.**
8. **Tickvals=list(range(1,13))** creating list from 1 to 12 it indicates months.
9. **Ticktext=['jan',…….'dec']** text that is contents of months jan to dec.
10. Height as 600, width as 1000.



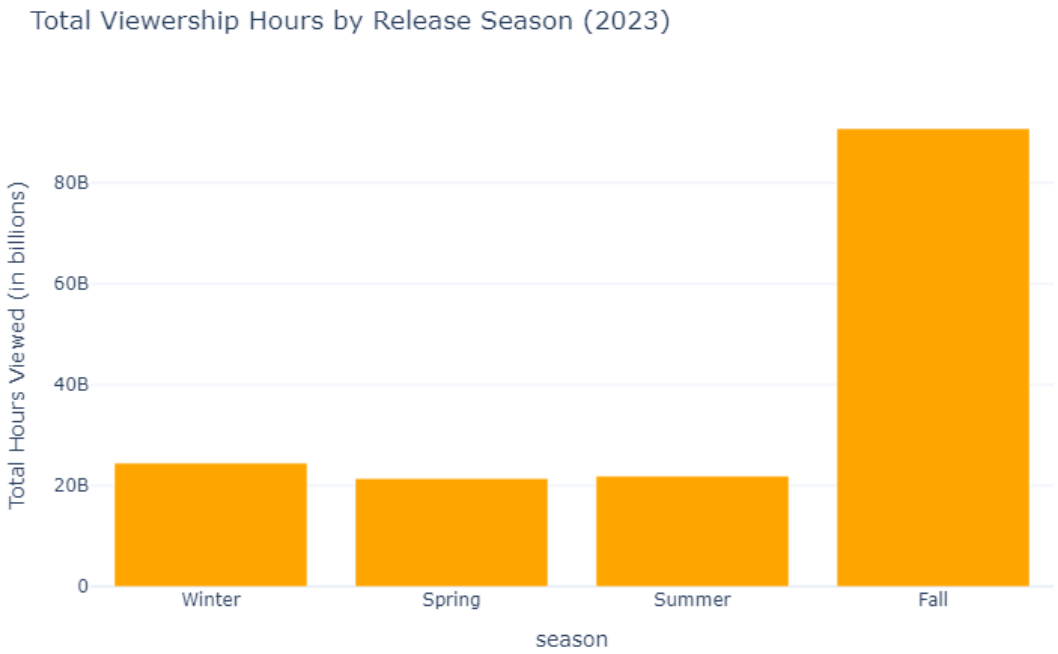
The graph compares viewership trends between movies and shows throughout 2023. It shows that shows consistently have higher viewership than movies, peaking in December. Movies have more fluctuating viewership, with notable increases in June and October. This indicates that Netflix's audience engages more with shows across the year, while movie viewership experiences occasional spikes, possibly linked to specific releases or events

Total Viewership Hours by Release Season (2023):

Now, let's explore the total viewership hours distributed across different release seasons:

1. By using if , elif af else traveling through the release month sprinting months into seasons.['Winter', 'Spring', 'Summer', 'Fall'].
2. Using data visualisation library's giving Total viewership's trend by seasons.
3. X axis title as season.

4. Y axis title as Total Hours Viewed (in billions).
5. By creating dictionary.
6. **categoryoder='array'** This tells Plotly that we will manually specify the **tick positions** and their corresponding **labels.**
7. **Categoryarray** which is equal to seasons.
8. Height as 500, width as 800.



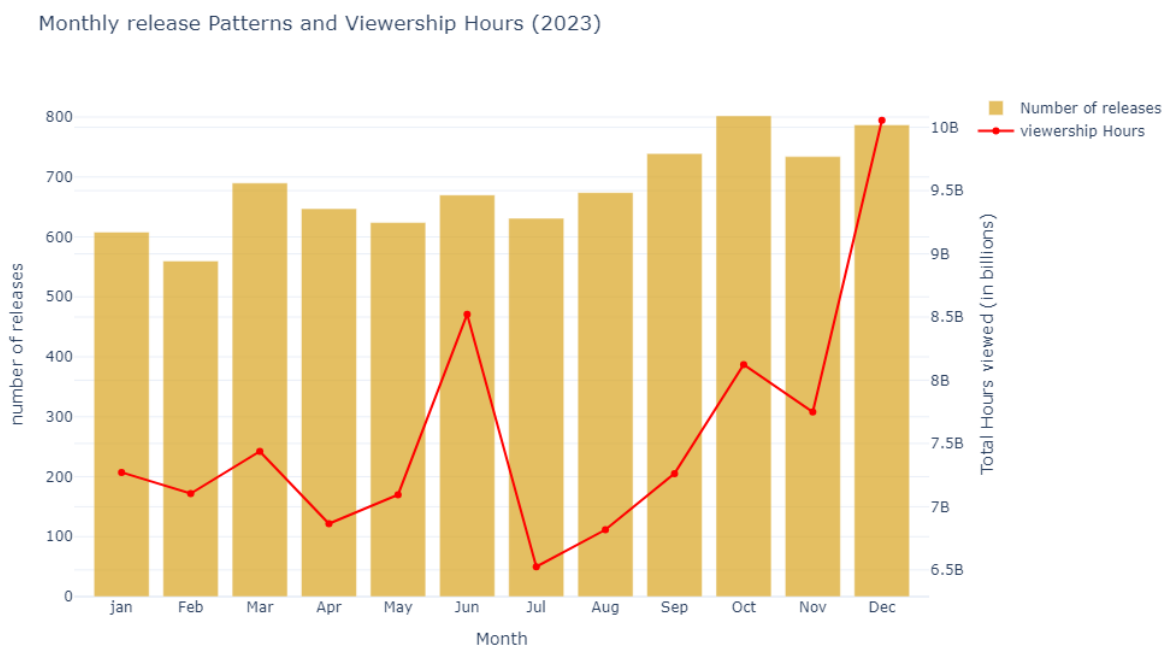
The graph indicates that viewership hours peak significantly in the Fall season, with over 80 billion hours viewed, while Winter, Spring, and Summer each have relatively stable and similar viewership around the 20 billion mark. This suggests that Netflix experiences the highest audience engagement during the Fall.

Monthly release Patterns and Viewership Hours (2023):

Now, let's analyze the number of content releases and their viewership hours across months:

1. Monthly release count are stored in **monthly_releases.**
2. To calculating viewership of every monthly releases use **groupby** function.
3. Using data visualisation library's giving Monthly release Patterns and Viewership Hours (2023).
4. Bar chat has it shows number of releases, y as monthly releases.
5. Scatter plot has show total number of monthly viewership, y axis total watch time
6. X axis title as Month.
7. By creating dictionarys axis , yaxis, yaxis2, and legend.
8. In xaxis **Tickmode='array'** This tells Plotly that we will manually specify the **tick positions** and their corresponding **labels.**
9. **Tickvals=list(range(1,13))** creating list from 1 to 12 it indicates months.
10. **Ticktext=['jan',…….'dec']** text that is contents of months jan to dec.
11. in yaxis giving title as number of releases.
12. In yaxis2 giving title as total hours viewed (in billions)
13. In legend x=0.15 it give location out of the plot, y=1 gives location top of the plot, orientation='v is know as items in a vertical list 'and xanchor='left' is know as left side plot.

14. Height as 600, width as 1000.



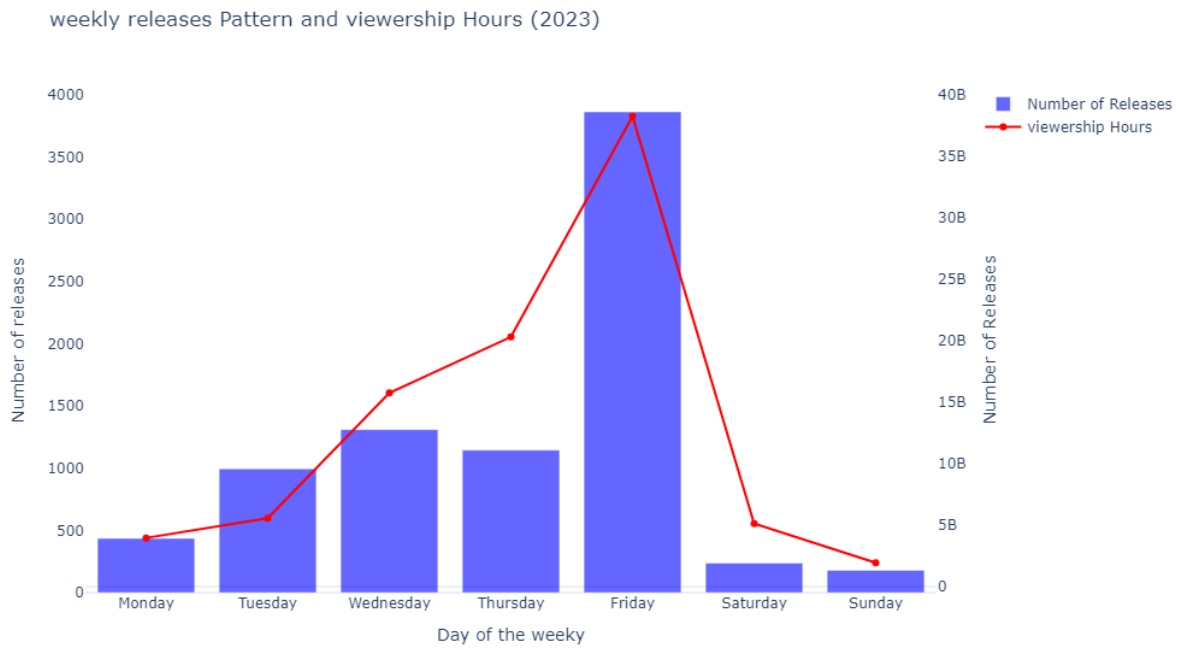
While the number of releases is relatively steady throughout the year, viewership hours experience a sharp increase in June and a significant rise in December, despite a stable release count. This indicates that viewership is not solely dependent on the number of releases but influenced by the timing and appeal of specific content during these months.

weekly releases Pattern and viewership Hours (2023):

Next, let's explore whether Netflix has a preference for releasing content on specific weekdays and how this influences viewership patterns:

1. Day wise release count are stored in **Releases_Day.**
2. To calculating viewership of every day releases use **groupby** function.
3. Using data visualisation library's giving day wise release Patterns and Viewership Hours (2023).
4. Bar chat has it shows number of releases, y as data wise releases count.
5. Scatter plot has show total number of day wise viewership, y axis total watch time
6. X axis title as days.
7. By creating dictionarys axis , yaxis, yaxis2, and legend.
8. In xaxis **Tickmode='array'** This tells Plotly that we will manually specify the **tick positions** and their corresponding **labels.**
9. **Ticktext=['mon',…….'sun']** text that is contents of months Monday to Sunday.
10. in yaxis giving title as number of releases.
11. In yaxis2 giving title as total hours viewed (in billions)
12. In legend x=0.15 it give location out of the plot, y=1 gives location top of the plot, orientation='v is know as items in a vertical list 'and xanchor='left' is know as left side plot.
13. Height as 600, width as 1000.

The graph highlights that most content releases occur on Fridays, with viewership hours also peaking significantly on that day. This suggests that Netflix strategically releases content toward the weekend to maximize audience engagement. The viewership drops sharply on Saturdays and Sundays, despite



some releases, indicating that the audience tends to consume newly released content right at the start of the weekend, which makes Friday the most impactful day for both releases and viewership.