

# Movie Analysis for Future Movie Productions

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# Summary

This project analyzes movie characteristics such as genres, return of investment (ROI), and popularity. The main purpose of the data analysis is to provide Microsoft with three recommendations for there new movie production studio.



## Business Problem

Microsoft has decided to create a new movie studio, but has no knowledge about creating movies.

- Explore what types of films are currently doing the best at the box office.
- Make actionable insights that the head of Microsoft's new movie studio can use to help decide what type of films to create.

## Business Understanding

Microsoft needs insights on audience opinions about movie characteristics.

- Audience opinions impact Return of Investment (ROI).
- Microsoft must also consider when to release their movies to get the most ROI.



# Data & Methods





# Data Sources

The Box Office Mojo dataset contains the following information:

- Movie Domestic gross and Worldwide gross for 3387 movies

The IMDB database contains information about:

- movie production team, cast, basic information, and ratings for 73,856 movies

The Rotten Tomatoes dataset contains information about:

- Critic reviews, Box office sale for 1560 movies



# Data Sources

The TheMovieDB dataset contains the following information:

- Movies genres, vote average, vote count, and popularity score for 26,517 movies

The Numbers dataset contains the following information:

- Movie production budget, Domestic gross, Worldwide gross, and release date for 5782 movies



# Approach

This project analyzes the trends over time in regards to movie performance.

Movie performance includes:

- Popularity
- Return of Investment



# Results





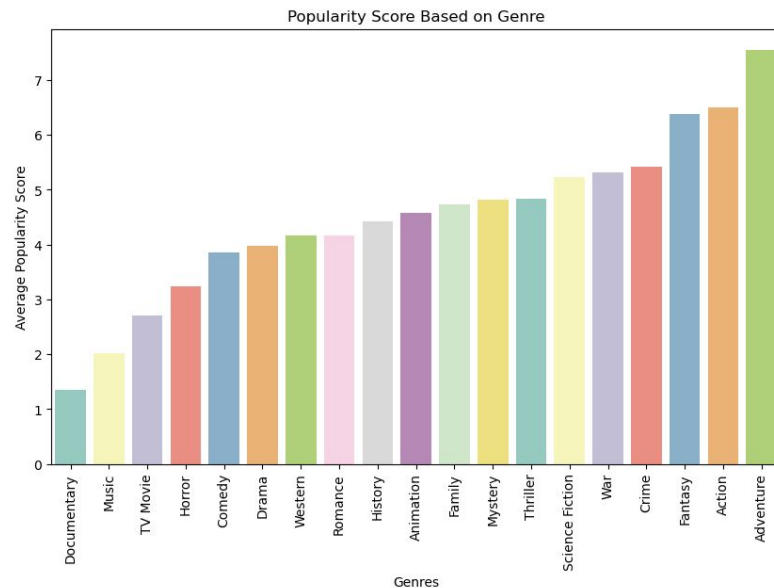


# Popularity Score Based on Genre

The most popular genres are Western, Romance, History, Animation, Family, Mystery, Thriller, Science Fiction, War, Crime, Fantasy, Action, Adventure

The popularity score is the lifelong culmination of:

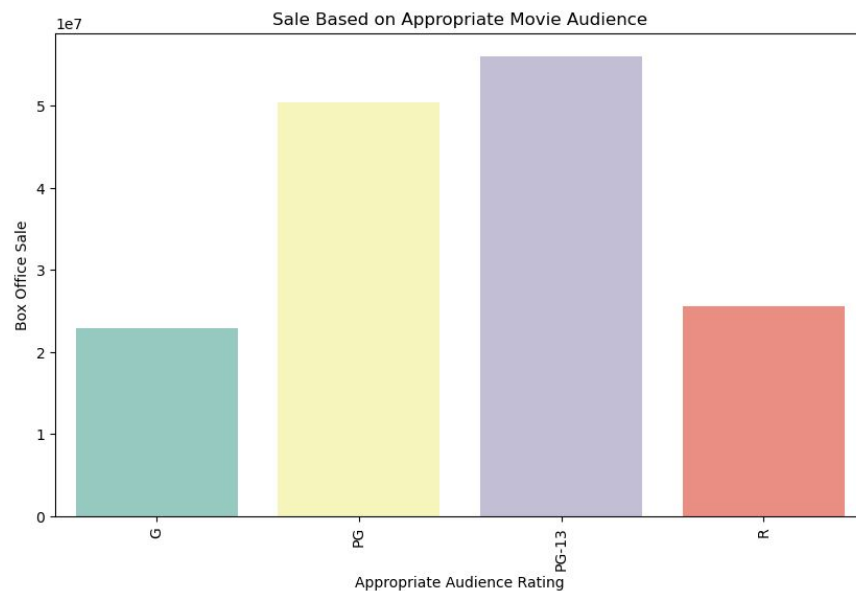
- Number of votes for the day
- Number of views for the day
- Number of users who marked it as a 'favorite' for the day
- Release date
- Number of total votes
- Accounts for the previous days score





# Sale Based on Appropriate Movie Audience

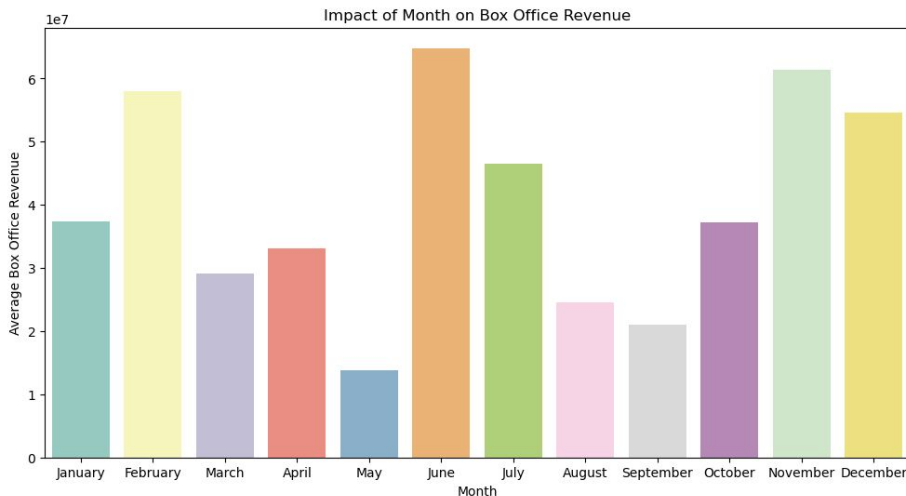
PG-13 and PG movies had the largest Box Offices sales on release day on average. Both ratings were capable of producing over \$50,000,000

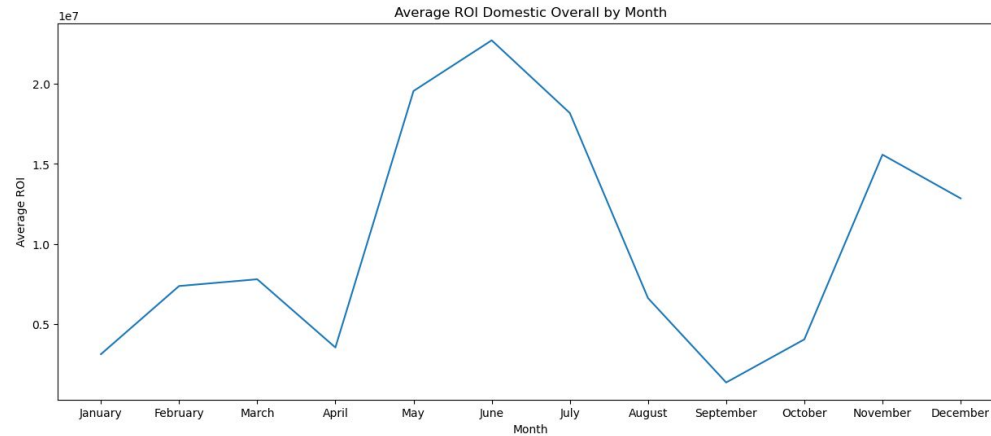
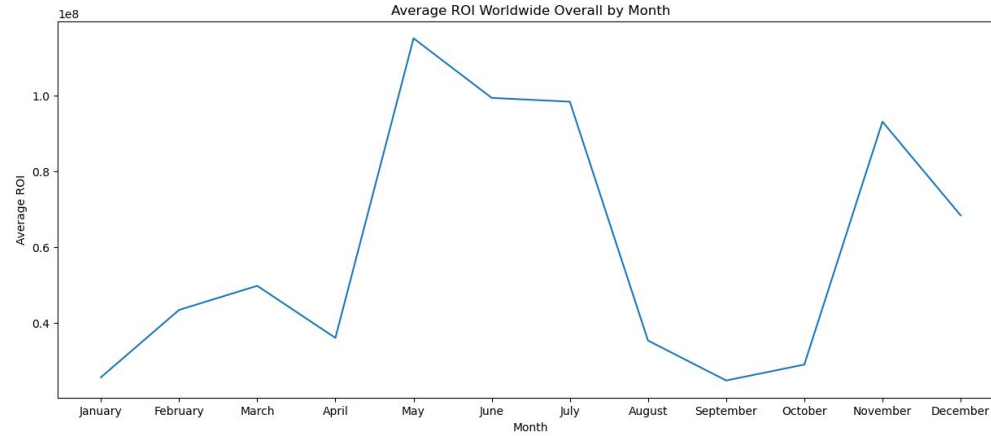




# Sale Throughout the Year

The time of the year impacts a movie's Box office sale. The months that create the biggest sales on average June, July, November, December, and February.







# Conclusion

This analysis has lead to three recommendations for Microsoft's new movie production studio:

- **Make movies with the following genres: Western, Romance, History, Animation, Family, Mystery, Thriller, Science Fiction, War, Crime, Fantasy, Action, Adventure.** These genres had a popularity score of 40 percent or higher which according to TMDB is considered good through excellent.
- **Make movies with the intended Audience of PG-13 and PG.** These intended audience ratings proved to have the higher box office sales in comparison to rated R and G movies.
- **Release movies in the summer time as well as the end of the year.** The time of the year matters when releasing movies. We can see this occur in the months of May, June, July, November, December and February.



## Next Steps

Further analysis can provide additional insights for Microsoft and there new movie production studio. Other exploratory routes to take can be the following directions:

- Explore the ROI based on director for the movie.
- Create a model where you can predict the best years to release movies.
- Merge Box Office Mojo data with The Number and look at the domestic gross made on average throughout the year.

# Thank You!

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