Analysis on Netflix Movies & TV Shows

December 8, 2022

```
[4]: #!pip install jovian --upgrade #--quiet
```

1   importing Important Library

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

2   Loading the dataset

```
[6]: Netflix_df= pd.read_csv('/home/miracle/Documents/Data_Analysis/netflix_titles.
      ↪csv')
```

```
[7]: Netflix_df.head(5)
```

```
[7]:   show_id     type                      title           director  \
     0      s1    Movie   Dick Johnson Is Dead   Kirsten Johnson
     1      s2  TV Show          Blood & Water              NaN
     2      s3  TV Show              Ganglands   Julien Leclercq
     3      s4  TV Show   Jailbirds New Orleans             NaN
     4      s5  TV Show           Kota Factory             NaN


                                                       cast        country  \
     0                                                  NaN   United States
     1   Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban…    South Africa
     2   Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi…            NaN
     3                                                  NaN            NaN
     4   Mayur More, Jitendra Kumar, Ranjan Raj, Alam K…          India


               date_added  release_year rating   duration  \
     0  September 25, 2021          2020  PG-13     90 min
     1  September 24, 2021          2021  TV-MA   2 Seasons
     2  September 24, 2021          2021  TV-MA    1 Season
```

```
3  September 24, 2021        2021  TV-MA   1 Season
4  September 24, 2021        2021  TV-MA   2 Seasons

                                            listed_in  \
0                                        Documentaries
1      International TV Shows, TV Dramas, TV Mysteries
2    Crime TV Shows, International TV Shows, TV Act…
3                               Docuseries, Reality TV
4    International TV Shows, Romantic TV Shows, TV …

                                          description
0  As her father nears the end of his life, filmm…
1  After crossing paths at a party, a Cape Town t…
2  To protect his family from a powerful drug lor…
3  Feuds, flirtations and toilet talk go down amo…
4  In a city of coaching centers known to train I…
```

[8]:
```python
print(Netflix_df.size, Netflix_df.shape, Netflix_df.ndim)
```

```
105684 (8807, 12) 2
```

3 Data preparation and cleaning

[11]:
```python
Netflix_df.info() #Viewing data summary
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 8807 entries, 0 to 8806
Data columns (total 12 columns):
 #   Column        Non-Null Count  Dtype
---  ------        --------------  -----
 0   show_id       8807 non-null   object
 1   type          8807 non-null   object
 2   title         8807 non-null   object
 3   director      6173 non-null   object
 4   cast          7982 non-null   object
 5   country       7976 non-null   object
 6   date_added    8797 non-null   object
 7   release_year  8807 non-null   int64
 8   rating        8803 non-null   object
 9   duration      8804 non-null   object
 10  listed_in     8807 non-null   object
 11  description   8807 non-null   object
dtypes: int64(1), object(11)
memory usage: 825.8+ KB
```

[12]:
```python
Netflix_df.nunique()
```

```
[12]: show_id        8807
      type              2
      title          8807
      director       4528
      cast           7692
      country         748
      date_added     1767
      release_year     74
      rating           17
      duration        220
      listed_in       514
      description    8775
      dtype: int64
```

```
[13]: Netflix_df.nunique().sum()
```

```
[13]: 41951
```

4 Checking and handling null values

```
[32]: Netflix_df.isnull().any()
```

```
[32]: show_id        False
      type           False
      title          False
      director       False
      cast           False
      country        False
      date_added      True
      release_year   False
      rating          True
      duration        True
      listed_in      False
      description    False
      dtype: bool
```

```
[14]: #Check if there is any null values
      Netflix_df.isnull().values.any()
```

```
[14]: True
```

```
[22]: # Let's display the null values
      Netflix_df.isnull().sum()
```

```
[22]: 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
```

[16]:
```
total_nullvalues= Netflix_df.isnull().sum().sum()
total_nullvalues
```

[16]: 4307

[17]:
```
# percentages of nullvalues
total_cell= Netflix_df.size
percentage_null= (total_nullvalues/total_cell)*100
percentage_null
```

[17]: 4.075356723818175

[18]:
```
Netflix_df.isnull()
```

[18]:

	show_id	type	title	director	cast	country	date_added \
0	False	False	False	False	True	False	False
1	False	False	False	True	False	False	False
2	False	False	False	False	False	True	False
3	False	False	False	True	True	True	False
4	False	False	False	True	False	False	False
...	...	...	...	...	...	...	...
8802	False	False	False	False	False	False	False
8803	False	False	False	True	True	True	False
8804	False	False	False	False	False	False	False
8805	False	False	False	False	False	False	False
8806	False	False	False	False	False	False	False

	release_year	rating	duration	listed_in	description
0	False	False	False	False	False
1	False	False	False	False	False
2	False	False	False	False	False
3	False	False	False	False	False
4	False	False	False	False	False
...	...	...	...	...	...
8802	False	False	False	False	False

```
8803            False   False       False       False       False
8804            False   False       False       False       False
8805            False   False       False       False       False
8806            False   False       False       False       False

[8807 rows x 12 columns]
```
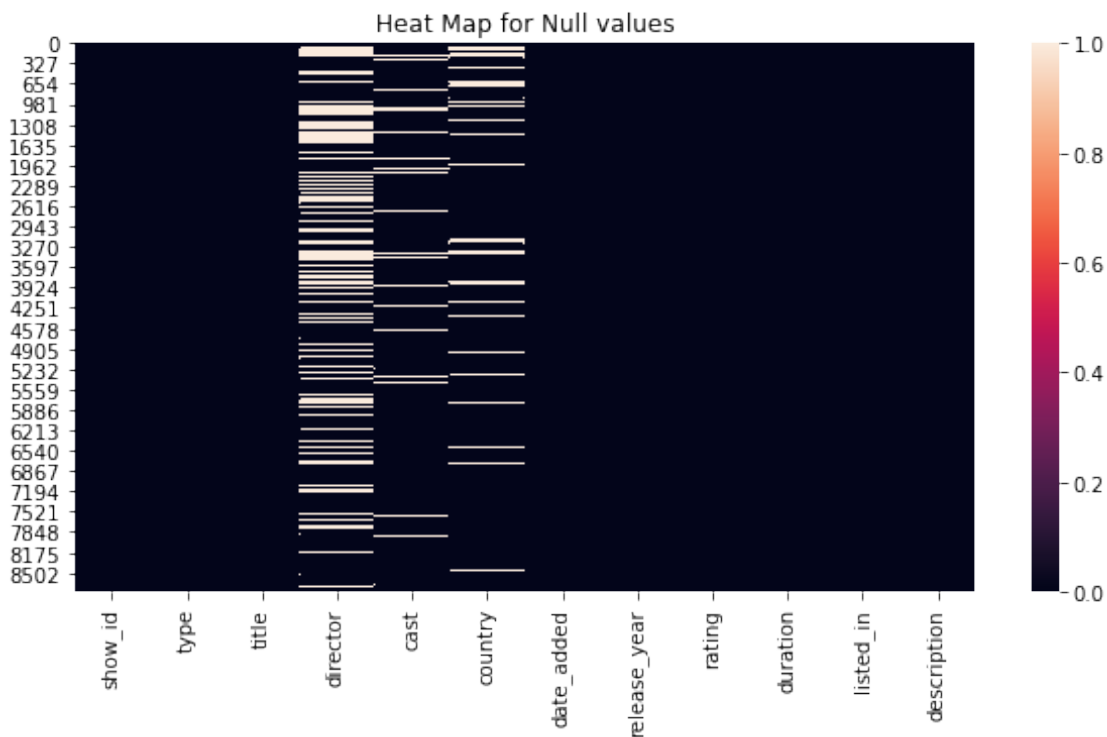
[24]:
```python
# ploting heat map of Netflix_df.isnull()
plt.figure(figsize=(10,5))
sns.heatmap(Netflix_df.isnull())
plt.title('Heat Map for Null values')
```

[24]: Text(0.5, 1.0, 'Heat Map for Null values')

[31]:
```python
# The two ways to deal with Not a Number(NaN) is by (a) fillna and (b) dropna.
#We use dropna when the number is small or insignificant
Netflix_df['director'].fillna('No director',inplace=True)
Netflix_df['cast'].fillna('No cast',inplace=True)
Netflix_df['country'].fillna(0,inplace=True)
#Netflix_df.dropna('date_added',axis=1)
#Netflix_df.dropna(subset=['date_added','rating','duration'], inplace=True)
```

[29]:
```python
Netflix_df.head(5)
```

```
[29]:   show_id     type                       title         director  \
    0       s1    Movie       Dick Johnson Is Dead  Kirsten Johnson
    1       s2  TV Show              Blood & Water      No director
    2       s3  TV Show                  Ganglands  Julien Leclercq
    3       s4  TV Show      Jailbirds New Orleans      No director
    4       s5  TV Show                Kota Factory      No director

                                                    cast        country  \
    0                                            No cast  United States
    1  Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban…   South Africa
    2  Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi…              0
    3                                            No cast              0
    4  Mayur More, Jitendra Kumar, Ranjan Raj, Alam K…          India

                 date_added  release_year rating   duration  \
    0  September 25, 2021            2020  PG-13     90 min
    1  September 24, 2021            2021  TV-MA   2 Seasons
    2  September 24, 2021            2021  TV-MA    1 Season
    3  September 24, 2021            2021  TV-MA    1 Season
    4  September 24, 2021            2021  TV-MA   2 Seasons

                                             listed_in  \
    0                                     Documentaries
    1        International TV Shows, TV Dramas, TV Mysteries
    2    Crime TV Shows, International TV Shows, TV Act…
    3                           Docuseries, Reality TV
    4    International TV Shows, Romantic TV Shows, TV …

                                            description
    0  As her father nears the end of his life, filmm…
    1  After crossing paths at a party, a Cape Town t…
    2  To protect his family from a powerful drug lor…
    3  Feuds, flirtations and toilet talk go down amo…
    4  In a city of coaching centers known to train I…
```

```
[17]: Netflix_df.isnull().values.any()
```

```
[17]: False
```

```
[18]: Netflix_df.isnull().any()
```

```
[18]: show_id        False
      type           False
      title          False
      director       False
      cast           False
      country        False
```

```
date_added      False
release_year    False
rating          False
duration        False
listed_in       False
description     False
dtype: bool
```

[19]: `print(Netflix_df.size, Netflix_df.shape)`

```
105480 (8790, 12)
```

5 Splitting the dataset into two according to type(movies/ Tv shows)

[20]: `Netflix_df.head(2)`

[20]:
```
  show_id     type                title          director  \
0      s1    Movie  Dick Johnson Is Dead  Kirsten Johnson
1      s2  TV Show        Blood & Water       No director

                                                cast       country  \
0                                            No cast  United States
1  Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban…   South Africa

           date_added  release_year rating   duration  \
0  September 25, 2021          2020  PG-13     90 min
1  September 24, 2021          2021  TV-MA  2 Seasons

                                   listed_in  \
0                              Documentaries
1  International TV Shows, TV Dramas, TV Mysteries

                                 description
0  As her father nears the end of his life, filmm…
1  After crossing paths at a party, a Cape Town t…
```

[21]:
```python
# Splitting the dataset according to type (Movies and Tv show)
# For Movies
Netflix_Movie =Netflix_df[Netflix_df['type']=='Movie']
Netflix_Movie.head(4)
```

[21]:
```
  show_id   type                            title  \
0      s1  Movie             Dick Johnson Is Dead
6      s7  Movie  My Little Pony: A New Generation
7      s8  Movie                          Sankofa
```

```
9       s10  Movie                    The Starling
```

```
                                director  \
0                    Kirsten Johnson
6   Robert Cullen, José Luis Ucha
7                     Haile Gerima
9                    Theodore Melfi
```

```
                                            cast  \
0                                        No cast
6   Vanessa Hudgens, Kimiko Glenn, James Marsden, …
7   Kofi Ghanaba, Oyafunmike Ogunlano, Alexandra D…
9   Melissa McCarthy, Chris O'Dowd, Kevin Kline, T…
```

```
                                      country          date_added  \
0                                United States   September 25, 2021
6                                            0   September 24, 2021
7   United States, Ghana, Burkina Faso, United Kin…  September 24, 2021
9                                United States   September 24, 2021
```

```
    release_year rating duration  \
0           2020  PG-13    90 min
6           2021     PG    91 min
7           1993  TV-MA   125 min
9           2021  PG-13   104 min
```

```
                                      listed_in  \
0                                 Documentaries
6                       Children & Family Movies
7   Dramas, Independent Movies, International Movies
9                                Comedies, Dramas
```

```
                                     description
0   As her father nears the end of his life, filmm…
6   Equestria's divided. But a bright-eyed hero be…
7   On a photo shoot in Ghana, an American model s…
9   A woman adjusting to life after a loss contend…
```

```python
# For TV shows
Netflix_TV= Netflix_df[Netflix_df['type']=='TV Show']
Netflix_TV.head(4)
```

```
   show_id     type                 title          director  \
1       s2  TV Show          Blood & Water       No director
2       s3  TV Show              Ganglands  Julien Leclercq
3       s4  TV Show   Jailbirds New Orleans       No director
4       s5  TV Show            Kota Factory       No director
```

```
                                          cast         country  \
1  Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban…  South Africa
2  Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi…             0
3                                          No cast             0
4  Mayur More, Jitendra Kumar, Ranjan Raj, Alam K…         India

          date_added  release_year rating   duration  \
1  September 24, 2021          2021  TV-MA  2 Seasons
2  September 24, 2021          2021  TV-MA   1 Season
3  September 24, 2021          2021  TV-MA   1 Season
4  September 24, 2021          2021  TV-MA  2 Seasons

                                         listed_in  \
1      International TV Shows, TV Dramas, TV Mysteries
2  Crime TV Shows, International TV Shows, TV Act…
3                          Docuseries, Reality TV
4  International TV Shows, Romantic TV Shows, TV …

                                       description
1  After crossing paths at a party, a Cape Town t…
2  To protect his family from a powerful drug lor…
3  Feuds, flirtations and toilet talk go down amo…
4  In a city of coaching centers known to train I…
```

[23]:
```python
# Separating season 1 and 2 from the TV show
Netflix_Season1= Netflix_df[Netflix_df['duration']== '1 Season']
```

[24]:
```python
Netflix_Season1.head(2)
```

[24]:
```
  show_id     type                  title        director  \
2      s3  TV Show              Ganglands  Julien Leclercq
3      s4  TV Show  Jailbirds New Orleans      No director

                                          cast country  \
2  Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi…       0
3                                       No cast       0

          date_added  release_year rating  duration  \
2  September 24, 2021          2021  TV-MA  1 Season
3  September 24, 2021          2021  TV-MA  1 Season

                                         listed_in  \
2  Crime TV Shows, International TV Shows, TV Act…
3                          Docuseries, Reality TV

                                       description
```

```
2  To protect his family from a powerful drug lor…
3  Feuds, flirtations and toilet talk go down amo…
```

[35]:
```
Netflix_Season2= Netflix_df[Netflix_df['duration']=='2 Seasons'] # separating␣
 ↪season 2 from duration
Netflix_Season2.head(2)
```

[35]:
```
  show_id     type             title      director  \
1      s2  TV Show  Blood & Water   No director
4      s5  TV Show   Kota Factory   No director

                                             cast        country  \
1  Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban…   South Africa
4  Mayur More, Jitendra Kumar, Ranjan Raj, Alam K…          India

           date_added  release_year rating   duration  \
1  September 24, 2021          2021  TV-MA  2 Seasons
4  September 24, 2021          2021  TV-MA  2 Seasons

                                      listed_in  \
1     International TV Shows, TV Dramas, TV Mysteries
4  International TV Shows, Romantic TV Shows, TV …

                                   description
1  After crossing paths at a party, a Cape Town t…
4  In a city of coaching centers known to train I…
```

6 Rename a specific column or columns

[25]:
```
Netflix_TV.rename(columns={'duration':'season'}, inplace=True) # To rename a␣
 ↪column header
#Netflix_Movie.duration= Netflix_Movie.duration.str.replace('min','') # To␣
 ↪remove string(min)attached
Netflix_TV.rename(columns={'mad':'country'},inplace=True)
Netflix_TV.rename(columns={'season':'Seasons'}, inplace= True) # or
#Netflix_TV.replace({'Season':{'1 Season':'2 Seasons'}}, inplace= True)
```

```
/home/miracle/anaconda3/lib/python3.8/site-packages/pandas/core/frame.py:4441:
SettingWithCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame

See the caveats in the documentation: https://pandas.pydata.org/pandas-
docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy
  return super().rename(
```

[26]:
```
Netflix_TV.head(4)
```

```
[26]:   show_id    type                       title         director  \
     1      s2  TV Show           Blood & Water      No director
     2      s3  TV Show               Ganglands   Julien Leclercq
     3      s4  TV Show   Jailbirds New Orleans      No director
     4      s5  TV Show            Kota Factory      No director

                                                 cast      country  \
     1   Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban…   South Africa
     2   Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi…            0
     3                                         No cast             0
     4   Mayur More, Jitendra Kumar, Ranjan Raj, Alam K…        India

               date_added  release_year rating     Seasons  \
     1  September 24, 2021          2021  TV-MA   2 Seasons
     2  September 24, 2021          2021  TV-MA    1 Season
     3  September 24, 2021          2021  TV-MA    1 Season
     4  September 24, 2021          2021  TV-MA   2 Seasons

                                            listed_in  \
     1     International TV Shows, TV Dramas, TV Mysteries
     2  Crime TV Shows, International TV Shows, TV Act…
     3                           Docuseries, Reality TV
     4  International TV Shows, Romantic TV Shows, TV …

                                          description
     1  After crossing paths at a party, a Cape Town t…
     2  To protect his family from a powerful drug lor…
     3  Feuds, flirtations and toilet talk go down amo…
     4  In a city of coaching centers known to train I…
```

7 Replace specific characters in a columns

```python
[27]: Netflix_TV.Seasons= Netflix_TV.Seasons.str.replace('2 Seasons','2
      ↪Season')#Replace Specific character in a column
```

/home/miracle/anaconda3/lib/python3.8/site-packages/pandas/core/generic.py:5494:
SettingWithCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame.
Try using .loc[row_indexer,col_indexer] = value instead

See the caveats in the documentation: https://pandas.pydata.org/pandas-
docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy
  self[name] = value

```python
[28]: Netflix_TV.Seasons=Netflix_TV.Seasons.str.replace('Season','')
```

```
[29]: Netflix_TV.head(4)
```

```
[29]:    show_id     type                 title         director  \
       1      s2  TV Show        Blood & Water      No director
       2      s3  TV Show            Ganglands  Julien Leclercq
       3      s4  TV Show  Jailbirds New Orleans     No director
       4      s5  TV Show          Kota Factory      No director


                                             cast        country  \
       1  Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban…  South Africa
       2  Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi…             0
       3                                       No cast             0
       4  Mayur More, Jitendra Kumar, Ranjan Raj, Alam K…         India


                  date_added  release_year rating Seasons  \
       1  September 24, 2021          2021  TV-MA       2
       2  September 24, 2021          2021  TV-MA       1
       3  September 24, 2021          2021  TV-MA       1
       4  September 24, 2021          2021  TV-MA       2


                                       listed_in  \
       1    International TV Shows, TV Dramas, TV Mysteries
       2  Crime TV Shows, International TV Shows, TV Act…
       3                       Docuseries, Reality TV
       4  International TV Shows, Romantic TV Shows, TV …


                                     description
       1  After crossing paths at a party, a Cape Town t…
       2  To protect his family from a powerful drug lor…
       3  Feuds, flirtations and toilet talk go down amo…
       4  In a city of coaching centers known to train I…
```
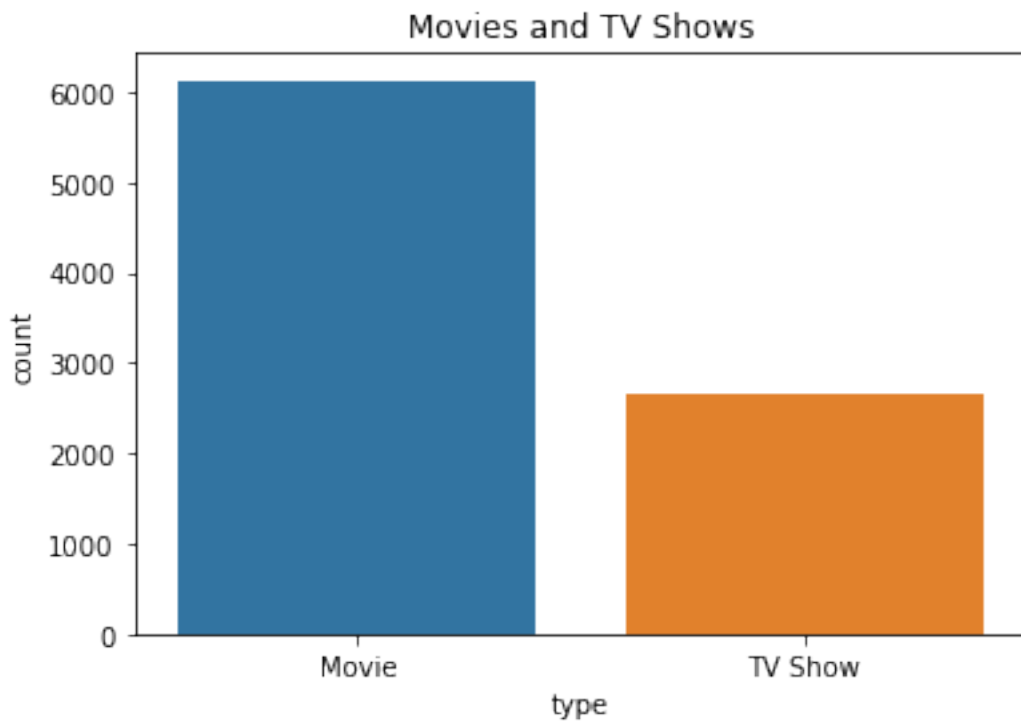
8 Data Visualization

```
[30]: Netflix_df.head(5)
```

```
[30]:    show_id     type                 title         director  \
       0      s1    Movie  Dick Johnson Is Dead  Kirsten Johnson
       1      s2  TV Show        Blood & Water      No director
       2      s3  TV Show            Ganglands  Julien Leclercq
       3      s4  TV Show  Jailbirds New Orleans     No director
       4      s5  TV Show          Kota Factory      No director


                                             cast         country  \
       0                                       No cast   United States
       1  Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban…   South Africa
```

```
2  Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi…                    0
3                                           No cast                    0
4  Mayur More, Jitendra Kumar, Ranjan Raj, Alam K…              India

          date_added   release_year rating    duration  \
0  September 25, 2021           2020  PG-13      90 min
1  September 24, 2021           2021  TV-MA   2 Seasons
2  September 24, 2021           2021  TV-MA    1 Season
3  September 24, 2021           2021  TV-MA    1 Season
4  September 24, 2021           2021  TV-MA   2 Seasons

                                      listed_in  \
0                                  Documentaries
1      International TV Shows, TV Dramas, TV Mysteries
2  Crime TV Shows, International TV Shows, TV Act…
3                         Docuseries, Reality TV
4  International TV Shows, Romantic TV Shows, TV …

                                      description
0  As her father nears the end of his life, filmm…
1  After crossing paths at a party, a Cape Town t…
2  To protect his family from a powerful drug lor…
3  Feuds, flirtations and toilet talk go down amo…
4  In a city of coaching centers known to train I…
```

[31]:
```python
#sns.countplot(x='type',data=Netflix_df)
sns.countplot(Netflix_df.type)
plt.title('Movies and TV Shows')
```
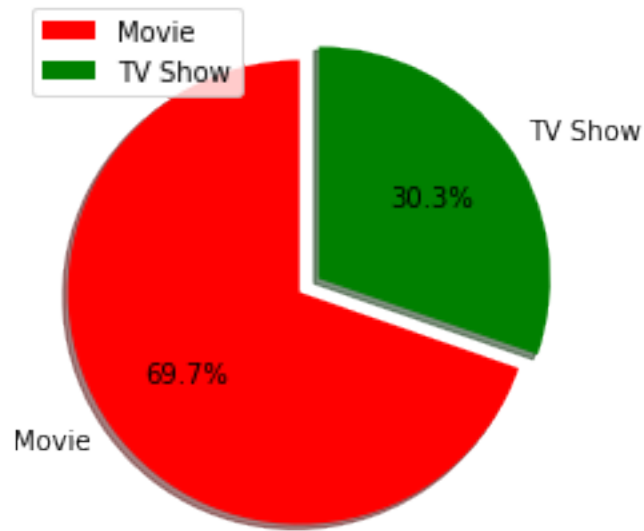
/home/miracle/anaconda3/lib/python3.8/site-packages/seaborn/_decorators.py:36:
FutureWarning: Pass the following variable as a keyword arg: x. From version
0.12, the only valid positional argument will be `data`, and passing other
arguments without an explicit keyword will result in an error or
misinterpretation.
  warnings.warn(

[31]: Text(0.5, 1.0, 'Movies and TV Shows')

Movies and TV Shows
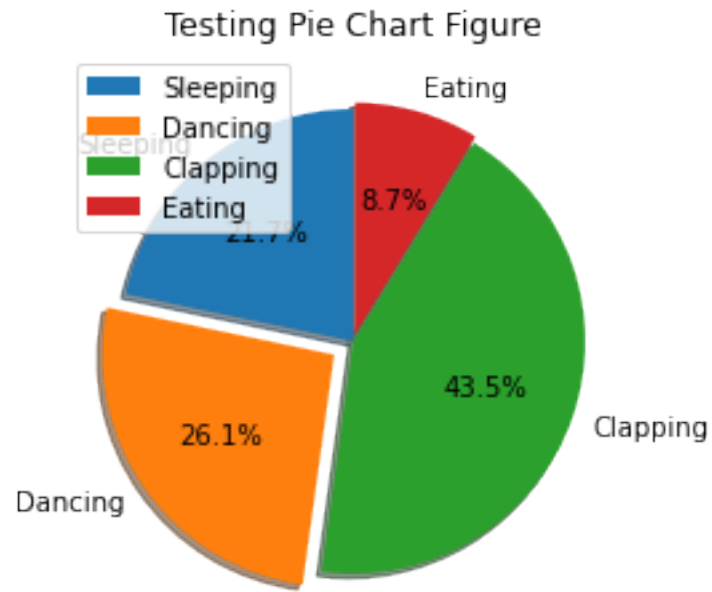


```
[32]: plt.pie(Netflix_df.type.value_counts(),
              labels=Netflix_df.type.value_counts().index,
              explode=(0.05,0.05),colors=('r','g'),
              autopct='%1.1f%%',startangle=90, shadow=True);
      plt.legend()
```
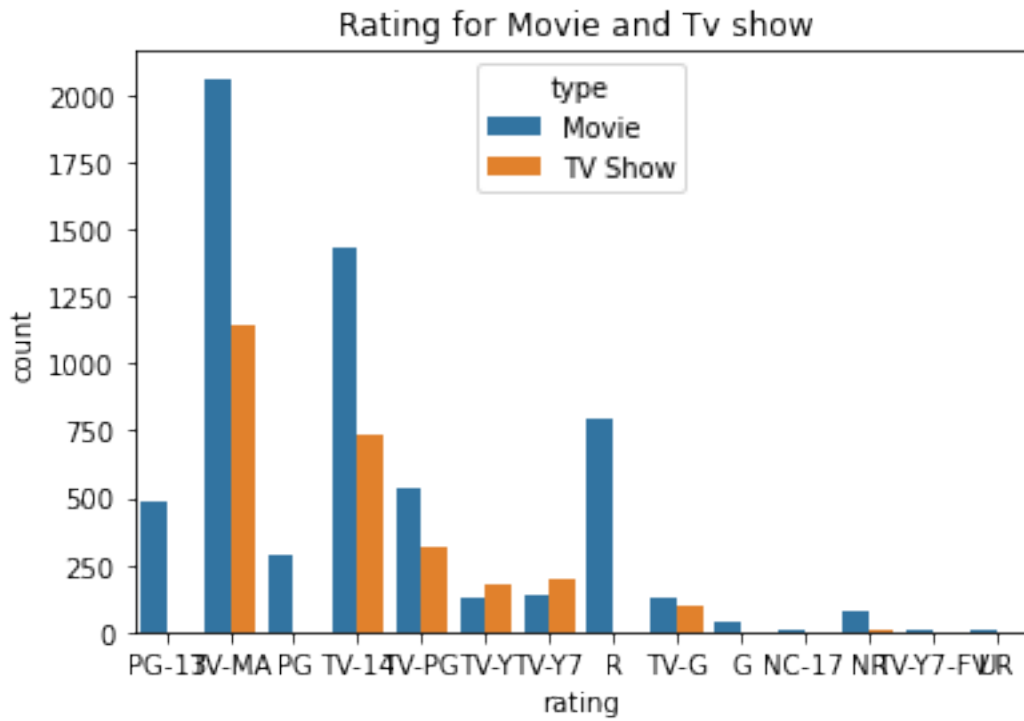
```
[32]: <matplotlib.legend.Legend at 0x7f3bf79af610>
```

[33]: ```python
# Testing the Pie chart.
Slices=[5,6,10,2]
activities=['Sleeping', 'Dancing', 'Clapping' ,'Eating']
plt.pie(Slices, labels=activities,startangle=90,
        explode=(0,0.1,0,0.028),shadow=True,autopct='%0.1f%%')
plt.legend()
plt.title('Testing Pie Chart Figure')
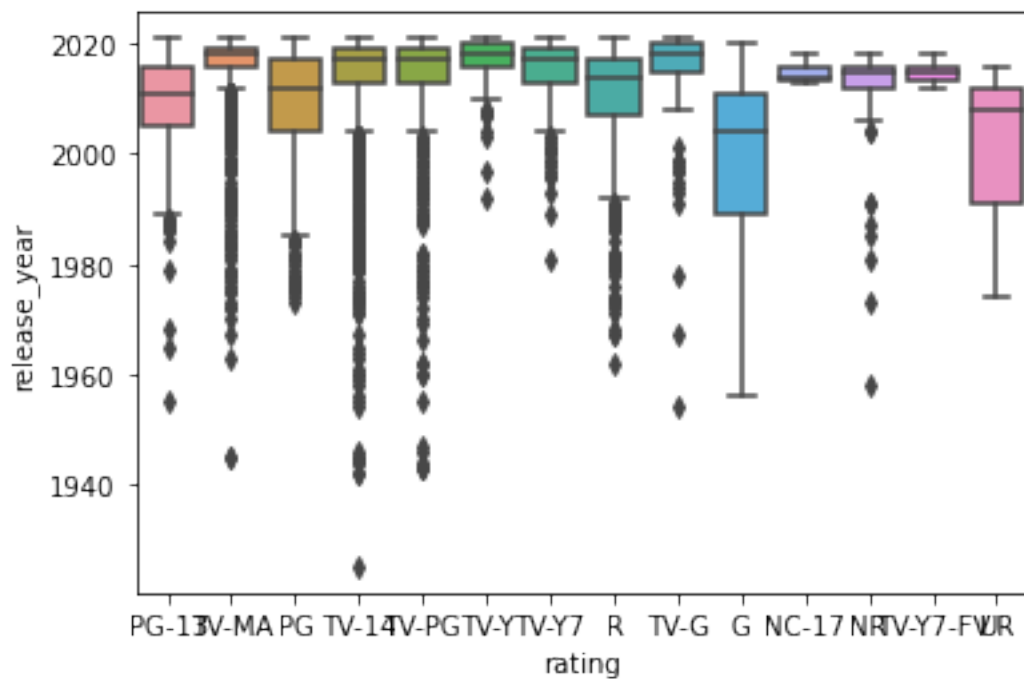```

[33]: Text(0.5, 1.0, 'Testing Pie Chart Figure')

Testing Pie Chart Figure


```
[34]:  oder= ['G','TV-Y', 'TV-G','PG','TV-Y7',⊔
        ↪'TV-Y7-FV','TV-PG','PG-13','TV-14','R','NC-17','TV-MA']
       sns.countplot(x='rating',data=Netflix_df,hue='type')
       #plt.figure(figsize=(15,7))
       plt.title('Rating for Movie and Tv show ')
```

```
[34]:  Text(0.5, 1.0, 'Rating for Movie and Tv show ')
```

Rating for Movie and Tv show

```
[35]: sns.boxplot(x=Netflix_df['rating'],y=Netflix_df['release_year'])
      plt.figure(figsize=(5,1))
      plt.show()
```

```
<Figure size 360x72 with 0 Axes>
```

[48]:
```python
# Subplot Ploting
fig,ax=plt.subplots(1,2,figsize=(15,5))
g1=sns.countplot(Netflix_Movie.rating,ax=ax[0])
g1.set_xlabel('Rating')
g1.set_title('Rating for Movies')
g2=sns.countplot(Netflix_TV.rating,ax=ax[1])
g2.set_xlabel('Rating')
g2.set_title('Rating for TV Shows')
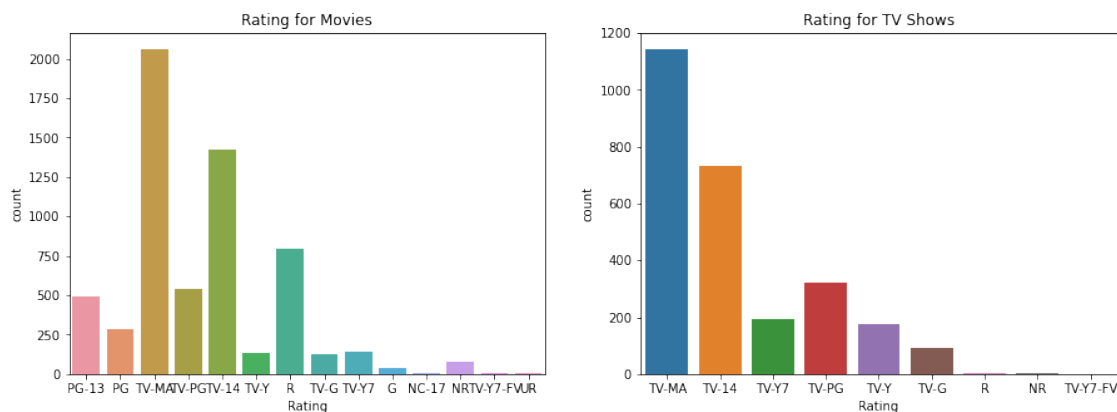#g2.set(yticks=np.arange(0,1600,200))
```

/home/miracle/anaconda3/lib/python3.8/site-packages/seaborn/_decorators.py:36:
FutureWarning: Pass the following variable as a keyword arg: x. From version
0.12, the only valid positional argument will be `data`, and passing other
arguments without an explicit keyword will result in an error or
misinterpretation.
  warnings.warn(
/home/miracle/anaconda3/lib/python3.8/site-packages/seaborn/_decorators.py:36:
FutureWarning: Pass the following variable as a keyword arg: x. From version
0.12, the only valid positional argument will be `data`, and passing other
arguments without an explicit keyword will result in an error or
misinterpretation.
  warnings.warn(

[48]: Text(0.5, 1.0, 'Rating for TV Shows')

18

9 Counting the no of content added at release_year columns

```
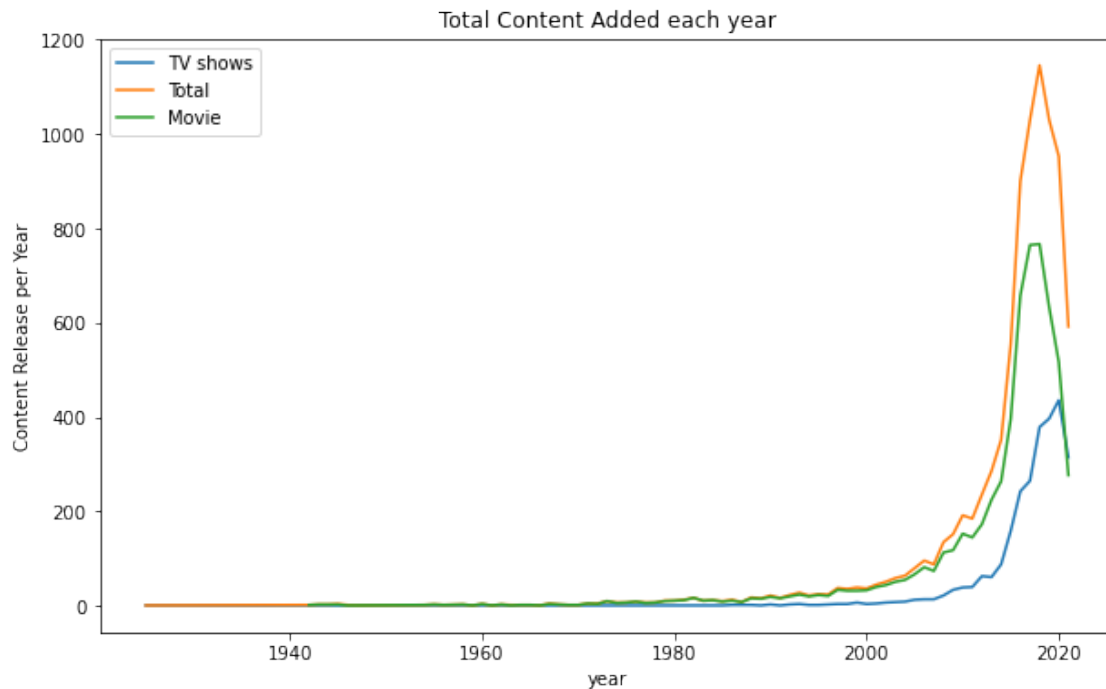[137]: TV= Netflix_TV['release_year'].value_counts()
       TV=pd. DataFrame(TV)
       TV_count=TV.reset_index().rename(columns={'index':"year",'release_year':
        ↪'content_added'})
       TV_count.head(5)
```

```
[137]:    year  content_added
       0  2020            436
       1  2019            397
       2  2018            379
       3  2021            315
       4  2017            265
```

```
[138]: Movie= Netflix_Movie['release_year'].value_counts()
       Movie_count= pd.DataFrame(Movie)
       #Movie_count.columns=['year']
       Movie_count= Movie_count.reset_index().rename(columns={'index':
        ↪'year','release_year':'content_added'})
       NetflixT= Netflix_df['release_year'].value_counts()
       NetflixT_count=pd.DataFrame(NetflixT)
       NetflixT_count=NetflixT_count.reset_index().rename(columns={'index':
        ↪'year','release_year':'content_added'})
       #NetflixT_count
```

```
[139]: plt.figure(figsize=(10,6))
       sns.lineplot(x='year',y ='content_added',data=TV_count,label='TV shows')
       sns.lineplot(x='year',y ='content_added',data=NetflixT_count, label='Total')
       sns.lineplot(x='year',y ='content_added',data=Movie_count, label='Movie')
       plt.ylabel('Content Release per Year')
       plt.title('Total Content Added each year')
```

```
[139]: Text(0.5, 1.0, 'Total Content Added each year')
```

Total Content Added each year

10 How to sort date in months, days and years

```
[1]: Netflix_df['days']=pd.DatetimeIndex(Netflix_df['date_added']).day
     Netflix_df['month_added']=pd.DatetimeIndex(Netflix_df['date_added']).month
     Netflix_df['year']=pd.DatetimeIndex(Netflix_df['date_added']).year
     Netflix_df['miracle']=TV
     Netflix_df.head(3)
```

```
    ---------------------------------------------------------------------------
    NameError                                 Traceback (most recent call last)
    <ipython-input-1-f1ddb3ef7fac> in <module>
    ----> 1 Netflix_df['days']=pd.DatetimeIndex(Netflix_df['date_added']).day
          2 Netflix_df['month_added']=pd.DatetimeIndex(Netflix_df['date_added']).
      →month
          3 Netflix_df['year']=pd.DatetimeIndex(Netflix_df['date_added']).year
          4 Netflix_df['miracle']=TV
          5 Netflix_df.head(3)

    NameError: name 'pd' is not defined
```

```
[5]: project_name='Netflix_data_analysis'
     jovian .commit(project=project_name)
```

```
<IPython.core.display.Javascript object>
```

[jovian] Updating notebook "oguejiofor-mbah/netflix-data-analysis" on https://jovian.ai/
[jovian] Committed successfully! https://jovian.ai/oguejiofor-mbah/netflix-data-analysis

[5]: 'https://jovian.ai/oguejiofor-mbah/netflix-data-analysis'

[ ]:

[ ]: