```
# Import necessary libraries
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
from wordcloud import WordCloud


# Load the dataset
df = pd.read_csv('/content/drive/MyDrive/netflix_titles.csv')


# Display basic info
print("Dataset shape:", df.shape)
print("Data types:\n", df.dtypes)
print("\nMissing values:\n", df.isnull().sum())
```

```
Dataset shape: (8807, 12)
Data types:
 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

Missing values:
 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
```

```
# Display basic info
print
("Dataset shape:"
, df.shape
)
print
("Data types:\n"
, df.dtypes
)
print
("\nMissing values:\n"
, df.isnull()
.sum())
```

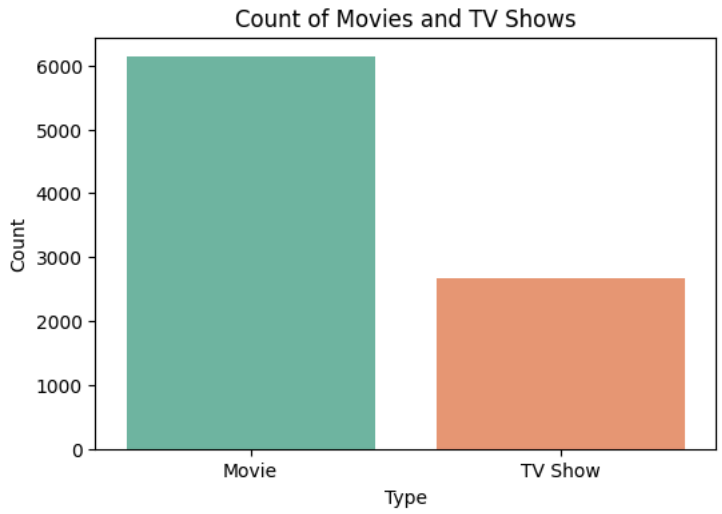
```
('\nMissing values:\n',
 show_id            0
 type               0
 title              0
 director        2634
 cast             825
 country          831
 date_added        10
 release_year       0
 rating             4
 duration           3
 listed_in          0
 description        0
 dtype: int64)
```

```
# Drop duplicates if any
df.drop_duplicates(inplace=True)


# Fill missing values (optional strategies)
df['country'].fillna('Unknown', inplace=True)
df['director'].fillna('No Director', inplace=True)
df['cast'].fillna('No Cast', inplace=True)
df['rating'] = df['rating'].fillna(df['rating'].mode()[0])
```

```
/tmp/ipython-input-7-892754574.py:2: FutureWarning: A value is trying to be set on a copy of a DataFrame or Series through chained assig
The behavior will change in pandas 3.0. This inplace method will never work because the intermediate object on which we are setting valu

For example, when doing 'df[col].method(value, inplace=True)', try using 'df.method({col: value}, inplace=True)' or df[col] = df[col].me


  df['country'].fillna('Unknown', inplace=True)
/tmp/ipython-input-7-892754574.py:3: FutureWarning: A value is trying to be set on a copy of a DataFrame or Series through chained assig
The behavior will change in pandas 3.0. This inplace method will never work because the intermediate object on which we are setting valu

For example, when doing 'df[col].method(value, inplace=True)', try using 'df.method({col: value}, inplace=True)' or df[col] = df[col].me


  df['director'].fillna('No Director', inplace=True)
/tmp/ipython-input-7-892754574.py:4: FutureWarning: A value is trying to be set on a copy of a DataFrame or Series through chained assig
The behavior will change in pandas 3.0. This inplace method will never work because the intermediate object on which we are setting valu

For example, when doing 'df[col].method(value, inplace=True)', try using 'df.method({col: value}, inplace=True)' or df[col] = df[col].me


  df['cast'].fillna('No Cast', inplace=True)
```

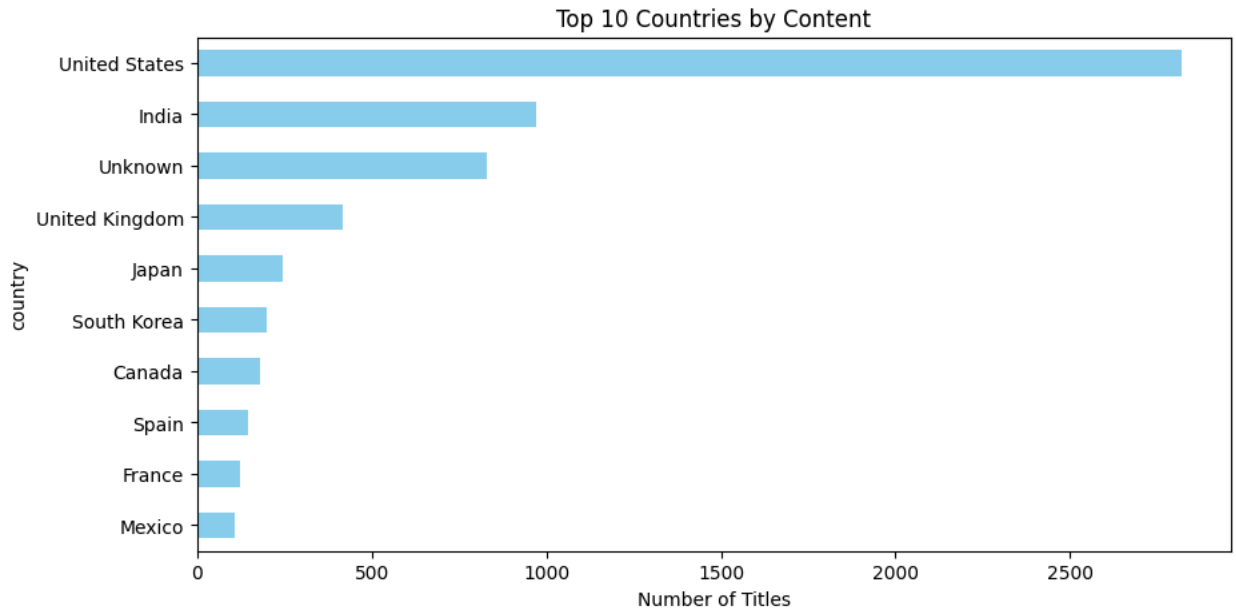
```
# Convert 'date_added' to datetime
df['date_added'] = pd.to_datetime(df['date_added'], errors='coerce')


# Create new column for year added
df['year_added'] = df['date_added'].dt.year


plt.figure(figsize=(6, 4))
sns.countplot(data=df, x='type', palette='Set2')
plt.title('Count of Movies and TV Shows')
plt.xlabel('Type')
plt.ylabel('Count')
plt.show()
```

```
/tmp/ipython-input-10-4006608308.py:2: FutureWarning:

Passing `palette` without assigning `hue` is deprecated and will be removed in v0.14.0. Assign the `x` variable to `hue` and set `legend

  sns.countplot(data=df, x='type', palette='Set2')
```



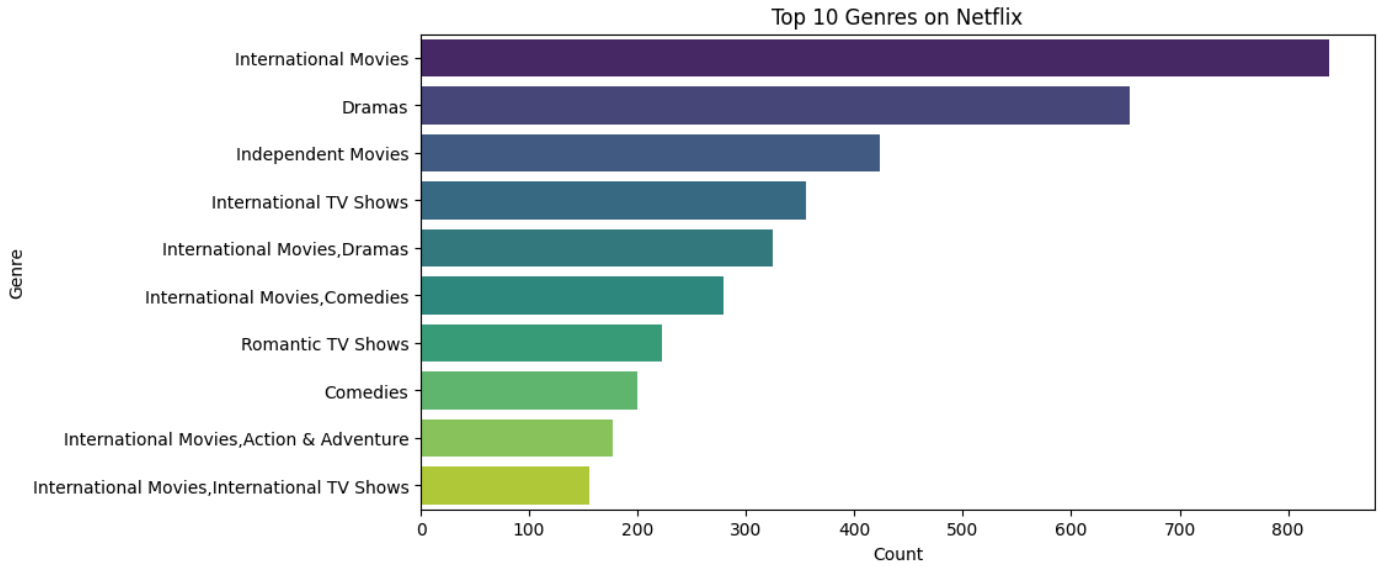

```
plt.figure(figsize=(10, 5))
df['country'].value_counts().head(10).plot(kind='barh', color='skyblue')
plt.title('Top 10 Countries by Content')
```

```
plt.xlabel('Number of Titles')
plt.gca().invert_yaxis()
plt.show()
```



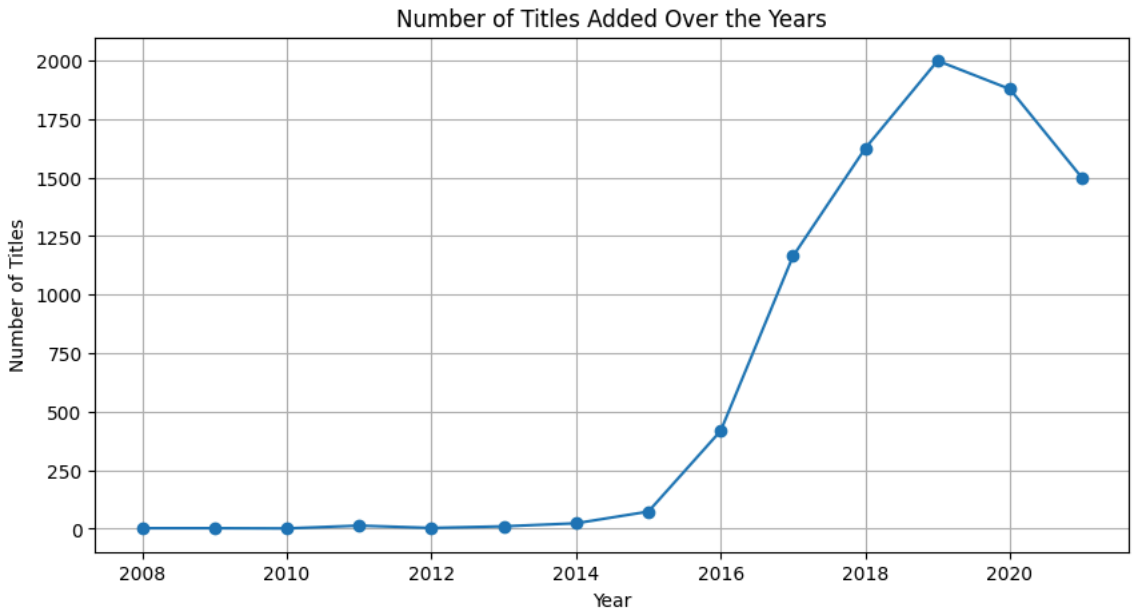

```
# Most common genres (listed_in)
from collections import Counter
genres = ','.join(df['listed_in'].dropna()).split(', ')
genre_count = Counter(genres)
top_genres = pd.DataFrame(genre_count.items(), columns=['Genre', 'Count']).sort_values(by='Count', ascending=False).head(10)
plt.figure(figsize=(10, 5))
sns.barplot(data=top_genres, y='Genre', x='Count', palette='viridis')
plt.title('Top 10 Genres on Netflix')
plt.show()
```

```
/tmp/ipython-input-12-2279169043.py:7: FutureWarning:

Passing `palette` without assigning `hue` is deprecated and will be removed in v0.14.0. Assign the `y` variable to `hue` and set `legend

  sns.barplot(data=top_genres, y='Genre', x='Count', palette='viridis')
```

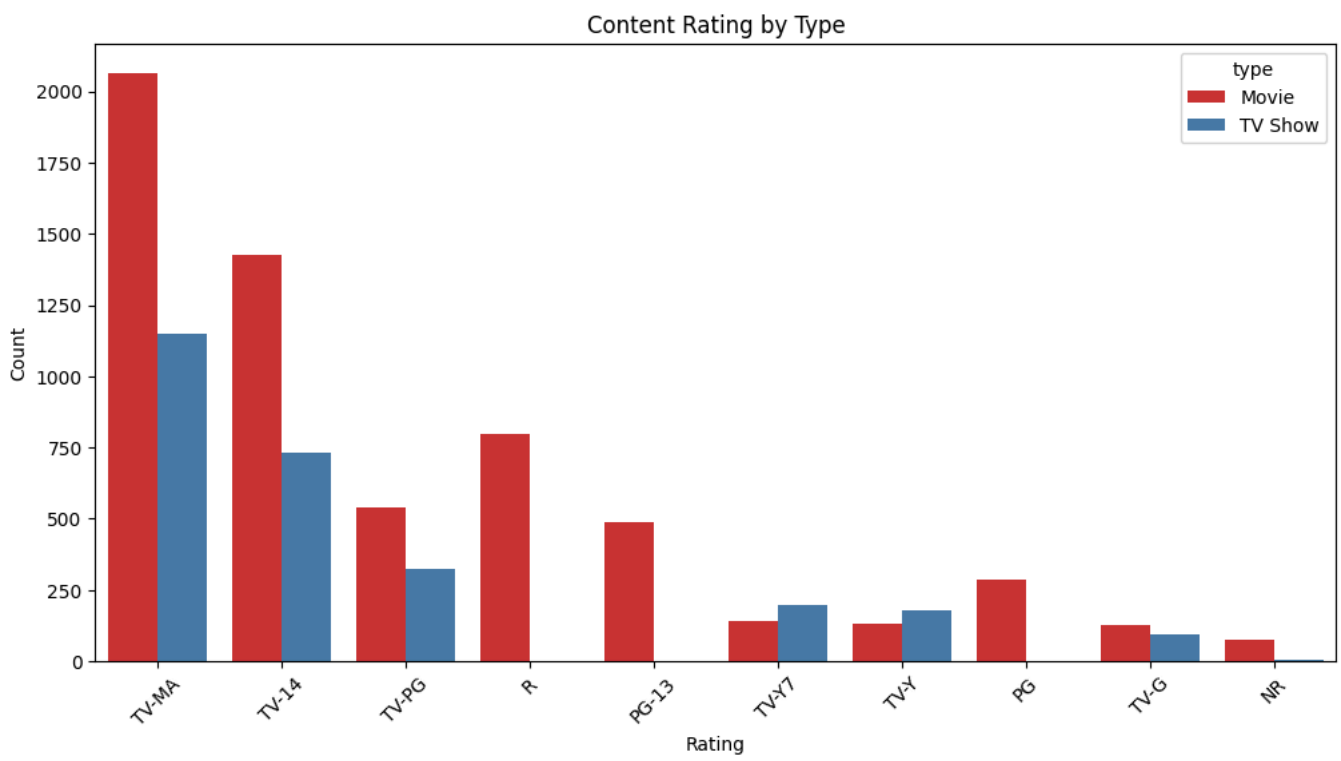



```
# Content Added Over the Years
plt.figure(figsize=(10, 5))
df['year_added'].value_counts().sort_index().plot(kind='line', marker='o')
plt.title('Number of Titles Added Over the Years')
```

```
plt.xlabel('Year')
plt.ylabel('Number of Titles')
plt.grid(True)
plt.show()
```

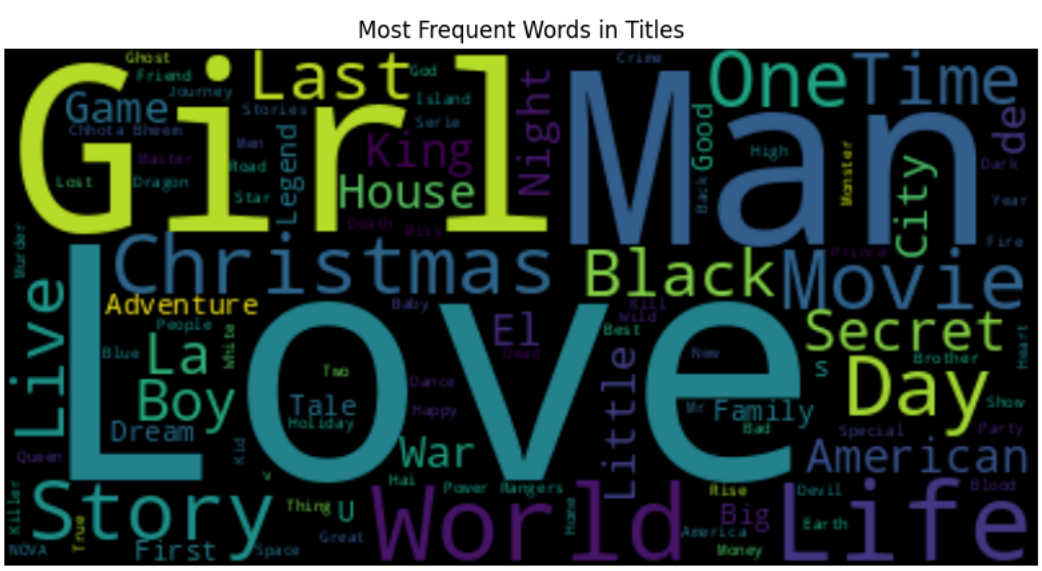



```
# Content by Type and Rating
plt.figure(figsize=(12, 6))
sns.countplot(data=df, x='rating', hue='type', order=df['rating'].value_counts().index[:10], palette='Set1')
plt.title('Content Rating by Type')
plt.xlabel('Rating')
plt.ylabel('Count')
plt.xticks(rotation=45)
plt.show()
```




```
plt.figure(figsize=(10, 6))
wordcloud = WordCloud(background_color='black', max_words=100).generate(' '.join(df['title'].dropna()))
plt.imshow(wordcloud, interpolation='bilinear')
plt.axis('off')
```

```
plt.title('Most Frequent Words in Titles')
plt.show()
```



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