Netflix Business Case Study

1. Defining Problem Statement and Analyzing basic metrics

   Analyze the data and generate insights that could help Netflix in deciding which type of shows/movies to produce and how they can grow the business in different countries

   a. Shape - (8807, 12)
   b. Missing Values

```
: df.isna().sum()
```

```
: show_id              0
  type                 0
  title                0
  director          2634
  cast               825
  country            831
  date_added          10
  release_year         0
  rating               4
  duration             3
  listed_in            0
  description          0
  dtype: int64
```

   c. Data type

```
: df.dtypes
```

```
: show_id         object
  type            object
  title           object
  director        object
  cast            object
  country         object
  date_added      object
  release_year     int64
  rating          object
  duration        object
  listed_in       object
  description     object
  dtype: object
```

d. DataFrame statistics summary

```
In [1]: import numpy as np
        import pandas as pd
        import matplotlib.pyplot as plt
        import seaborn as sns

        df = pd.read_csv('netflix.csv')

In [18]: df.describe()

Out[18]:
```

	release_year
count	8807.000000
mean	2014.180198
std	8.819312
min	1925.000000
25%	2013.000000
50%	2017.000000
75%	2019.000000
max	2021.000000

2. Conversion of categorical attributes to 'category'
   Link - 📄 Conversion of categorical attributes to category.pdf

3. Non-Graphical Analysis: Value counts and unique attributes

   Below file was used when analysis only on movies was required
   Link - 📄 Movies Netlfix final.pdf

   Below file was used when analysis only on TV Shows was required
   Link - 📄 TV Shows Netflix final.pdf

4. Visual Analysis
   a. Top 20 countries contributing to Netflix
      Link - 📄 Top 20 countries.pdf

      ● What type of content is available in different countries?
        Link - 📄 What type of content is available in different countries_.pdf

   b. How has the number of movies released per year changed over the last 20-30 years?

Link - 📄 30 year release trend.pdf

c. Comparison of tv shows vs. movies.
Link - 📄 Content Breakdown % wise .pdf

d. What is the best time to launch a TV show?
Link - 📄 Best time to lauch tvshow or movie.pdf

e. Analysis of directors of different types of shows/movies.
Link - 📄 Director Genre Distribution.pdf

f. Analysis of actors of different types of shows/movies.
Link - 📄 Analysis of actor genre distribution.pdf

g. Does Netflix has more focus on TV Shows than movies in recent years
Link - 📄 Trend of Movie and TV Show Additions to Netflix Over Recent Years….

h. Duration comparison tv vs movies
Link - 📄 Duration comparison, boxplot and distplot.pdf

i. Popular Movie cast
Link - 📄 Popular Movie Cast.pdf

j. Popular Movie genre
Link - 📄 Popular Movie Genres.pdf

k. Popular movie director
Link - 📄 Popular movie director.pdf

l. Popular rating in tv and movie
Link - 📄 rating comparsion.pdf

m. Popular TV Show cast
Link - 📄 Popular TV Shows cast.pdf

n. Popular TV Show genre
Link - 📄 Popular TV Show Genres.pdf

o. Popular TV Show director
Link - 📄 Popular tv show director.pdf

q. How has the number of TV Shows released per year changed over the last 20-30 years?
Link - 📄 tv show release trend year wise.pdf

Assumptions and Challenges : -

- Most of the missing values are replaced with suitable modes from the data.
- Popularity is based on count of titles
- To improve performance, certain columns with an object data type were converted to the category data type
- Each season(TV Shows) consists of 10 episodes, with each episode having a duration of 30 minutes.
- Unnesting columns such as cast, country, and genre entry is separated into its own individual value, allowing for more granular analysis and filtering based on specific criteria.
- Columns with less than 10% missing data were dropped from the dataset. Columns with a small amount of missing values may not significantly contribute to the overall analysis.

Business Insights

Netflix, the popular streaming platform, has gained significant traction since 2014 and has become a dominant player in the entertainment industry. This report aims to provide an analysis of various aspects of Netflix content, including the most common content type, the country with the highest production, the most popular director, prevalent genres, dominant content rating, and the most prominent actors in TV shows and movies.

1. Content Type:
The most prevalent content type on Netflix is movies. While Netflix offers a diverse range of content, movies constitute a significant portion of their library, providing subscribers with a wide selection of cinematic experiences.

2. Content Growth:
Since 2014, the amount of content added to Netflix has witnessed a substantial increase. As the platform gained popularity, Netflix focused on expanding its library, offering a diverse range of movies and TV shows to cater to the preferences of its global audience.

3. Country of Production:
The United States stands out as the country with the highest volume of content produced on Netflix. American productions have contributed significantly to Netflix's extensive library, showcasing the creativity and talent of the American entertainment

industry. Following countries are India, United Kingdom, Canada, and France. Penetration in the west is evident here

4. Popular Director:
   Alstair Fothergrill and Ken Burns emerged as the most popular TV Show directors on Netflix, having directed the most titles on the platform. For movies, its Rajiv Chilaka and Jan Suter came as most popular directors, their work has resonated with audiences, and have garnered substantial viewership and acclaim on Netflix.

5. Genre Analysis:
   International Movies is a genre that predominates on Netflix both for movies and TV Shows. This genre showcases films from various countries, offering viewers a diverse range of storytelling styles, cultural perspectives, and cinematic experiences.Following places are held my drama and comedy

6. Content Rating:
   The largest count of Netflix content falls under the "TV-MA" and "TV-14" ratings. These ratings signify that the content may be unsuitable for children under 14 years of age and and only for mature audiences(17+) and may contain moderate violence, suggestive themes, or strong language. Netflix aims to provide a range of content suitable for different age groups and preferences. For instance Rajiv Chilaka who is very popular is making content for Children and family specifically

7. Popular Actor in TV Shows:
   Takahiro Sakurai is the most popular actor on Netflix TV shows, based on the number of titles they have appeared in. Also one thing to note is that the following popular cast(Yuki Kaji and Daisuke Ono) are from Japan too. Anime and similar contents are making them popular in TV Show

8. Popular Actor in Movies:
   Coming to popular actor in movies according to the visualization it's clearly evident that Vlad Yudin and Cathy Garcia Molina, but these are film makers so I think there is some skewness in the data that needs to be analyzed

9. Duration
   Preferred duration for movies is 90 to 120 minutes and for TV Shows it is 1 - 2 seasons

10. Recent year demand rise in movies vs TV Show
    Till 2019 the demand of movies compared to TV show was sharply rising and now this has taken a pause, we are seeing a tipping point for movies in recent years and trend is heading lower, even though similar sort of trend is visible for TV Shows, the rate at which decline is happening is very mild compared to movies for Tv Shows

Recommendations

1. If we observe the top contributors to Netflix, we can see a significant presence of Western countries. While the West has proven to be a cash cow in terms of content production and viewership, it may be worth considering a greater focus on other regions of the world. There are many untapped markets present that hold potential for growth and expansion.Instead of creating new content, we can first focus on native language dubs. By prioritizing the production of dubbed versions in the native languages of different regions, we can cater to a larger audience and tap into untapped markets. This approach allows us to provide localized viewing experiences and make Netflix more accessible and appealing to diverse global audiences.

2. When searching for new content on a regional basis, it is advisable to prioritize popular or proven content genres. By giving precedence to genres that have a track record of success and resonance with the target audience, we increase the likelihood of attracting viewers and achieving favorable reception.

   However, when exploring new genres, it is essential to track the past performance of directors and title role cast members in relation to specific genres. By examining their track record in delivering successful projects within a particular genre, we can assess their expertise and potential for creating engaging content in new and unexplored genres.

3. Until 2019, the demand for movies compared to TV shows was sharply rising. However, we are now witnessing a tipping point for movies, and the trend is heading downwards. The demand for movies has started to decline, indicating a shift in viewer preferences.

   Interestingly, a similar trend can be observed for TV shows, but the rate at which the decline is occurring is relatively mild compared to movies. This suggests that TV shows are experiencing a more gradual shift in popularity, and their demand remains relatively stable compared to the declining interest in movies.

   These trends highlight the evolving landscape of entertainment consumption, with viewers showing a preference for TV shows over movies in recent years. Content creators and platforms need to adapt to this changing demand and consider the shifting dynamics when planning their content strategies.

4. It is recommended to aim for a duration of 90 to 120 minutes for movies and a span of 2 seasons for TV shows when creating new content. Adhering to this framework can help ensure optimal viewer engagement and satisfaction.
   For movies, a duration of 90 to 120 minutes allows for a concise storytelling experience that captures the audience's attention without dragging the narrative. This duration is

generally well-suited for a single sitting and aligns with the typical viewer's attention span.

When it comes to TV shows, planning for a span of 2 seasons provides a balance between introducing a compelling storyline and allowing enough time for character development and plot progression. Two seasons offer an opportunity to engage viewers over an extended period while maintaining their interest and anticipation for subsequent seasons.

By considering these recommended durations, content creators can effectively structure their storytelling and pacing, ensuring that movies and TV shows deliver an enjoyable and satisfying experience for the audience.

5. Upon observation, it is generally considered favorable to launch TV shows during the months of July, June, and April. These months are often associated with increased viewership and engagement, making them optimal for releasing new TV show content. For movies, the recommended release months are July, June, September, and August. These months tend to coincide with peak moviegoing seasons and offer a higher potential for box office success and audience turnout.

   Considering these patterns, launching content towards the middle of the year, particularly in the months of July and June, could be a strategic decision. By doing so, content creators and distributors can take advantage of the heightened audience interest and engagement during these periods, maximizing the visibility and impact of their TV shows and movies.

   However, it's important to note that release strategies may vary depending on factors such as target audience, genre, competition, and marketing campaigns. Therefore, comprehensive market research and careful consideration of various factors should guide the final decision on the specific release timing for each individual project.