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

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

print(df.head())
print(df.info())

df['date_added'] = df['date_added'].str.strip()

df['date_added'] = pd.to_datetime(df['date_added'])

df['rating'].fillna('Not Rated', inplace=True)

print(df.isnull().sum())

# 5. Exploratory Data Analysis (EDA)

# a) Count of Movies vs TV Shows
plt.figure(figsize=(6,4))
sns.countplot(x='type', data=df)
plt.title('Count of Movies vs TV Shows')
plt.show()

# b) Top 10 Countries Producing Netflix Content
top_countries = df['country'].value_counts().head(10)

plt.figure(figsize=(10,5))
sns.barplot(x=top_countries.index, y=top_countries.values)
plt.xticks(rotation=45)
plt.title('Top 10 Countries Producing Netflix Content')
plt.ylabel('Number of Titles')
plt.show()

# c) Number of Releases by Year
df['release_year'].value_counts().sort_index().plot(kind='line', figsize=(10,5))
plt.title('Number of Releases Over Time')
plt.xlabel('Year')
plt.ylabel('Number of Titles')
plt.show()

# 6. Final Insights
print("""
    ♦ Netflix focuses more on Movies than TV Shows.
    ♦ US and India are major contributors to Netflix's content library.
    ♦ The number of new titles has grown steadily over time, peaking in recent years.
    """)
```

```

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

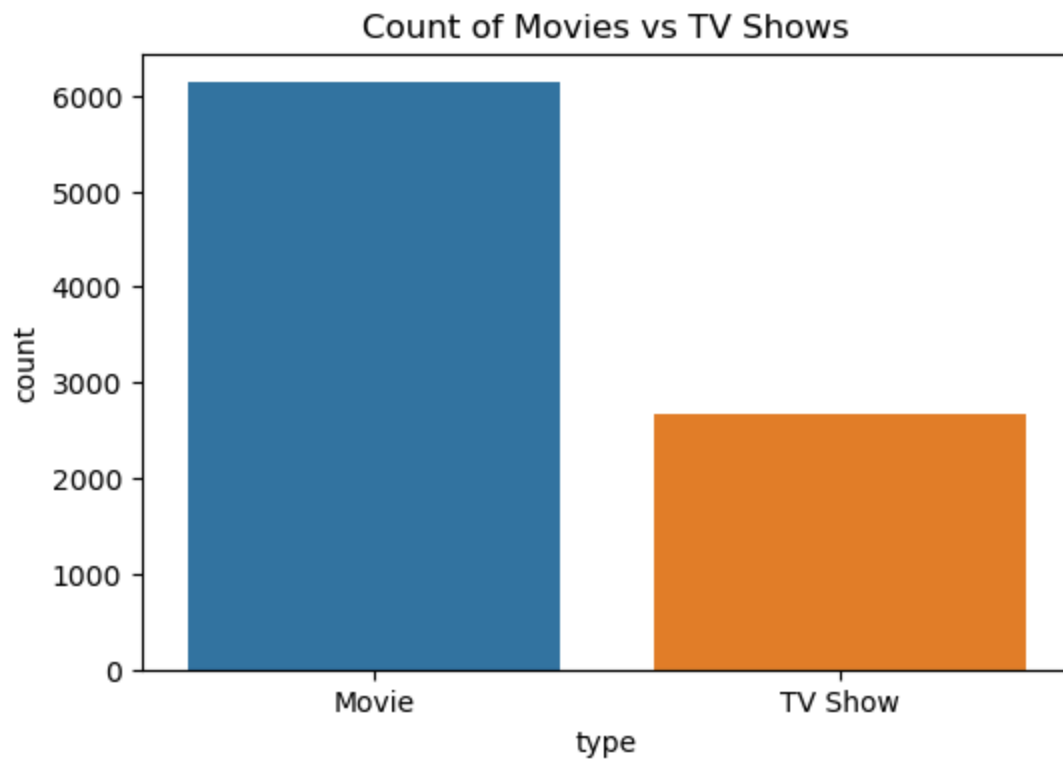
date_added    release_year    rating    duration \
0    September 25, 2021    2020    PG-13    90 min
1    September 24, 2021    2021    TV-MA    2 Seasons
2    September 24, 2021    2021    TV-MA    1 Season
3    September 24, 2021    2021    TV-MA    1 Season
4    September 24, 2021    2021    TV-MA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

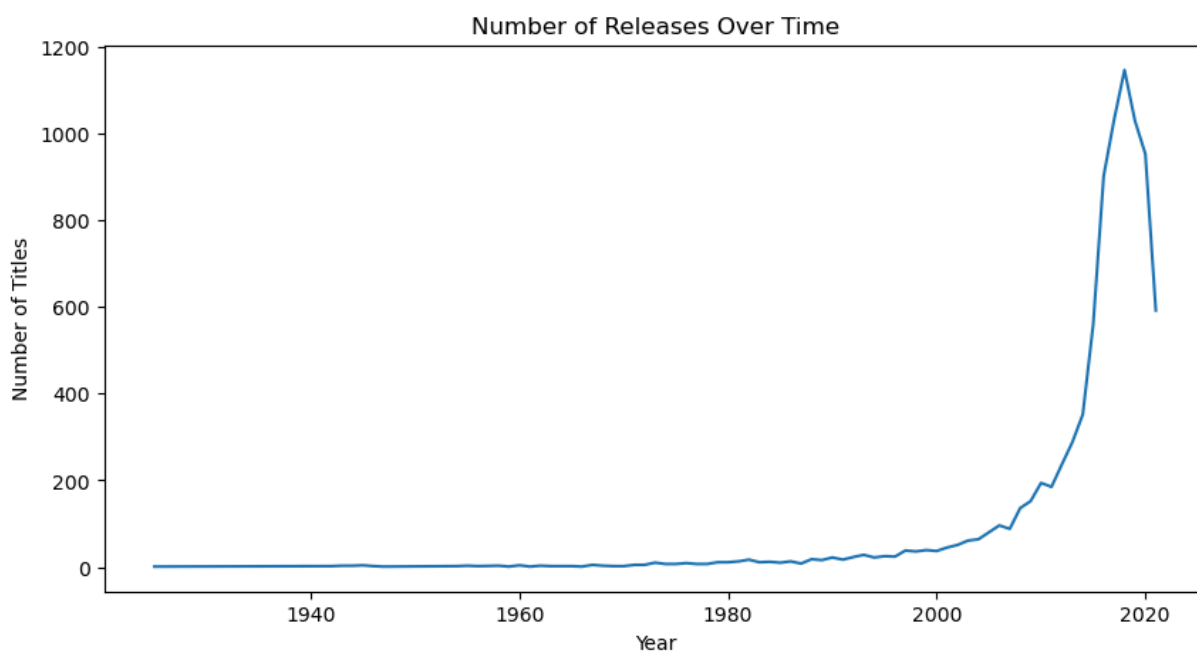
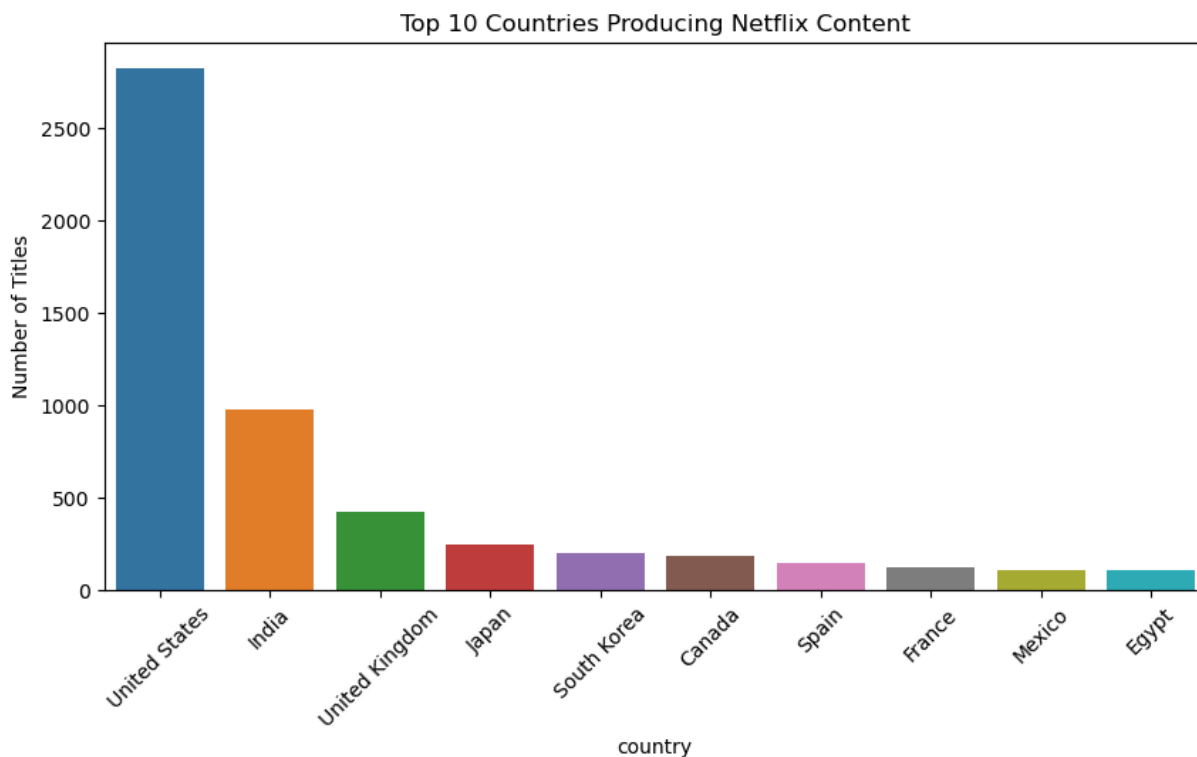
listed_in \
0      Documentaries
1    International TV Shows, TV Dramas, TV Mysteries
2    Crime TV Shows, International TV Shows, TV Act...
3      Docuseries, Reality TV
4    International TV Shows, Romantic TV Shows, TV ...

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...
<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
None
show_id      0
type        0

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





- ◆ Netflix focuses more on Movies than TV Shows.
- ◆ US and India are major contributors to Netflix's content library.
- ◆ The number of new titles has grown steadily over time, peaking in recent years.

In []: