

Netflix Data Analysis Overview

This project aims to analyze the Netflix dataset to extract insights on content type, genre distribution, country-wise production, rating trends, content evolution, and user preferences. We use data preprocessing and visualization techniques using Python libraries like **Pandas, Seaborn, and Matplotlib**.

The dataset offers a comprehensive view of Netflix's global content library from **1925 to 2021**. Our goal is to uncover patterns and assist in strategic content and user engagement planning.

By : Abhishek Bhagat

The Netflix logo is displayed in a bold, red, sans-serif font. It is centered within a dark blue rectangular box that has rounded corners. The background of the entire slide is a dark blue gradient.

Dataset Preparation & Cleaning

Loaded Netflix Data

Imported the `netflix_titles.csv` file into our analysis.

Handled Missing Values

Filled in any missing data with the value 'Unknown' to ensure a complete dataset.

Expanded Genre Data

Split the `listed_in` column into individual genres and created a row for each one.

1

2

3

4

5

Streamlined the Data

Dropped unnecessary columns like `show_id`, `director`, `cast`, and `description` to focus our analysis.

Formatted Release Dates

Converted the `date_added` column to a consistent datetime format.



Dataset Overview

- Total entries: 8807
- Columns include type, title, country, date added, release year, rating, duration, and genre (listed_in).
- After exploding genres, dataset expanded to 19,323 entries.

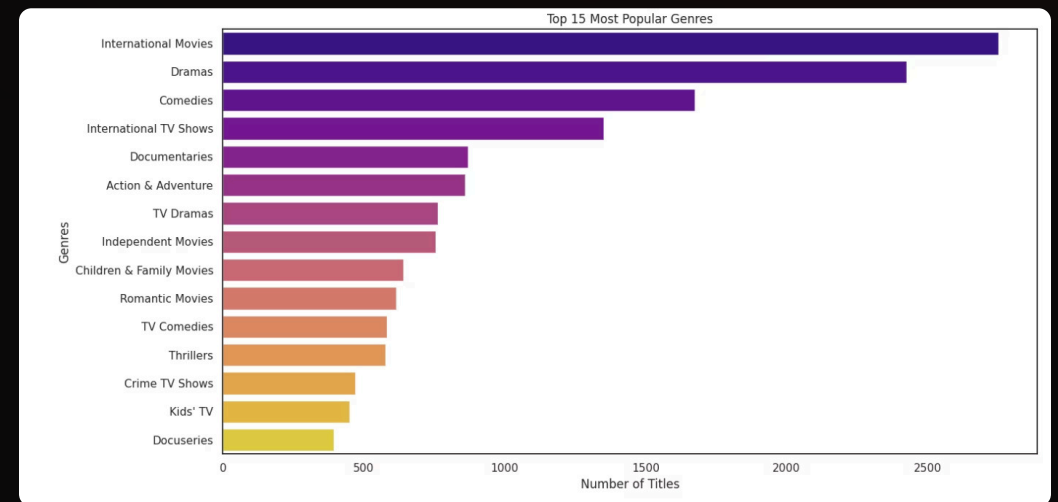
	type	title	country	date_added	release_year	rating	duration	listed_in
0	Movie	Dick Johnson Is Dead	United States	September 25, 2021	2020	PG-13	90 min	Documentaries
1	TV Show	Blood & Water	South Africa	September 24, 2021	2021	TV-MA	2 Seasons	International TV Shows, TV Dramas, TV Mysteries
2	TV Show	Ganglands	NaN	September 24, 2021	2021	TV-MA	1 Season	Crime TV Shows, International TV Shows, TV Act...
3	TV Show	Jailbirds New Orleans	NaN	September 24, 2021	2021	TV-MA	1 Season	Docuseries, Reality TV
4	TV Show	Kota Factory	India	September 24, 2021	2021	TV-MA	2 Seasons	International TV Shows, Romantic TV Shows, TV ...

```
df['listed_in'] = df['listed_in'].str.split(',')
df = df.explode('listed_in').reset_index(drop=True)
df.head()
```

	type	title	country	date_added	release_year	rating	duration	listed_in
0	Movie	Dick Johnson Is Dead	United States	2021-09-25	2020	PG-13	90 min	Documentaries
1	TV Show	Blood & Water	South Africa	2021-09-24	2021	TV-MA	2 Seasons	International TV Shows
2	TV Show	Blood & Water	South Africa	2021-09-24	2021	TV-MA	2 Seasons	TV Dramas
3	TV Show	Blood & Water	South Africa	2021-09-24	2021	TV-MA	2 Seasons	TV Mysteries
4	TV Show	Ganglands	Unknown	2021-09-24	2021	TV-MA	1 Season	Crime TV Shows

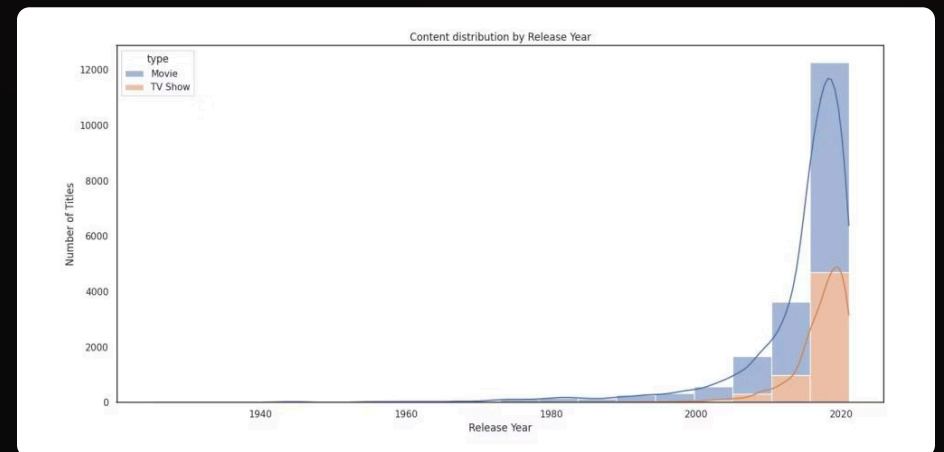
Top Genres on Netflix

Bar plot showing most frequent genres on Netflix.
Dominant genres include International Movies,
Dramas, Comedies, and Documentaries.



Content Distribution by Release Year & Type

Histogram of content release years, stacked by type (Movie/TV Show). Shows surge in content after 2010.



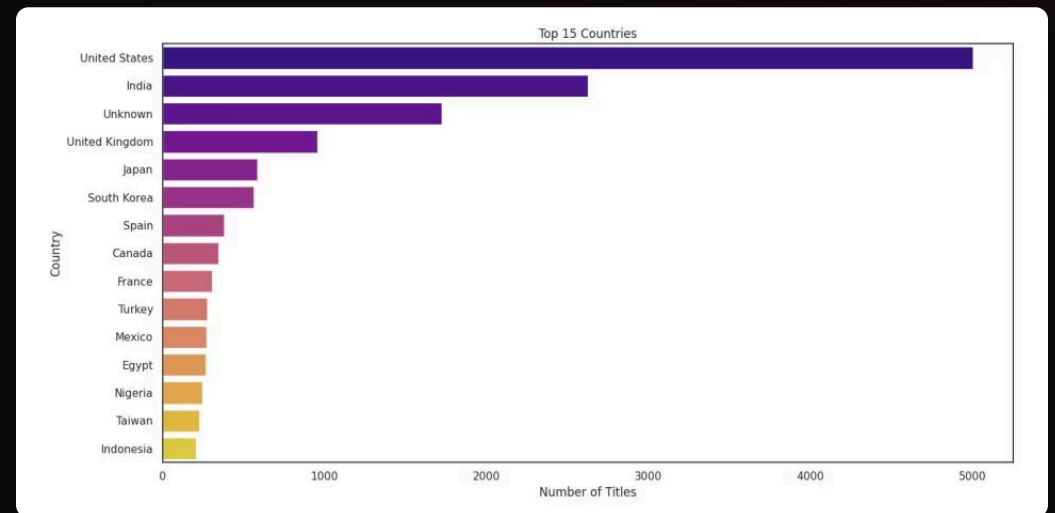
Top Countries Producing Content

1 United States

2 India

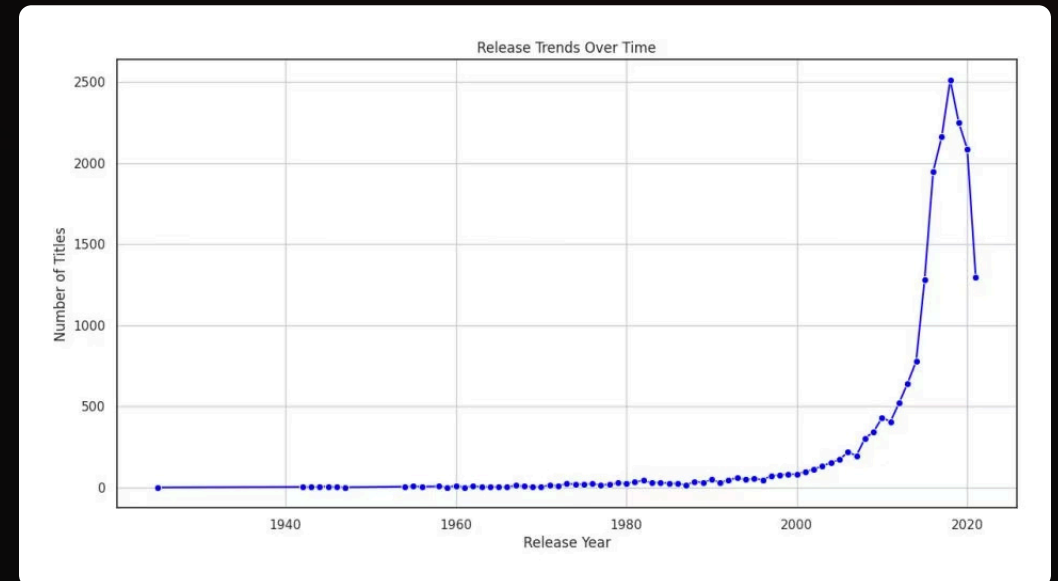
3 United Kingdom

4 South Korea



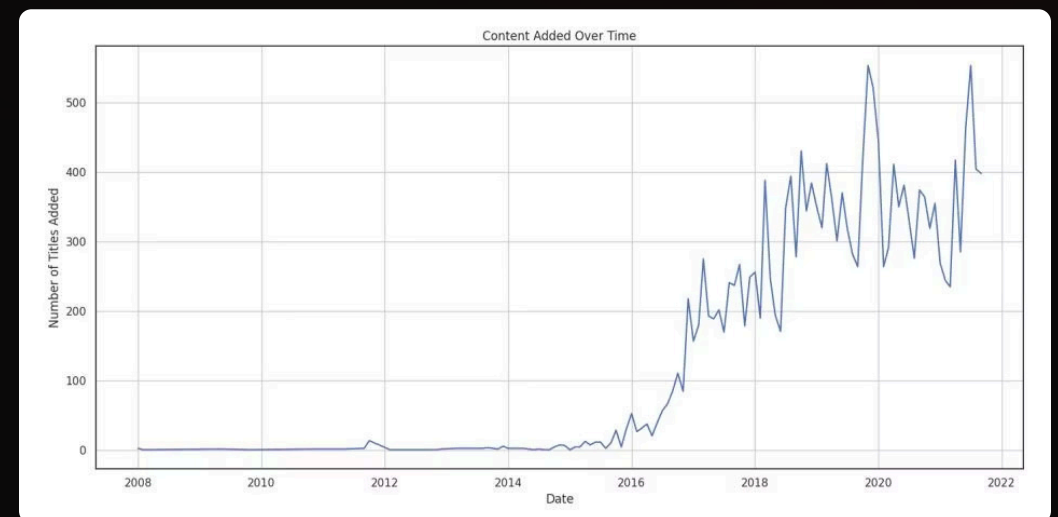
Content Release Trends Over Time

Number of titles released increased steadily, peaking around 2018–2020.



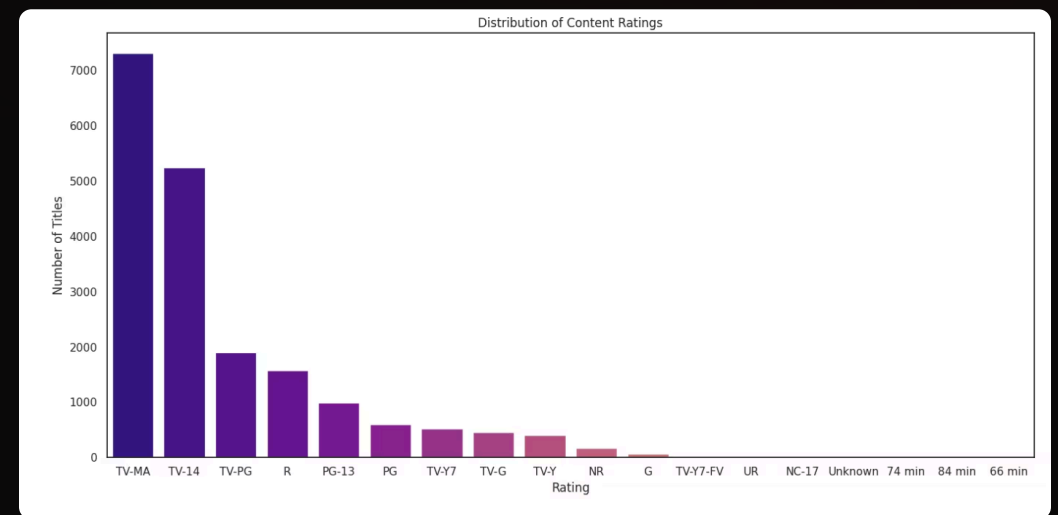
Content Added Over Time

This chart visualizes how Netflix's content library has grown over time, focusing on the monthly addition of new titles. The line chart helps us understand the consistency, spikes, or slowdowns in Netflix's content acquisition and release strategy. Trends observed can reflect business strategies, seasonal campaigns, or global events impacting content release.

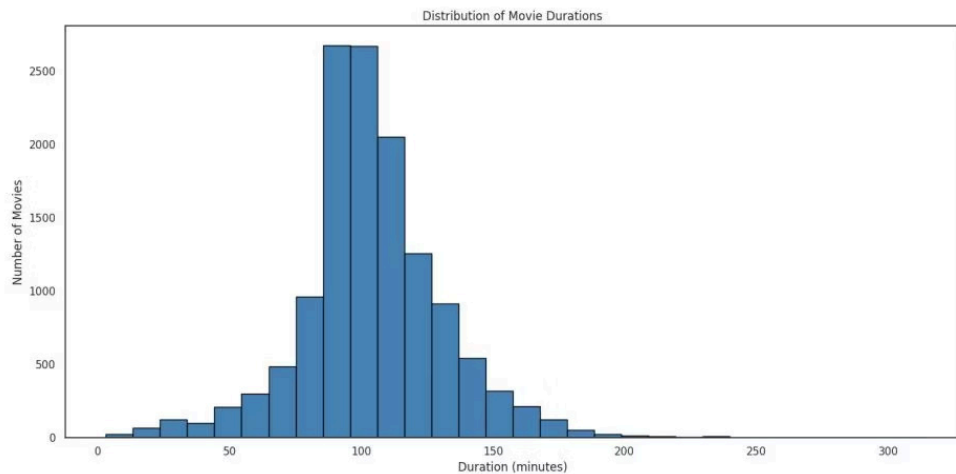


Content Rating Distribution

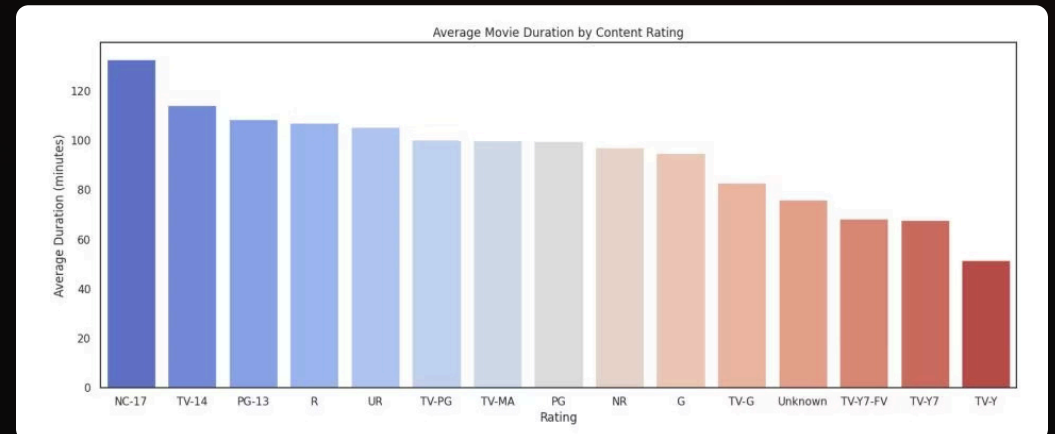
The chart showing content ratings like TV-MA, TV-14, PG, etc. Most content falls under mature ratings.



Duration & Rating Insights



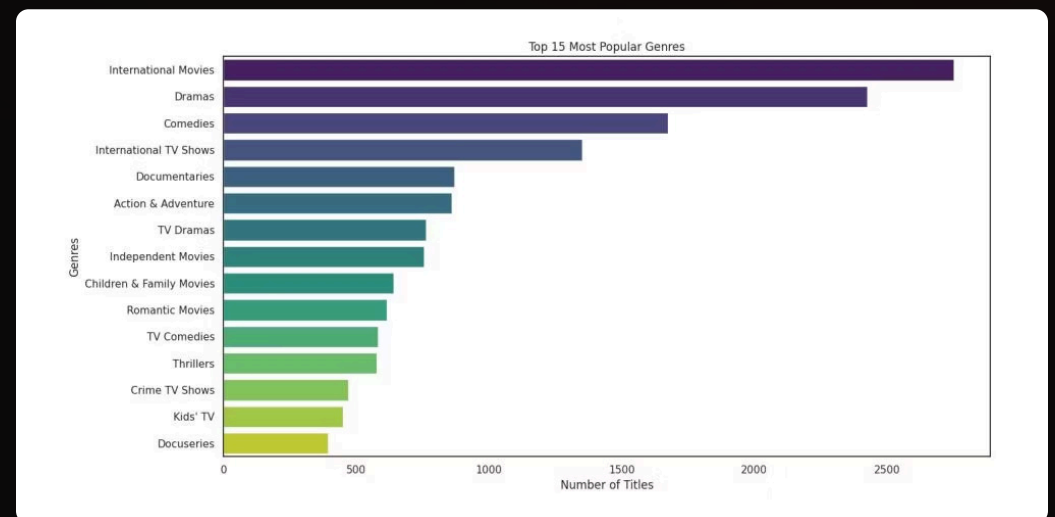
Movie durations mostly range between 80–120 minutes.



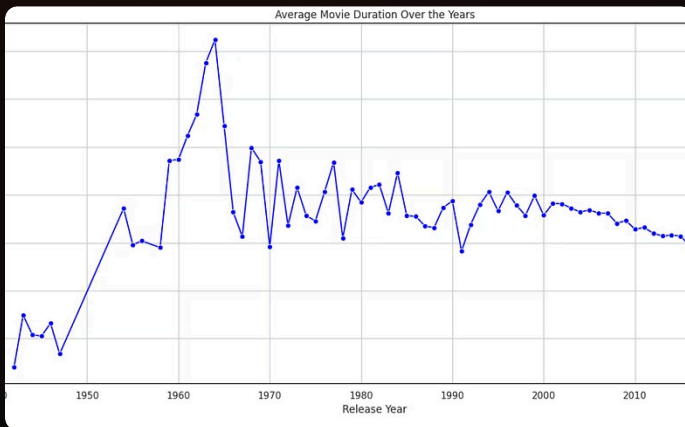
Average movie duration varies by rating, with unrated and NC-17 movies generally longer.

Genre Popularity

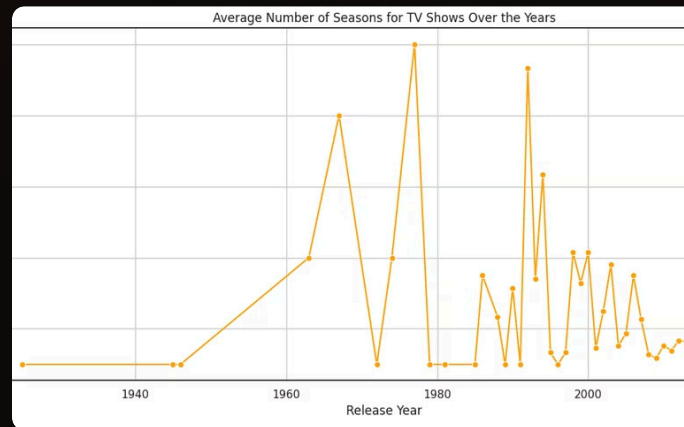
- International Movies and Dramas are the most common genres.
- Content diversity and volume have grown significantly over the years.
- US dominates content production, but international presence is strong.



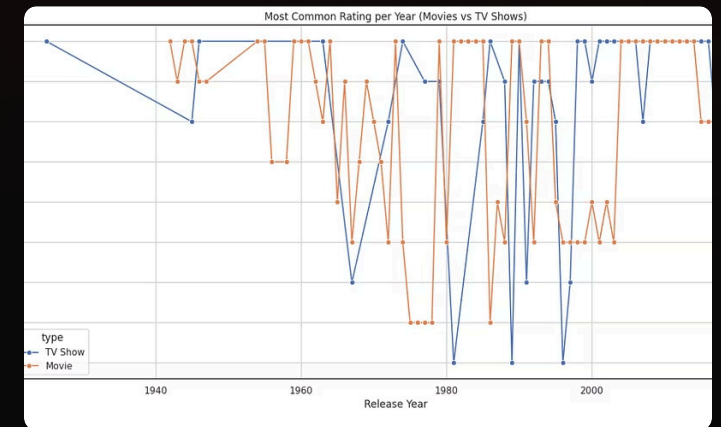
Duration and Rating Evolution



This chart shows average movie duration over years.



This chart shows average number of TV seasons over years.



This chart shows most common rating over years by type.

Conclusion

This analysis reveals how Netflix's expansion has diversified over the years in terms of genre, geography and content type. The data-driven trends provide valuable context for understanding consumer behavior and global content strategy.

- Netflix content surged after 2010.
- TV Shows and Movies have different duration and rating patterns.
- Genres like Drama, International, and Documentaries are most popular.
- USA and India lead in content contribution.
- Content ratings and duration show evolution over time.

References

Tools: Python (pandas, seaborn, matplotlib), Jupyter Notebook

LinkedIn- www.linkedin.com/in/abhishek-bhagat-15a005370

GitHub- https://github.com/Abhishek-0502-Bhagat/Netflix_Project

Dataset- https://drive.google.com/file/d/1z4DpDJOiryjzgwORGC5vBQDI_vJlvoJz/view?usp=drive_link