PHASE 1 PROJECT

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INTRODUCTION

- BUSINESS PROBLEM PRESENTED:

- Microsoft has seen other big companies create original video content and they also want to join in on the fun. However they do not know anything about film creation. We are therefore tasked with identifying the films that are doing well at the box office. This information will be used to provide insights to the head of the new movie studio at Microsoft.

- A number of datasets were provided. For this analysis I chose the movie gross data and the tmdb movies dataset.

OBJECTIVES

- The main objective is to find the best performing movies in the box office.

- To find what movies bring in the highest financial benefits.

- To use insights attained from the analysis of the data to provide useful and appropriate recommendations to Microsoft.

Tools Used

- For the data analysis the tool used was Python via Jupyter Notebook.

- The datasets, jupyter notebook and the non technical PowerPoint presentation have been posted on GitHub.
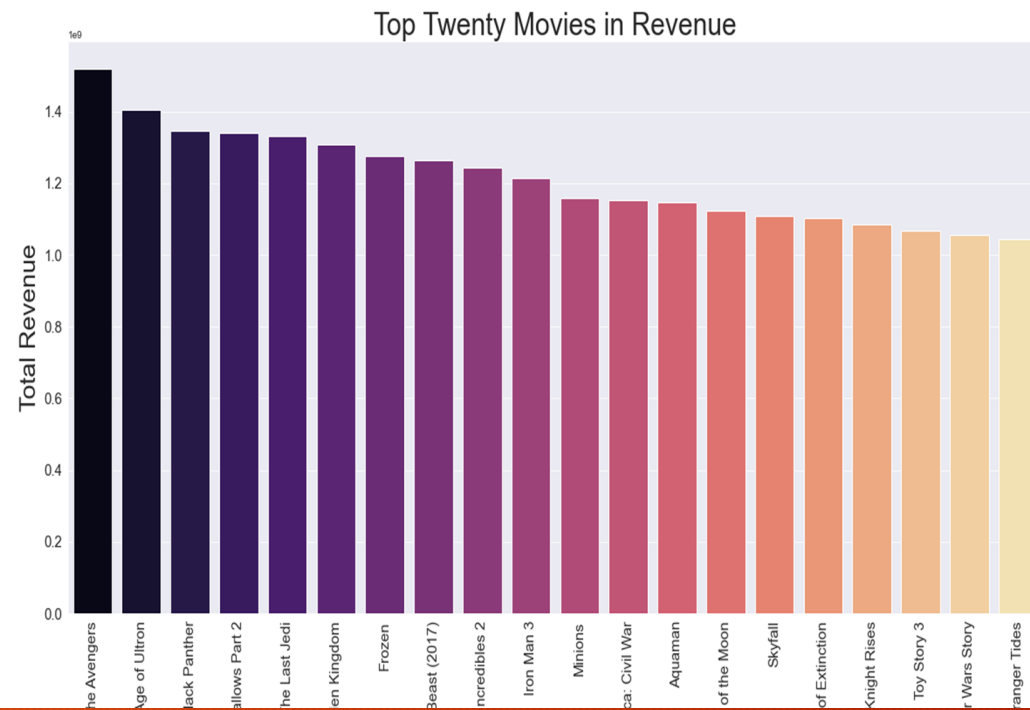
Data Analysis

- The data sets used for this analysis were:

i. 'bom.movie_gross.xlsx'. This data set includes movie titles, they release year and the domestic and foreign gross each of those movies earn.

ii. 'tmdb.movies.xlsx'. This dataset contains movie titles, their popularity index, release dates, vote counts and vote averages.
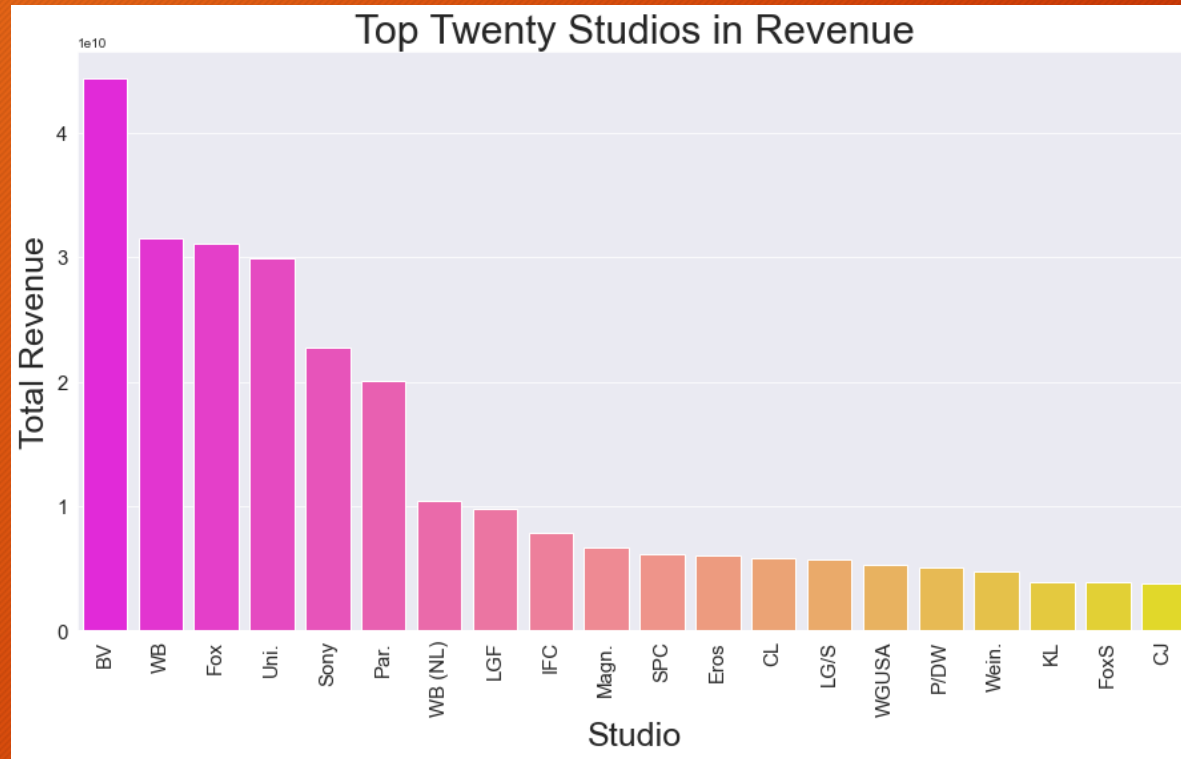
Findings from the Movie Gross dataset

- To analyze this data I calculated the total gross which is equal to domestic gross plus foreign gross. This is to find the total revenue brought in by each of the movies

- For this analysis, I used data visualization tools like graphs to find the best financially performing movies
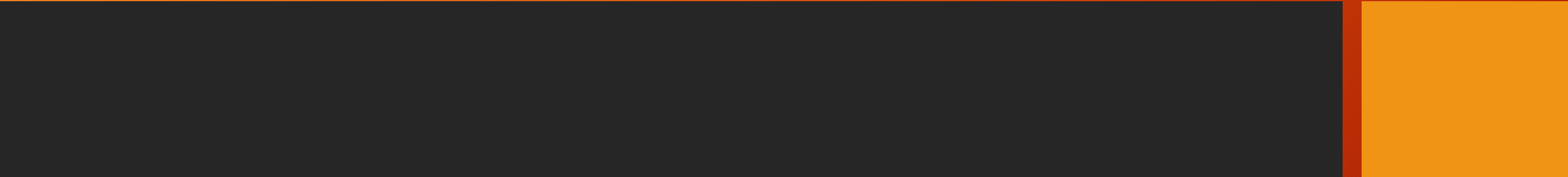
Top 20 highest grossing movies

- The graph below shows the top 20 movies that brought in the highest revenue.

- From the bar graph we can see that *Marvel's The Avengers* is the highest grossing movie at 1.5 billion dollars. Note that the total gross is in billions. This is followed closely by Avengers: Age of Ultron at 1.4 billion dollars. The Avenger's movies seem to be doing well as they are the highest grossing movies.

- From further research done, the highest grossing movies are mostly action movies and animations.

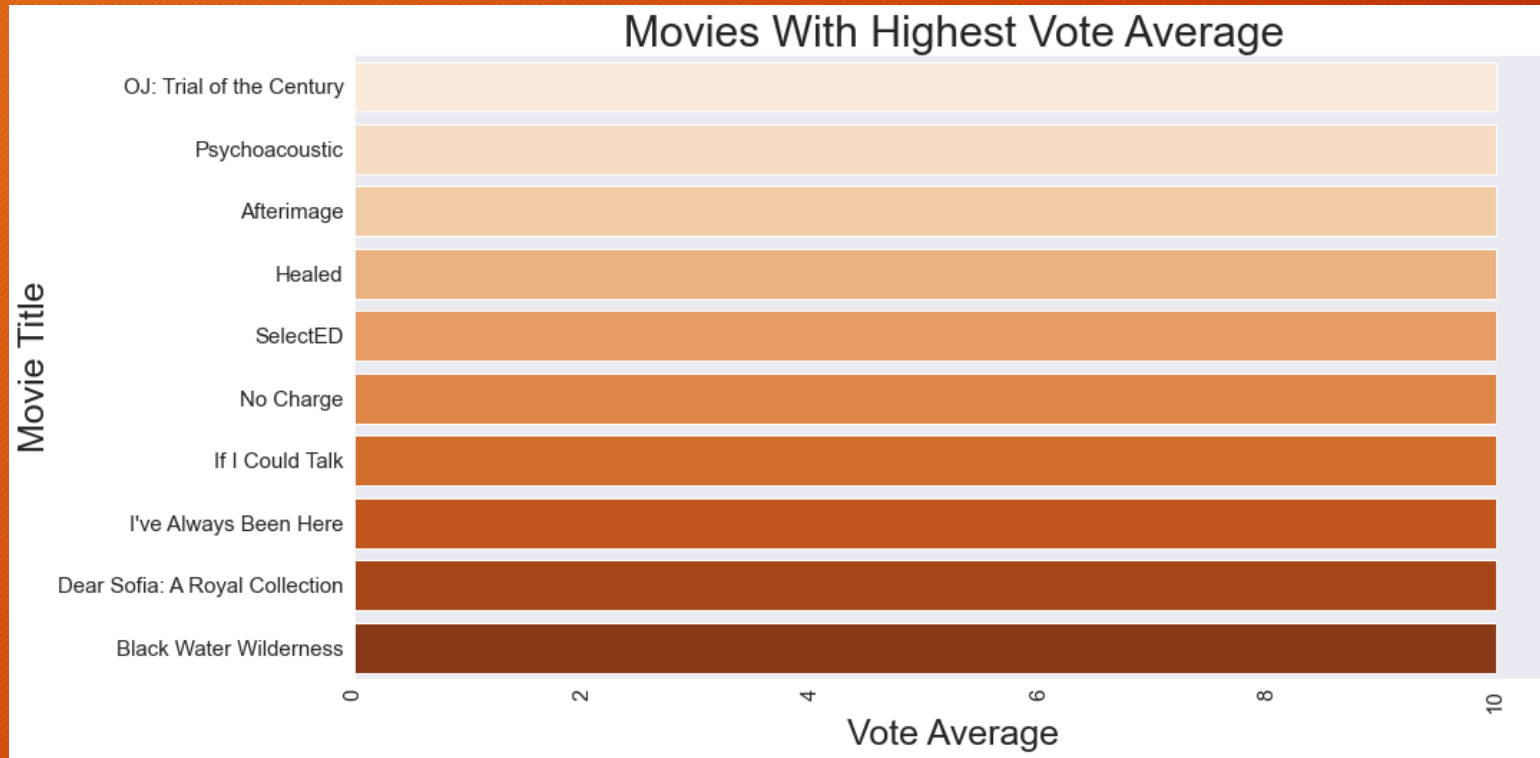Top Twenty Movies in Revenue

Top 20 highest grossing studios

- The graph above represents the studios that brought in the highest revenue with the films they created.
- From the above analysis we can see that Buena Vista (BV) makes the highest from the movies it creates. Followed by Warner Bros Studios (W.B), Fox, Universal Studios (Uni.) and Sony. These are the top 5 studios in terms of gross.
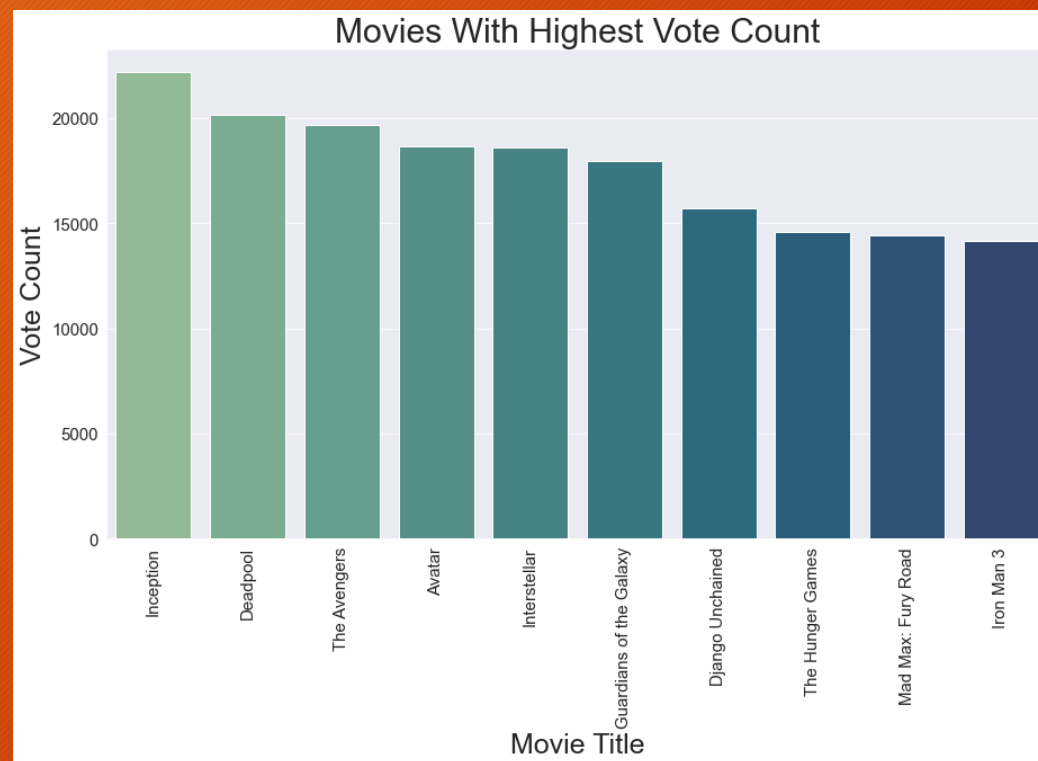
Analysis of the 'tmdb.movies.xlsx ' dataset

- From this dataset I calculated the most popular movies, the movies with the highest vote average.

- I also looked for the correlation between the vote average and the popularity of the movies in the dataset.

- The findings are represented in the visalisations below.

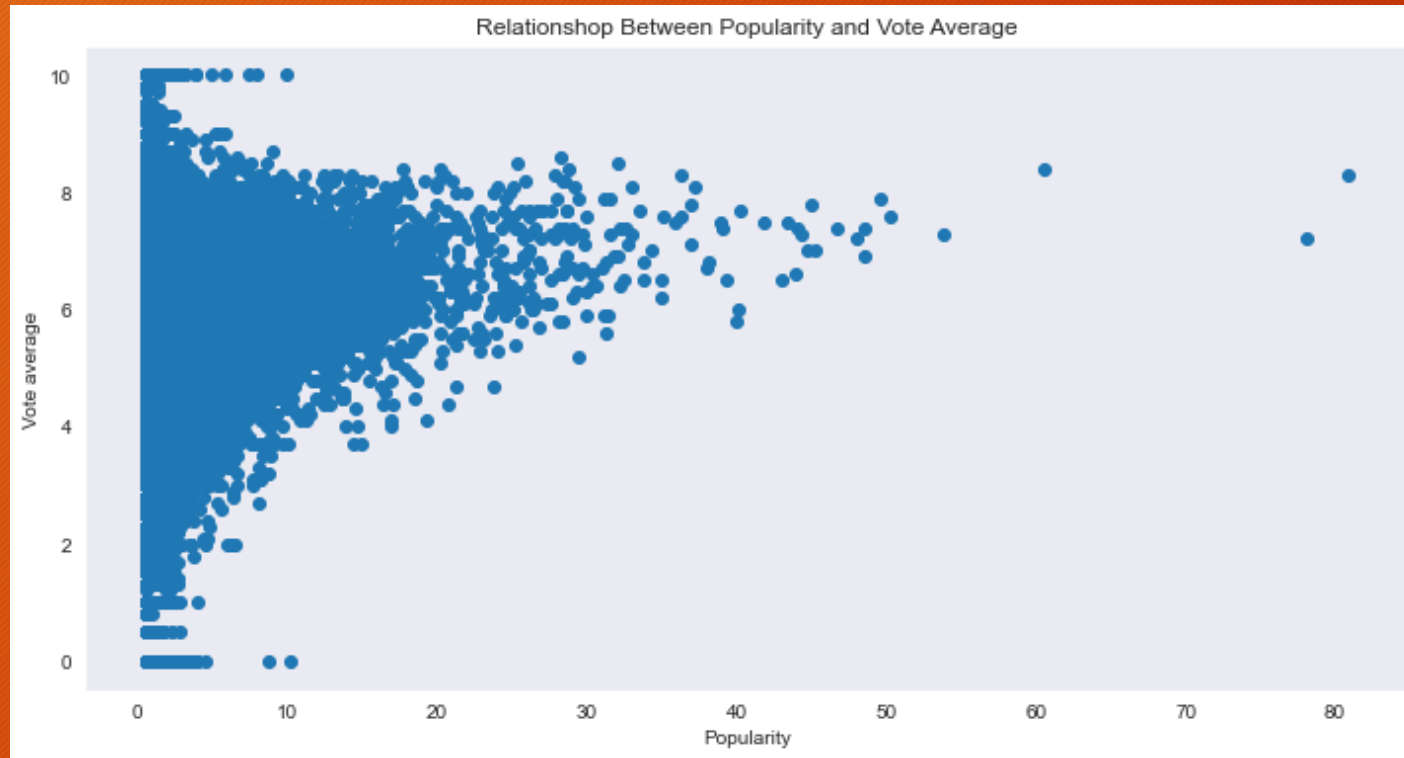# Top 10 Movies with the highest vote average.

- The ten movies with the highest vote average all have a vote average of 10.
- The top 10 movies in terms of vote average are: 1.OJ: Trial of the Century 2.Psychoacoustic 3.Afterimage 4.Healed 5.SelectED 6.No Charge 7.If I could Talk 8.I've Always Been Here 9.Dear Sofia: A Royal Collection 10. Black Water Wilderness
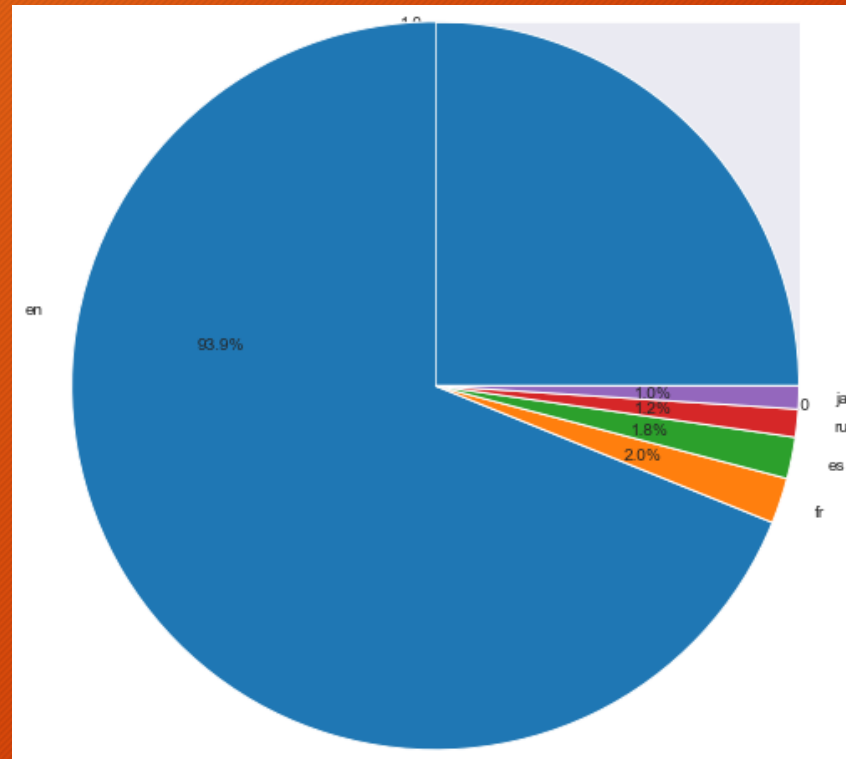
Top 10Movies with the highest vote counts.

Relationship between vote average and popularity.

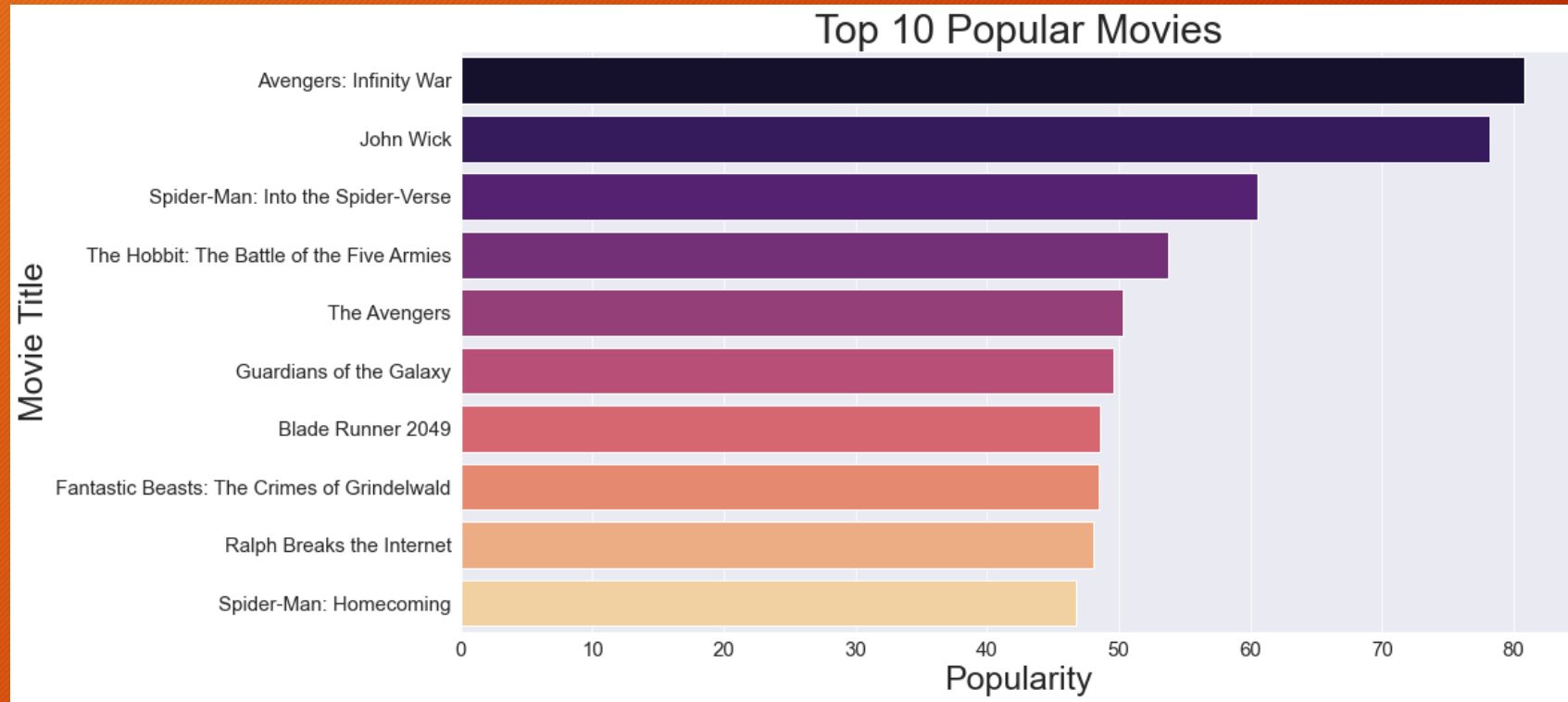- If we are to draw a line throught the scatter plot, we will see that there is a posituve correlation between the vote average and the popularity . The higher the popilarity the the higher the vote average.

The top 5 most used languages

- From the above analysis we checked the top 5 used languages in films. English is seen to take the lead as it is used in 93.9% of the films.

Top 10 popular movies

- The first finding is that English is the most used languge in the films .
- It is also evident that Avengers Infinity War is the most popular Movie, followed by John Wick then Spider_Man: Into the Spider Verse. Those make the top 3 most popular movies.

Recommendations.

- The following are the recommendations that can be given to Microsoft after analyzing the movie gross data:

- Microsoft could partner with the top 5 highest grossing studios to create their films. They could partner with Buena Vista(BV) , Warner Bros (WB) Studios, Fox, Universal Studios or Sony. This will enable Microsoft to gain financally from the movies they create worldwide.

- The highest grossing movies are Marvel's The Avengers, Avenger's Age of Ultron and Black Panther. These are taking the top 3 spots. One recommendation is that Microsoft casts the actors and actresses from these films. They could also work with the directors from these films.

- Looking at the top 20 highest grossing movies, most of them are action movies . These include: Marvel's The Avengers, Avenger's Age of Ultron, Black Panther, Star Wars: The last Jedi, Skyfall, Aquaman, Iron Man 3, Transformers Age of Extinction among others. Animations such as Toy Story 3, Frozen, Beauty and the Beast and Incredibles 2 have also made it to the list of the highest Grossing movies. Therefore while creating Films, Microsoft could look into creating Action movies and Animations as they bring in the highest income worldwide.

- Recommendations from the tmdb movies data set is as follows:

- The first recommendation is that Microsoft uses English in their films. Considering English is the most used Language in the above analysis. Furthermore, English is used in many parts of the world making it suitable. In line with the findings from the Part 1 one analysis, it is evident that Action movies are doing well. Specifically the Avenger's movie Franchise. In the second data analysis we see that Avenger's Infinity War is the most popular. Therefore Microsoft should consider venturing in Action movies.

- Looking at the top ten popular movies, Microsoft could cast actors and actresses from these movies since the audience is already familiar with them. This increases the chances that the movies made by Microsoft will be popular. Microsoft could also work with the production team of these movies to produce quality and popular movies.

- Once Microsoft is able to create their movies, they should also create platforms where their audience can vote and give reviews so that they are able to understand how to better their film creation.
- From the movies with the highest vote average, we see OJ: Trial Of the Century among the top. This being a film from a trending and real life occurrence, Microsoft should consider making films on real life stories that hit the headlines.

Conclusion

- The most evident finding from both data sets used is that action movies perform well financially and are also very popular.