imdb-scrapping

April 9, 2023

1 IMDb Top 250 as rated by regular IMDb voters.

—- *Import Necessary Libraries* —-

[1]:
```
import re
import requests
import pandas as pd
import seaborn as sns
from bs4 import BeautifulSoup
import matplotlib.pyplot as plt
```

—- *Read a HTML page* —-

[2]:
```
url = 'https://www.imdb.com/chart/top/?sort=rk,asc&mode=simple&page=1'
response = requests.get(url)
soup = BeautifulSoup(response.content, 'html.parser')
```

[3]:
```
#print(soup.prettify())
```

—- *A function to get all the contents of the table* —-

[4]:
```
tables = soup.find_all('tbody')
def get_movie_items(tables):
    for table in tables:
        rows = table.find_all('tr')
        for row in rows:
            items = {}
            items['Title'] = row.select_one(".titleColumn a").get_text()
            items['Year'] = row.select_one(".titleColumn span").get_text()[1:5]
            items['Rating'] = row.select_one(".ratingColumn strong").get_text()
            items['MoreRating'] = row.select_one(".ratingColumn␣
 ↪strong")['title']
            yield items
```

—- *Make a dataframe* —-

[6]:
```
# create a list of movie items
items_list = list(get_movie_items(tables))
```

```
# convert the list of dictionaries to a DataFrame
df = pd.DataFrame(items_list)

# display the DataFrame
df.head()
```

[6]:

	Title	Year	Rating	MoreRating
0	The Shawshank Redemption	1994	9.2	9.2 based on 2,724,709 user ratings
1	The Godfather	1972	9.2	9.2 based on 1,894,028 user ratings
2	The Dark Knight	2008	9.0	9.0 based on 2,697,542 user ratings
3	The Godfather Part II	1974	9.0	9.0 based on 1,291,777 user ratings
4	12 Angry Men	1957	9.0	9.0 based on 805,724 user ratings

—- *Understand The Data* ——

[7]:
```
df.shape
```

[7]: (250, 4)

[8]:
```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 250 entries, 0 to 249
Data columns (total 4 columns):
 #   Column      Non-Null Count  Dtype
---  ------      --------------  -----
 0   Title       250 non-null    object
 1   Year        250 non-null    object
 2   Rating      250 non-null    object
 3   MoreRating  250 non-null    object
dtypes: object(4)
memory usage: 7.9+ KB
```

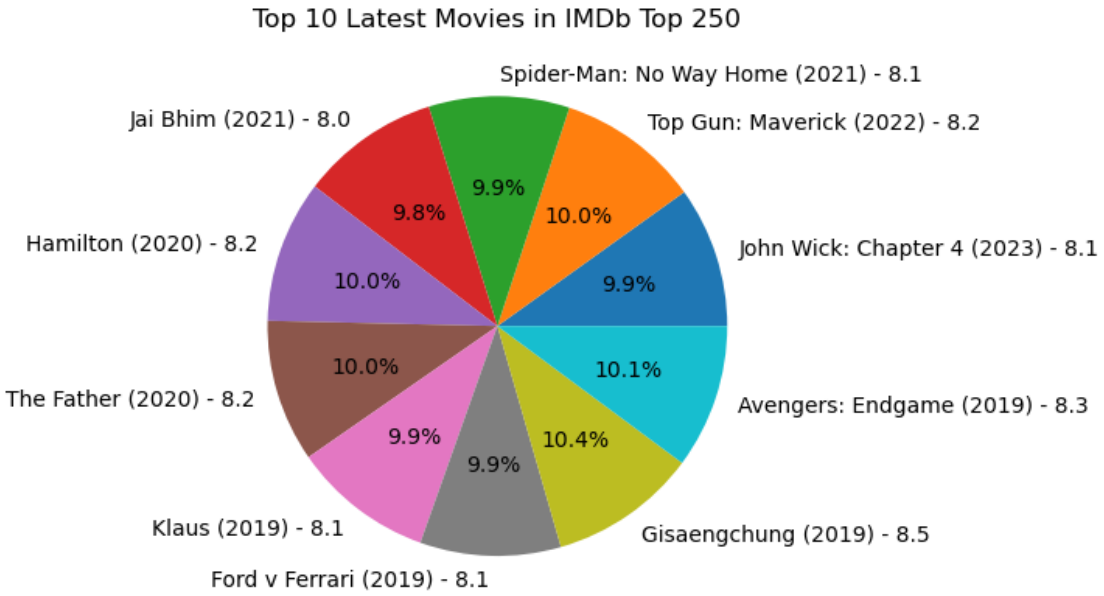
—- *Clean the Dataset* —-

[9]:
```
df['Year']=df["Year"].astype('int')
df['Rating']=df["Rating"].astype('float')
```

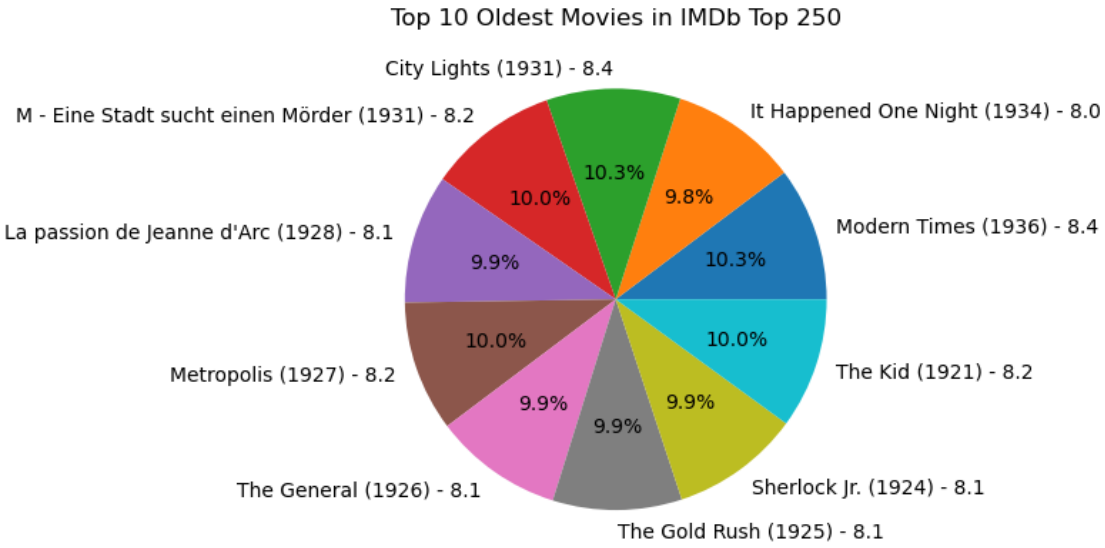
—- *Visualize the Dataset* —-

[29]:
```
# Latest Movies on top 250 list
top_10=df.sort_values(by="Year",ascending=False).head(10)

# Create a list of labels that includes both the movie title ,the year and the␣
 ↪rating
labels = [f"{title} ({year}) - {rating}" for title, year, rating in␣
 ↪zip(top_10['Title'], top_10['Year'], \

                                                                        ␣
 ↪top_10['Rating'])]
```

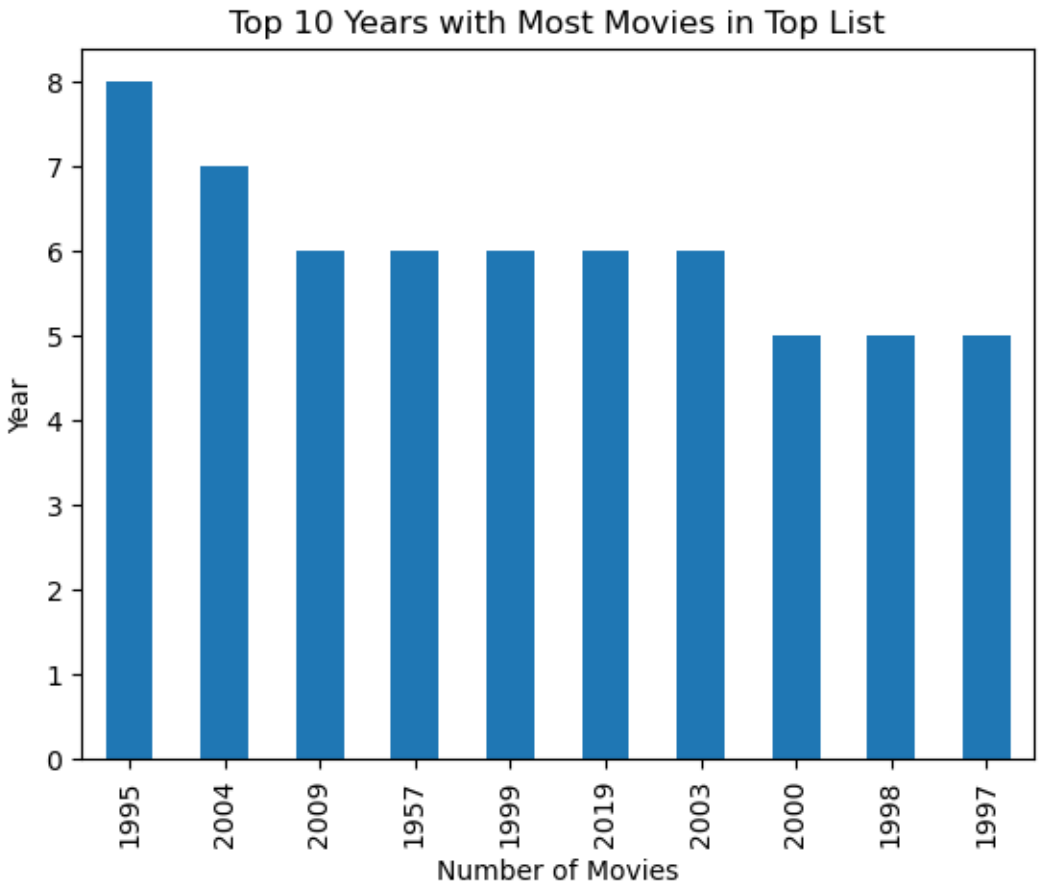
```
# Create a pie chart of the top 10 movies by year of release
plt.pie(top_10['Rating'], labels=labels, autopct='%1.1f%%')
plt.title('Top 10 Latest Movies in IMDb Top 250')
plt.show()
```



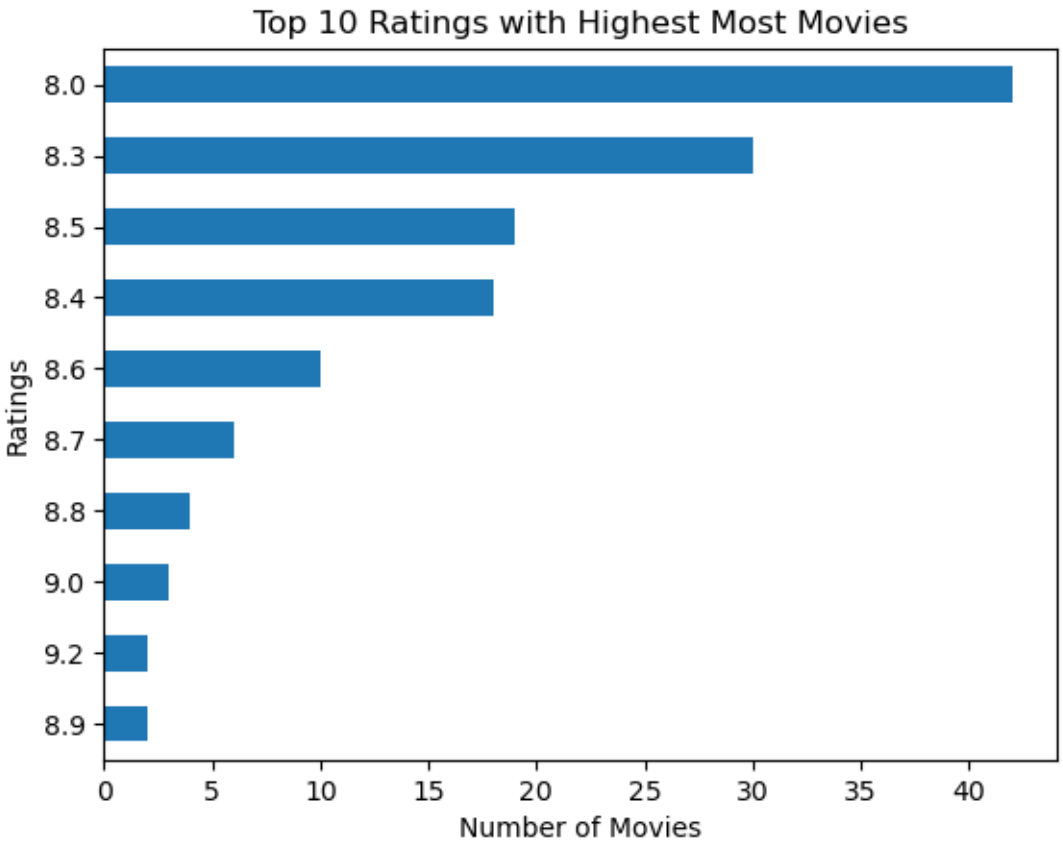
[30]:
```
# Oldest Movies still topping the list!
top_10=df.sort_values(by="Year",ascending=False).tail(10)

# Create a list of labels that includes both the movie title,the year and the␣
 ↪rating
labels = [f"{title} ({year}) - {rating}" for title, year, rating in␣
 ↪zip(top_10['Title'], top_10['Year'], \

 ↪top_10['Rating'])]

# Create a pie chart of the top 10 movies by year of release
plt.pie(top_10['Rating'], labels=labels, autopct='%1.1f%%')
plt.title('Top 10 Oldest Movies in IMDb Top 250')
plt.show()
```



[9]:
```python
#Top 10 Years with Most Movies in Top List

# group the data by year and count the number of movies in each group
year_counts = df.groupby("Year")["Title"].count()

# sort the Series object in descending order and select the first 10 rows
top_years = year_counts.sort_values(ascending=False).head(10)

# create a bar chart
top_years.plot(kind='bar')

# set the chart title and axis labels
plt.title("Top 10 Years with Most Movies in Top List")
plt.ylabel("Year")
plt.xlabel("Number of Movies")

# display the chart
plt.show()
```



[10]:
```
# group the data by Rating and count the number of movies in each group
ratings_counts = df.groupby("Rating")["Title"].count()

# sort the Series object in descending order and select the first 10 rows
top_ratings  = ratings_counts.sort_values(ascending=True).head(10)

# create a bar chart
top_ratings .plot(kind='barh')

# set the chart title and axis labels
plt.title("Top 10 Ratings with Highest Most Movies")
plt.ylabel("Ratings")
plt.xlabel("Number of Movies")

# display the chart
plt.show()
```


Top 10 Ratings with Highest Most Movies
Ratings
8.0
8.3
8.5
8.4
8.6
8.7
8.8
9.0
9.2
8.9
0
5
10
15
20
25
30
35
40
Number of Movies