Optimizing Factors to Maximize the Success of Movies

By Lucas Fishbein
(Flatiron DS Phase 1 Project)

Project Overview

- Microsoft is opening up a new movie studio
- How do we maximize the likelihood of success from the get-go?
- The culture and trends of movies globally is in constant flux
- To provide recommendations to maximize the likelihood of success, **a descriptive analysis has been completed on a set of movies released after 2010** in order to elucidate factors from these movies that may have contributed to their success

Analysis Criteria And Source Databases

Analysis Criteria:

In order to maximize Microsoft's investments our success metric will be Return on Investment (ROI)

Movie Factors explored to obtain a high ROI:

- Production Budget
- Genre
- Release Month

Data Sources:

- IMDB.com - A repository of descriptive features of movies
- The-Numbers.com - a repository of data on the financials of Movies

From these sources, **a combined database of 1,859 movies released after 2010** was utilized for the preceding analyses

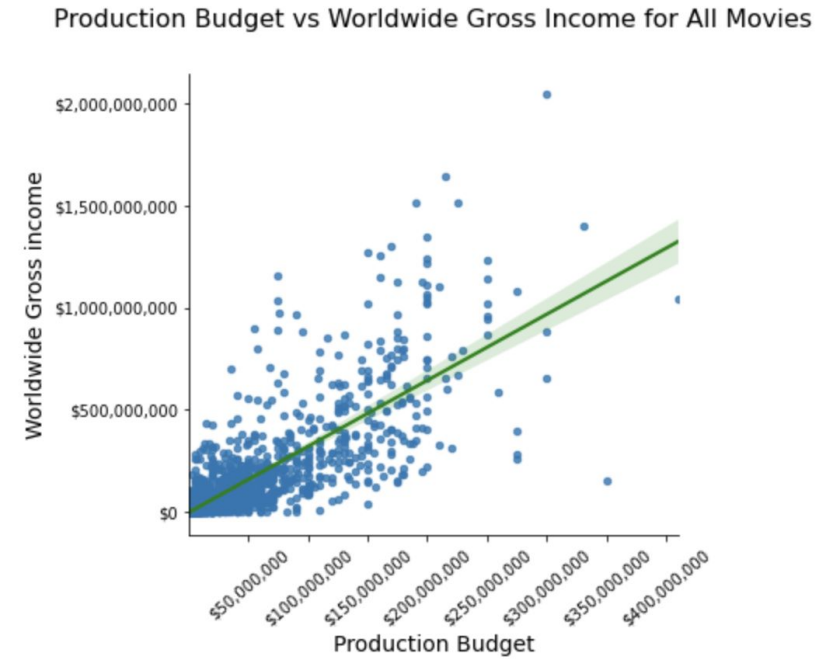
Data Analysis Basis

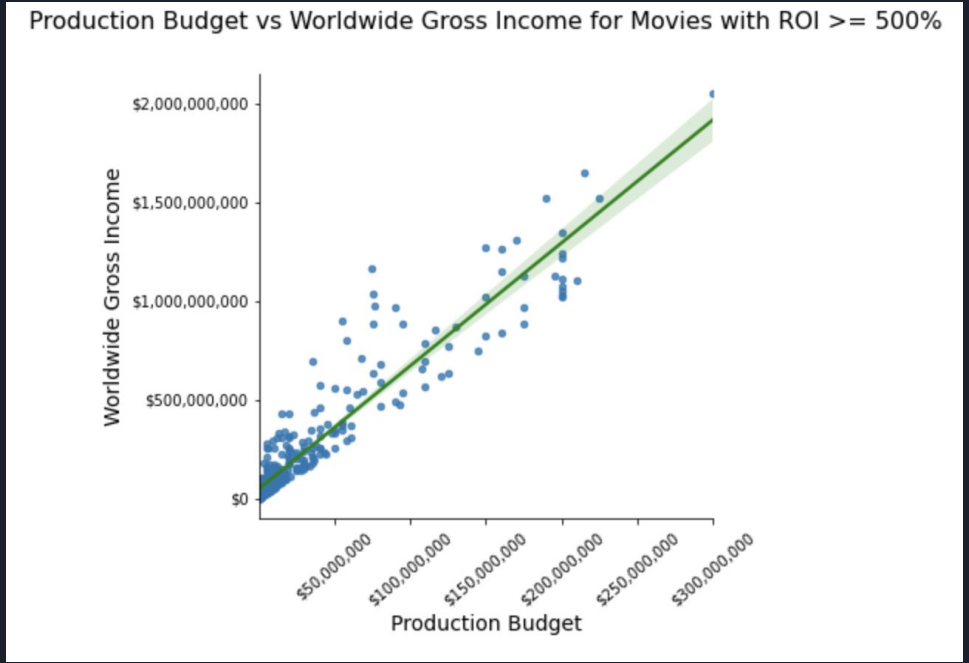
- To determine the rate of success for each of the variables explored the percentage of movies the became “Highly Successful” versus the overall data set was utilized

- Highly Successful movies have an ROI >=500%
  - 320 movies in the present dataset were highly successful
  - These will be used as the “Top Movies” dataset

Production Budget vs. Worldwide Gross Income

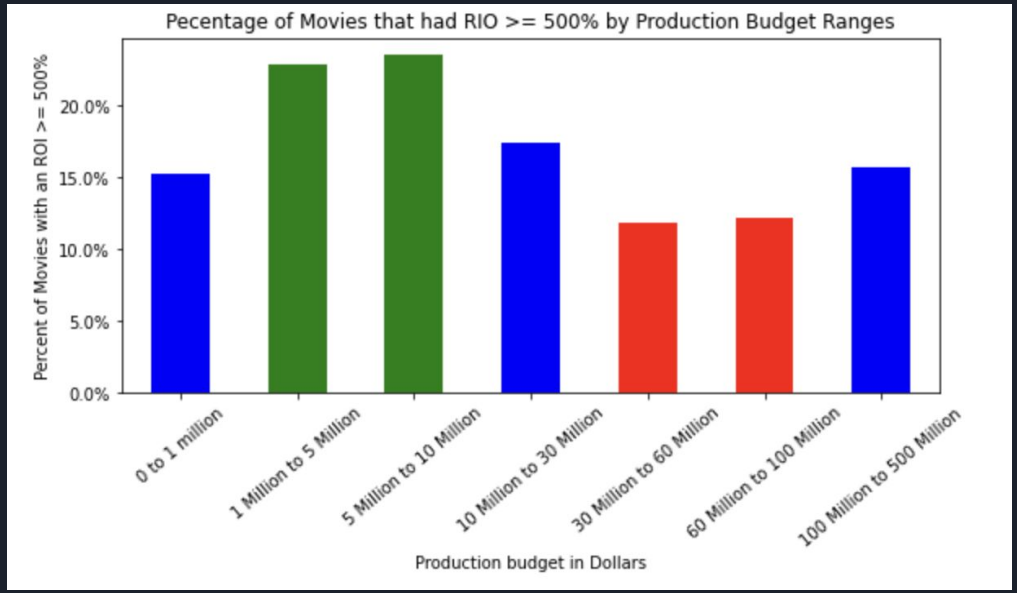
The general trend across both graphs is **the more you invest the higher the worldwide gross**





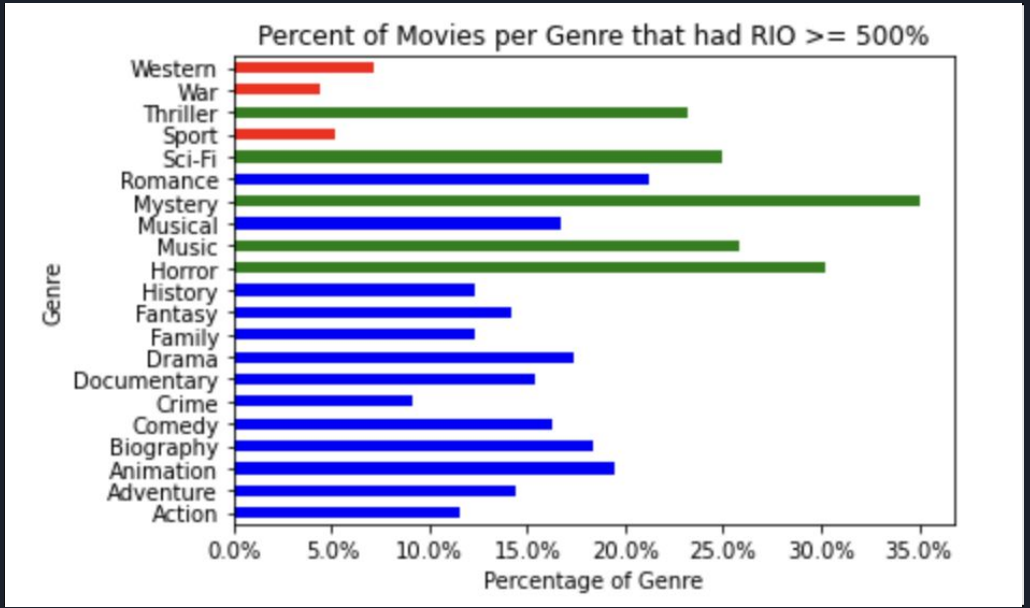
Production Budget Analysis

- One to Ten Million range has highest rate of success
- Thirty to One Hundred Million is the range to avoid



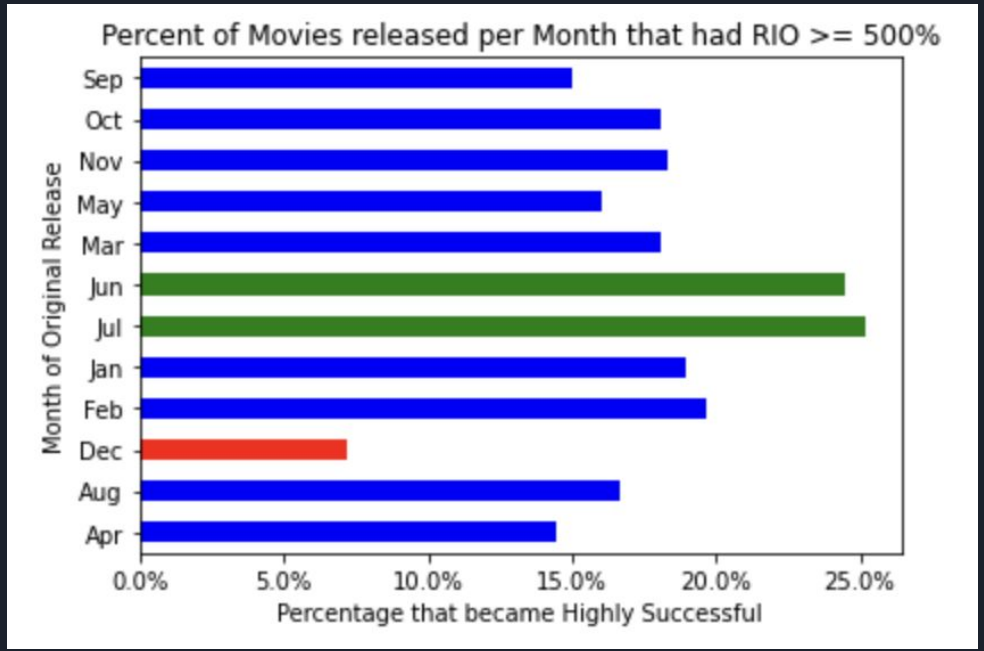
Genre Analysis

- Top Genres were Mystery and Horror
- Other High performing genres included Music, Sci-Fi, Thrill
- Poorest Performers were War, Sport and Western



Release Month Analysis

- June and July had the highest rate of success
- December should be avoided



Summary of Results and Recommendations

- The factors to include based on this analysis to maximize the chance of an ROI >= 500%:
  - Production Budget:
    - Between One and Ten Million Dollars were top performer
    - Avoid Thirty to One Hundred Million dollar range
  - Genre
    - Mystery and Horror were top performers
    - Avoid War, Sport & Western
  - Release Month
    - June and July were top performers
    - Avoid December

Limitations and future improvements

- Do not fully understand the origins of the databases
  - How movies were selected for inclusion
- A much larger dataset could be built beyond the limitations of the provided datasets.
- This analysis does not actual measure the how any of these factors impact the results as it is only a descriptive analysis
- It is possible that two movies with the same name came out in the same year
  - The-Numbers.com database sometimes used the “Video Release” date in place of the original release date, to compensate a tolerance of 1 year was used during the merge.
- The same movie may have been released at different times in different countries
- Investment portion of ROI does not include all factors of interest such as advertising budget
- Worldwide Gross does not contain factors such as merchandise and other peripheral sales

Contact Info

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Github Repository: https://github.com/LayFish21/Microsoft_Movie_Analysis

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