# MICROSOFT MOVIE STUDIO ANALYSIS

Phase 1 project

Summary

Over-The-Top (OTT) is a media distribution model that has gained popularity in recent years. It allows content providers to deliver television shows, movies, and videos directly to viewers .
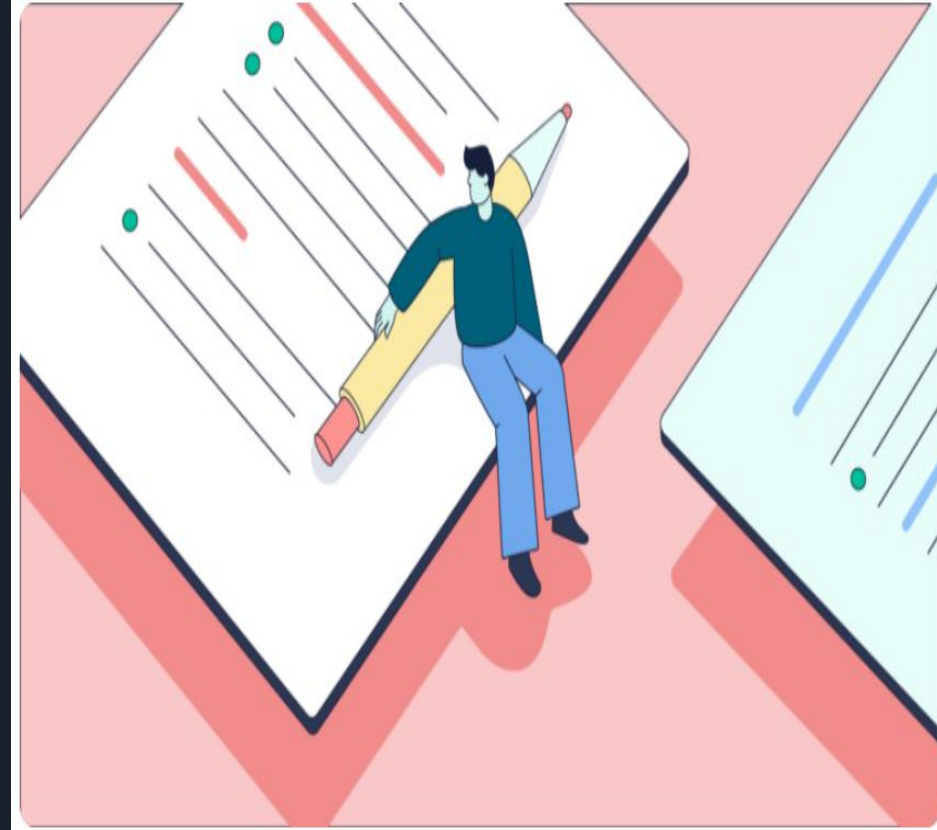
Microsoft who has seen all the big companies creating original video content and they want to get in on the fun. My goal in this project was to analyze box office movies and translate the findings into actionable insights

Analysis done on Genres, Budgets, Revenues and Language of the produced movies
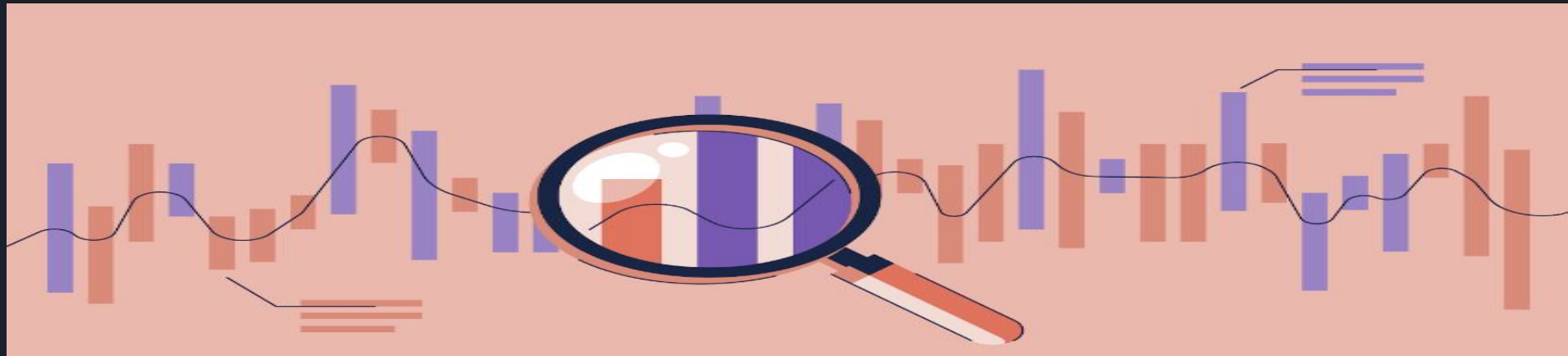
Outline

- Business Problem
- Data
- Methods
- Results
- Conclusions

Business Problem

➢ Microsoft's decision to venture into the movie industry presents exciting opportunities, but also potential challenges due to their lack of experience in creating films.

Questions Considered:

- What high-quality content can microsoft produce that resonate with both audiences

  and critics?

- What financial management practices should they employ to optimize movie budgets

  and maximize returns on investment?

- How can they use release timing, boost a movie's success?

- How important are ratings and votes for the long-term viability

  of a movie studio?

Data Sources

11 Datasets were compiled by the school for the project from below sources for this analysis:

Box Office Mojo

IMDB

Rotten Tomatoes

TheMovieDB

The Numbers

Variables Considered:

- Popular genres
- Profit and release timing analysis
- Ratings and Runtime of movies over the years
- Language Analysis

Methods

The data available was in CSV and TSV formats.

- Made use of Python Libraries such as Pandas to read data into data frames. Represented tabular data with an integrated index, so data can be selected a manipulated using rows or columns. For visualization, I made use of matplotlib and seaborn libraries.
- Data cleaning formed the foundation for exploring the data. Once I identified the data I wanted to work with, I converted data to the correct data types especially numeric data, deleted duplicates, and also deleted unwanted columns from some tables.
- merged the 11 data frames into 2 combined data sets (tmdb_movies_budgets_df(TMDB dataset) and movies_df(IMDB dataset)) seeking to answer key questions .

Results: POPULAR GENRES

Distribution of Movie Genres
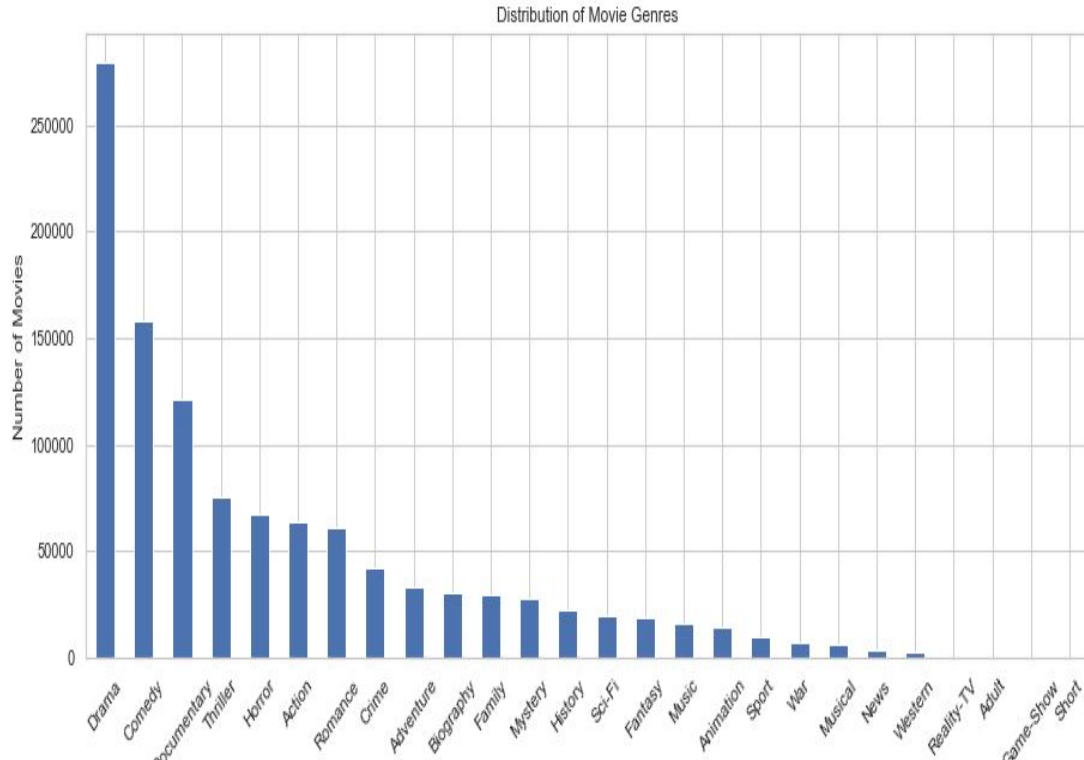
Insights

- Drama and comedy are the most commonly produced movies
- Microsoft should be keen on how the distribution of the produced movies and can opt to combine popularly produced genres with most votes like drama and top genres with highest average

Results: GENRES WITH HIGHEST VOTES

Top Genres with Most Number of Votes
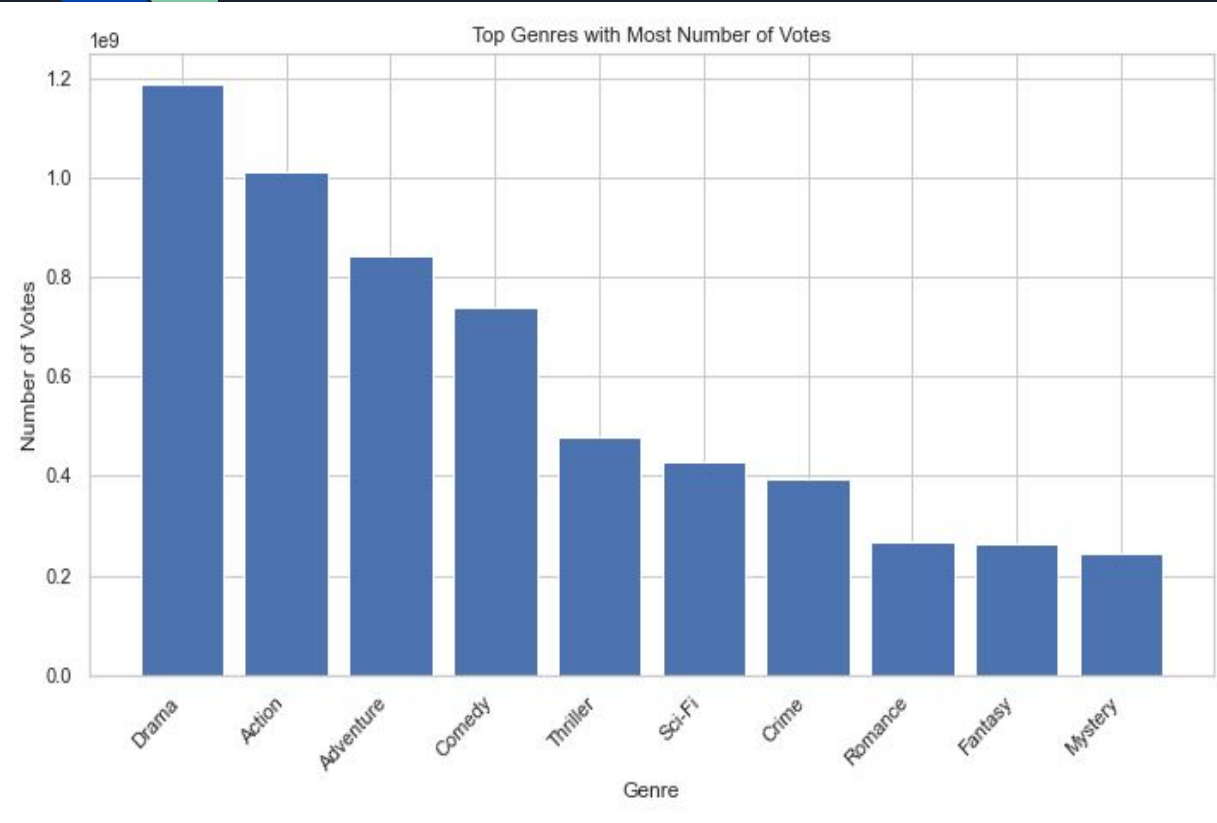
Best Voted genres:

- Drama
- Action
- Adventure
- ➢ Microsoft can opt to combine popularly produced genres with most votes like drama and top genres with highest average ratings which can be a viable strategy for their movie studio if done effectively.

From the top 30 movies Avatar ,Avengers Infinity war and Furious 7 are just but a few movies with different Genre Representation

Results: Release month performance

Average Box Office Performance by Release Month
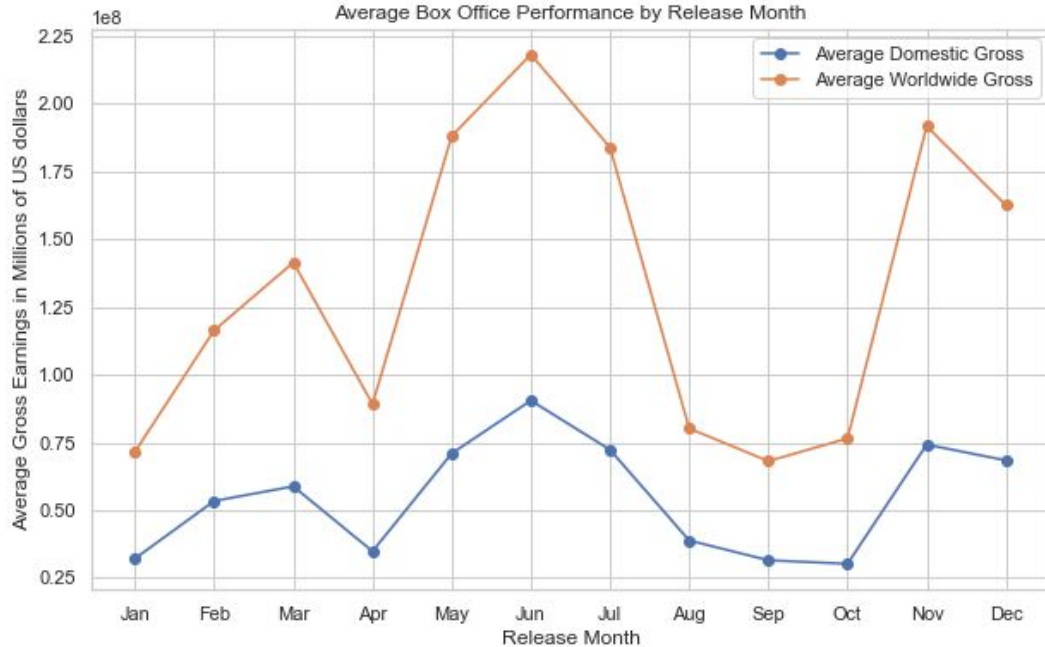
INSIGHTS

➢ Best time to produce movies is during summer as well as the holiday(Oct-Dec) season with people having more free time, there's an increased potential for higher movie attendance

➢ June release allows more time for a movie to build momentum and benefit from word-of-mouth promotion as compared to Holiday thus the average performance is slightly higher than that of holiday season

Results-Production Budget VS Revenue

Correlation between Production Budget and worldwide_gross Gross
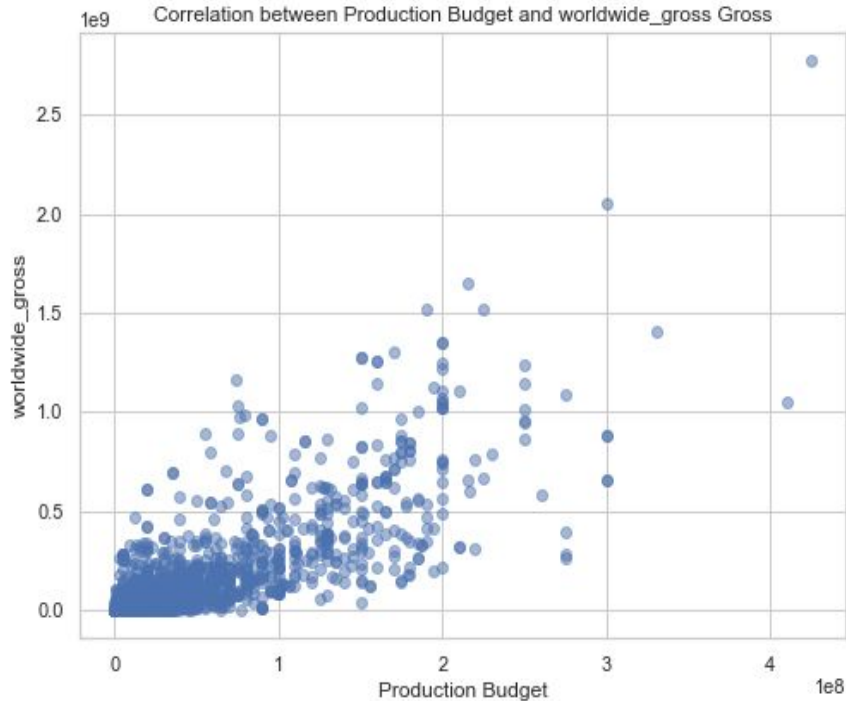
INSIGHTS

➢ Correlation coefficient between production budget and domestic gross: 0.7112719018305409

➢ Correlation coefficient between production budget and worldwide gross: 0.7919405720240019

➢ This suggests that movies with higher production budgets are more likely to generate higher domestic /worldwide grosses at the box office

➢ While a strong correlation indicates a robust relationship between the variables, it does not mean that one variable directly causes the other to change. Additional analysis and consideration of various factors are necessary to make informed decisions in the film industry.

Results

Top 30 Movies by Net Profit and Production Budget

➤ Comparing Avatar and Avengers age of ultron both have relatively higher(close to $500M) and comparable budgets but the profit for avatar are significantly higher . The difference in profit levels could be due to Release Timing,talented Cast and Crew as well as Distribution Strategy especially when reaching the worldwide market

➤ High-quality production values are essential, but excessive spending doesn't always guarantee success
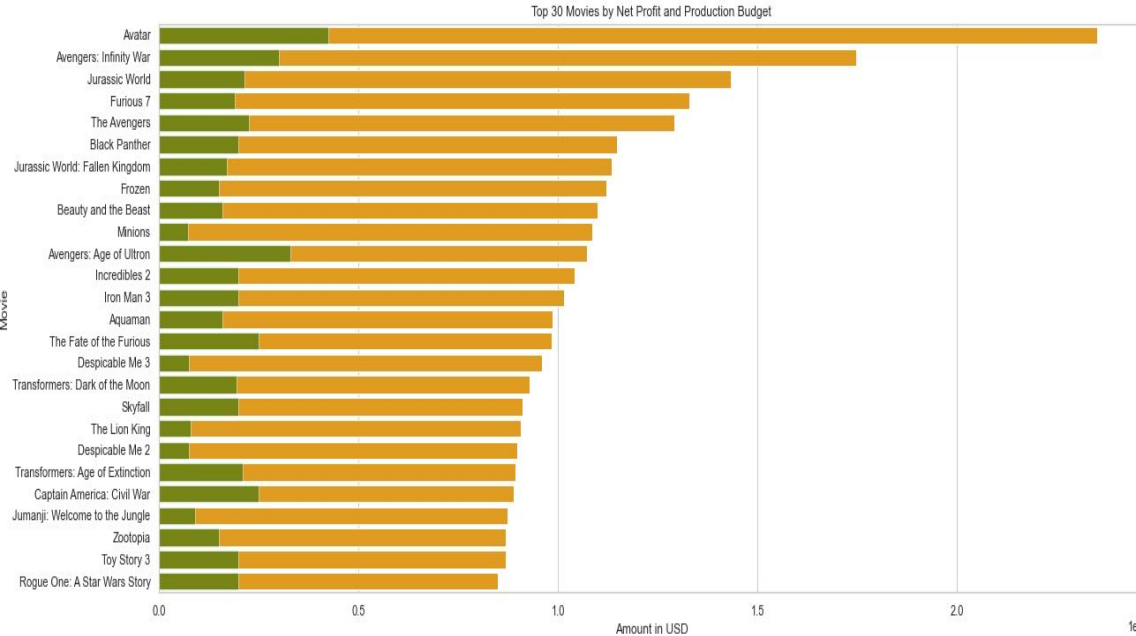
# Results: Correlation between, Rating,votes and Runtime

Correlation Between Rating, Votes, and Runtime
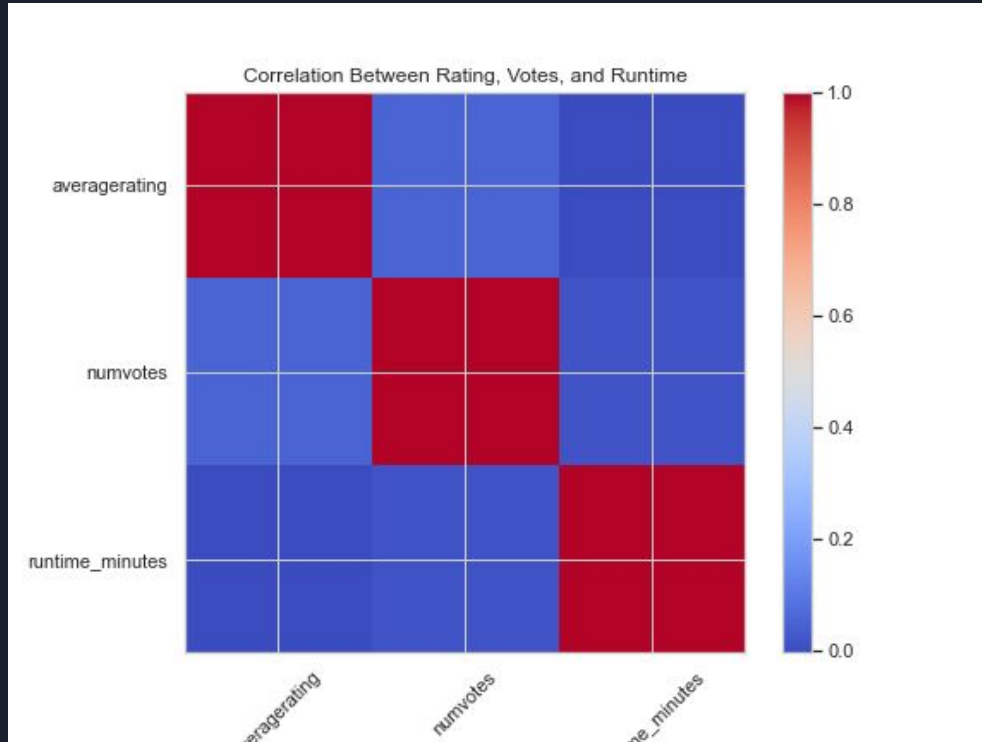
INSIGHTS

➢ Recognition is influenced by the average ratings a movie gets. From the data set, most movies receive a mean rating of 6.261905. The average rating has been increasing throughout the years peaking in 2018 while the number of votes reducing therefore could signify that the competitors have significantly improved the quality of movies produced

➢ There is a Moderate Positive correlation of 0.4 between the number of votes and average ratings; when the number of votes increases, average ratings increase moderately. There is minimal close to zero correlation between the runtime in minutes and average ratings of movies.

Results

POPULAR LANGUAGES

Average Popularity by Original Language
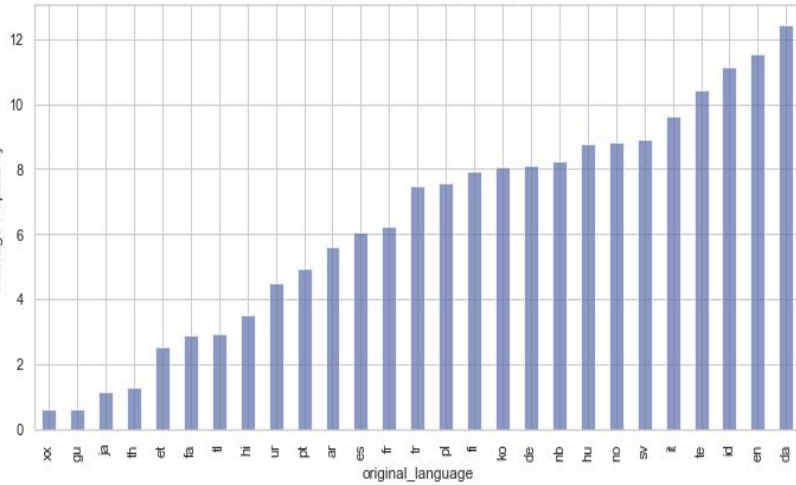
- ➢ Microsoft need not restrict production to only English. Movies can be diversified and produced in different languages and can be translated to others based on demand
- ➢ Danish (da), Turkish,Estonian and Hungarian are some of the most voted for languages
- ➢ Korean Movies the highest vote counts

Average Vote Count by Original Language
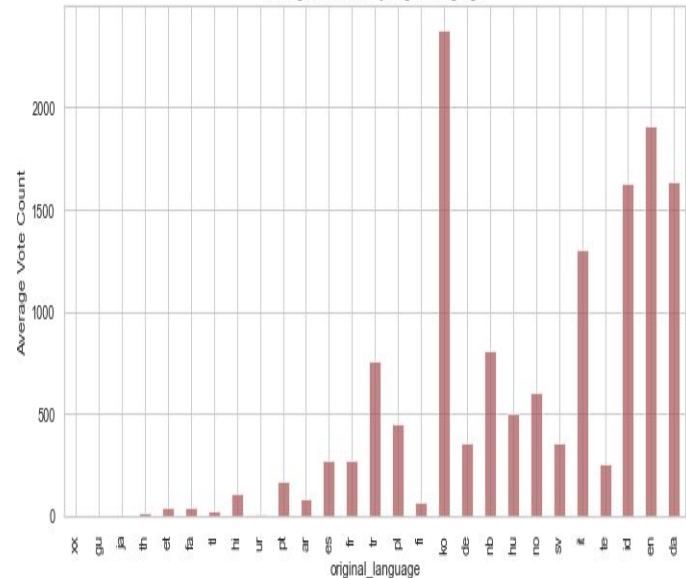
Conclusions

Overall, from the data Microsoft Studio can increase its chances of success by producing high-quality content across various genres, effectively managing its finances, implementing strong marketing and distribution strategies, aiming for award recognition, and staying adaptable and innovative in the ever-changing film industry. However I would not recommend Microsoft setting up a new movie yet since there are other options available;

1. They can opt to Purchasing existing content can provide immediate access to popular titles
2. Microsoft can partner with content and studio providers to license rights for other titles.
3. Further Research- analyse more recent data for the film industry

Thank You!

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