# PHASE ONE PROJECT

# PROJECT OVERVIEW

- In this project, we will use exploratory data analysis to generate insights for a business stakeholder.

# BUSINESS PROBLEM

- Microsoft sees all the big companies creating original video content and they want to get in on the fun. They have decided to create a new movie studio, but they don't know anything about creating movies. You are charged with exploring what types of films are currently doing the best at the box office. You must then 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

# GOALS

- The goal of the project is to evaluate the data provided in the datasets

- Come up with recommendations based on the data evaluation done

- Perform data visualizations that back up the recommendations.

# DATA UNDERSTANDING

- Data sets containing data from box office were used in the evaluation. The data sets contained information such as: movie genres, release dates, number of reviews ,production budgets and gross income domestically and foreign ,number of views and ratings for each movie title.

- The data sets were imported , and basic exploratory data analysis performed so as to understand the structure of data in the files.

# DATA UNDERSTANDING

- Data cleaning is done for all the data sets. This includes ensuring proper naming of columns , dropping irrelevant columns in the data frames, replacing null values with either mean or median, converting data types to the relevant type to enable easier data analysis of the data.

- After data cleaning,  merging of the data frames is done this makes plotting visualizations easier. Two files were merged using an outer join to include all the columns from both tables.

# DATA VISUALIZATIONS

- Data visualizations that show correlations between variables in the data frames were plotted and used to back up recommendations.
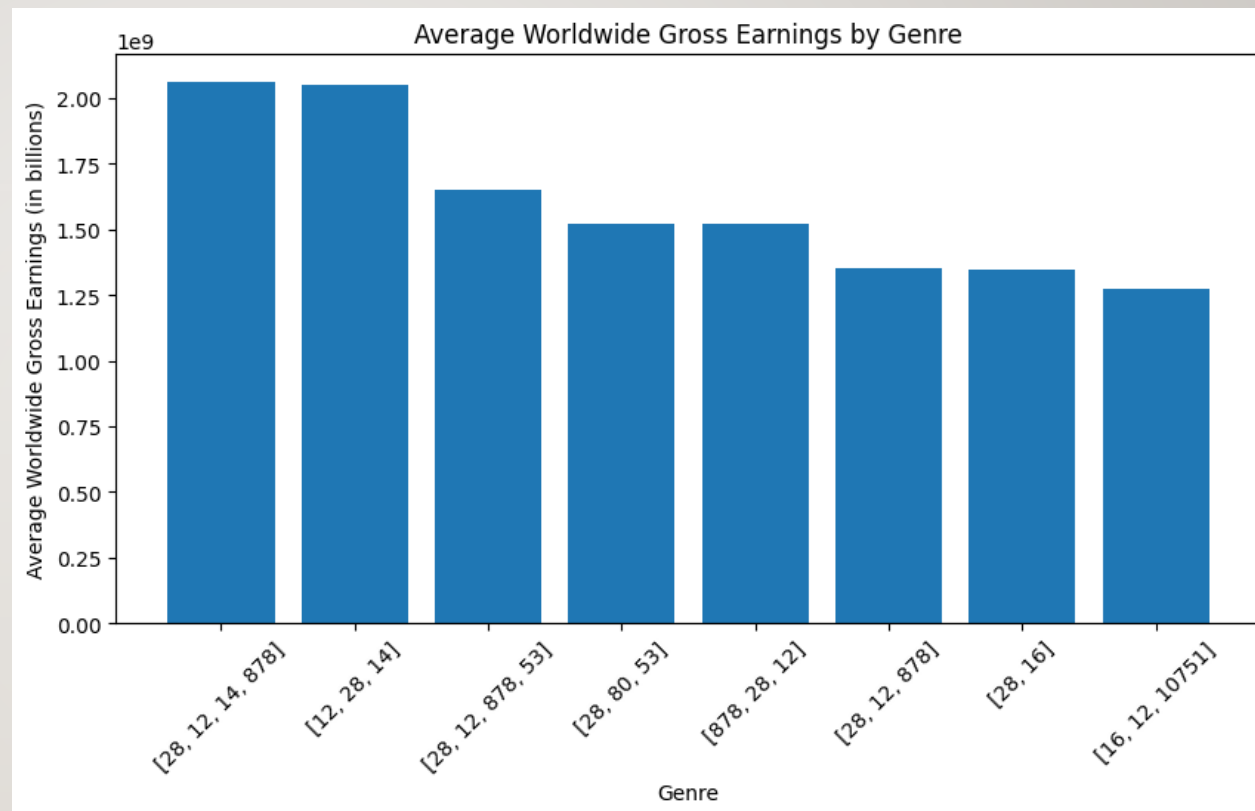
# RECOMMENDATIONS

- As per the analysis of the provided datasets, here are some actionable insights that the head of Microsoft's new movie studio can use to help decide what type of films to create:

- Genre: According to the analysis, the top performing genres at the box office are Action, Adventure, Drama, Comedy, and Animation. Thus, Microsoft's movie studio can focus on creating films in these genres to increase their chances of success.
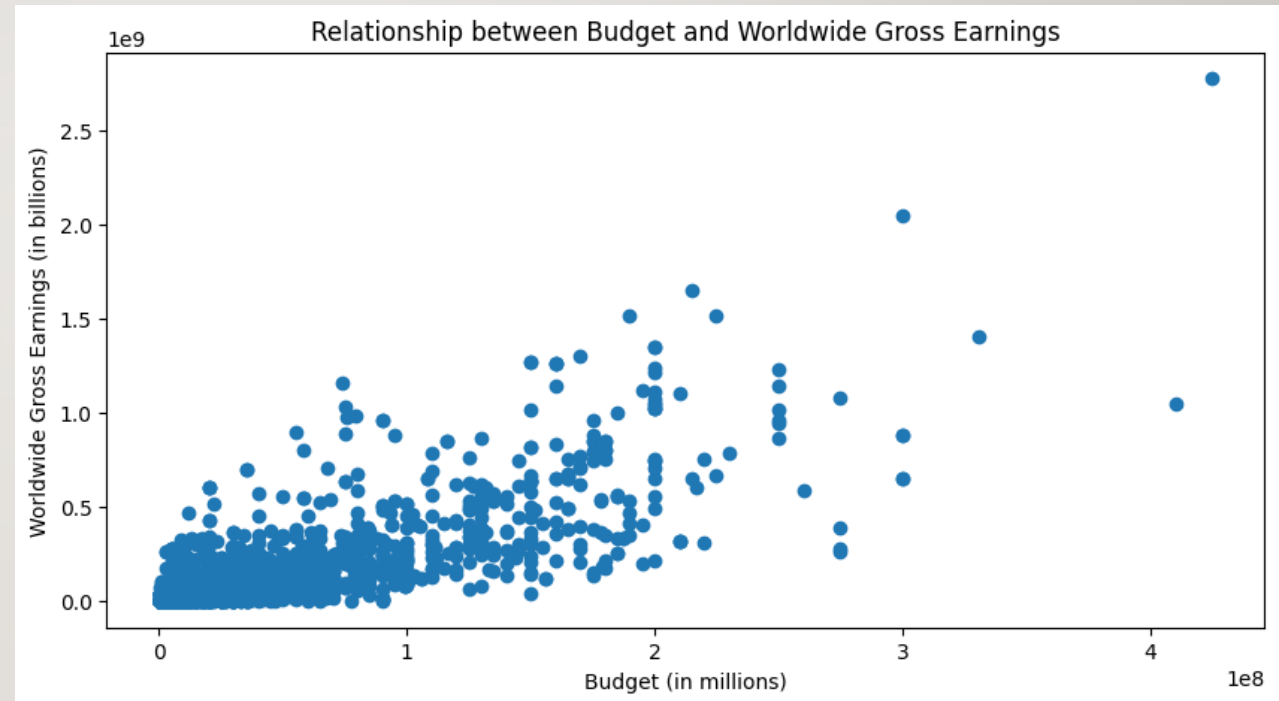
# AVERAGE GROSS EARNINGS OF GENRE

The bar graph shows the average earnings by movie genres.

Some of the genres with the highest income include; comedy, animation ,drama and action represented by the genre ids.



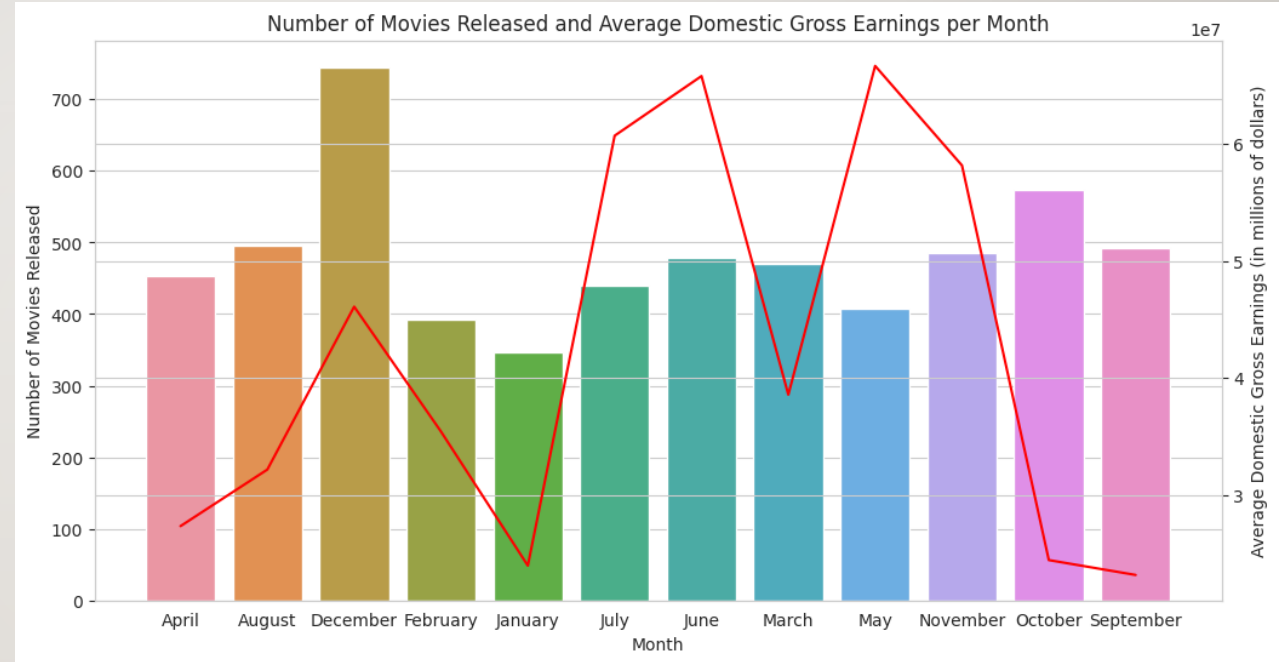Average Worldwide Gross Earnings by Genre

# MOVIE BUDGET CORRELATION WITH EARNINGS

The scatter plot shows that movies with higher budgets tend to have higher domestic and worldwide gross earnings



Relationship between Budget and Worldwide Gross Earnings

# RELATION BETWEEN RELEASE DATE AND EARNINGS

The bar graph shows the number of movies released per month and a line graph that shows the average domestic gross earnings per month. The months with the highest average domestic gross earnings are highlighted in red



Number of Movies Released and Average Domestic Gross Earnings per Month

# RECOMMENDATIONS

- Budget: The analysis also shows that movies with higher budgets tend to have higher domestic and worldwide gross earnings. Therefore, Microsoft can consider investing more money into the production of their films to increase their chances of success at the box office.

- Release Date: The analysis shows that the summer months of June, July, and August tend to have the highest box office earnings. Microsoft can target the release of their films during this time to increase their chances of success.

# RECOMMENDATIONS

- Collaborations: Collaborations between studios, directors, and actors tend to have a positive impact on the success of a movie. Microsoft can collaborate with established studios, directors, and actors to increase their chances of success.

- Marketing: Marketing plays a crucial role in the success of a movie. Microsoft should focus on creating effective marketing campaigns to promote their films and generate buzz around their release.

# CONCLUSION

- By taking these factors into consideration, Microsoft's new movie studio can increase their chances of success at the box office and create original video content that resonates with audiences.

# THANK YOU.