

Making Microsoft Movie Magic

A quick yet thorough overview of certain considerations and expectations for starting your own studio.

Summary

Today we look through various data collected about movies - their production costs, their ratings, genres, time of release, and more, to determine three clear and concise business goals to work toward when starting up a movie studio.



Outline

- Business Problem
- Data
- Methods
- Results
- Conclusions



Business Problem

Microsoft wants to open their own movie studio, but they don't know anything about creating movies. My work is cut out to study the movies of yesterday and today to find patterns and give them some solid groundwork and expectations to base their decisions on.



Data

We will be using data from the following datasets:

- [Box Office Mojo](#) (bommovie)
- [IMDB](#) (movieinfo)
- [Rotten Tomatoes](#) - (reviews)
- [TheMovieDB](#) (tmdb_movies)
- [The Numbers](#) (tn_movie_budgets)



Methods

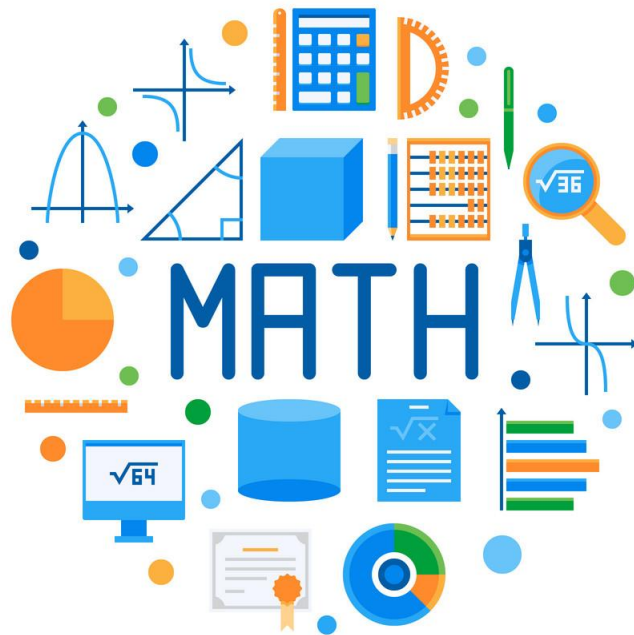
Data prep

First, I took a look at the data sets and what questions I wanted answered to decide how to combine them. I cleaned up the dataframes by:

- Capitalized and renamed titles
- Checked for and removed duplicates
- Filled in or removed Nan or 0 values
- Converted the bigger numbers by dividing by a million

Visualization and Analysis

- Bar graphs and scatter plots
- Explore the low, high, and medium budgets, among other considerations



Money and cents!

Minimum budget:

\$ 1100.00 (My Date with Drew)

Maximum budget:

\$ 425,000,000.00 (Avatar)

Median budget: \$17,000,000.00

Average budget: \$31,814,228.00

With a budget of 17-32 million dollars,
expect an average ROI between about
\$15 and \$18 million.

Why not spend more to get more?

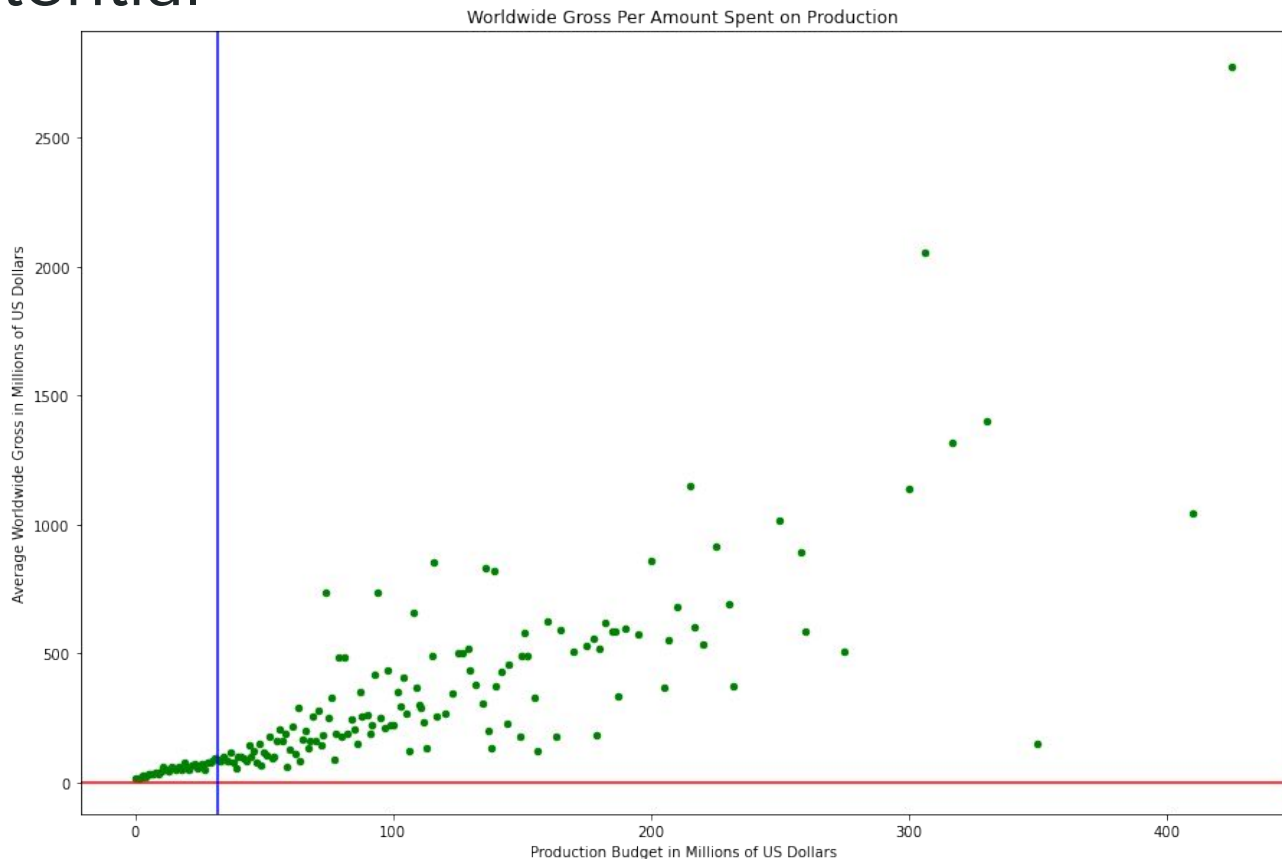


International Potential

Going international can have some serious benefits. The data shows a slight correlation of higher worldwide gross paired with higher budgets - the more you put in, the more you are likely to get out.

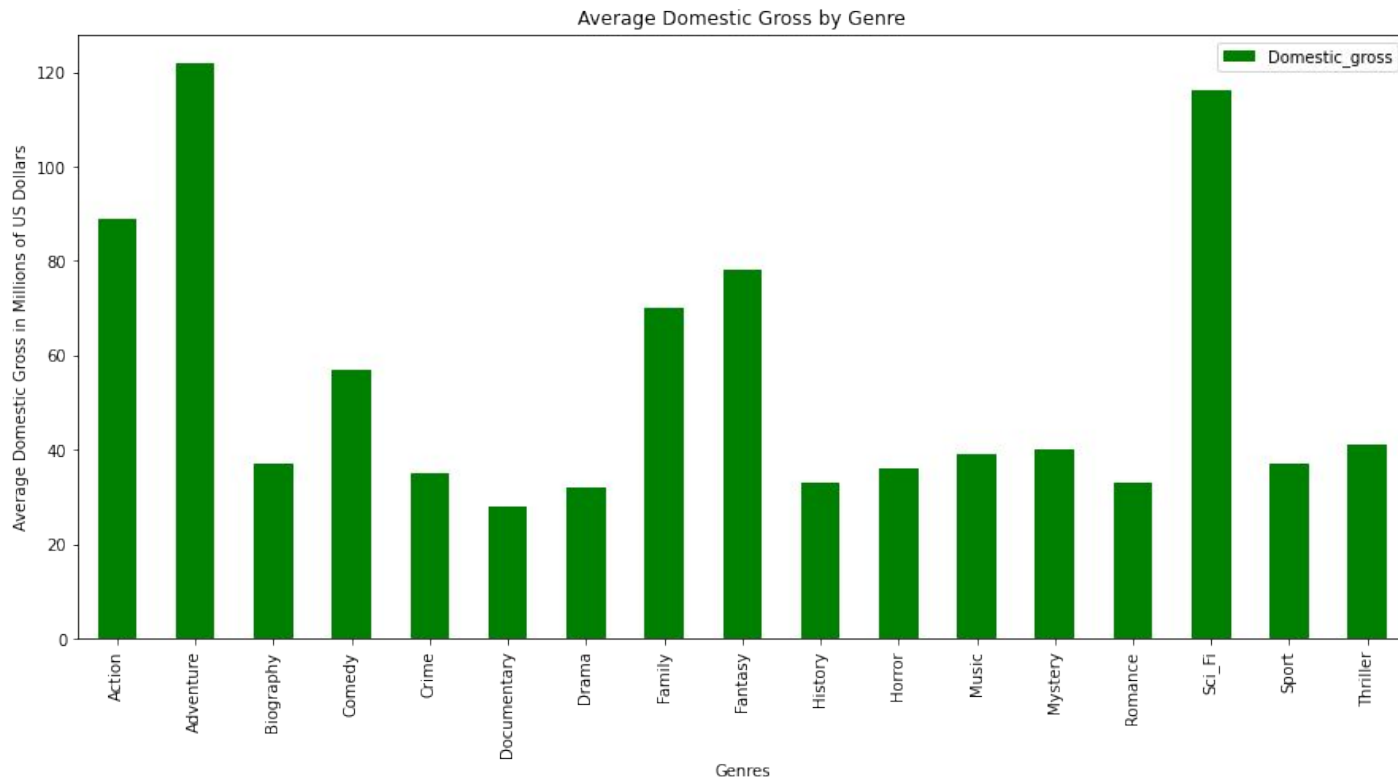
The correlation is tightest and most predictable up to about \$30 million.

With a budget between 17 and 32 million dollars, you can expect an average worldwide gross of 57.64 million dollars to 86.86 million dollars.



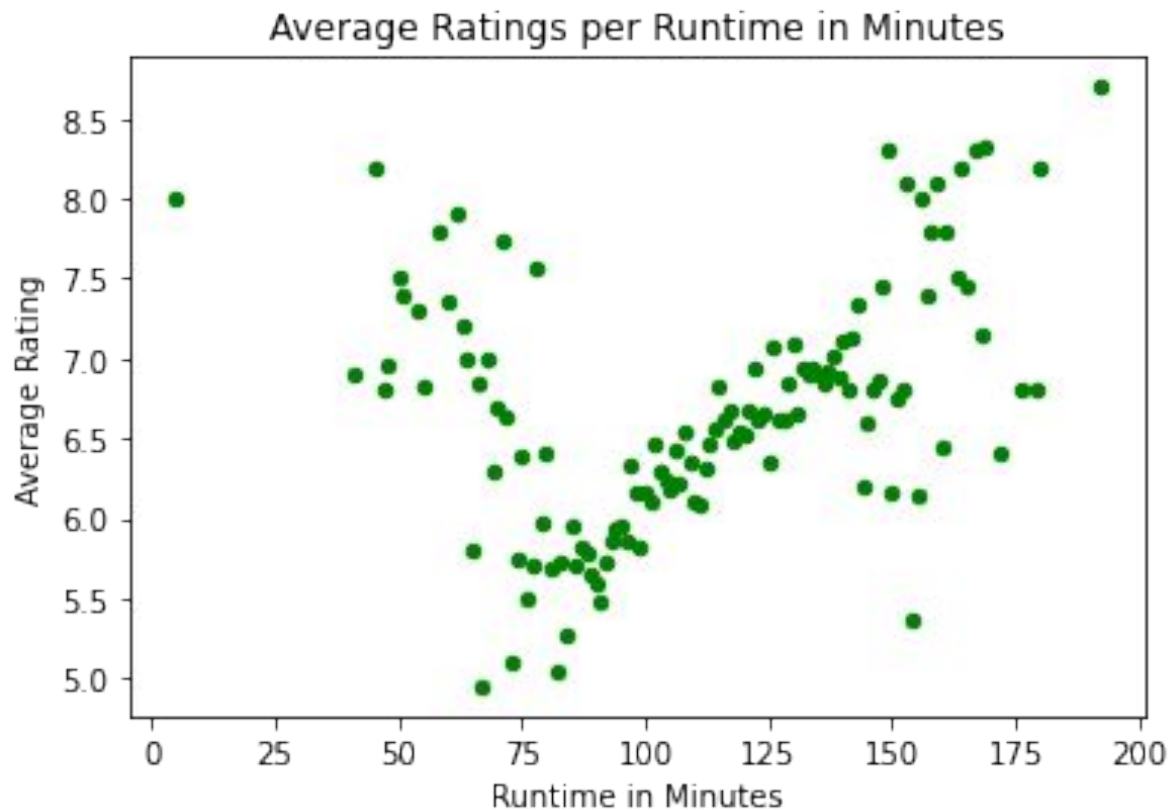
What kind of movie?

Domestic_gross	
genres	
Action	89.0
Adventure	122.0
Biography	37.0
Comedy	57.0
Crime	35.0
Documentary	28.0
Drama	32.0
Family	70.0
Fantasy	78.0
History	33.0
Horror	36.0
Music	39.0
Mystery	40.0
Romance	33.0
Sci_Fi	116.0
Sport	37.0
Thriller	41.0

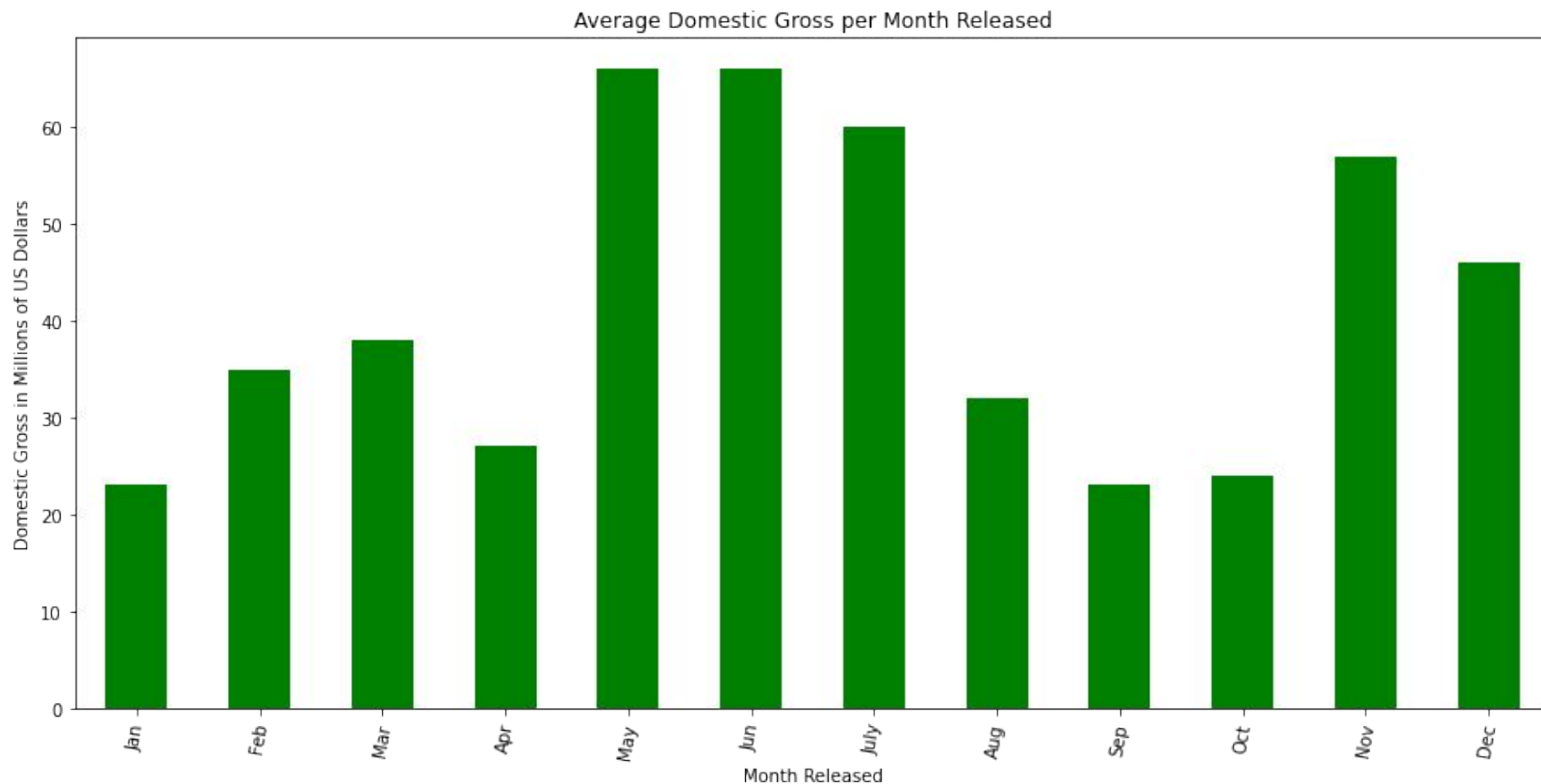


How long?

Between 55-65 minutes,
or between 100-145
minutes, seems to yield
the most consistently high
marks.



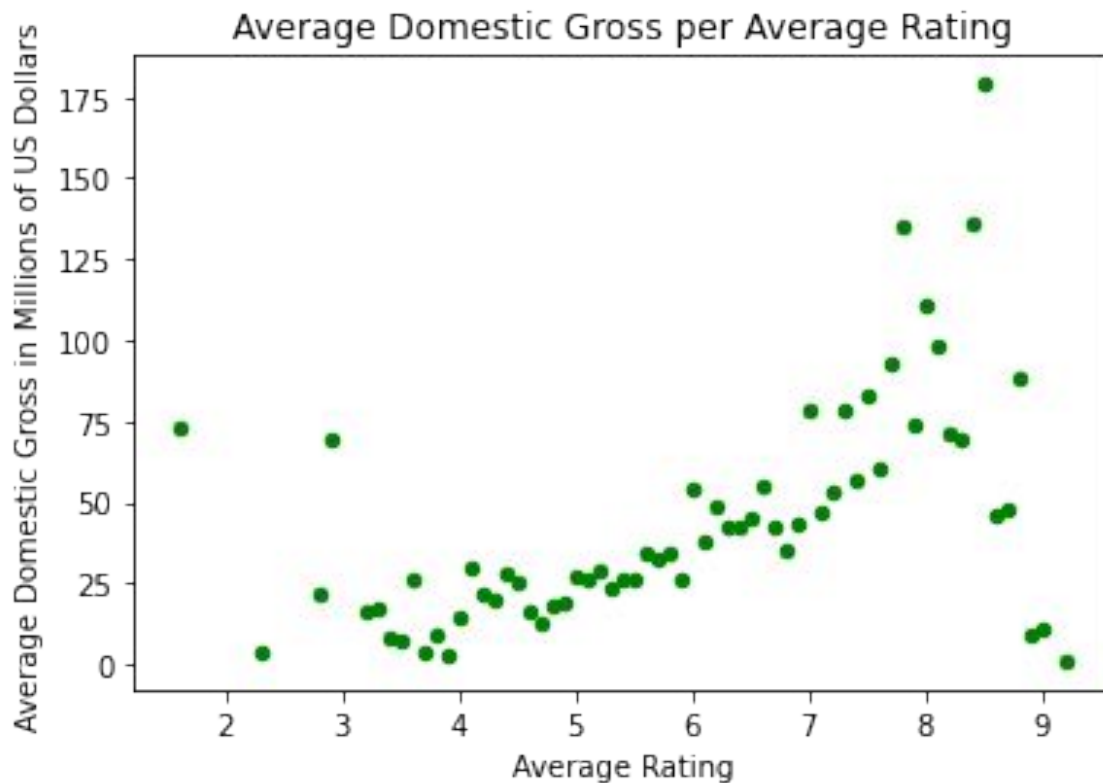
When to release?



Do higher ratings = more revenue?

For the most part, yes!

High ratings come from a variety of elements, but one way to secure it is finding a good director with a history of highly rated movies!



Who to choose?

- Someone with experience directing
- Highly rated work
- Varied works
- International experience

Emre Oran	10.0
Adam Rabinowitz	9.6
Karzan Kardozi	9.6
Roi Maoz	9.6
Violeta Paus Soto	9.4
Zolbayar Dorj	9.4
Janice Buenaventura	9.3
Rhadem Camlian Morados	9.3
Zack Bennett	9.3
Kevin Schlanser	9.3
Chandler Wild	9.3
Aaron Jackson	9.2
Jerome Walter Gueguen	9.2
Ian Wiggins	9.2
Steve Gute	9.2
Richard Heap	9.2
Ivane Arsenishvili	9.2
Nino Orjonikidze	9.2
Constantine Papanicolaou	9.1
António Caetano Faria	9.1

Who would I recommend?

Richard Heap

- Numerous highly rated works such as The Runaways
- Highly decorated with 8 award wins and 2 nominations
- Directed over 20 projects and has experience with other aspects of production



Business Propositions

1. Expect to budget between 17 and 32 million dollars, and have an average return on investment between 15 and 18 million dollars. Should you choose to go international, your potential worldwide gross would be between 58 and 87 million dollars.
2. Make an action film between 55-65 minutes, or between 100-145 minutes, and release it in May or June. If you need to delay the release, July and November are also good choices.
3. Hire a director with international acclaim that has produced highly rated films, such as Richard Heap, as movies rated higher generally gross more and will do better on the worldwide stage.

Conclusions

There were some pretty serious limitations for this project, no more so than the reviews dataframe, which included review ratings, but were not at all consistent. Not being able to use that dataset for ratings was very frustrating. I was also annoyed at the lack of consistency in the parental advisory ratings.

In addition, I would have liked to sort directors by US-based vs foreign-based, and information based on how budgets were spent, and would have loved info spent on marketing both foreign and domestic to compare to their gross and ROI.

In hindsight, I would have excluded production budgets over \$300 million for legibility of the visuals, and the fact it's unlikely a new studio would spend that much on their first film.

Thank You!

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