

# MICROSOFT MOVIE STUDIO

Phase I Project Presentation: Analysis of Trends and Box Office Revenues  
across Genres



# STUDY BACKGROUND

- Microsoft had noted all the big companies creating original video content and they wanted to start their own studio.
- Based on this premise our objectives were thus:
  - exploring what types of films are currently doing the best at the box office.
  - translate those findings into actionable insights that the head of Microsoft's new movie studio can use to help decide what type of films to create.
- Our aims in this analysis were to:
  - Find the box office revenue across various film genres.
  - Determine what factors contribute to revenue generation.
  - Based on these findings decide what strategies to implement to ensure revenue generation.



## THE DATA

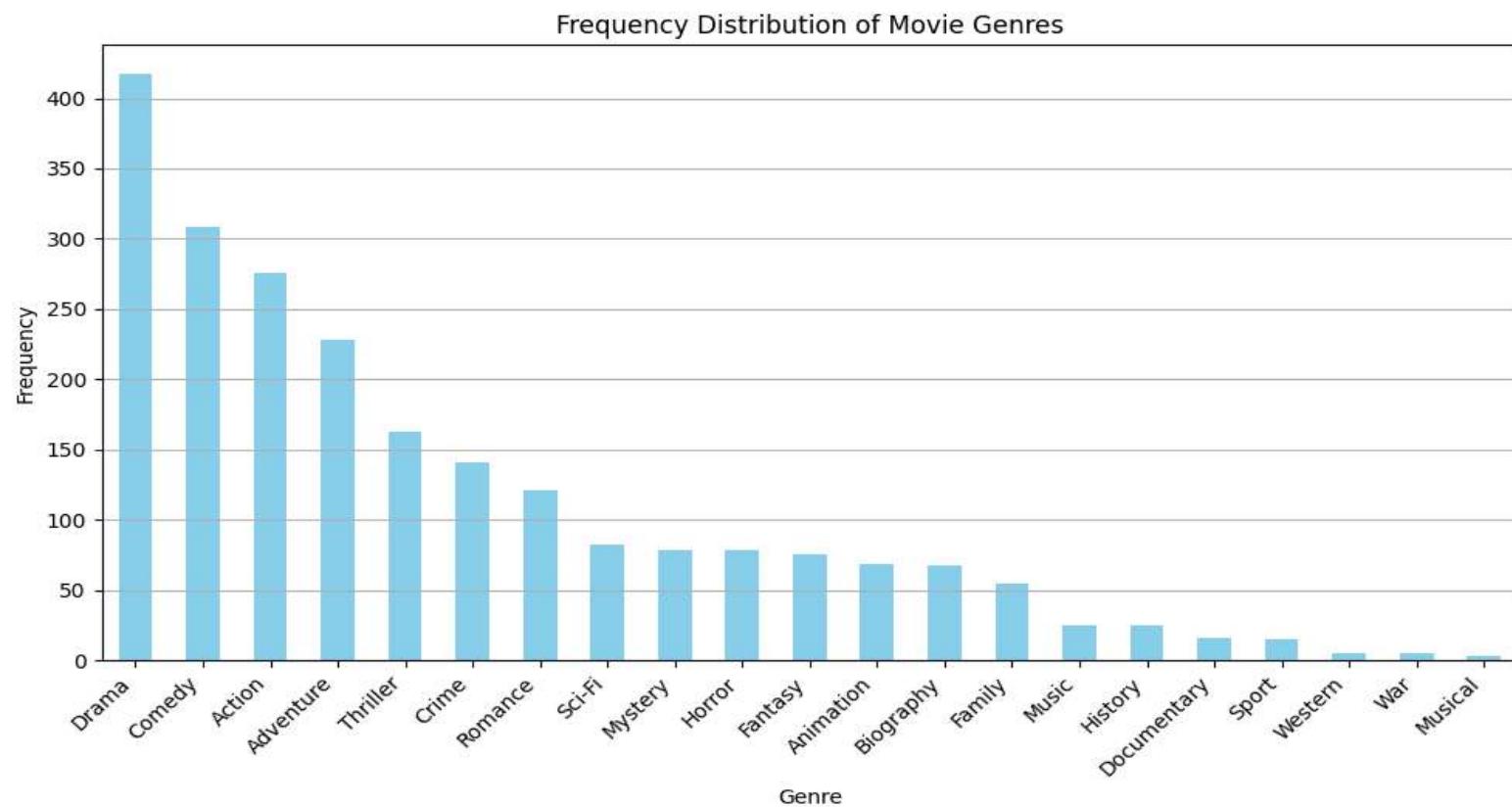
- Our data consisted of 4 different datasets scraped from various movie sites including; IMDB, Box Office Mojo, and Rotten Tomatoes.
- The data focused on four main points:
  - Box office gross
  - Movie titles
  - Movie Ratings
  - Movie Budgets
- The data from was stored as .csv files to be used in our analysis.



# ANALYSIS

- As per our aims and objectives our analysis consisted of the following parameters:
- Analysis by Genre: Genre Analysis, Revenue by Genre.
- Analysis by Ratings: Correlation analysis between ratings and revenue, Ratings distribution, overall and by genre.
- Analysis by Release Date: Release Date analysis and Budget vs Revenue trends over time (done using one way ANOVA).

# ANALYSIS BY GENRE

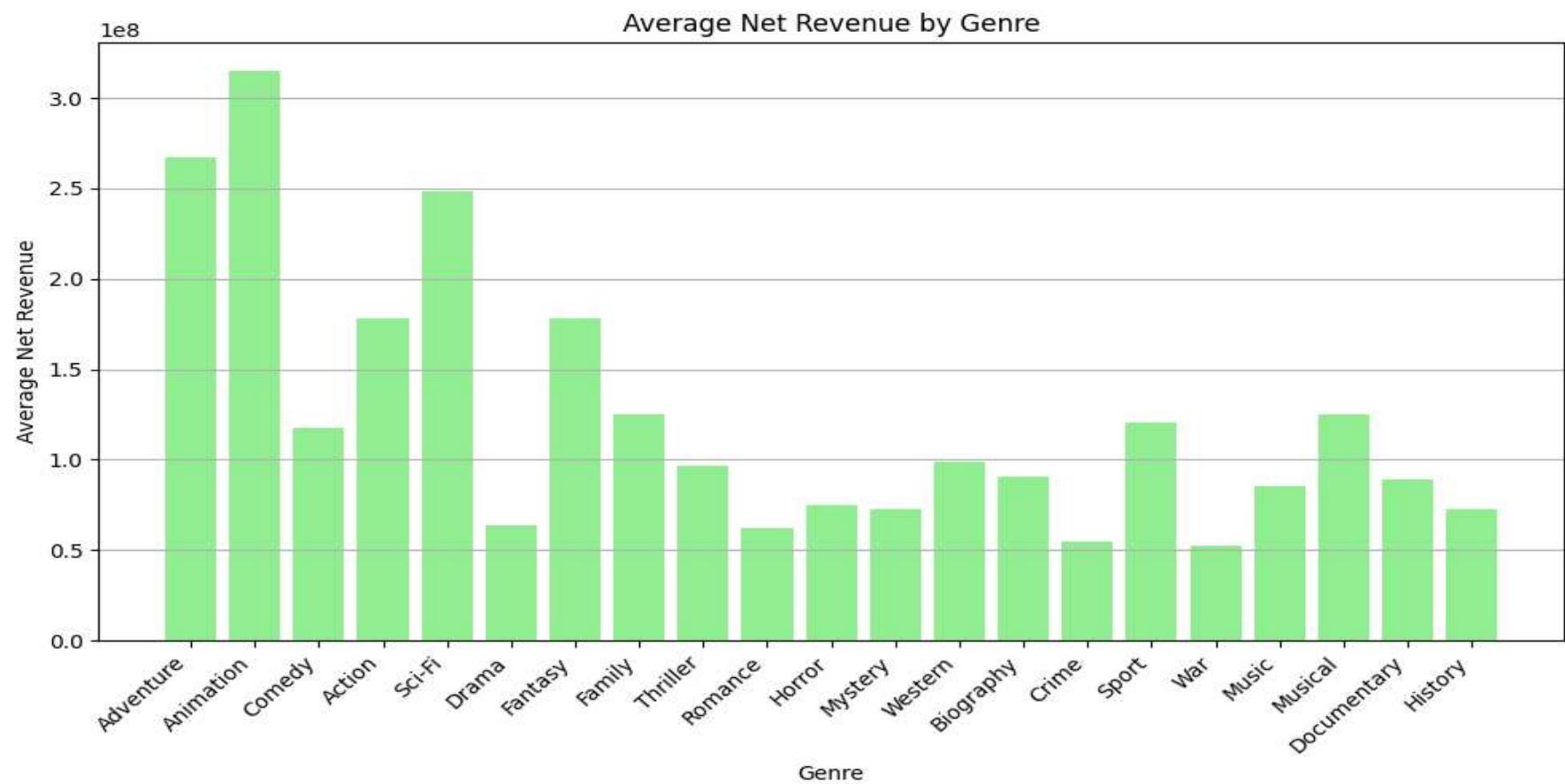




## ANALYSIS BY GENRE

- Here we can see drama and comedy are the most featured genres in most movies indicating most movies tend to have drama and comedy as part of their genre list.
- This however does not reflect audience preference for these genres and shouldn't be taken as the best indicator for our study.
- That depends on revenue and audience ratings.

# ANALYSIS BY GENRE

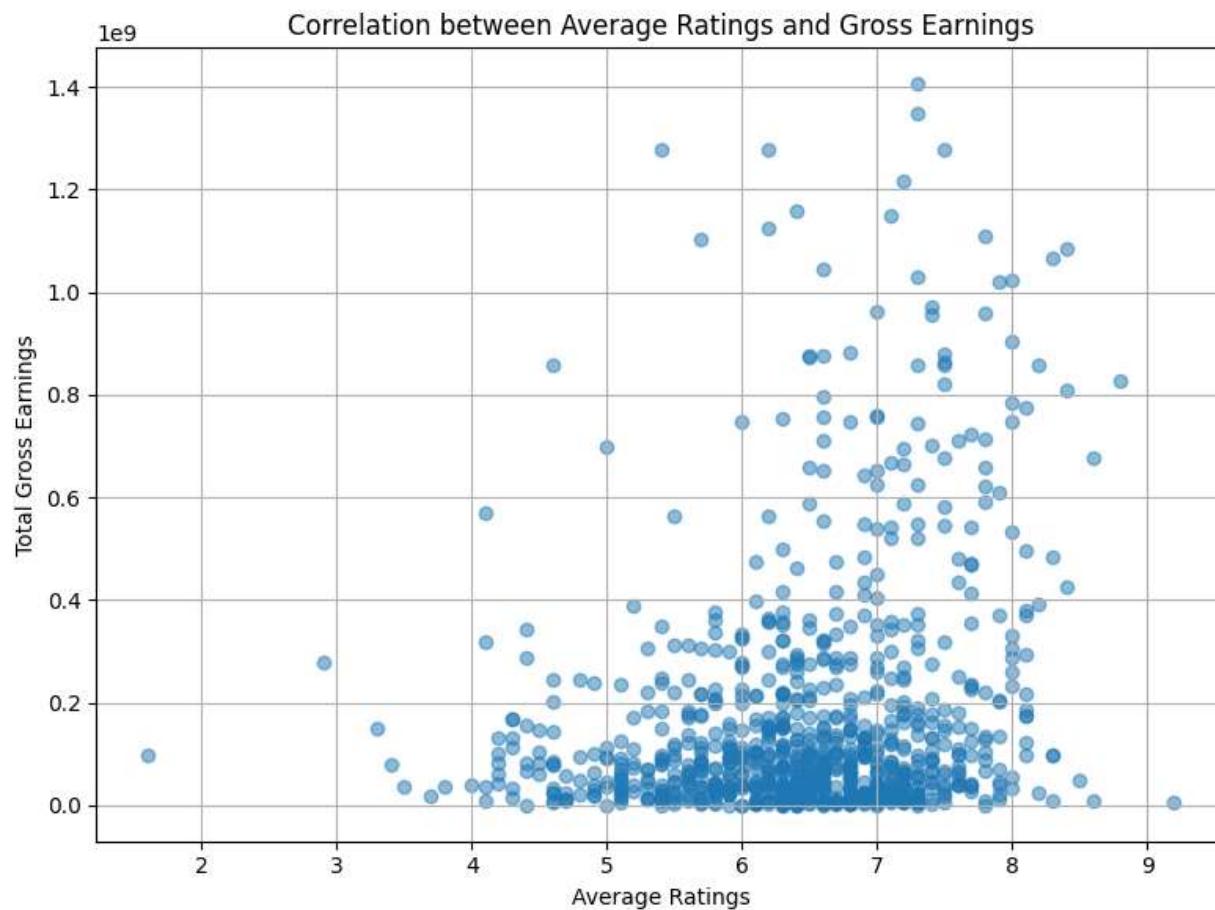




## ANALYSIS BY GENRE

- We see that Adventure, Animation, Action, and Sci-Fi are the most popular genres. Showing that they are the most likely to attract audiences.
- They are most popular with movie going audiences.
- These figures contradict our earlier observation of most movies featuring comedy and drama genres proving that they are common but not necessarily popular.

# ANALYSIS BY RATING

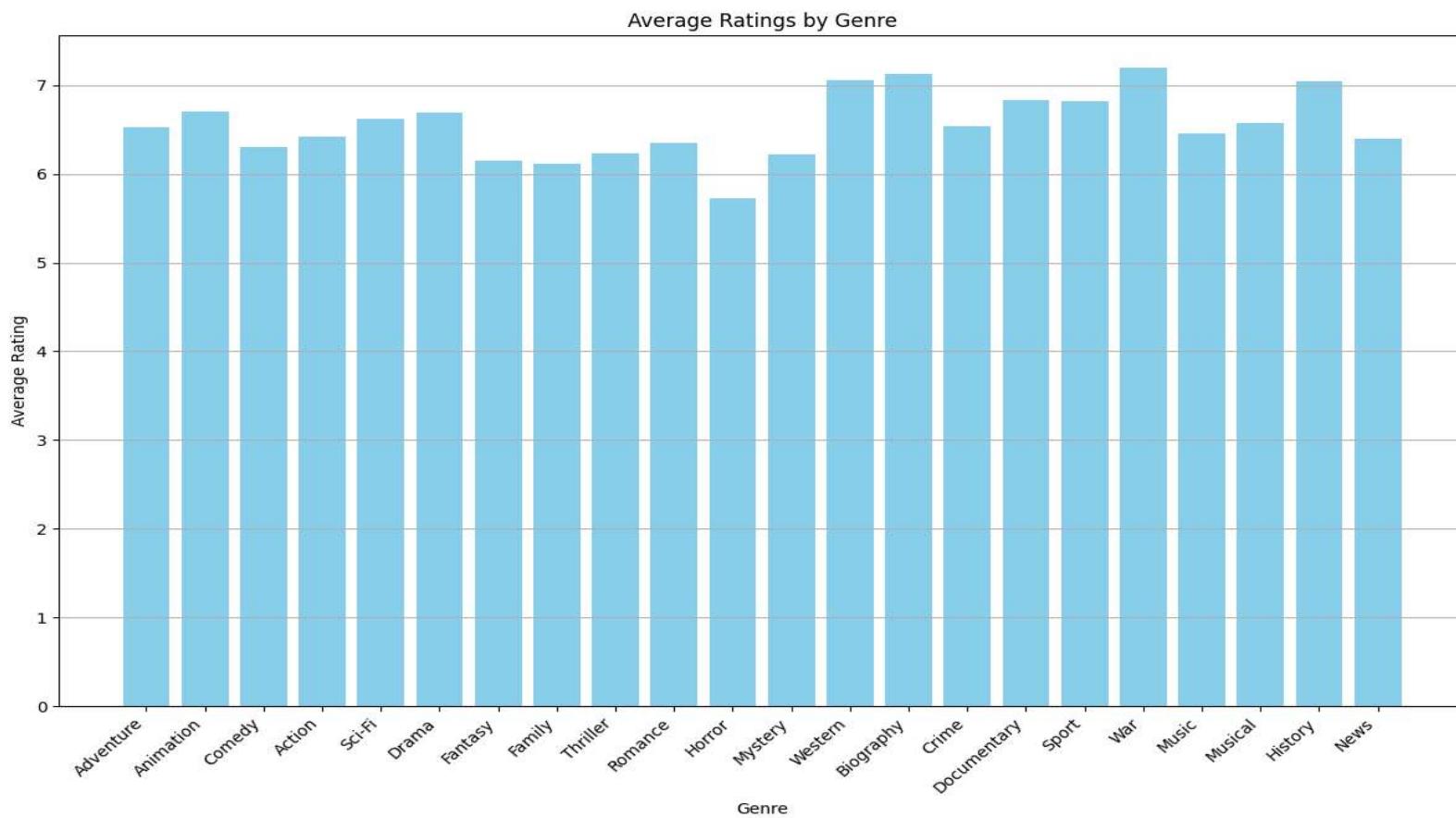




## ANALYSIS BY RATING

- The correlation coefficient between average ratings and gross earnings is approximately 0.21.
- In simple terms, this positive correlation indicates that there is a weak to moderate relationship between the average ratings of movies and their gross earnings.
- This means that the audience and critics' rating of a movie does not necessarily affect its revenue. However, it's important to note that the correlation is not very strong, suggesting that other factors besides ratings also play a role in determining the financial success of a movie.

# ANALYSIS BY RATING

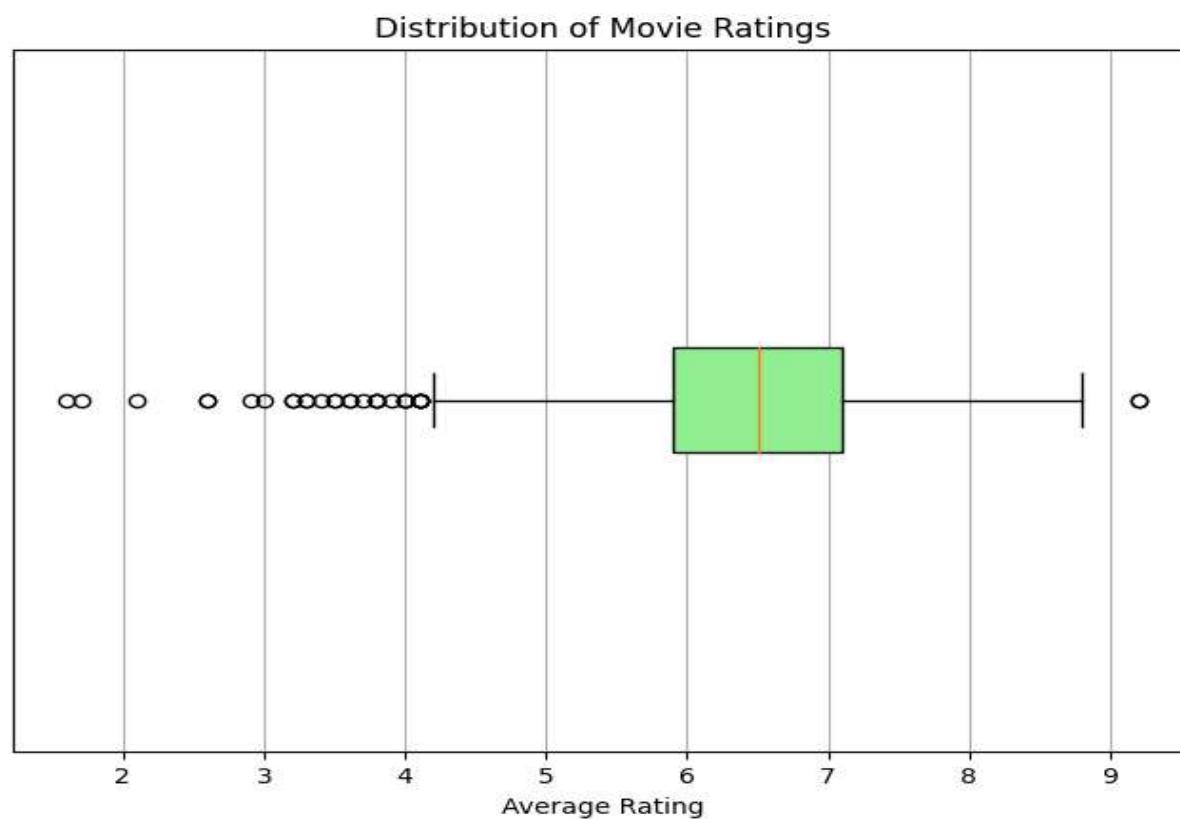




## ANALYSIS BY GENRE

- Our different genres are rated in a similar range even in combination with other genres, Western and biography are rated higher than most other genres. This can be stated as they attract positive reviews even when combined with other genres.

# ANALYSIS BY RATING



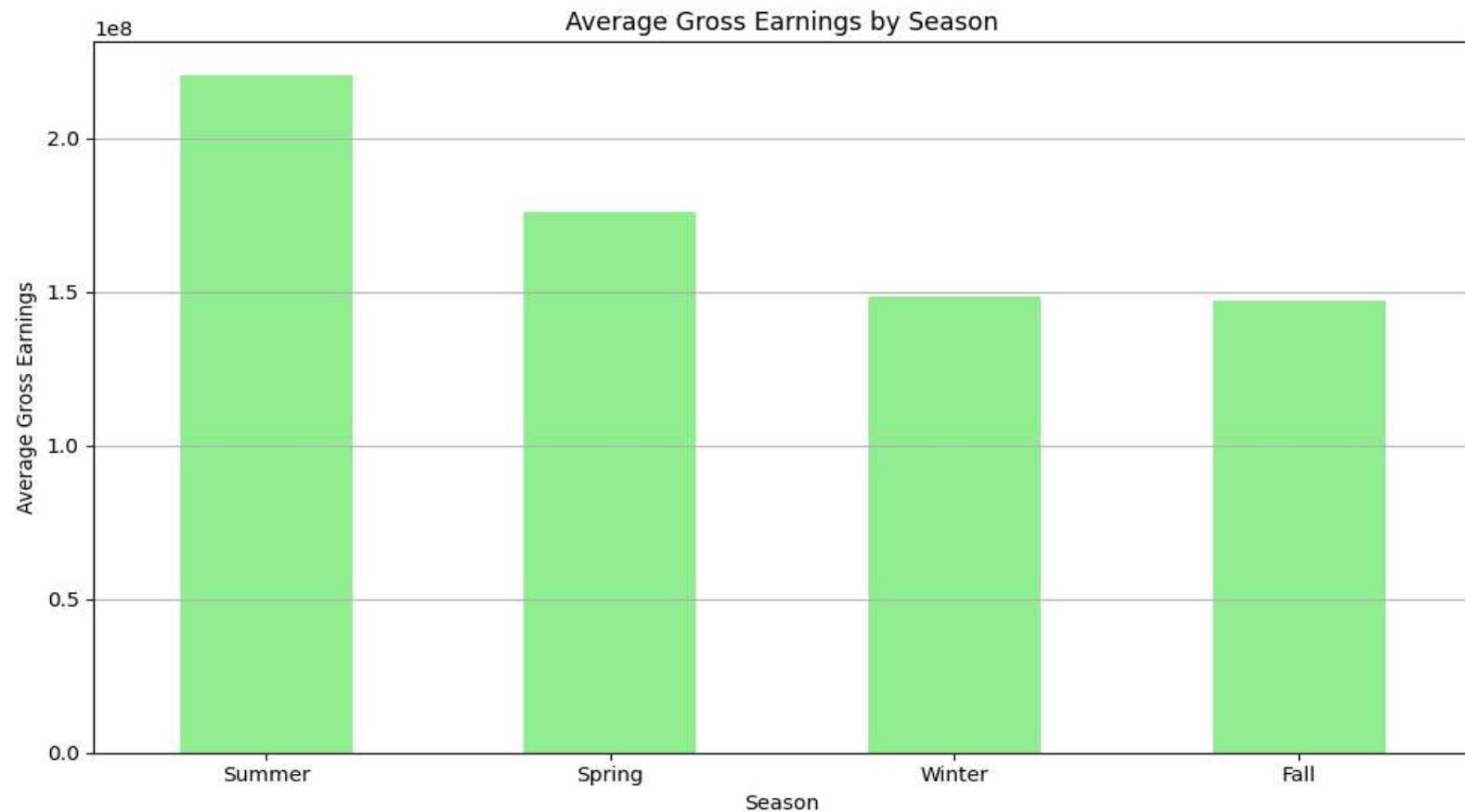
## ANALYSIS BY RATING

- The value of Q1 (4.2) indicates that 25% of the movie ratings fall below this value, suggesting that a significant portion of the movies have ratings lower than 4.2. The value of Q3 (8.8) indicates that 75% of the movie ratings fall below this value, suggesting that the majority of movies have ratings lower than 8.8. The interquartile range (IQR), calculated as Q3 - Q1, measures the spread of the middle 50% of the data. In this case, the IQR is approximately 4.6, indicating the range in which the middle 50% of movie ratings fall.
- However note that there are more outliers in the past our Q1 value than our Q3 value. Showing that more movies are rated lower than higher even in our distribution. This is important to note as it indicates audiences and critics have a tendency to rate movies within our IQR range but will often score movies below that range as opposed to above it.

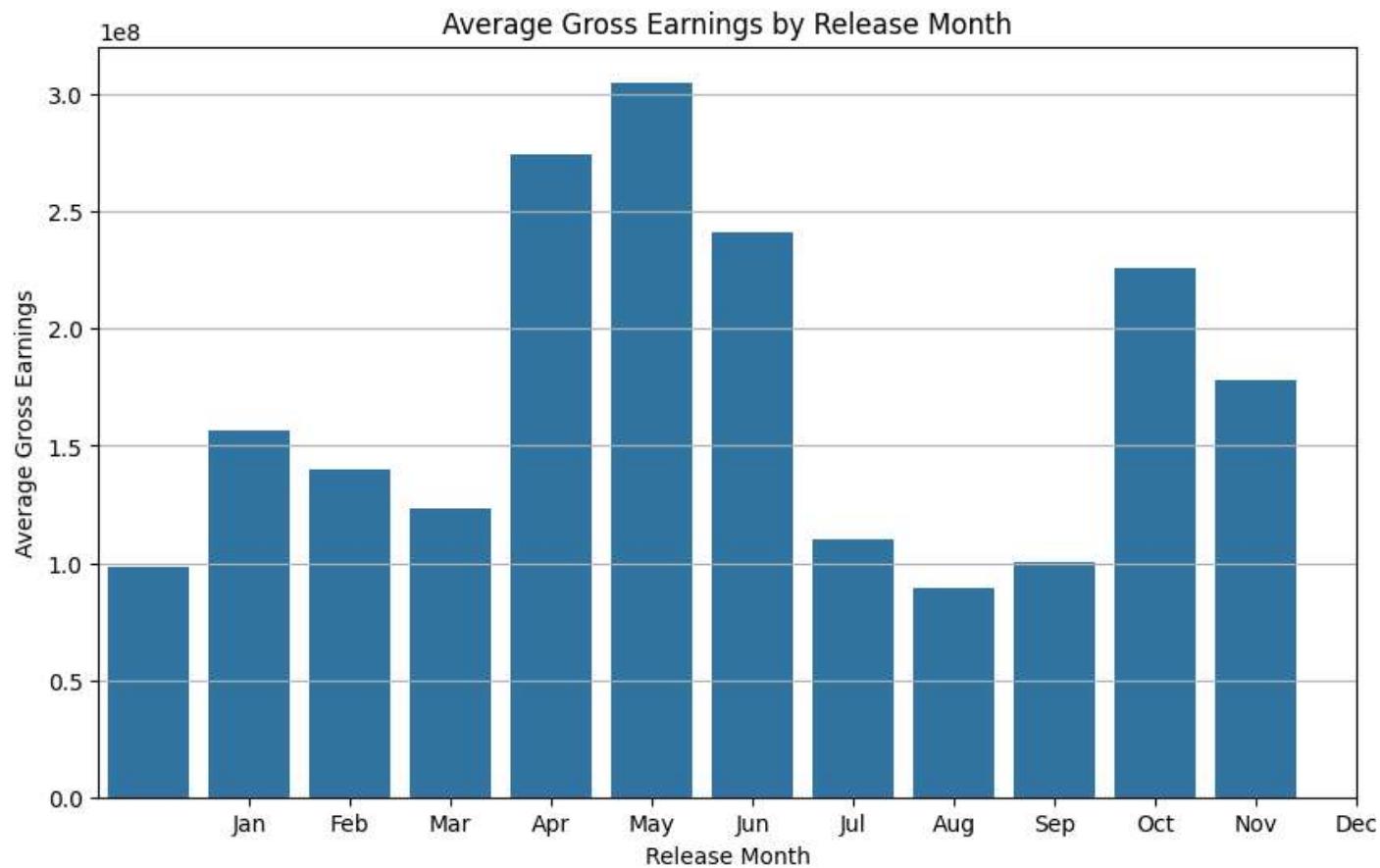
# ANALYSIS BY RELEASE DATE

- ANOVA Test Result for our Budget vs. Revenue:
- F\_onewayResult(statistic=1.971510556756344, pvalue=1.0469216871196105e-16)
- This indicates that there is a statistically significant difference in gross earnings among movies released in different months. The extremely low p-value (1.05e-16) suggests that the differences in gross earnings among months are highly unlikely to be due to random chance alone. Therefore, we can conclude that release dates have a significant impact on gross earnings.
- However, it's important to perform further analysis or consider other factors to understand the specific patterns or trends associated with release dates and gross earnings.

# ANALYSIS BY RELEASE DATE



# ANALYSIS BY RELEASE DATE





## ANALYSIS BY RELEASE DATE

- The most likely months that seem to make more money are the spring and Summer months between April and June. This by no means that these months are the best times to release films as we see strong revenue generation in October and November in the fall. In addition while these are the likely months for audiences to watch films, it is no indicator of success upon release.



# CONCLUSIONS

- From our study we can draw the following conclusions:
  - The most popular film genres with audiences are; **Adventure, Animation, Action, and Sci-Fi.**
  - Audience and critics rating of a movie do not necessarily affect its revenue.
  - **Late spring, to summer months and early fall** are the best times to release movies with most audiences likely to come to theatres.
- These factors however do not solely contribute to a films likelihood of success with other considerations taken into account before beginning a film project.



# RECOMMENDATIONS

- **Strategic Genre Selection:** Given the popularity and revenue-generating potential of the Adventure, Animation, Action, and Sci-Fi genres, Microsoft should consider investing in projects within these genres. Audience preferences and trends within these genres to ensure alignment with audience expectations.
- **Focus on Quality:** While genre selection plays a crucial role, it's essential not to compromise on the quality of the film itself. Investing in compelling storytelling, high production values, talented cast and crew, and innovative filmmaking techniques can enhance the overall appeal of the movie and increase its chances of success, regardless of genre.



# RECOMMENDATIONS

- **Optimal Release Timing:** Microsoft studios should strategically schedule releases during peak months such as spring and summer, particularly April to June, to capitalize on higher audience turnout and maximize revenue potential. However, they should also consider factors such as competition and audience demographics when planning release dates.
- **Marketing and Promotion:** Effective marketing and promotion strategies are essential to generate buzz and create anticipation for movie releases. The studio should invest in comprehensive marketing campaigns across various platforms, including social media, traditional advertising channels, and promotional events, to reach and engage with target audiences effectively.



# RECOMMENDATIONS

- **Continuous Analysis and Adaptation:** The film industry is dynamic, with audience preferences, market trends, and external factors constantly evolving. Movie studios should continuously monitor industry trends, conduct audience research, and analyze box office performance to adapt their strategies accordingly. Flexibility and agility in responding to changing market dynamics are essential for long-term success.
- **Diversification and Innovation:** While certain genres may dominate the box office, there is also room for innovation and diversification. Studios should explore new and emerging genres, experiment with hybrid genres, and support diverse voices and storytelling perspectives to cater to a wide range of audience tastes and preferences. However in this endeavor it is important to note that it is better to support this as independent lower-budget features as a testing ground for audiences.