MICROSOFT & THE MOVIE INDUSTRY ANALYSIS
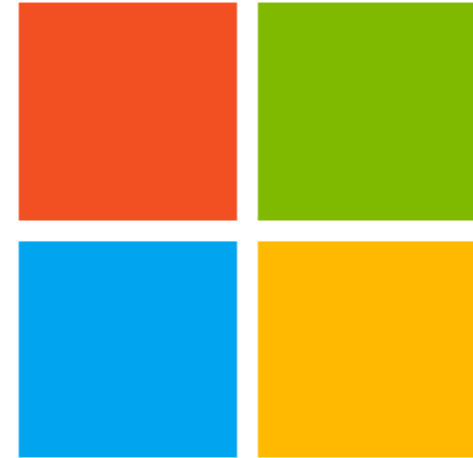
## AN INSIGHT INTO THE MOVIE INDUSTRY

Overview

- The project's primary purpose is to generate insights that can assist Microsoft in entering and succeeding in the movie industry. We will utilize exploratory data analysis to get actionable insights to assist Microsoft determine what kind of films to develop. This project will leverage existing movie data to analyze box office trends, genre performance, and financial metrics to recommend strategic directions for Microsoft's new movie studio.

Business understanding

- The business understanding for Microsoft's new movie studio project revolves around comprehending the dynamics of the film industry and discovering actionable insights that can guide the studio's entry and strategy in this space. Here's a breakdown of the key components to understand and discover:

  - **Market Landscape:**
    - Assessing the current state of the film industry, including prevalent trends, audience preferences, and competitive landscape.
    - Understanding the economic models of movie production, distribution, and revenue generation.

  - **Budget Allocation:**
    - Determining the optimal budget range for producing a movie that maximizes ROI while minimizing financial risk.
    - Exploring the relationship between production budgets and box office success to inform budgeting decisions.

  - **ROI Analysis:**
    - Calculating and understanding ROI across different movie genres and budget levels to prioritize investment in high-return projects.
    - Identifying patterns or characteristics of films that lead to high ROI.
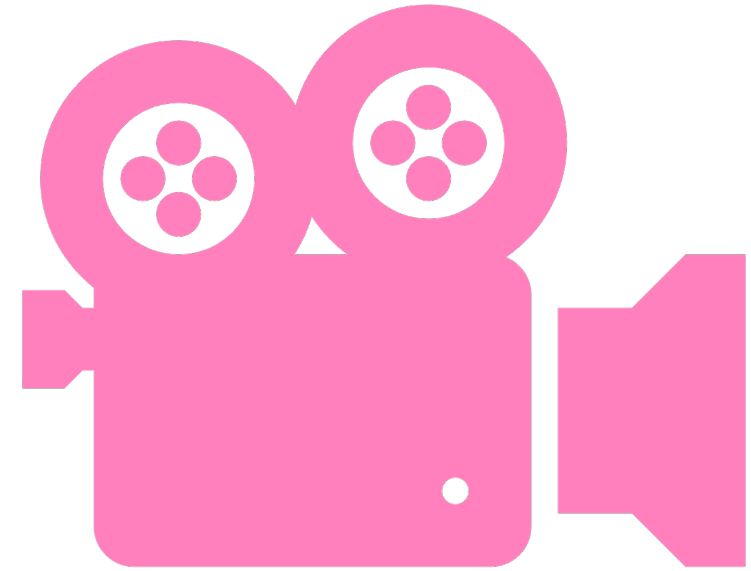
Key questions to answer
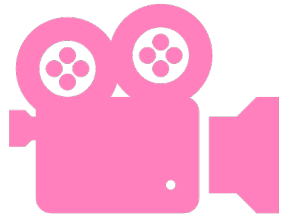
Which movie genres yield the highest box office earnings and ROI? Aims to identify genres that consistently perform well, offering a safer investment for Microsoft.
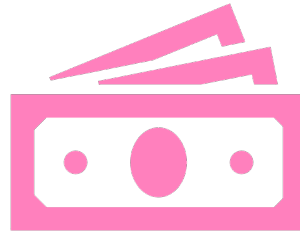
What is the optimal budget range for producing a profitable movie? Seeks to find a budget sweet spot that maximizes earnings without unnecessarily inflating costs.

How do movie budgets correlate with box office success? Investigates whether higher budgets lead to higher gross earnings or if diminishing returns set in beyond a certain point.
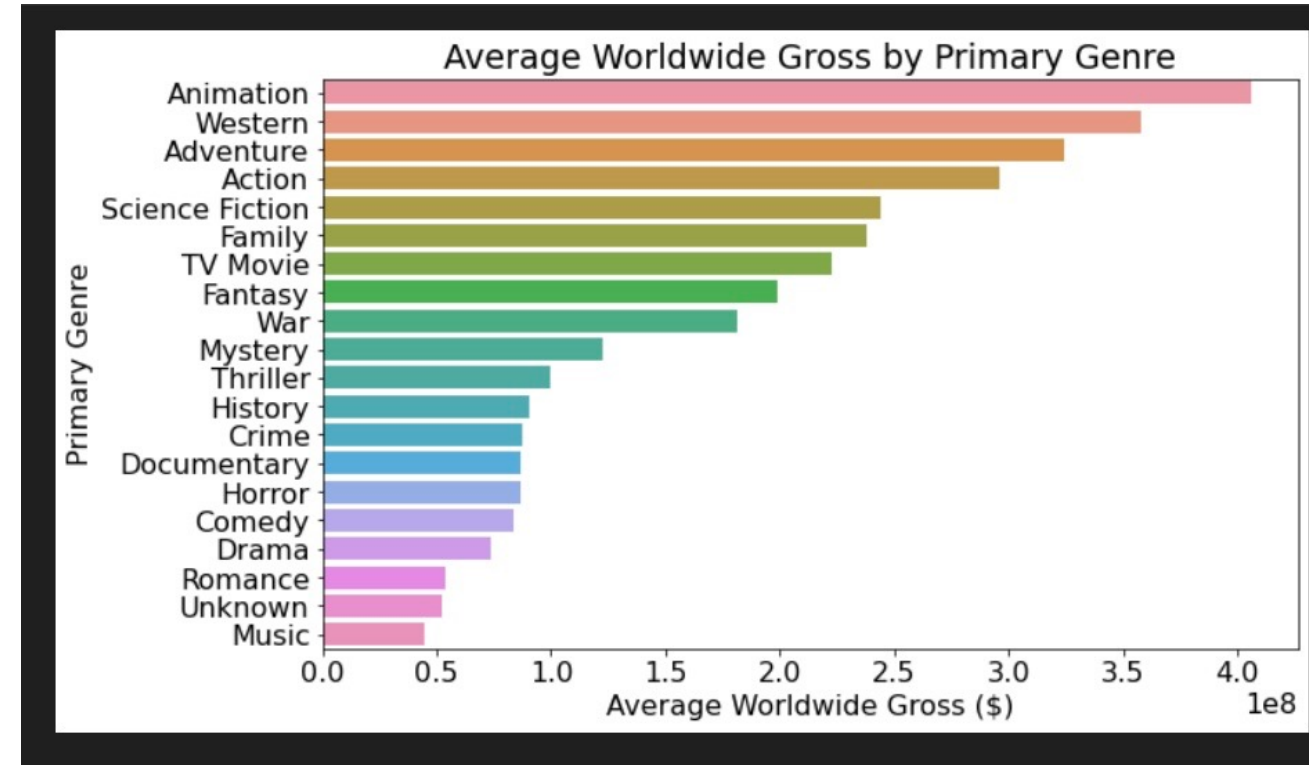
Data

- The datasets that will be used in this presentation to help make informed decisions will be sourced from:
  - Box Office MojoLinks
    - bom.movie_gross.csv
  - TheMovieDBLinks
    - tmdb.movies.csv
  - The Numbers
    - tn.movie_budgets.csv
- With the use of these data sets we will be able to answer the business questions and help in producing informed decision making.
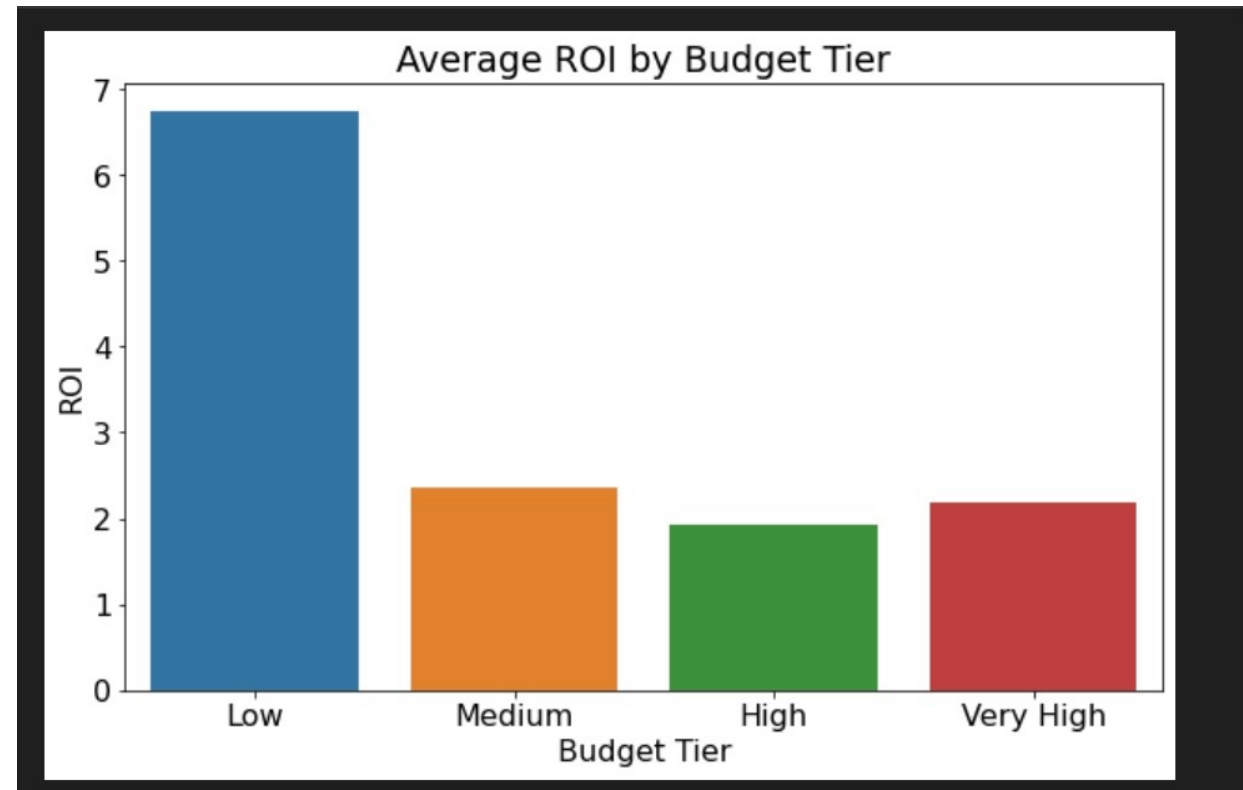
Data analysis

- **Average Worldwide Gross by Primary Genre:** The genres are listed on the y-axis, and their corresponding average worldwide gross earnings are on the x-axis. The chart shows that some genres, typically those like Animation, Adventure, or Action, generate higher revenues on average compared to genres like Drama or Documentary. This suggests that movies in these high-grossing genres might be a safer bet for attracting a large audience and generating significant box office earnings.


Average Worldwide Gross by Primary Genre

Data analysis

- **Average ROI by Budget Tier**: This bar chart shows that movies in the 'Low' budget tier have the highest average ROI, indicated by the tallest bar. As the budget tiers increase to 'Medium', 'High', and 'Very High', the ROI decreases. This pattern implies that investing in lower-budget movies might offer the best return on investment, while higher-budget movies may not always yield proportionally higher returns.

Data analysis

- This is a scatter plot for production budget vs. ROI (Return on Investment). This shows the correlation between the two. The correlation suggests that there is a very weak negative linear relationship between the production budget and ROI. In practical terms, this means that as the production budget increases, there is a slight tendency for ROI to decrease.

Scatter plot for Budget vs. ROI
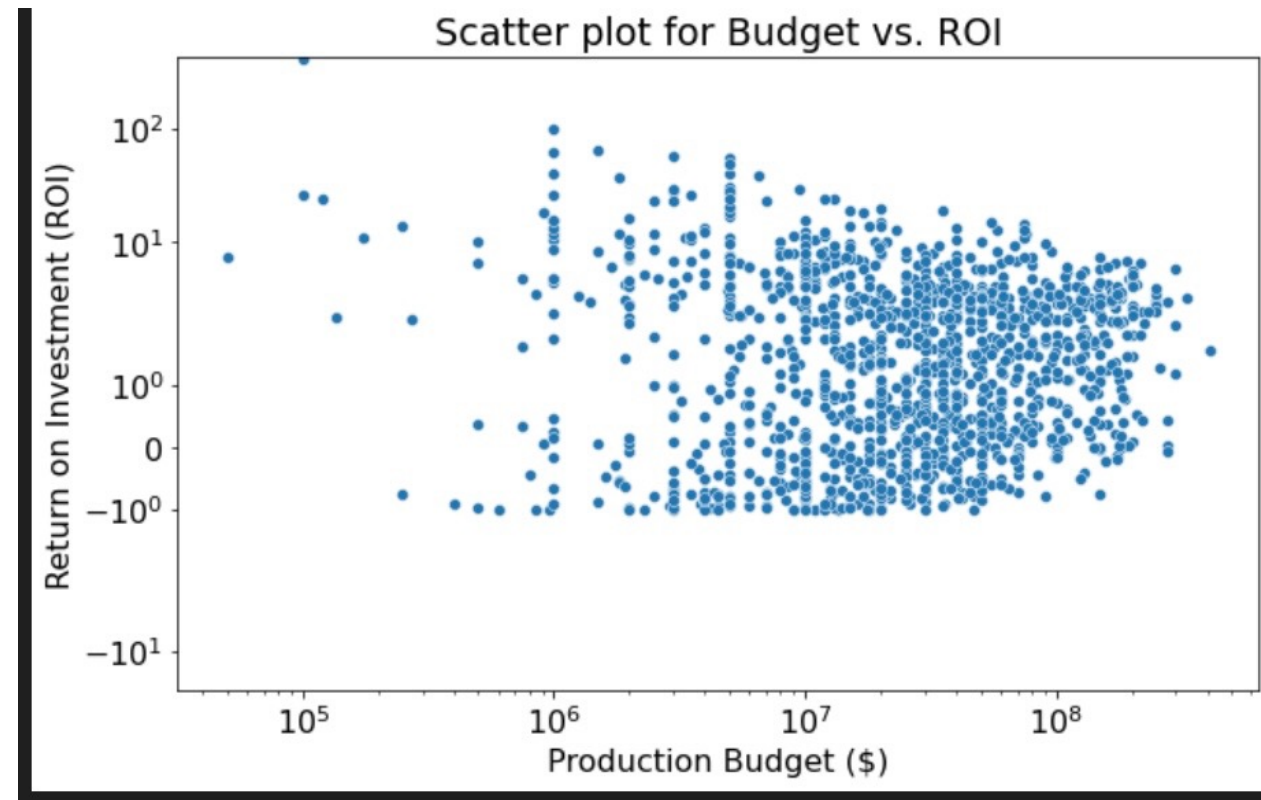
Data analysis

- **Number of movies by genre:** Based on the typical distribution, genres like Drama, Comedy, and Documentary appear to have the greatest number of movies, indicating they are common genres for filmmakers. Genres such as Western, War, and History have fewer films, suggesting they are less commonly produced. This means Microsoft should consider producing films in the most populated genres as their popularity might imply a stable audience base.

Number of Movies by Genre in TMDB Dataset
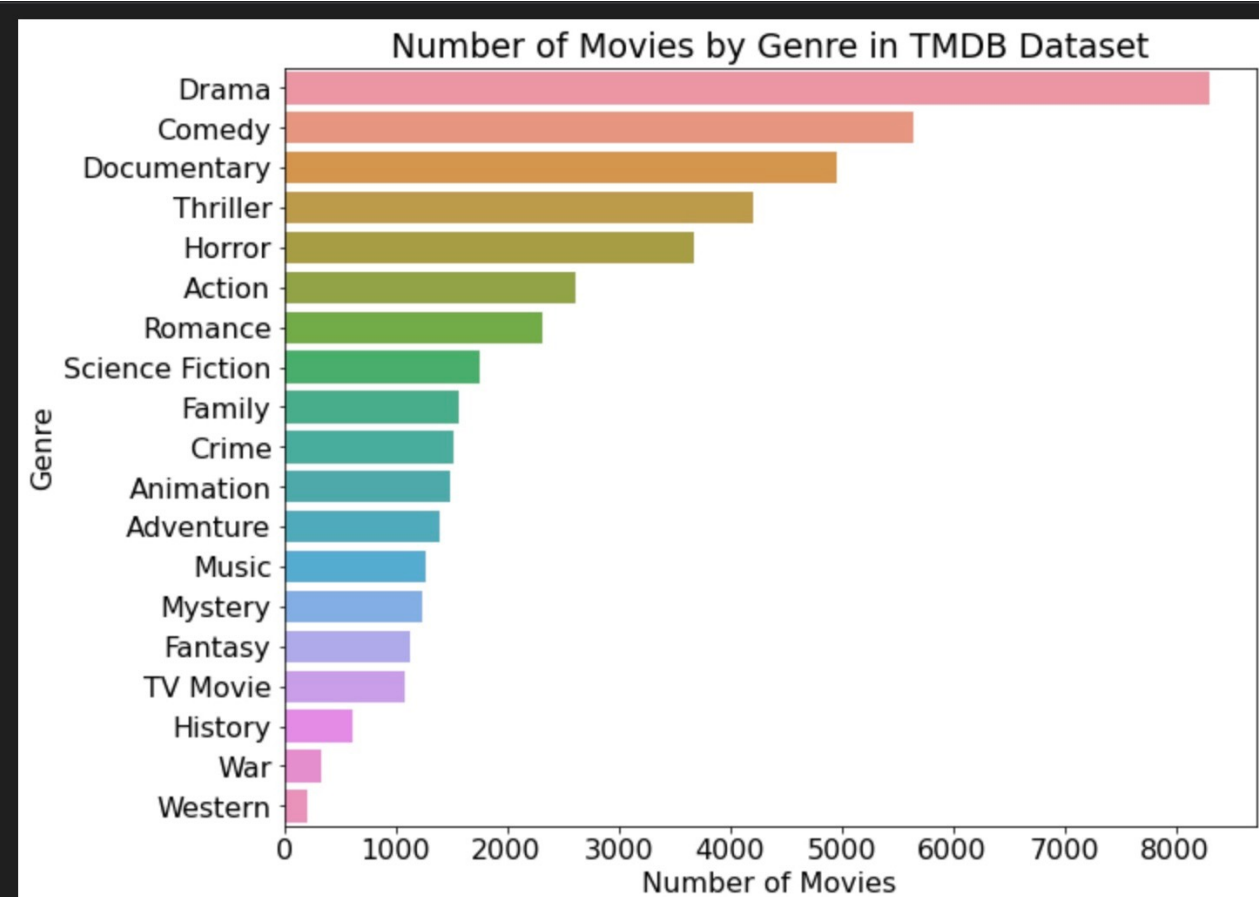
Reccomendations

Based on the insights gathered from the visualizations, here are some actionable recommendations for Microsoft's new movie studio:

- **Focus on High-Grossing Genres:**
  - Prioritize film production in genres that consistently show higher average worldwide gross, such as Animation, Adventure, and Action. These genres have proven market appeal and can lead to substantial box office earnings.

- **Consider Moderate Budgets for Higher ROI:**
  - Allocate investments in 'Low' and 'Medium' budget tiers where ROI is highest. While blockbuster budgets may attract attention, they do not necessarily guarantee a proportionally higher return on investment.

Reccomendations

- **Diversify Investment Across Budget Tiers:**
  - Diversify the portfolio by investing in a mix of low, medium, and some high-budget films to balance the risks and benefits. Lower-budget films can offer high returns and can be produced more frequently, while a few carefully selected high-budget projects can boost the studio's profile if they succeed.

- **Analyze Market Trends and Audience Preferences:**
  - Stay informed about current trends in cinema, including popular themes, emerging genres, or shifts towards streaming platforms. This could involve market research, surveys, or leveraging data analytics to tap into audience interests.

Q&A

- Thank you for your time feel free qo ask any question 🤝 .

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