IMDB Movie Analysis

Project Description:

IMDb (Internet Movie Database) is an online database of information related to films, television series, podcasts, home videos, video games, and streaming content online including cast, production crew and personal biographies, plot summaries, trivia, ratings, and fan and critical reviews. IMDb began as a fan-operated movie database in 1990, and moved to the Web in 1993. Since 1998, it has been owned and operated by IMDb.com, Inc., a subsidiary of Amazon.

Approach:

I went through the Excel data provided by the trainity IMDB Movie Analysis project and understood that there were columns related to the movie in the dataset. Further, I understood the columns and their respective constraints to do the analysis. I was given a set of questions to solve as part of the analysis. By using the Microsoft Excel, I did solve the queries and provided the result as expected.

Tech-Stack Used:

Microsoft Excel 2021 – To answer the queries with the help of Excel formulas in the tool.

Insights:

Did the data cleaning like:

- Removing null values.
- Removed the columns which we don't use for the analysis. Removing the Duplicate rows.

Have used the in-built formulas in excel for the descriptive analysis such as: Mean – average()

Median – median()

Mode – mode()
Max – max() Min
– min()

Variance – VAR.P()

Standard Deviation - STDEV.P()

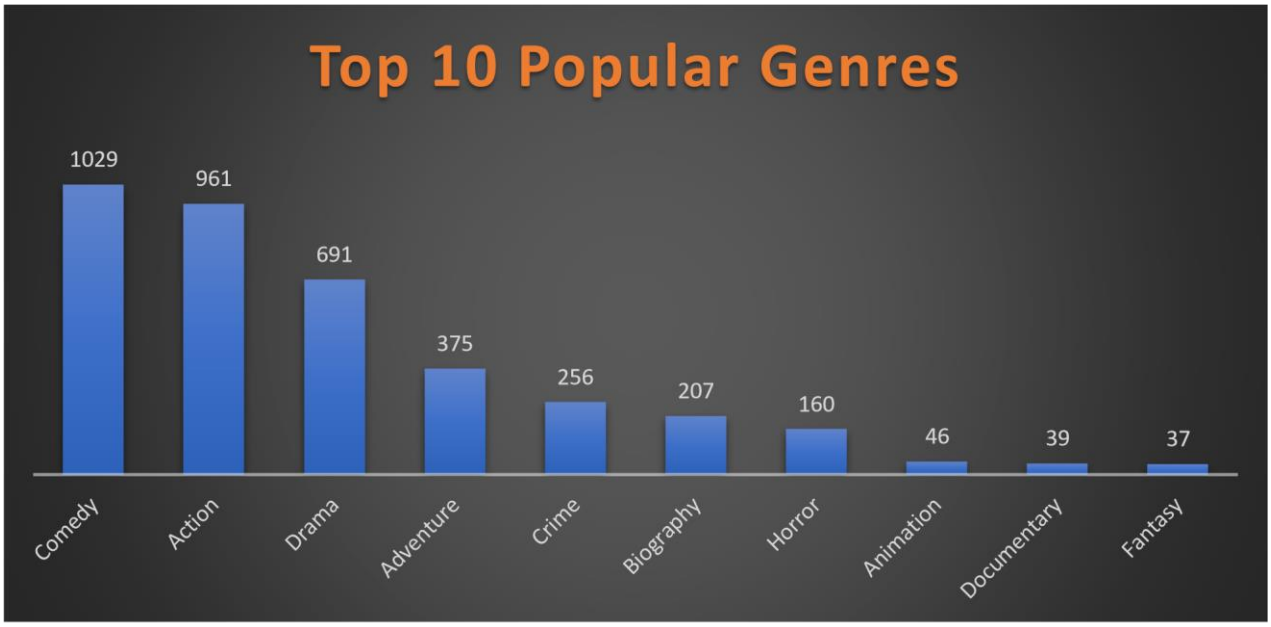
With the help of the Excel formulas, I found out many insights which include – **Task**

A - Genre Analysis:

Determine the most common genres of movies in the dataset. Then, for each genre, calculate descriptive statistics (mean, median, mode, range, variance, standard deviation) of the IMDB scores.

Used the columns Genres and found out the count of each Genres using the countif formula in Excel.

And sorted the Top 10 count to find out the Top 10 in pivot table and created the Column chart for it.



The Descriptive Analysis for the above is:

Mean	226
Median	39
Mode	3
Max	1028
Min	2
Var	109876.8
Std Dev.	331.5

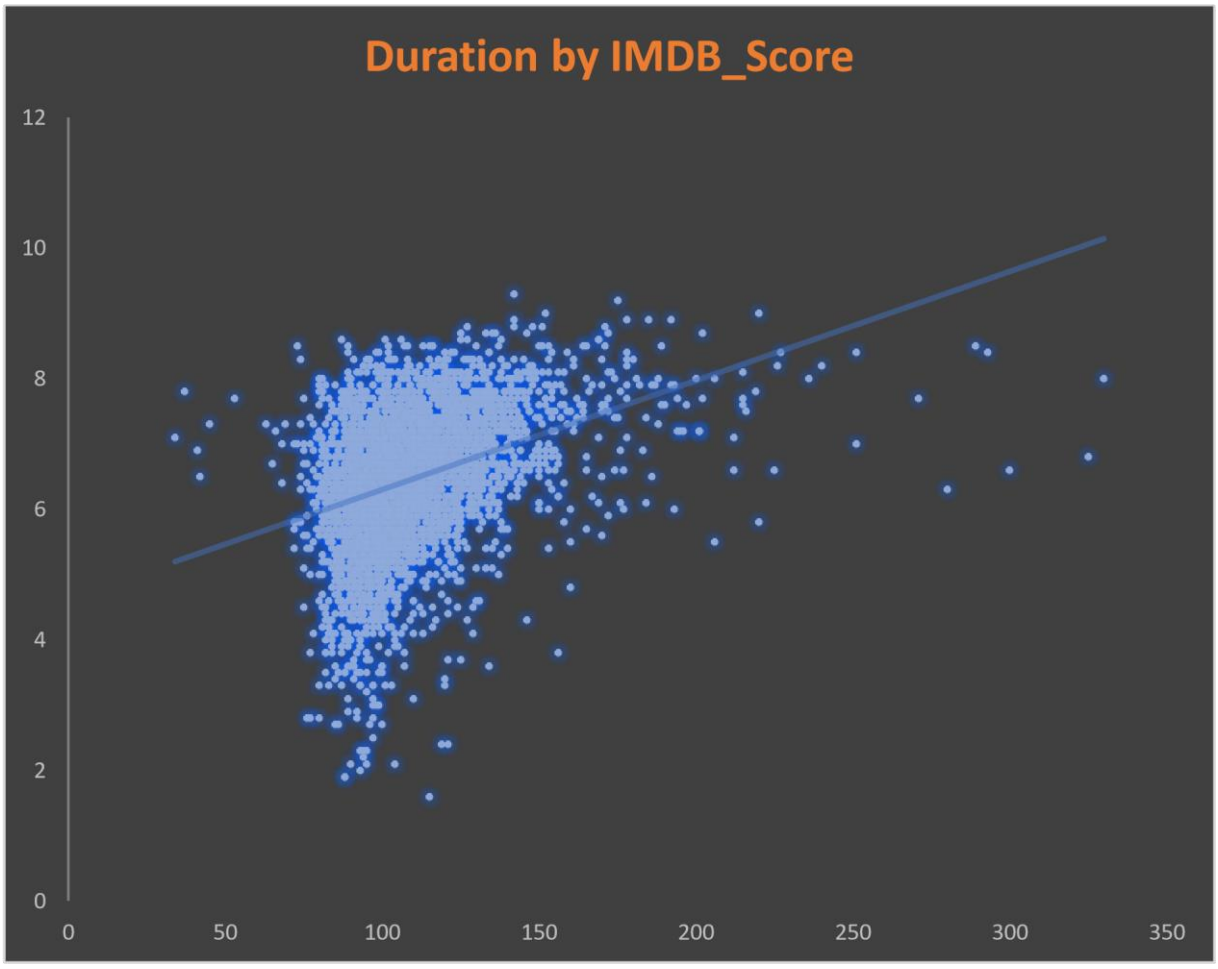
We could see that the most popular genre is **Comedy** and followed by the other genres.

Task B – Movie Duration Analysis:

Analyse the distribution of movie durations and identify the relationship between movie duration and IMDB score. Created the Scatter plot as instructed in the task.

The Descriptive Analysis is as below:

Mean	109.9
Median	106
Mode	101
Max	330
Min	34
Var	517.6844
Std Dev.	22.75268

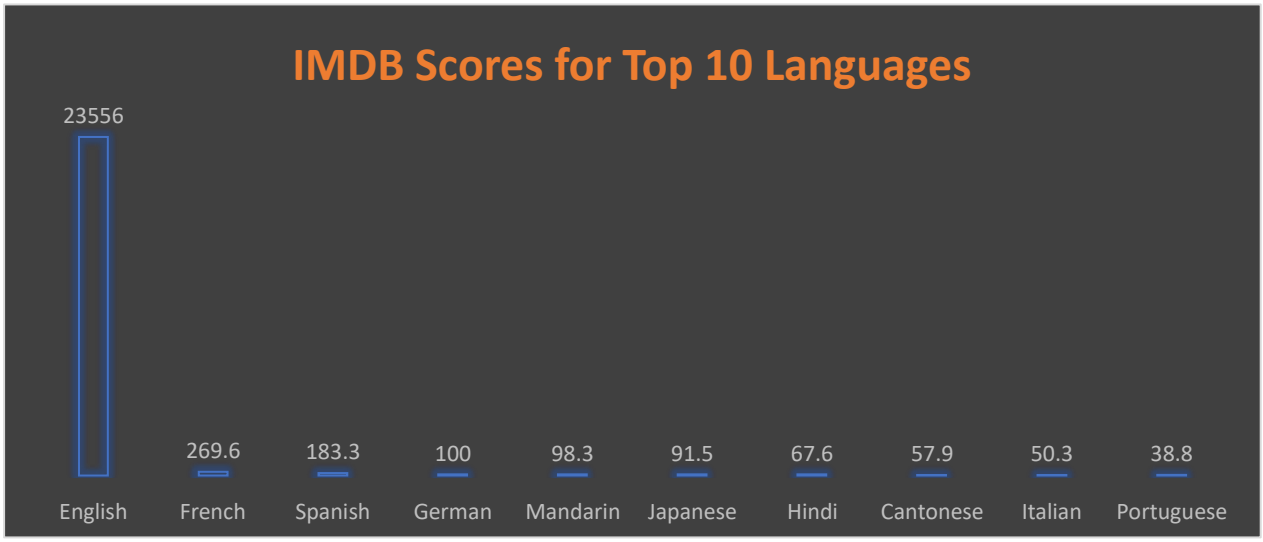


We could see that the trendline is increasing with the duration increase.

But mostly the IMDB score is more when the duration is between 80 mins to 150mins.

Task C – Language Analysis:

Determine the most common languages used in movies and analyse their impact on the IMDB score using descriptive statistics.



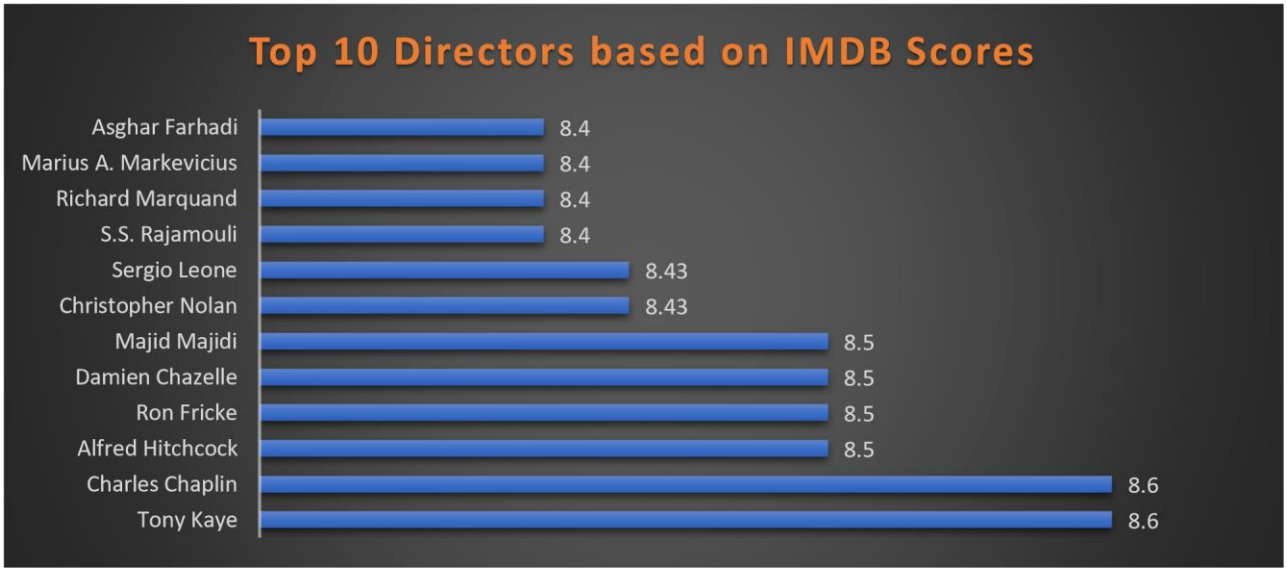
From the above Column chart, it is evident that the language "**English**" is the most common language with **23556** times present in the dataset. It was found by counting the number of times its present using the countif formula in excel.

The descriptive analysis is as below:

Mean	6.46
Median	0
Mode	0
Max	23556
Min	0
Var	144273.8
Std Dev.	379.8339

Task D – Director Analysis:

Identify the top directors based on their average IMDB score and analyse their contribution to the success of movies using percentile calculations.

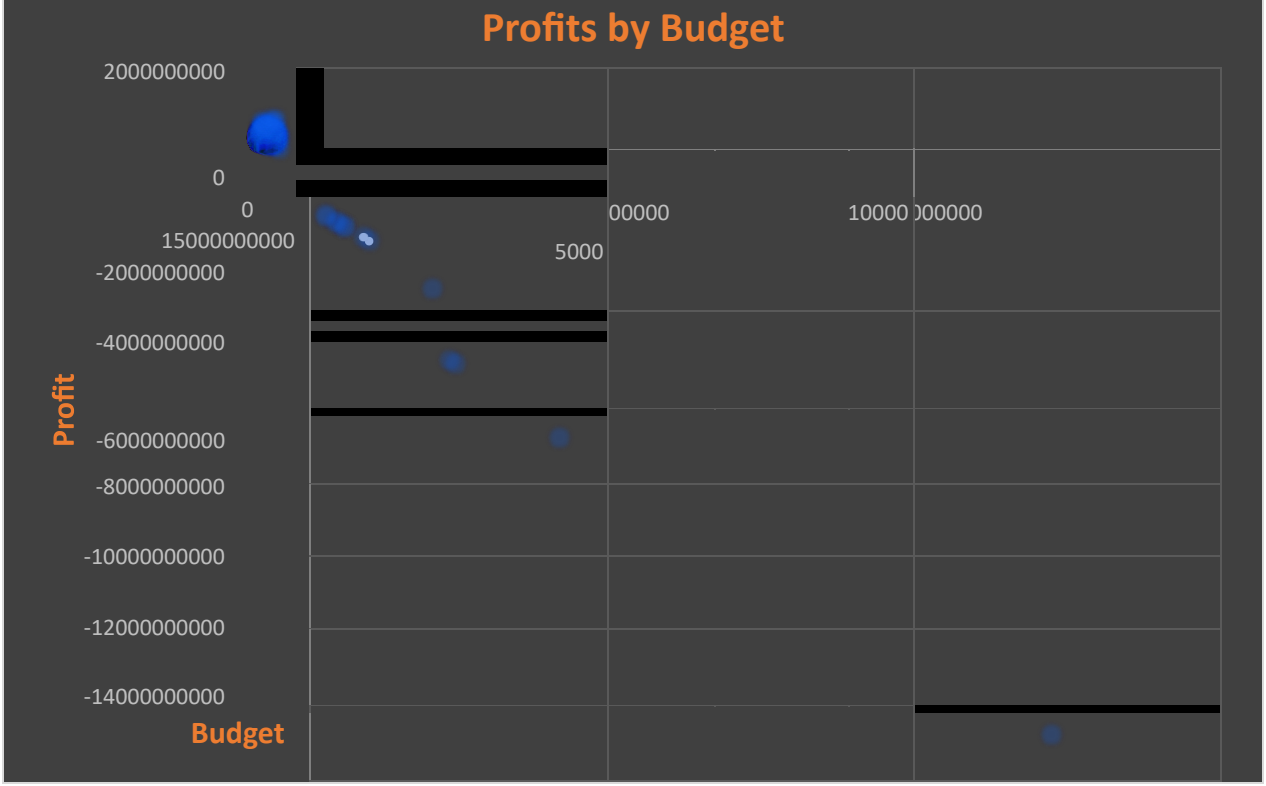


Have plotted the Bar graphs for the top directors with more IMDB scores.

Task E – Budget Analysis:

Analyse the correlation between movie budgets and gross earnings, and identify the movies with the highest profit margin.

Found the Profit of each movie by the difference of the gross with budget used for the movie.



These are the top 5 Profitable movies in the database:

Director Name	Gross	Budget	Year	IMDB Score	Movie Title	Profit
James Cameron	760505847	237000000	2009	7.9	Avatar	523505847
Colin Trevorrow	652177271	150000000	2015	7	Jurassic World	502177271
James Cameron	658672302	200000000	1997	7.7	Titanic	458672302
George Lucas	460935665	11000000	1977	8.7	Star Wars: Episode IV - A New Hope	449935665
Steven Spielberg	434949459	10500000	1982	7.9	E.T. the Extra-Terrestrial	424449459

The most profitable movie is **Avatar** with a profit of **523,505,847 Dollars (5.2 billion Approx.)**.

Result:

Through this project I was able to understand the formulas being used in the Excel which can be used to find the Statistical measures such as Mean, Median, Mode, Max, Min, Variance and Standard Deviation. I got used to the Excel formulas and how to convert the Raw Data into meaningful insights. And the steps which I used are – cleansing the data and using the formulas to find the desired outcome and also learnt how to convert the data into a

visualized chart so that the insights can be drawn within seconds by seeing the graphs instead of searching the whole data.

I have achieved the end result and I think I have contributed my full support into the Analysis. I hope this project helps the Analysis and it achieves what it was tend to achieve.