



Microsoft Movie Analysis

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Summary

Microsoft is wanting to start a movie studio and is interested in what makes a successful film.

In this project we focused on several aspects of the film industry including:

- Average worldwide gross per genre
- Average return on investment per genre
- Popularity per genre
- What month is the best to release a movie
- Production budget compared the the worldwide gross
- What is the best runtime for a movie.

Outline

- Business Problem
- Data
- Methods
- Results
- Conclusions

Business Problem

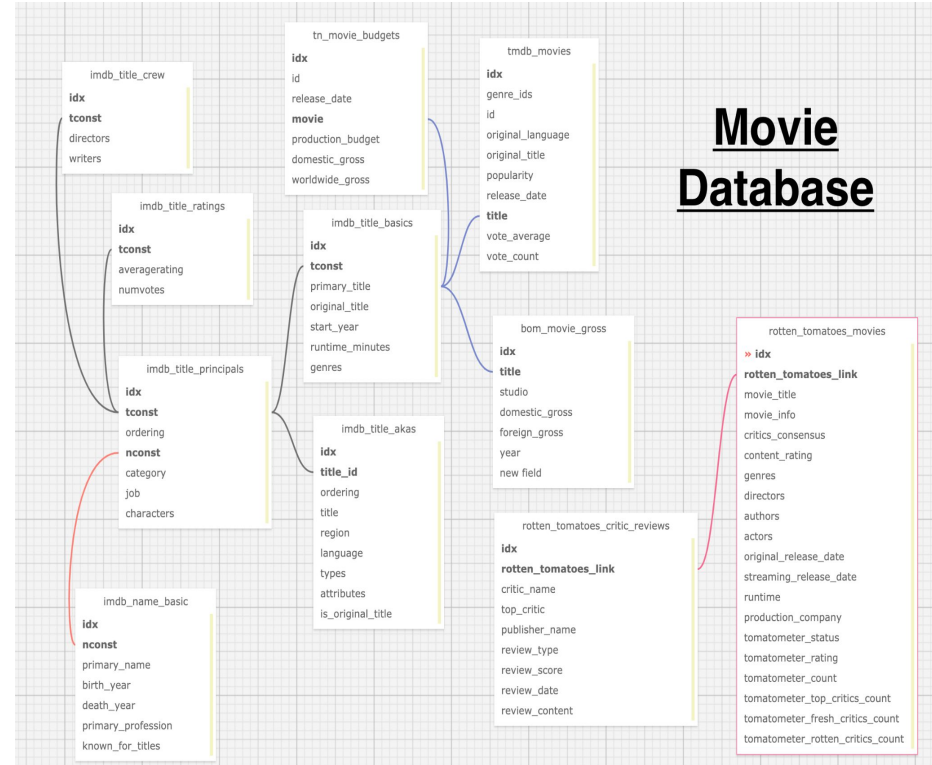
Microsoft producers need help starting up their movie studio. Below are a few ideas that will lead Microsoft to success.

- Select a genre of movie that will produce a high return on investment (ROI)
- Using the production budget as a prediction of how much a movie will gross worldwide
- Make sure a movie falls under an optimal runtime
- Release the movie during an month that has the highest opportunity for a high ROI

Data

We used data provided to us to create unique and effective visualizations that will help us explain the path that we believe Microsoft should follow in order to have the best chance of success in their new fight between giants like Disney and Netflix. Below is the data we used to conduct our analysis.

- imdb_title_basics
- tn_movie_budget
- tmdb_movies
- rotten_tomatoes_movies



Movie Database

Methods

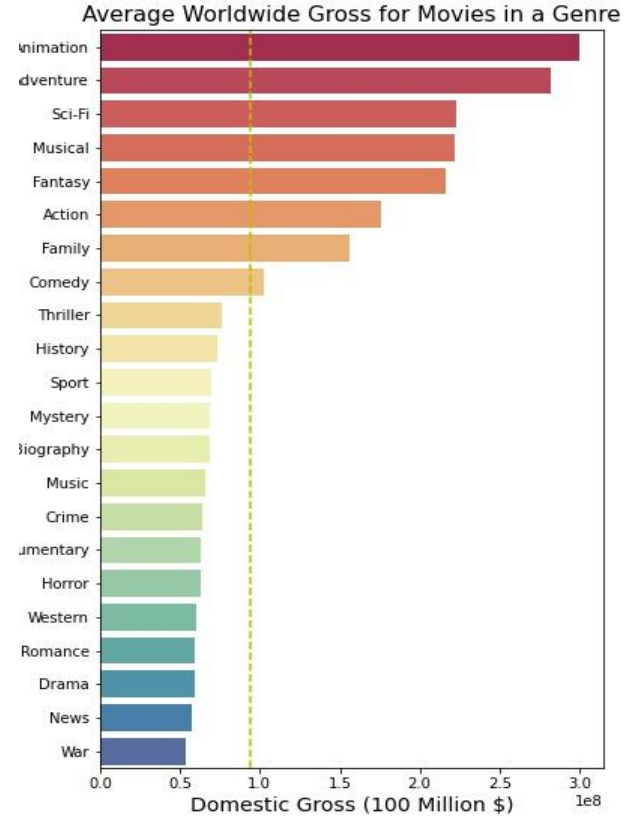
We used multiple SQL queries to search and clean though the data. We then used seaborn and matplotlib to create visualizations that are key to explaining the path we think Microsoft should follow as well as being visually appealing and easy to read.

- SQL queries
- Seaborn
- Matplotlib
- PANDAS

Results

This Chart plots average worldwide gross for each genre

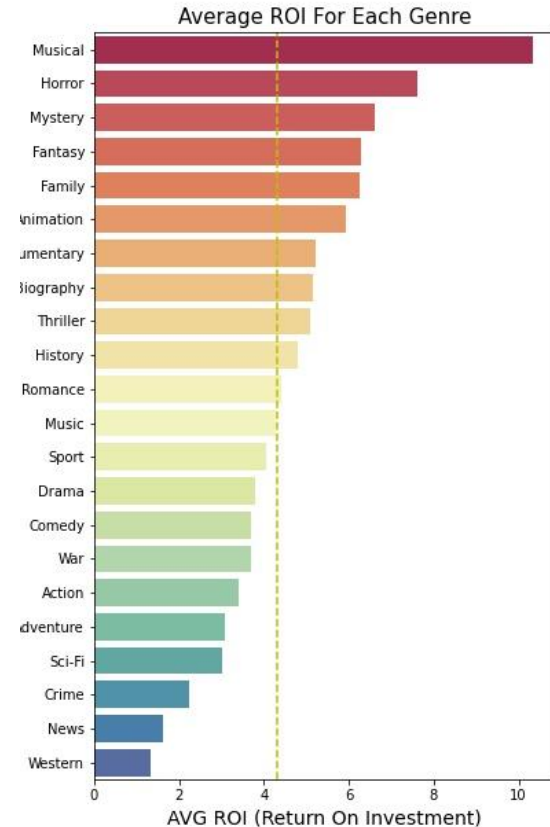
- Adventure
- Sci-Fi
- Musical
- Fantasy
- Action
- Family
- Comedy



Results

This graph shows the average return on investment for each genre

- Musical
- Horror
- Mystery
- Fantasy
- Family
- Animation
- Documentary
- Biography
- Thriller
- History
- Romance

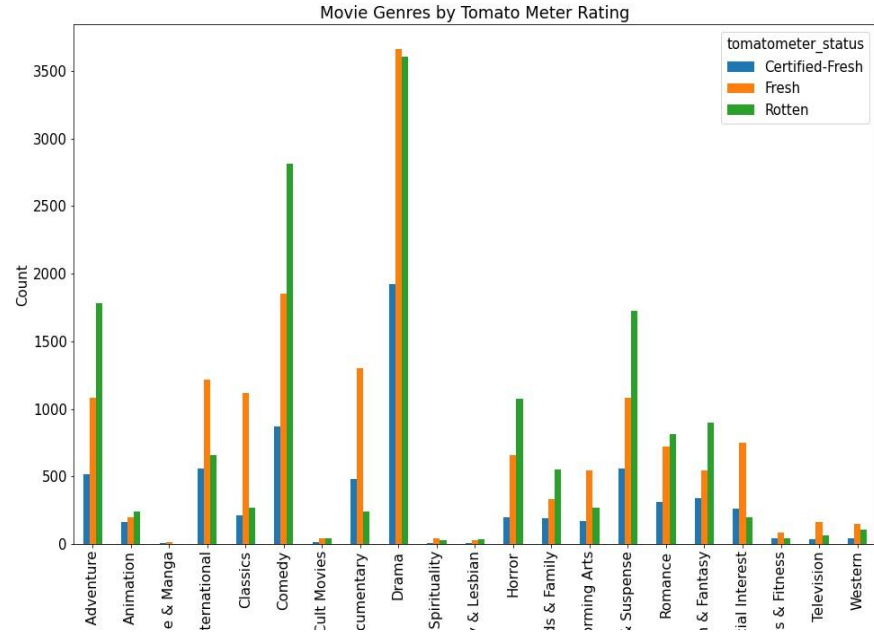


Results

This graph shows the tomatometer rating of movies in the rotten_tomatoes_movies table.

Many genres that are both above the average worldwide gross and average ROI for the industry have large amounts of “Rotten” reviews with fewer “Fresh” and “Certified-Fresh” reviews.

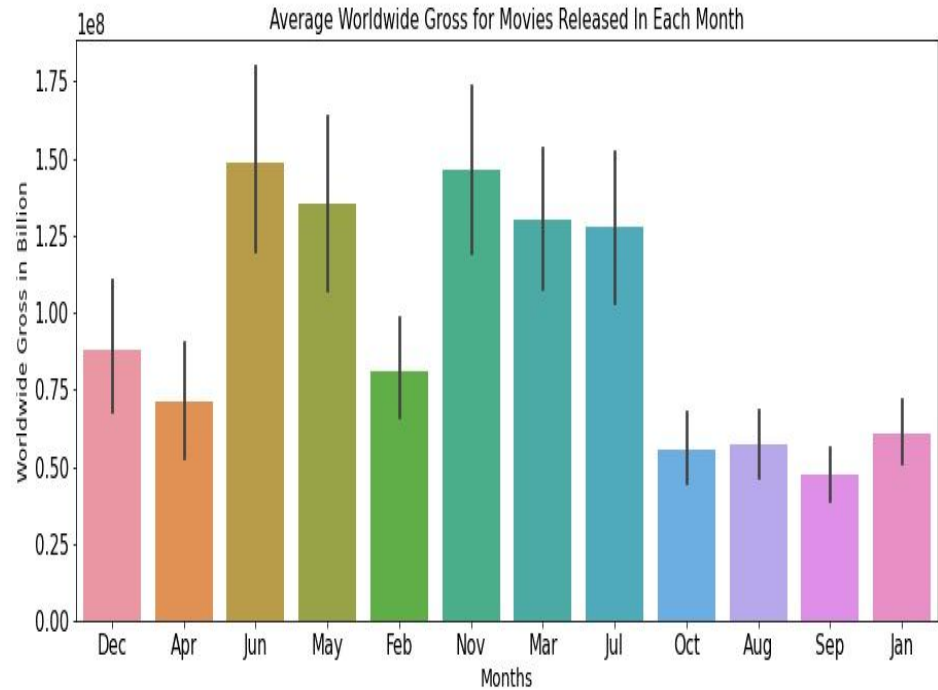
This shows how popularity and critic reviews are not a major contributing factor to a film’s success.



Results

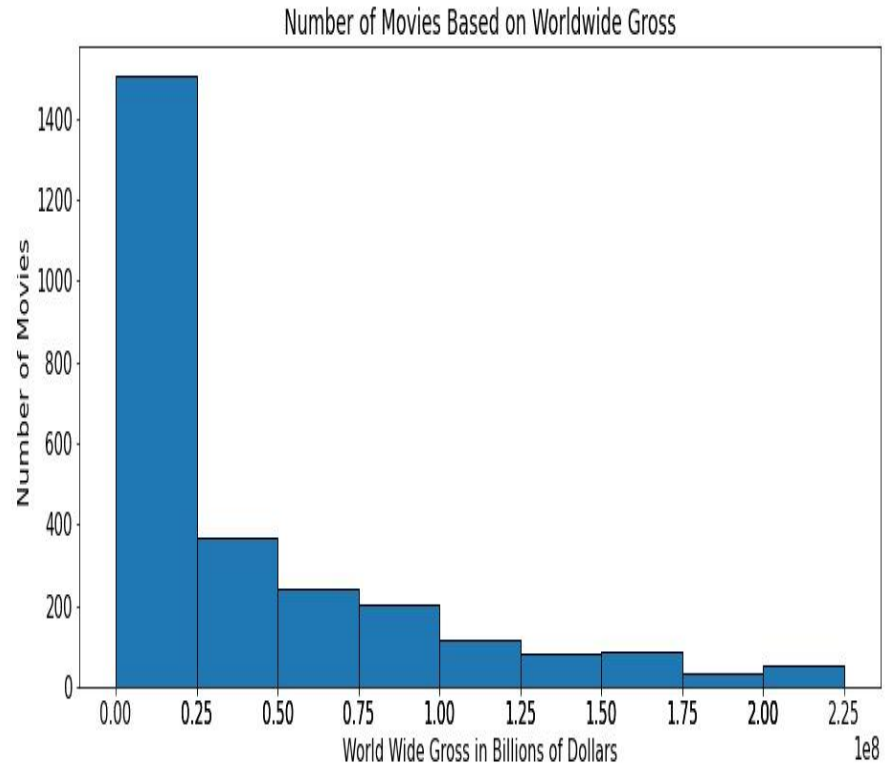
Comparison between the month a movie is released and the average worldwide gross for movies released in that month.

- June
- November



Results

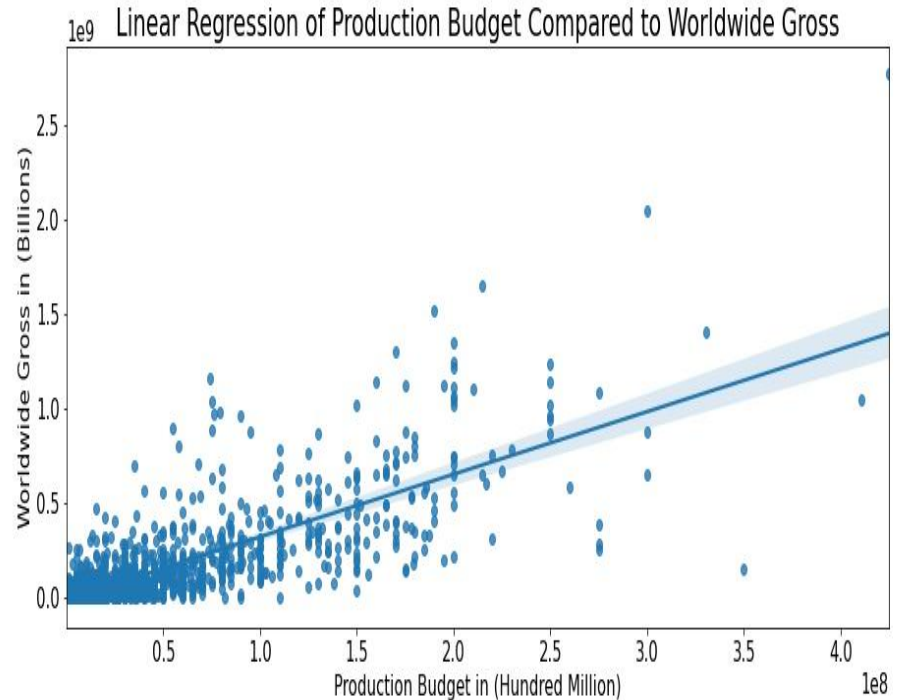
- Microsoft should expect to gross less than \$250,000,000 because the majority of movies fall in this range.
- They should plan their production budget accordingly.



Results

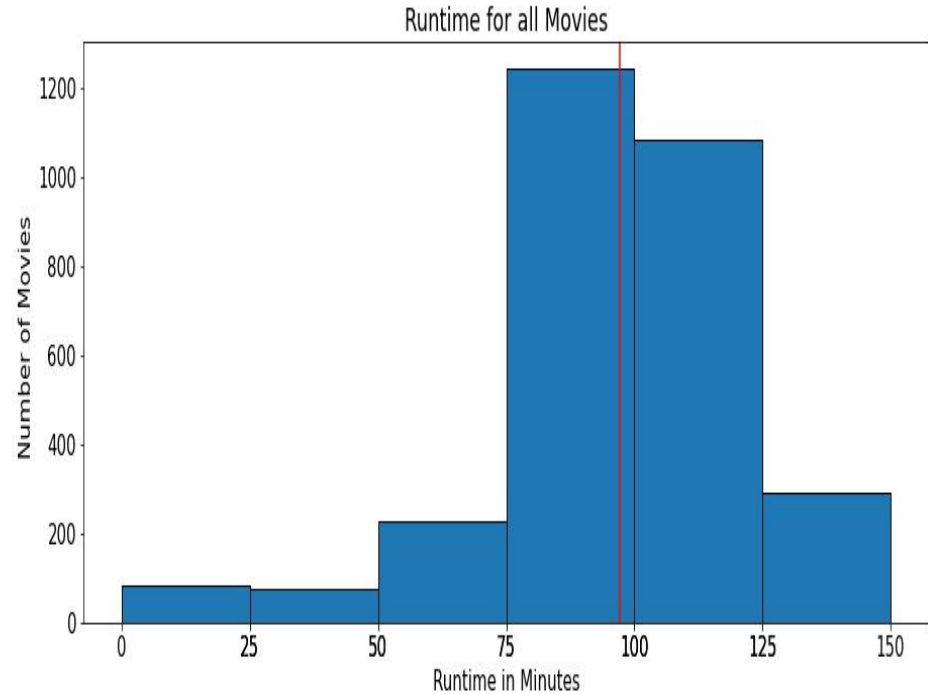
Here we can see a tight prediction spread of what Microsoft should expect to gross worldwide when compared to their production budget

- Ex: If microsoft has a production budget of \$150,000,000 they should aim for the worldwide gross of that movie to be about \$450,000,000.



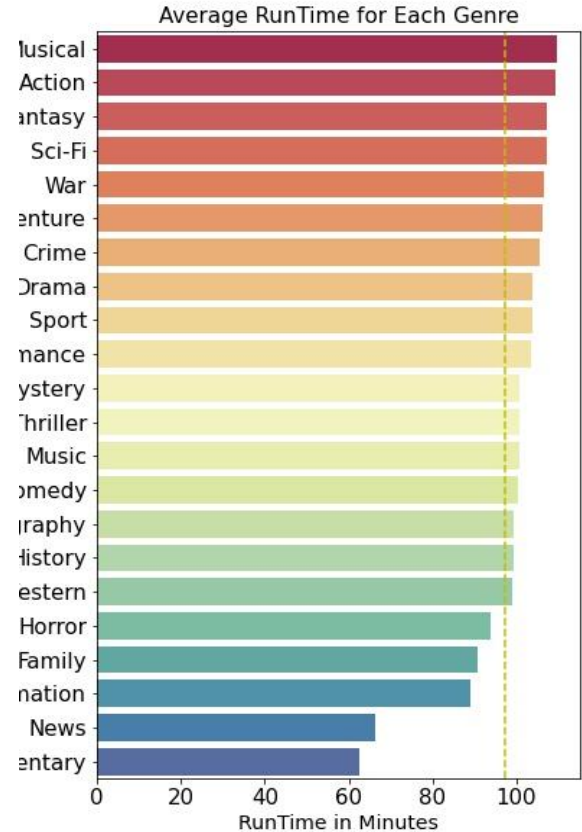
Results

- Mean runtime is 97 minutes
- Most movies fall between 75 and 125 minutes.



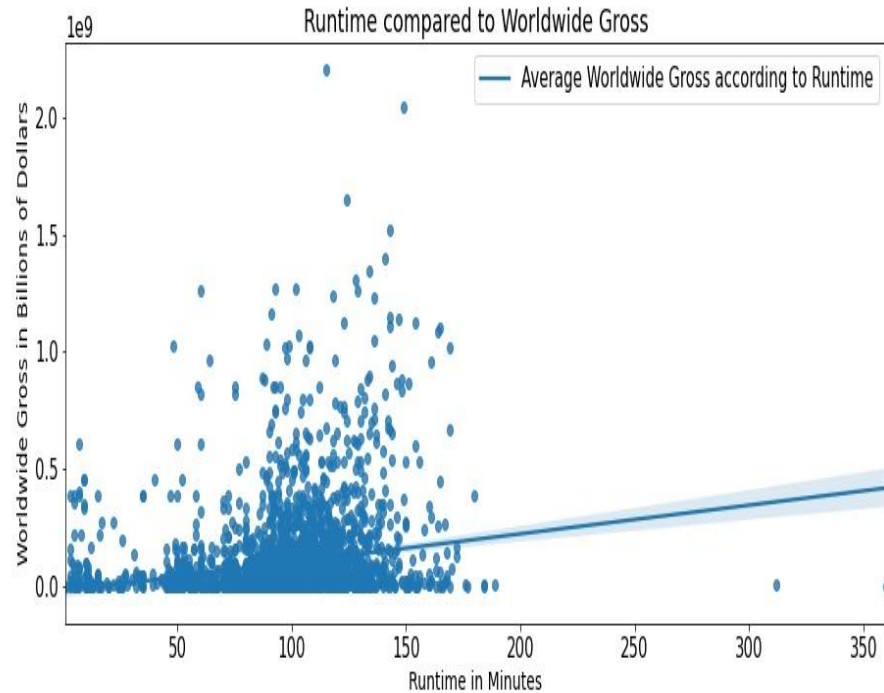
Results

When we refer to the previous graph we can understand that this makes sense because there is such a big chunk of movies between 100 and 125 minutes



Results

- Movies that grossed over one billion dollars tend to be between 90 and 125 minutes.
- Microsoft should aim to make their runtime somewhere inside that range.
- They should avoid movies longer 175 minutes because they do not make as much money.



Conclusion

1. Microsoft should produce either a Musical, Animation, Fantasy, or Family movie and release it in either June or November.
2. Based on Microsoft's production budget they should use the regression plot to aim for a worldwide gross goal that is correlated to its production budget
3. Microsoft should aim to make their movies anywhere between 90 and 125 minutes



Thank you!

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