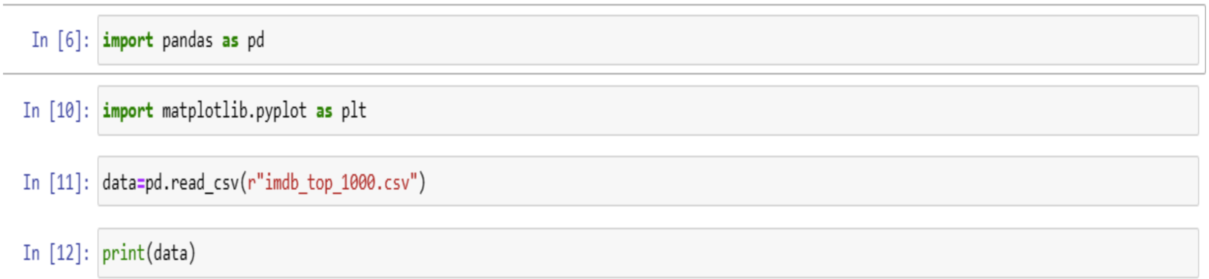
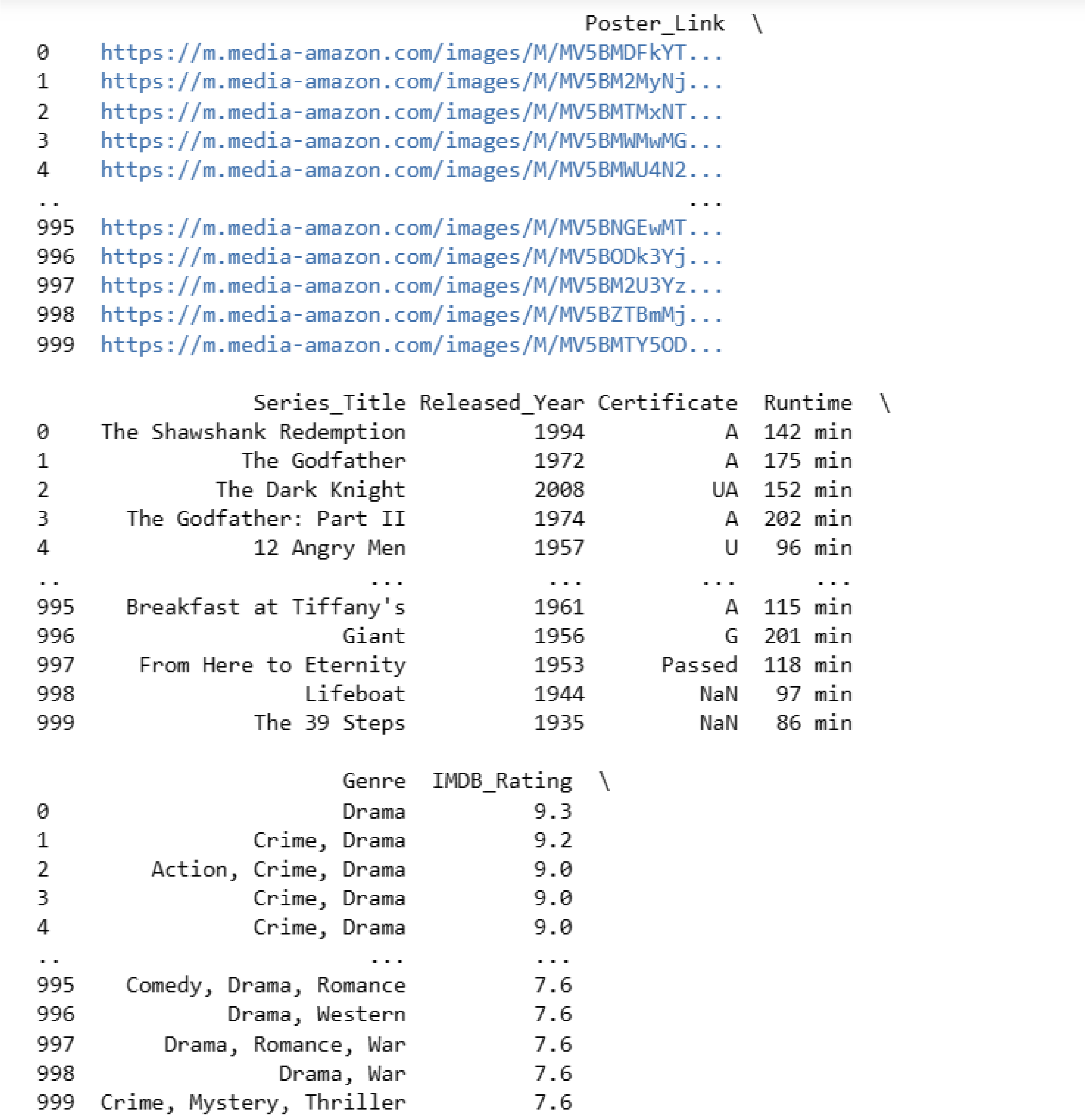
Phase 3

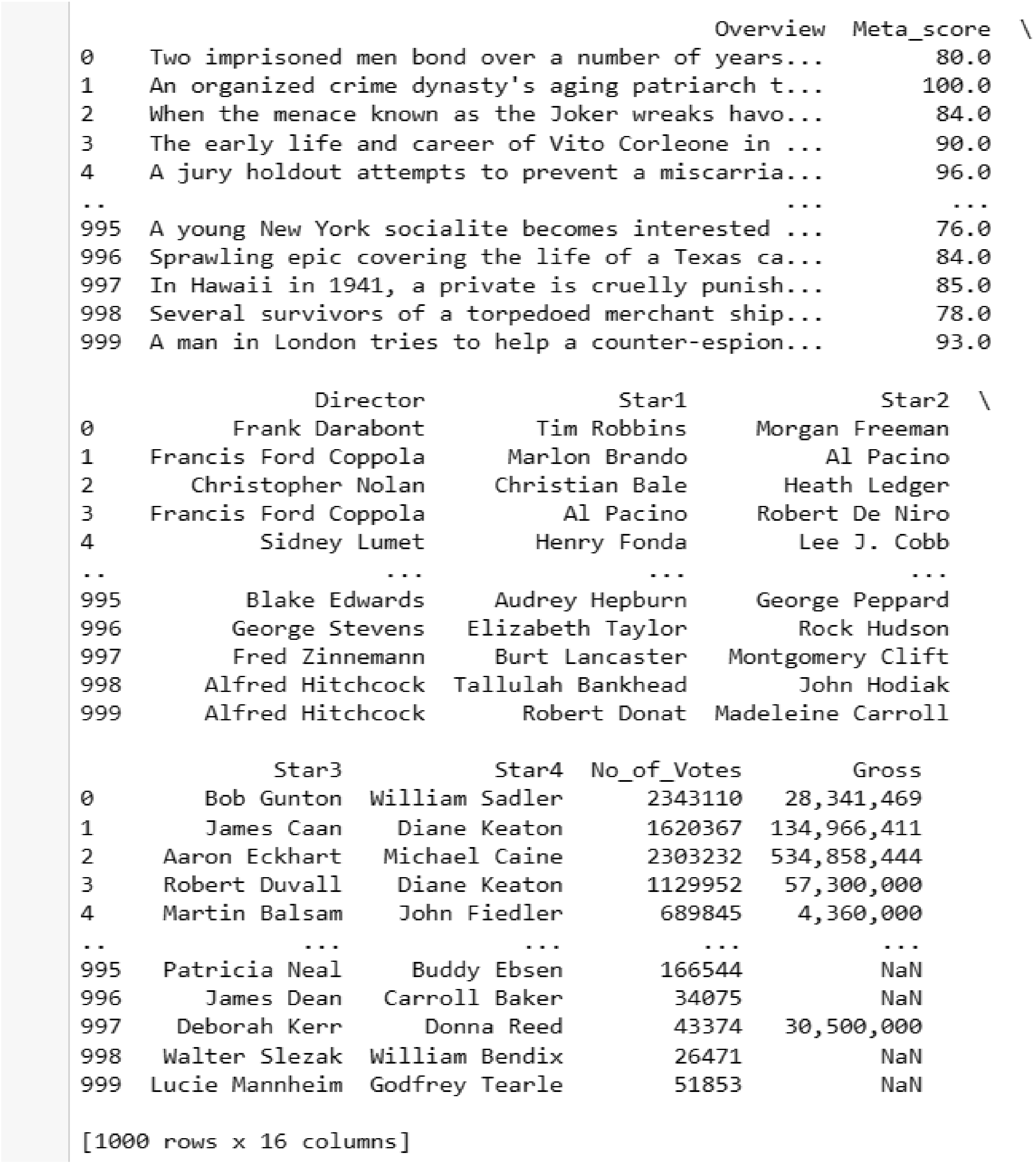
APPLIED DATA SCIENCE



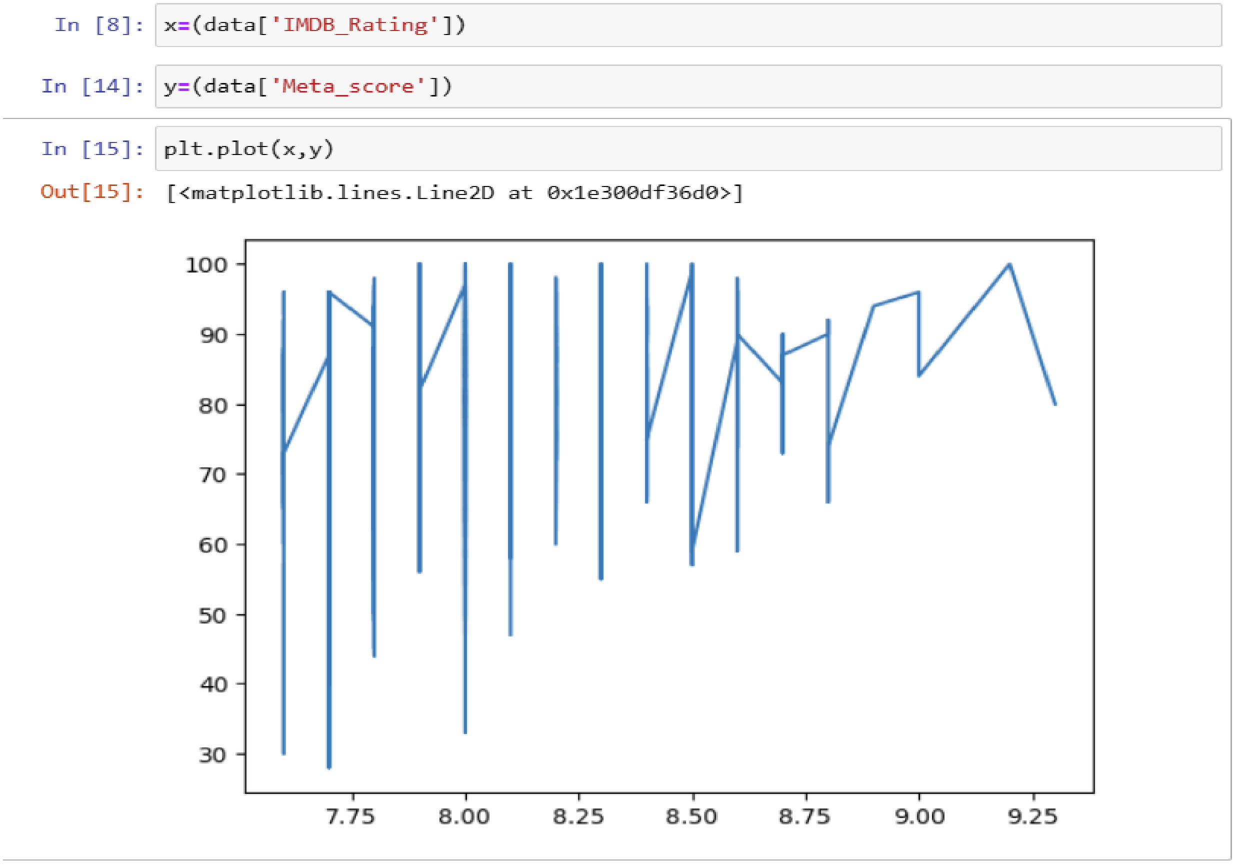
```
In [6]: import pandas as pd

In [10]: import matplotlib.pyplot as plt

In [11]: data=pd.read_csv(r"imdb_top_1000.csv")

In [12]: print(data)
```



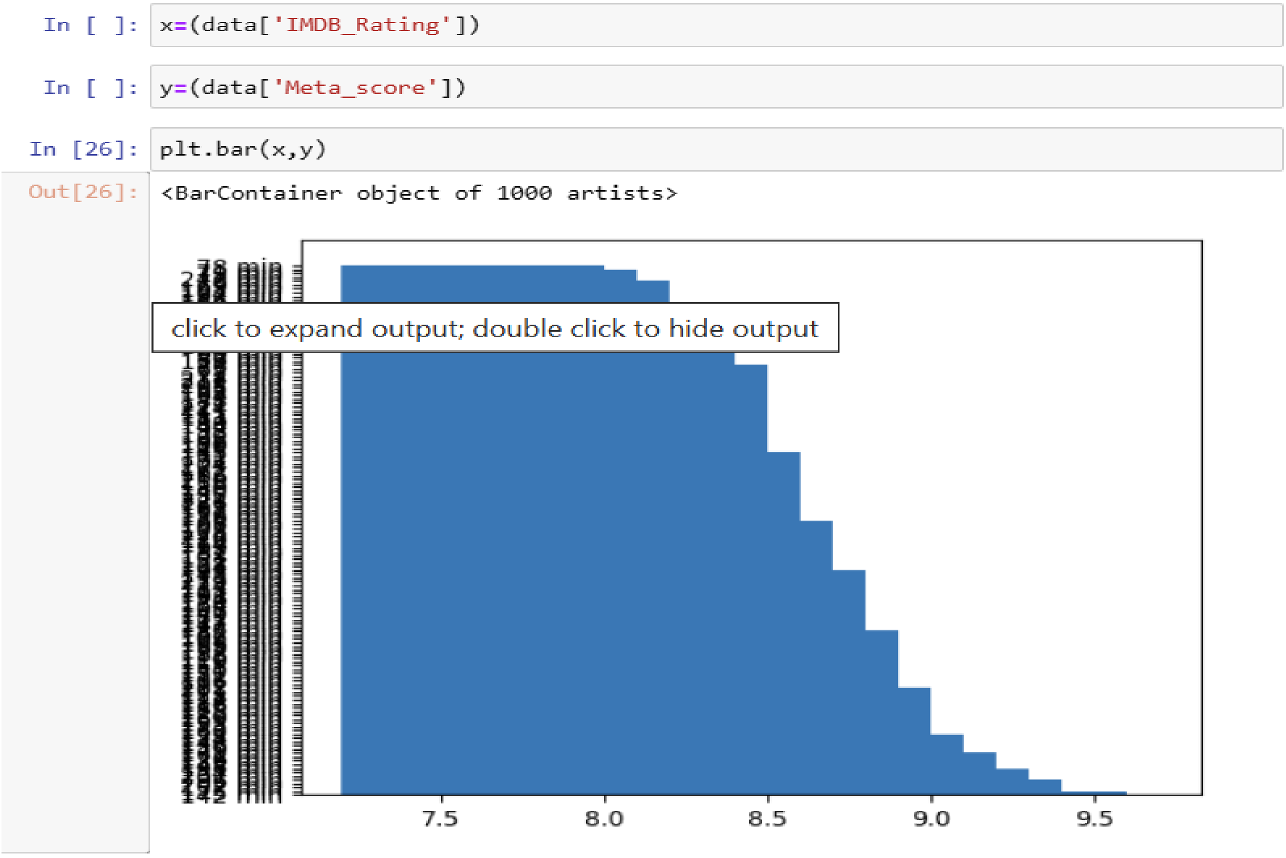
```
                                         Poster_Link  \
0    https://m.media-amazon.com/images/M/MV5BMDFkYT...
1    https://m.media-amazon.com/images/M/MV5BM2MyNj...
2    https://m.media-amazon.com/images/M/MV5BMTMxNT...
3    https://m.media-amazon.com/images/M/MV5BMWMwMG...
4    https://m.media-amazon.com/images/M/MV5BMWU4N2...
..                                               ...
995  https://m.media-amazon.com/images/M/MV5BNGEwMT...
996  https://m.media-amazon.com/images/M/MV5BODk3Yj...
997  https://m.media-amazon.com/images/M/MV5BM2U3Yz...
998  https://m.media-amazon.com/images/M/MV5BZTBmMj...
999  https://m.media-amazon.com/images/M/MV5BMTY5OD...

                 Series_Title Released_Year Certificate Runtime  \
0    The Shawshank Redemption          1994           A 142 min
1               The Godfather          1972           A 175 min
2             The Dark Knight          2008          UA 152 min
3      The Godfather: Part II          1974           A 202 min
4                12 Angry Men          1957           U  96 min
..                        ...           ...         ...     ...
995    Breakfast at Tiffany's          1961           A 115 min
996                     Giant          1956           G 201 min
997     From Here to Eternity          1953      Passed 118 min
998                  Lifeboat          1944         NaN  97 min
999              The 39 Steps          1935         NaN  86 min

                        Genre IMDB_Rating  \
0                       Drama         9.3
1                Crime, Drama         9.2
2        Action, Crime, Drama         9.0
3                Crime, Drama         9.0
4                Crime, Drama         9.0
..                        ...         ...
995    Comedy, Drama, Romance         7.6
996            Drama, Western         7.6
997       Drama, Romance, War         7.6
998                Drama, War         7.6
999  Crime, Mystery, Thriller         7.6
```



```
                                              Overview  Meta_score  \
0    Two imprisoned men bond over a number of years...        80.0   
1    An organized crime dynasty's aging patriarch t...       100.0   
2    When the menace known as the Joker wreaks havo...        84.0   
3    The early life and career of Vito Corleone in ...        90.0   
4    A jury holdout attempts to prevent a miscarria...        96.0   
..                                                 ...         ...   
995  A young New York socialite becomes interested ...        76.0   
996  Sprawling epic covering the life of a Texas ca...        84.0   
997  In Hawaii in 1941, a private is cruelly punish...        85.0   
998  Several survivors of a torpedoed merchant ship...        78.0   
999  A man in London tries to help a counter-espion...        93.0   

                 Director              Star1              Star2  \
0          Frank Darabont        Tim Robbins     Morgan Freeman   
1    Francis Ford Coppola      Marlon Brando          Al Pacino   
2       Christopher Nolan     Christian Bale       Heath Ledger   
3    Francis Ford Coppola          Al Pacino     Robert De Niro   
4            Sidney Lumet        Henry Fonda        Lee J. Cobb   
..                    ...                ...                ...   
995         Blake Edwards     Audrey Hepburn     George Peppard   
996        George Stevens   Elizabeth Taylor        Rock Hudson   
997        Fred Zinnemann     Burt Lancaster   Montgomery Clift   
998      Alfred Hitchcock  Tallulah Bankhead        John Hodiak   
999      Alfred Hitchcock       Robert Donat  Madeleine Carroll   

              Star3           Star4  No_of_Votes        Gross  
0        Bob Gunton  William Sadler      2343110   28,341,469  
1        James Caan    Diane Keaton      1620367  134,966,411  
2     Aaron Eckhart   Michael Caine      2303232  534,858,444  
3     Robert Duvall    Diane Keaton      1129952   57,300,000  
4     Martin Balsam    John Fiedler       689845    4,360,000  
..              ...             ...          ...          ...  
995   Patricia Neal     Buddy Ebsen       166544          NaN  
996      James Dean   Carroll Baker        34075          NaN  
997    Deborah Kerr      Donna Reed        43374   30,500,000  
998   Walter Slezak  William Bendix        26471          NaN  
999  Lucie Mannheim  Godfrey Tearle        51853          NaN  

[1000 rows x 16 columns]
```



```
In [8]: x=(data['IMDB_Rating'])

In [14]: y=(data['Meta_score'])

In [15]: plt.plot(x,y)

Out[15]: [<matplotlib.lines.Line2D at 0x1e300df36d0>]
```



```
In [ ]: x=(data['IMDB_Rating'])

In [ ]: y=(data['Meta_score'])

In [26]: plt.bar(x,y)

Out[26]: <BarContainer object of 1000 artists>
```

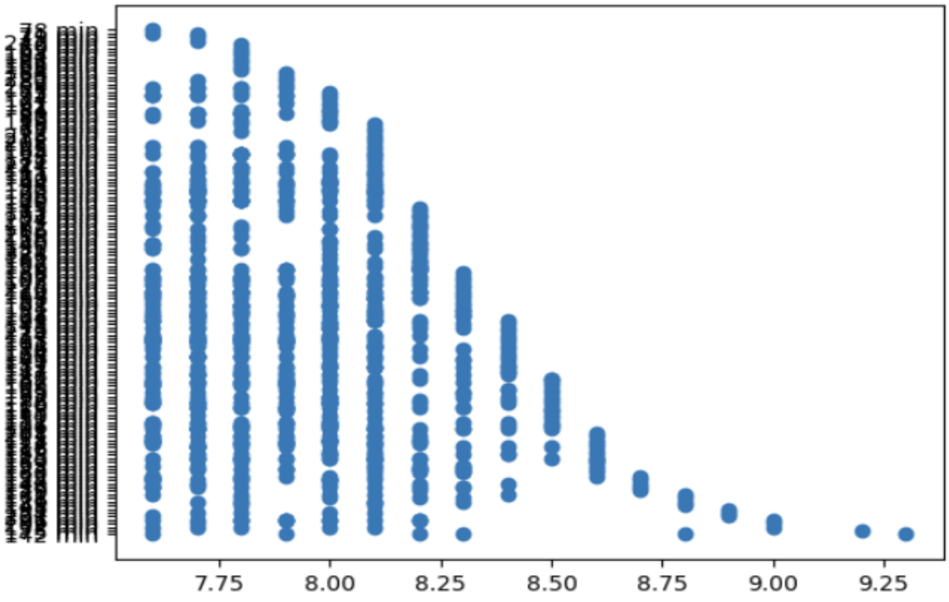
click to expand output; double click to hide output

```
In [ ]: x=(data['IMDB_Rating'])
```

```
In [ ]: y=(data['Meta_score'])
```

```
In [27]: plt.scatter(x,y)
```

```
Out[27]: <matplotlib.collections.PathCollection at 0x1e303ddefa0>
```

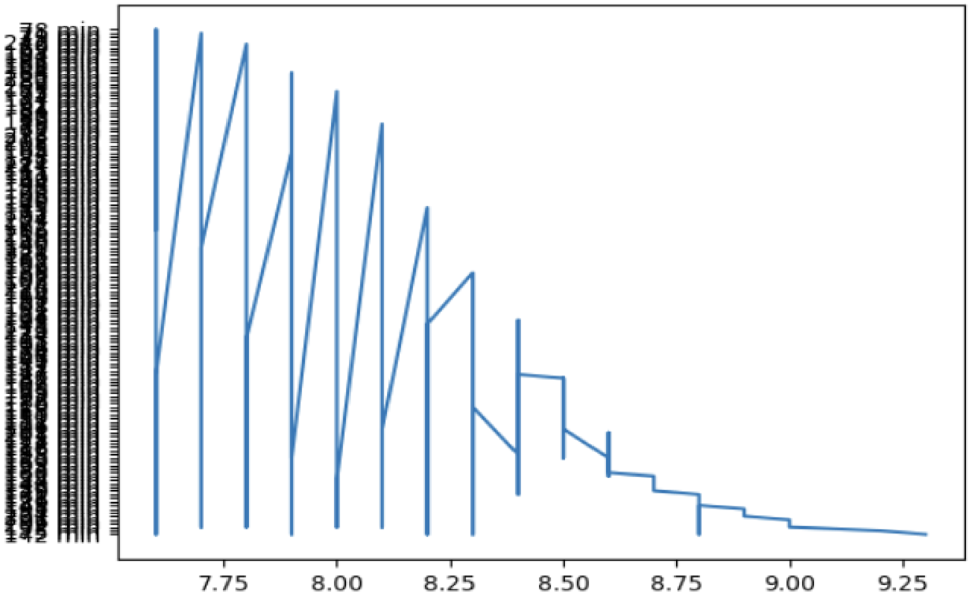


```
In [16]: x=(data['Released_Year'])
```

```
In [17]: y=(data['Runtime'])
```

```
In [28]: plt.plot(x,y)
```

```
Out[28]: [<matplotlib.lines.Line2D at 0x1e303f5b640>]
```

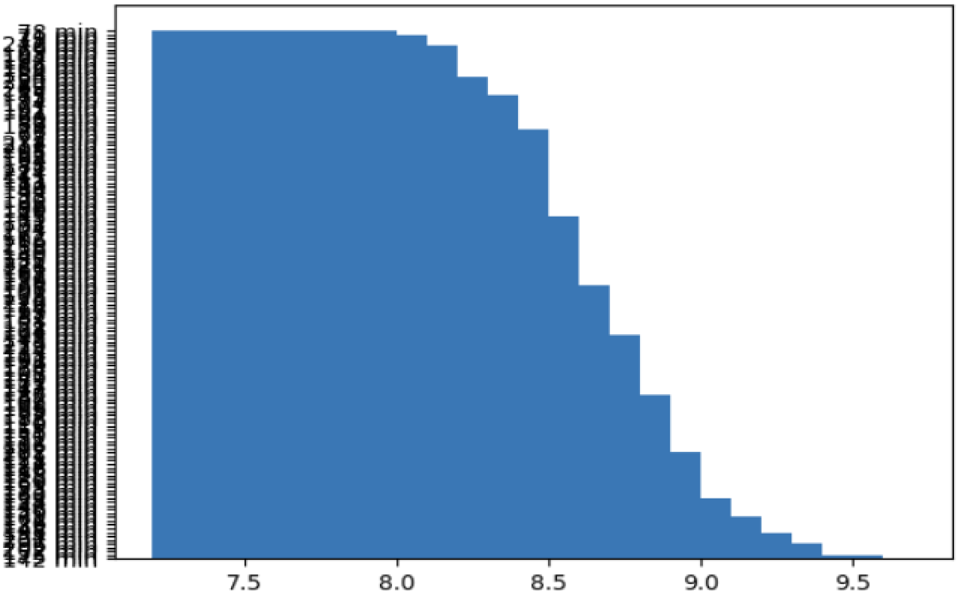


```
In [ ]: x=(data['Released_Year'])
```

```
In [ ]: y=(data['Runtime'])
```

```
In [29]: plt.bar(x,y)
```

```
Out[29]: <BarContainer object of 1000 artists>
```

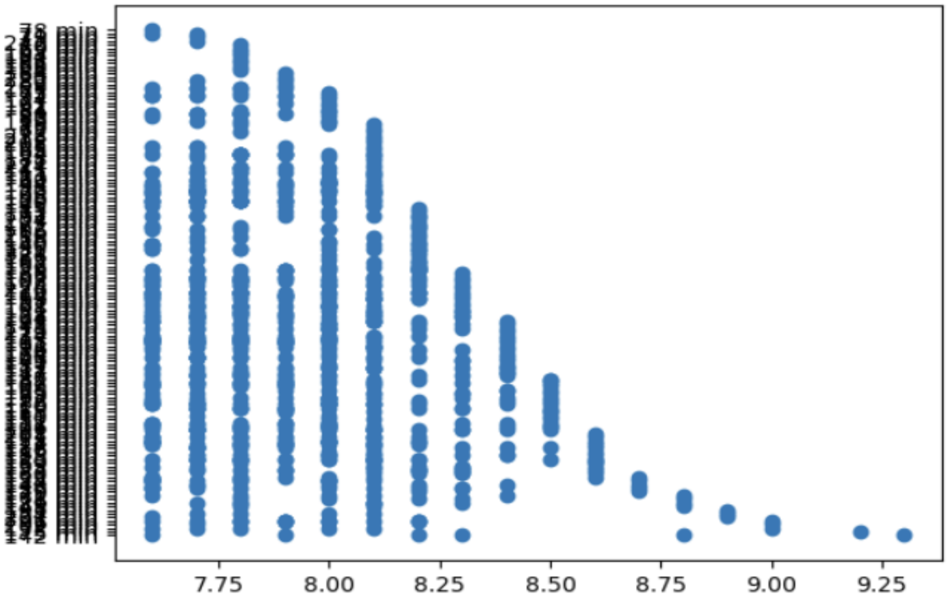


```
In [ ]: x=(data['Released_Year'])
```

```
In [ ]: y=(data['Runtime'])
```

```
In [30]: plt.scatter(x,y)
```

```
Out[30]: <matplotlib.collections.PathCollection at 0x1e305b1aac0>
```


78 min