

Out [1]:



## Introduction :

Netflix, Inc. is an American innovation and media administrations supplier and production company headquartered in California. It was established in 1997 by Reed Hastings and Marc Randolph in California. The company's center commerce is a paid subscription-based video streaming service.

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## Import Libraries

```
In [2]: import numpy as np
import pandas as pd
import os
import seaborn as sns
import matplotlib.pyplot as plt
import plotly.express as px
```

## Loading and Checking Data ✓

```
In [3]: df = pd.read_csv("/Users/chethankarunakara/Desktop/Netflix_Price_Diffe
```

```
In [4]: df.columns
```

```
Out[4]: Index(['Country', 'Total Library Size', 'No. of TV Shows', 'No. of Mo  
vies',  
              'Cost Per Month - Basic ($)', 'Cost Per Month - Standard ($)',  
              'Cost Per Month - Premium ($)'],  
            dtype='object')
```

```
In [5]: df.head(10)
```

```
Out[5]:
```

	Country	Total Library Size	No. of TV Shows	No. of Movies	Cost Per Month - Basic (\$)	Cost Per Month - Standard (\$)	Cost Per Month - Premium (\$)
0	Argentina	4760	3154	1606	3.74	6.30	9.26
1	Austria	5640	3779	1861	9.03	14.67	20.32
2	Bolivia	4991	3155	1836	7.99	10.99	13.99
3	Bulgaria	6797	4819	1978	9.03	11.29	13.54
4	Chile	4994	3156	1838	7.07	9.91	12.74
5	Colombia	4991	3156	1835	4.31	6.86	9.93
6	Costa Rica	4988	3152	1836	8.99	12.99	15.99
7	Croatia	2274	1675	599	9.03	11.29	13.54
8	Czechia	7325	5234	2091	8.83	11.49	14.15
9	Ecuador	4992	3155	1837	7.99	10.99	13.99

In [6]: `df.tail(5)`

Out [6]:

	Country	Total Library Size	No. of TV Shows	No. of Movies	Cost Per Month - Basic (\$)	Cost Per Month - Standard (\$)	Cost Per Month - Premium (\$)
60	Ireland	6486	4515	1971	9.03	14.67	20.32
61	Switzerland	5506	3654	1852	12.88	20.46	26.96
62	Australia	6114	4050	2064	7.84	12.12	16.39
63	Denmark	4558	2978	1580	12.00	15.04	19.60
64	United States	5818	3826	1992	8.99	13.99	17.99

In [7]: `df.describe()`

Out [7]:

	Total Library Size	No. of TV Shows	No. of Movies	Cost Per Month - Basic (\$)	Cost Per Month - Standard (\$)	Cost Per Month - Premium (\$)
<b>count</b>	65.000000	65.000000	65.000000	65.000000	65.000000	65.000000
<b>mean</b>	5314.415385	3518.953846	1795.461538	8.368462	11.990000	15.612923
<b>std</b>	980.322633	723.010556	327.279748	1.937819	2.863979	4.040672
<b>min</b>	2274.000000	1675.000000	373.000000	1.970000	3.000000	4.020000
<b>25%</b>	4948.000000	3154.000000	1628.000000	7.990000	10.710000	13.540000
<b>50%</b>	5195.000000	3512.000000	1841.000000	8.990000	11.490000	14.450000
<b>75%</b>	5952.000000	3832.000000	1980.000000	9.030000	13.540000	18.060000
<b>max</b>	7325.000000	5234.000000	2387.000000	12.880000	20.460000	26.960000

## Variable Description 🚀

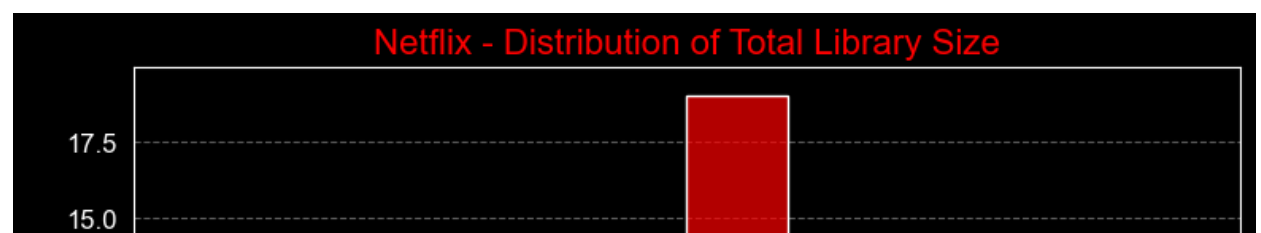
- **Country:** Some countries where Netflix is used.
- **Total Library Size:** Total number of movies and TV series aired in the country.
- **No. of TV Shows:** Total number of TV series broadcast in the country.
- **No. of Movies:** Total number of movies released in the country.
- **Cost Per Month - Basic:** The monthly price of the "basic package".
- **Cost Per Month - Standard:** The monthly price of the "standard package".
- **Cost Per Month - Premium:** The monthly price of the "premium package".

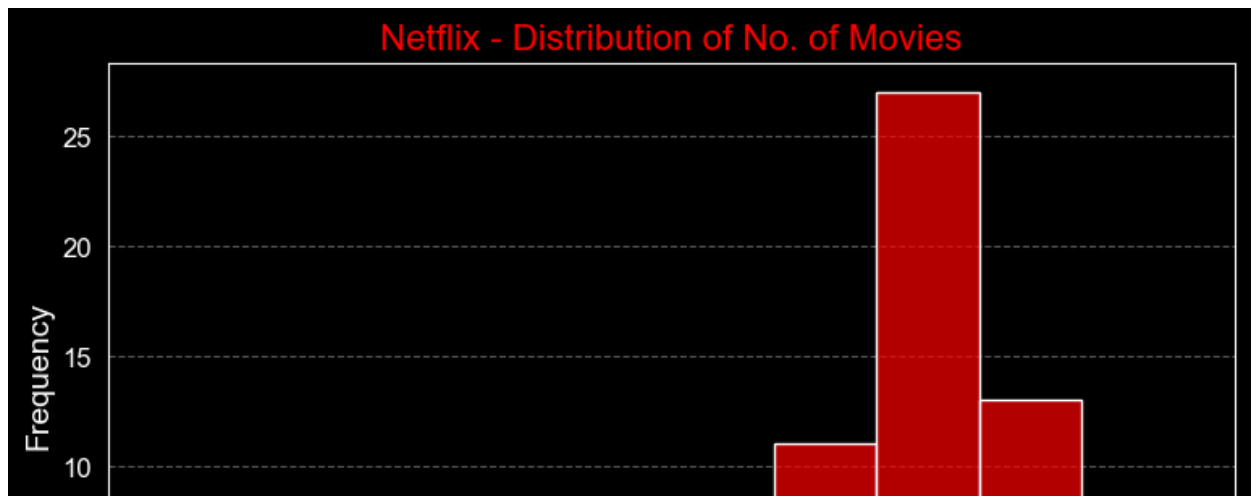
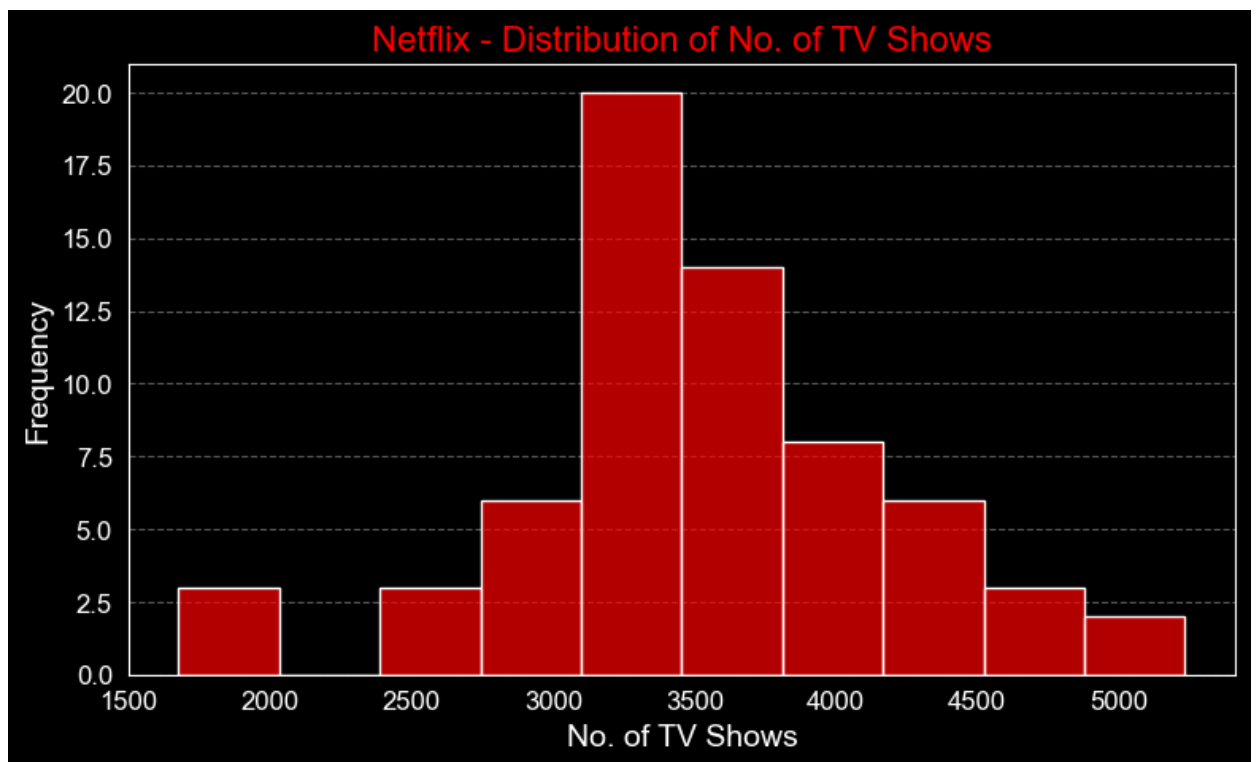
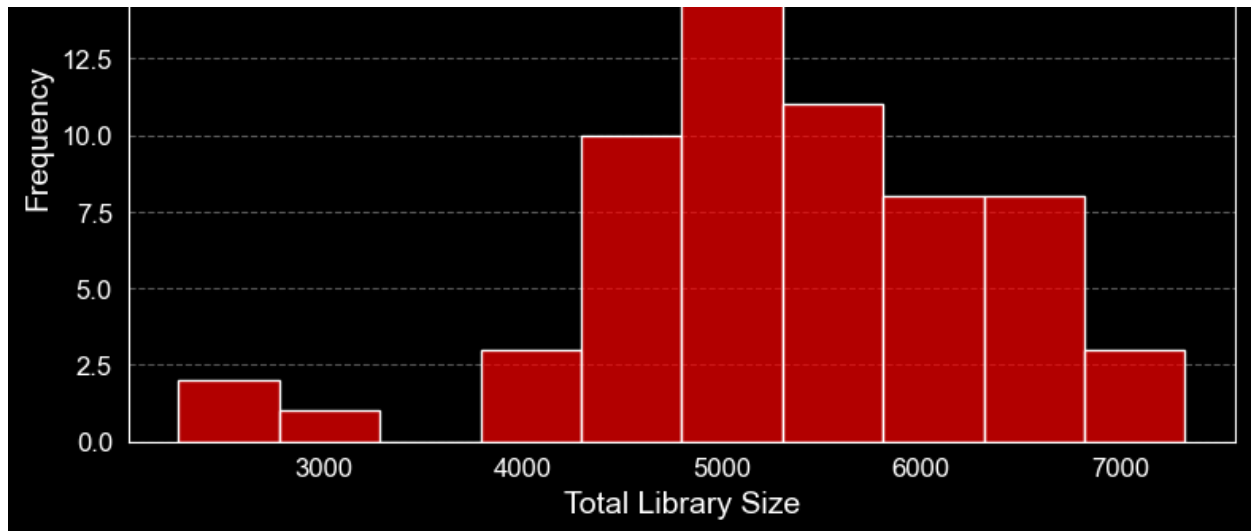
In [8]: `df.info()` # Checking if there are any Null Values

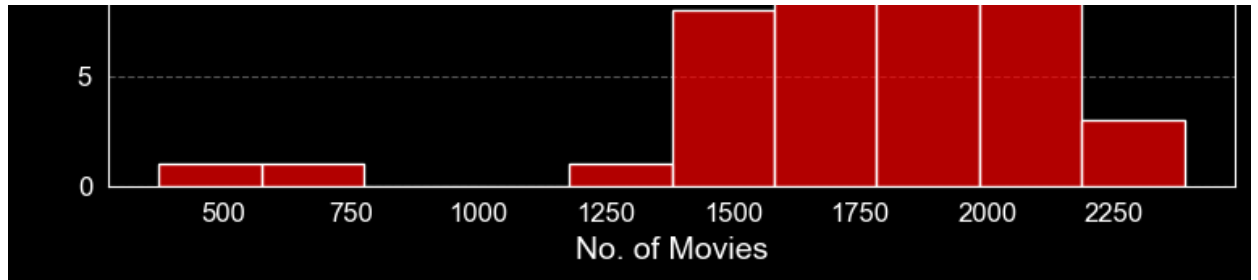
```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 65 entries, 0 to 64
Data columns (total 7 columns):
#   Column                                     Non-Null Count  Dtype
---  -
0   Country                                   65 non-null     object
1   Total Library Size                       65 non-null     int64
2   No. of TV Shows                         65 non-null     int64
3   No. of Movies                           65 non-null     int64
4   Cost Per Month - Basic ($)               65 non-null     float64
5   Cost Per Month - Standard ($)            65 non-null     float64
6   Cost Per Month - Premium ($)             65 non-null     float64
dtypes: float64(3), int64(3), object(1)
memory usage: 3.7+ KB
```

## Univariate Variable Analysis ⚠️

- **Categorical Variable :** Country
- **Numerical Variable :** Total Library Size, No. of TV Shows, No. of Movies, Cost Per Month - Basic, Cost Per Month - Standard, Cost Per Month - Premium







## Missing Value

### Finding Missing Value

In [10]: `df.columns[df.isnull().any()]`

Out[10]: Index([], dtype='object')

In [11]: `df.isnull().sum()`

```
Out[11]: Country                0
Total Library Size             0
No. of TV Shows                0
No. of Movies                  0
Cost Per Month - Basic ($)     0
Cost Per Month - Standard ($)  0
Cost Per Month - Premium ($)   0
dtype: int64
```

**Result no empty data.** 

## Unique Values

In [12]: `df.Country.unique()`

Out[12]: `array(['Argentina', 'Austria', 'Bolivia', 'Bulgaria', 'Chile', 'Colombia', 'Costa Rica', 'Croatia', 'Czechia', 'Ecuador', 'Estonia', 'France', 'Germany', 'Gibraltar', 'Greece', 'Guatemala', 'Honduras', 'Hong Kong', 'Iceland', 'India', 'Israel', 'Italy', 'Japan', 'Liechtenstein', 'Malaysia', 'Mexico', 'Moldova', 'Monaco', 'Norway', 'Paraguay', 'Peru', 'Philippines', 'Poland', 'Romania', 'Russia', 'San Marino', 'Slovakia', 'South Africa', 'South Korea', 'Taiwan', 'Thailand', 'Turkey', 'Ukraine', 'Uruguay', 'Venezuela', 'Belgium', 'Singapore', 'Finland', 'Latvia', 'New Zealand', 'Hungary', 'Portugal', 'Netherlands', 'Sweden', 'Canada', 'Lithuania', 'Spain', 'United Kingdom', 'Indonesia', 'Brazil', 'Ireland', 'Switzerland', 'Australia', 'Denmark', 'United States'], dtype=object)`

In [13]: `df.Country.unique().size`

Out[13]: 65

`<a id = "9"></a><br>`

## # Data Visualization

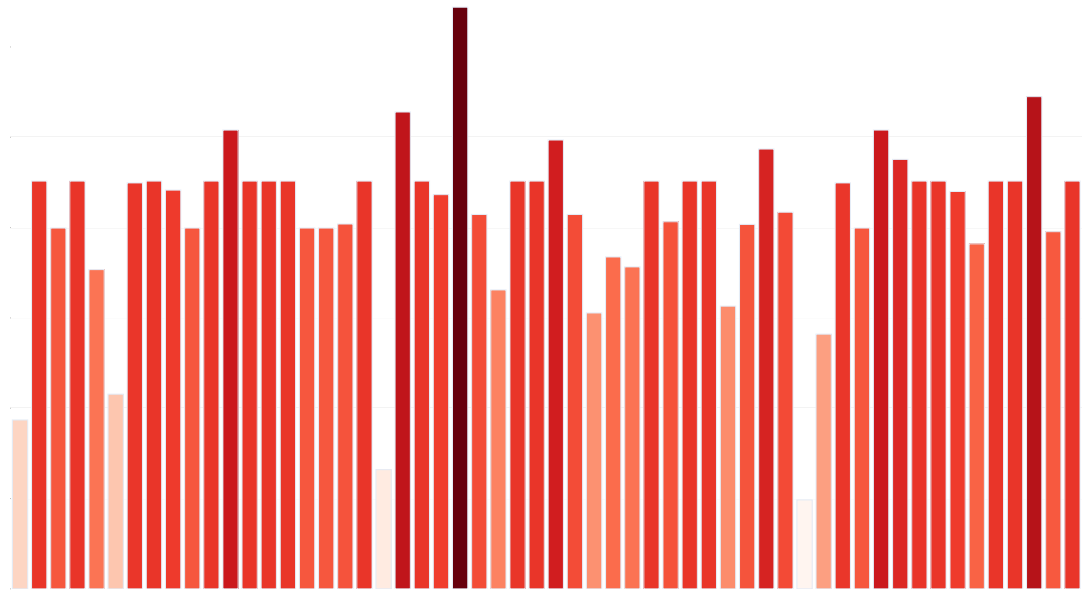
Visualization libraries such as `__seaborn, matplotlib and plotly__` are used here.

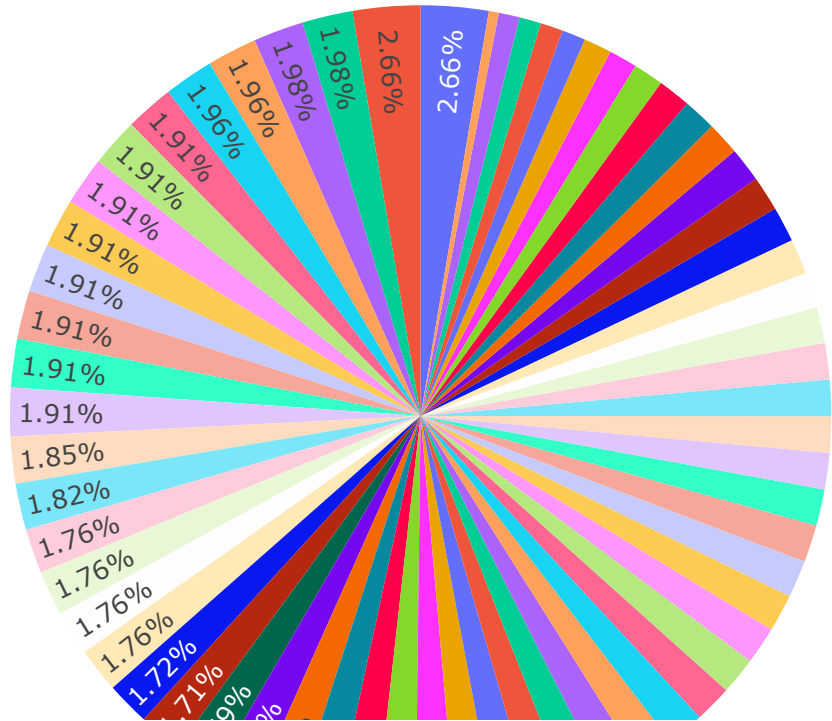
## Plotly

- The prices of basic, standard and premium packages by country were visualized.



## Netflix - Cost Per Month by Country





## **Geographical Pricing Strategy:**

Netflix employs a region-based pricing strategy. The cost variation across countries could be influenced by several factors including local economic conditions, average income levels, purchasing power parity, and local competition. For example, a higher price in one country might be due to greater purchasing power or less competition from other streaming services.

## **Market Penetration Goals:**

Netflix sometimes set lower prices in emerging markets to attract more subscribers and achieve market penetration. The goal might be to build a customer base quickly, especially in regions where digital streaming might be a relatively new concept.

## **Cost Adaptation to Local Content and Licensing:**

The cost may also reflect the amount and type of content available in each country. Licensing agreements for content are negotiated on a country-by-country basis, and the cost structure might reflect these agreements. Some countries might have a rich catalog of local content that's less expensive to license, allowing for lower subscription costs.

## **Strategic Positioning:**

In some countries, Netflix might face stiff competition from local streaming services, which could force it to adopt a more aggressive pricing strategy. Conversely, in markets where it holds a dominant position, it might price its services higher due to the lack of significant competition.

## **Cultural Value of Media Consumption:**

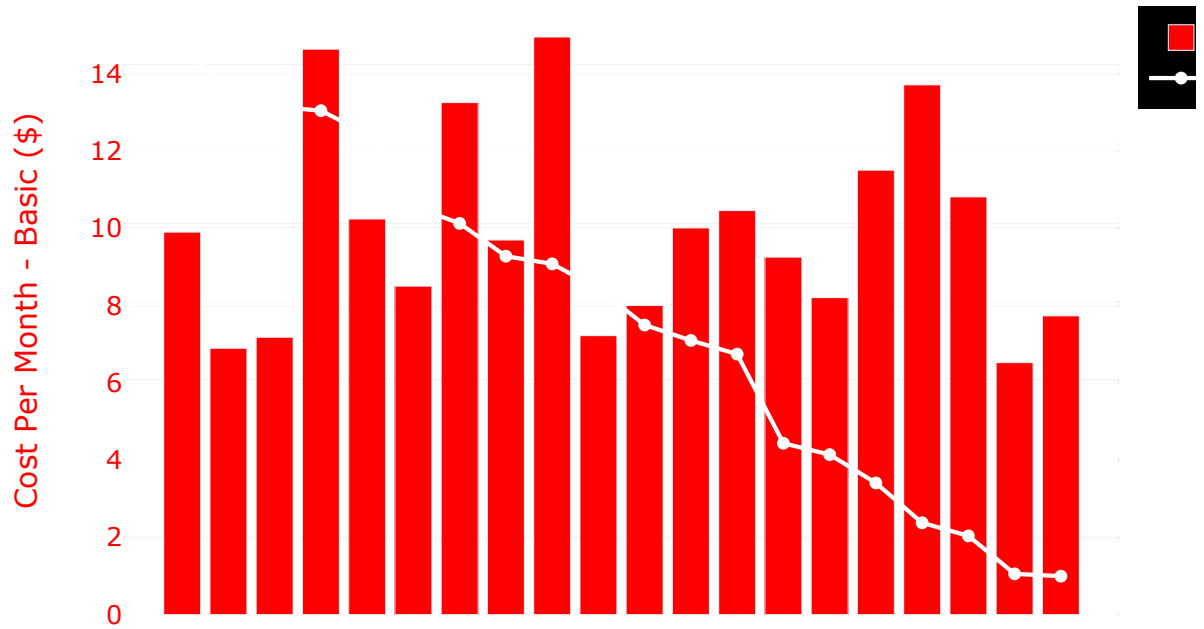
In cultures where media consumption is highly valued and paid subscriptions are a norm, Netflix might price its services higher due to the higher perceived value. Conversely, in countries where free-to-air TV or piracy is rampant, they may need to lower the price to make the legal option more attractive.

## **Why is Switzerland and Liechtenstein are so high ??**

Cost of Living and Purchasing Power comes into play here the cost of living and average income are higher than in the United States. This could mean that consumers in these countries are able to afford higher subscription prices. The size and quality of the content library can vary significantly by country. In some countries, Netflix may offer a larger or more desirable selection of shows and movies, which can justify a higher subscription cost. Some European countries have a higher willingness to pay for digital services, which could explain why the prices are higher despite not all being classified as more developed than the US.

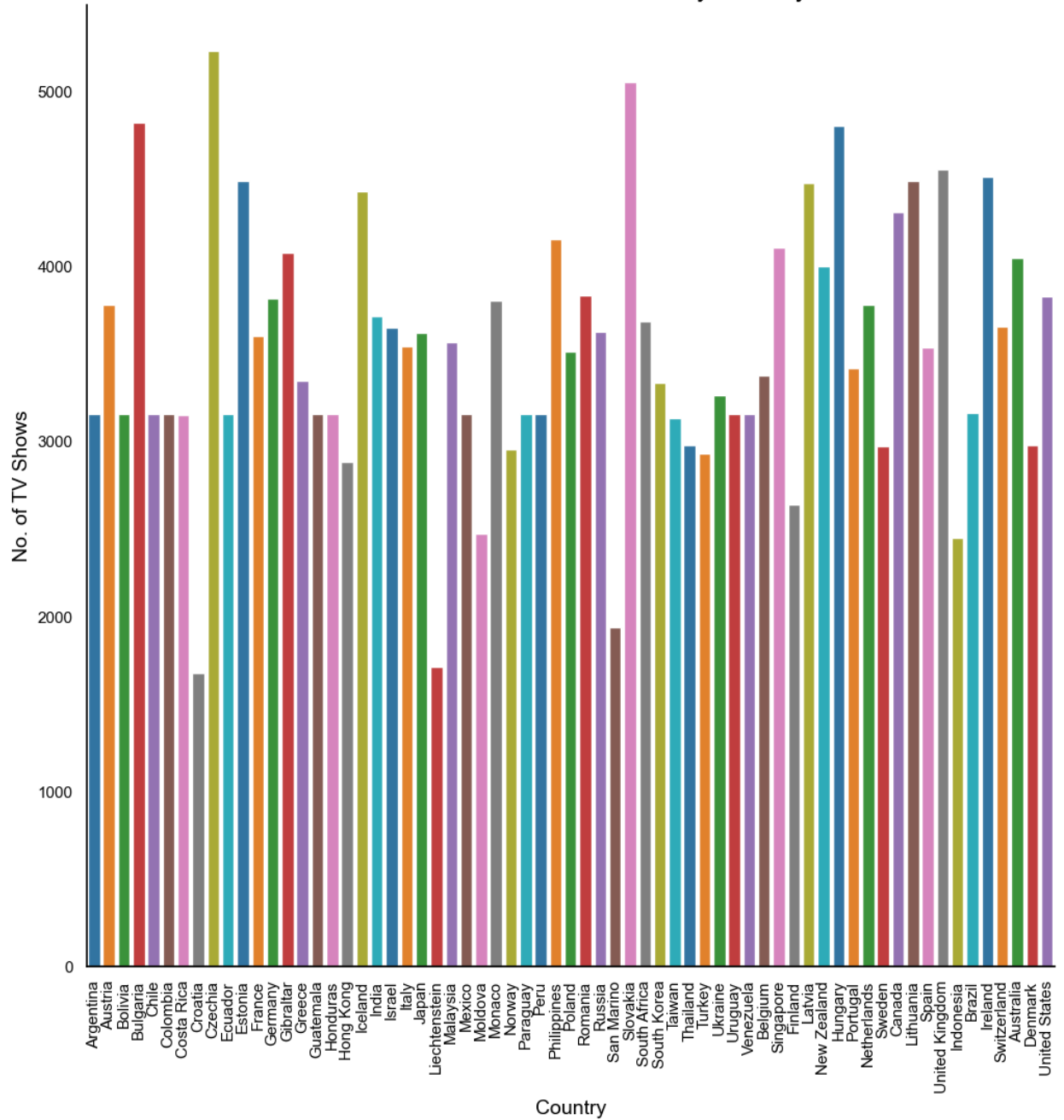
## **Diffrence with Pricing and Library Size**

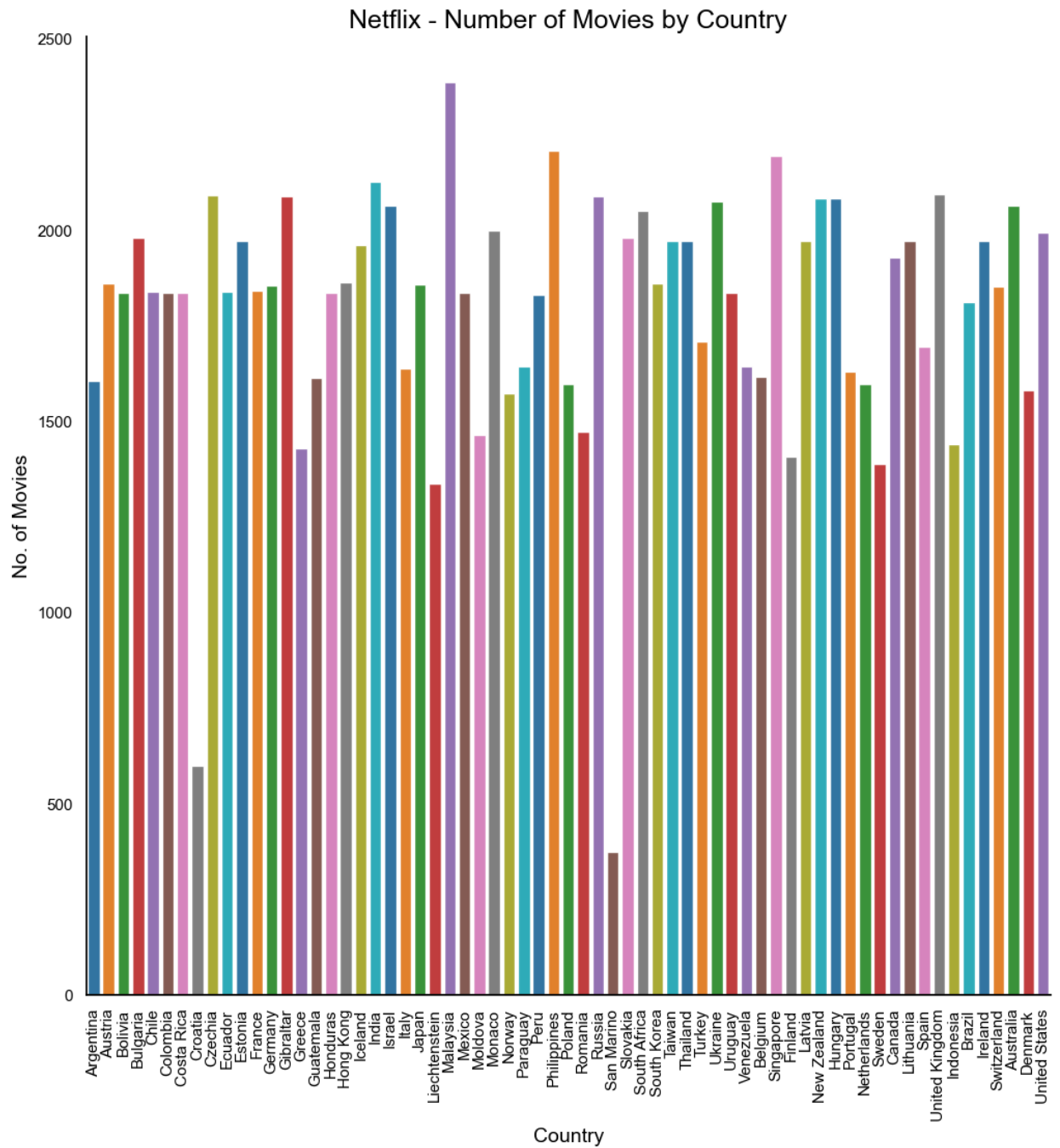
The graph depicting Netflix's library size against the subscription cost for selected countries reveals a nuanced pricing strategy. It appears that the subscription cost doesn't always correlate with the total library size, suggesting that factors beyond content volume influence pricing. For instance, higher-priced regions might reflect Netflix's market dominance or higher operating costs, while a larger library size in more competitive or economically diverse regions doesn't necessarily equate to higher prices, possibly due to strategic pricing to attract subscribers. This indicates that Netflix tailors its offerings and pricing to local market dynamics rather than adopting a one-size-fits-all approach.

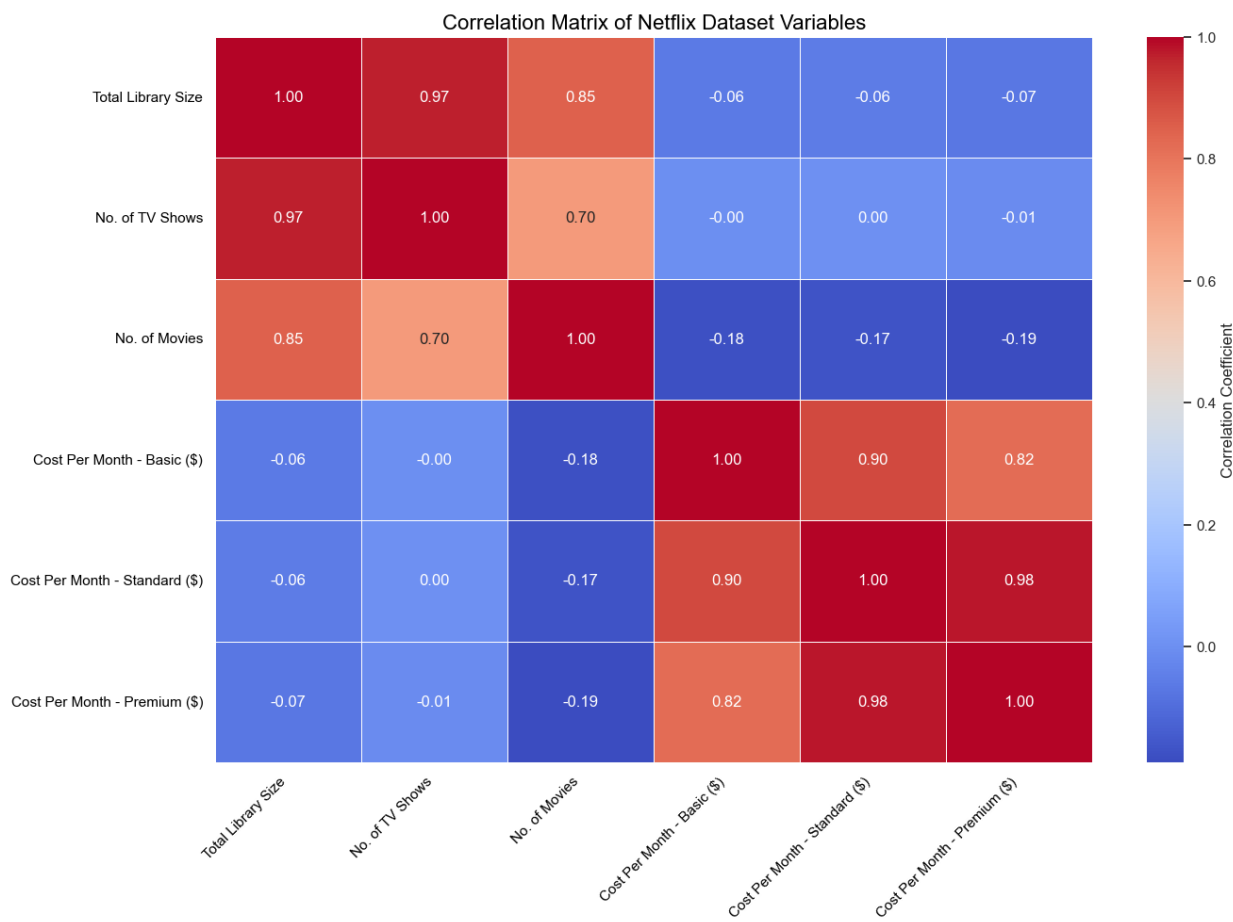


Seaborn🌟

Netflix - Number of TV Shows by Country



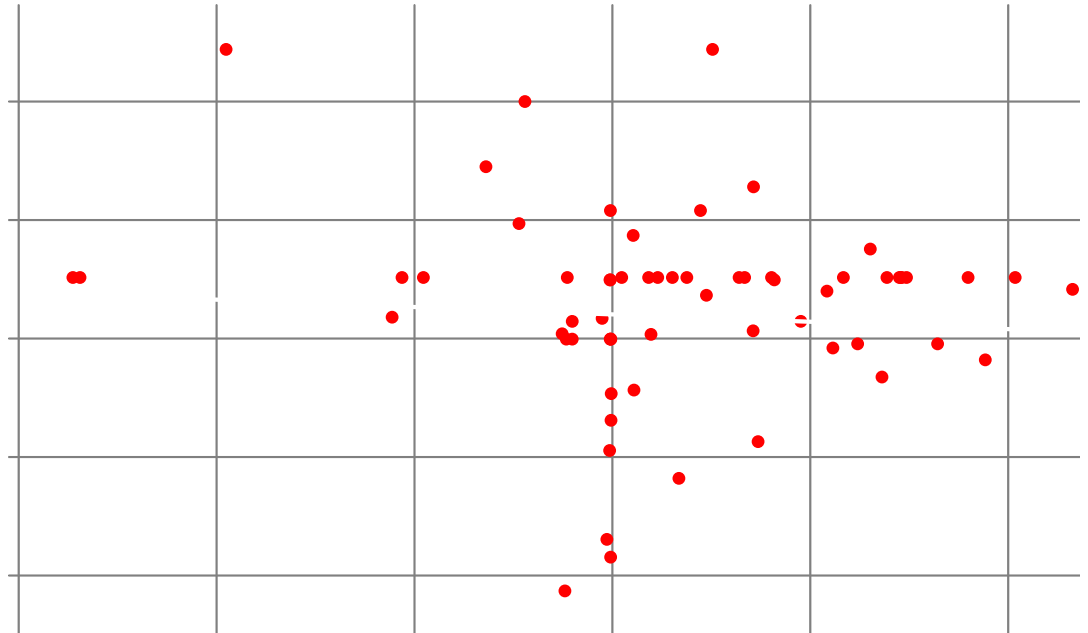




## Linear regression Analysis and its Results:

This result had The R-squared value obtained from the regression analysis was very low, indicating that the linear model does not effectively predict the 'Cost Per Month - Basic (\$)' based on 'Total Library Size'. This suggests that the relationship between these two variables is not strongly linear, and other factors might influence subscription costs.





## Diverse Pricing Strategy:

The scatter plot and subsequent analysis imply that Netflix employs a diverse pricing strategy across different countries, which does not strictly depend on the total library size. Factors such as local economic conditions, licensing agreements, competitive landscape, and market penetration goals likely play significant roles in determining subscription prices.

## Netflix's Global Strategy:

The variation in both 'Total Library Size' and 'Cost Per Month - Basic (\$)' across countries highlights Netflix's tailored approach to each market. This adaptability allows Netflix to cater to local preferences and conditions, optimizing its service for global audiences.

## Conclusion

This data visualization project on Netflix's global library and pricing strategy revealed the intricate balance between content volume and subscription costs across different markets. Through aesthetically engaging and interactive charts, we observed that pricing does not solely depend on library size, suggesting a nuanced approach to market penetration and competition. The weak correlation between the number of shows/movies and subscription cost highlighted the influence of other regional factors. Despite the challenges in establishing a strong linear relationship, the visual analysis offered valuable insights into Netflix's adaptable global strategy. Future explorations could benefit from incorporating broader datasets and multidimensional analysis to fully understand the streaming giant's positioning and decision-making process.

In [ ]: