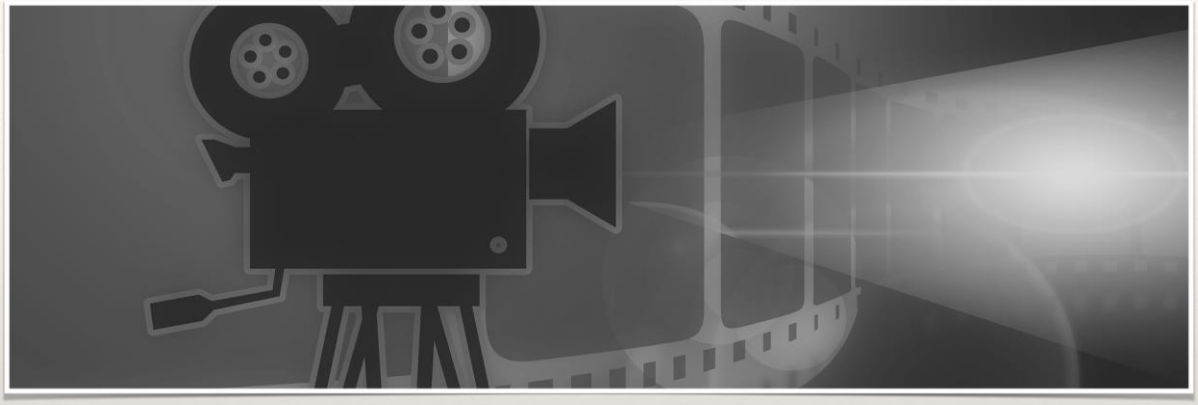


Flatiron School

Movie Industry Analysis

by: Erik Castro

I will be talking about the movie industry. This presentation was made by me for Flatiron. The goal of this presentation is to better understand how we can maximize profits

Problem Statement

Multiple Datasets from different websites provided.

The aim for this project is to understand what makes a movie profitable and how we can minimize the risk and maximize profits.

In this section I present the problem! We can see that the main problem here is to gain an insight in how the Movie industry works, how we can maximize the profits lowering down the risk. Once the problem is identified we can find a possible solution for it.

Business Value

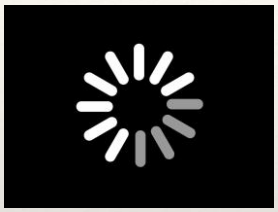
Understand the relationship of budget and total gross

Investigate how the crew chosen can affect the total gross

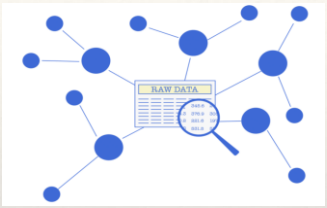
Gaining insight in the most common variables affecting the movie industry

What Value will this solution bring to the business? Understanding relationships between the data will help make sharper decisions when getting in the movie industry

Methodology



Load datasets and analyze them individually. Finding which datasets work together and perform data cleaning before joining to create a master dataset



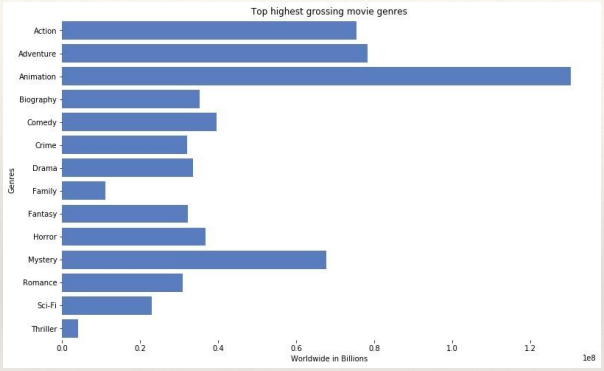
Organize data using group by in different columns such as: Rating, Director, Genres, among others.

Find averages, totals and correlations in different financial columns.

I will be analyzing each dataset individually before making a choice of what datasets to use. Once that is done some data Cleaning will be done to the dataset eliminating data that could potentially damaged our reports. When the datasets are ready a series of data grouping will be carried out, this could be done by genre, director, rating, actor or anything else.

The last step is finding averages, totals and correlations between the columns.

Findings 1: The highest grossing movie genres



Top 3 genres/billion $

- Animation: 1.4
- Adventure: 0.8
- Action: 0.7

Bottom Line!

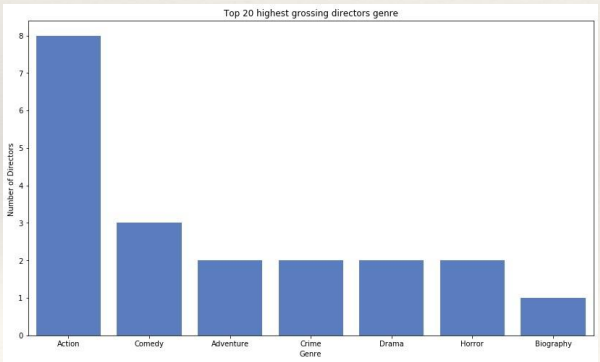
A superhero movie will always do right
They embark all three top categories!
Although something like fast and furious will also help

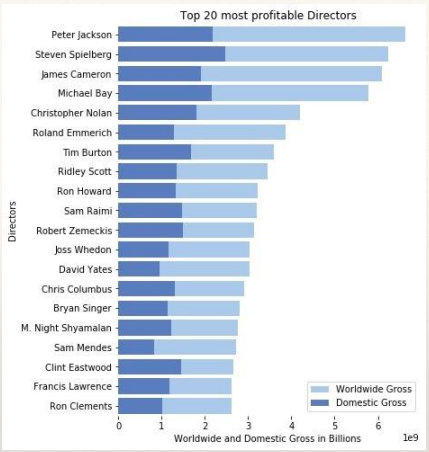
We can see here that the top 3 genres are animation with 1.4 Billion , adventure with 0.8 billion and action with 0.7 billion on average. A good starting point will be to make a superhero movie, as they embark the top 3 categories.

Findings 2: Directors and total grossing

Top 20 most profitable directors

Peter Jackson, Steven Spielberg, James Cameron, Michael Bay and Christopher Nolan have their highest grossing movies in Action, Drama and Adventure.





Conclusion

The highest grossing directors base their movies in the top 4 genres.

We can see that the top 20 most popular profitable actors are Peter Jackson, who made The lord of the rings. Steven Spielberg, who made movies such as Jurassic Park. James Cameron with Avatar, Titanic and the terminator.

Most of these movies fall into the top 3 categories Action, adventure and animation. However, we can see that

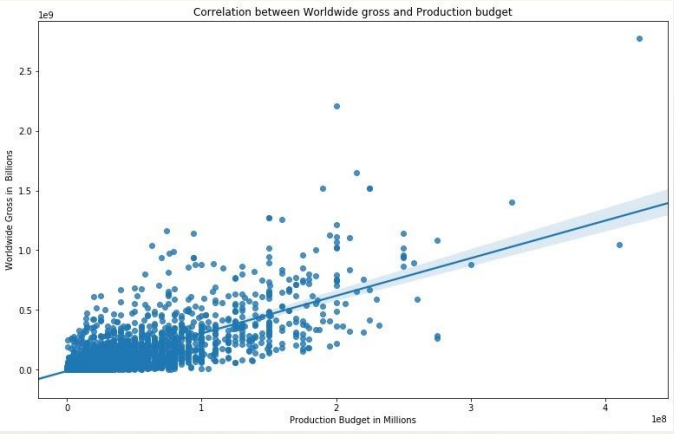
the top 20 highest grossing directors have most movies at Action, Comedy and Adventure.

Findings 3: Production budget and Total gross

Movies budget and Total gross average

Movie Mean Budget: 40$ Million
Movie Mean Total Gross: 116$ Million

Correlation Coefficient :0.859045



Conclusion

Taking into account the correlation between budget and total gross, the best course of action is to have a bigger production budget, which will allow to have higher grade actors,directors and crew leading to a higher total gross

Moving on, I wanted to see if there was any correlation between Production Budget and the total gross. In here, we can see that there is a positive correlation. The way to see this is as the production budget moves to the right the worldwide should move up! The correlation Coefficient is putting this into numbers, the closer the number is to 1, the stronger the

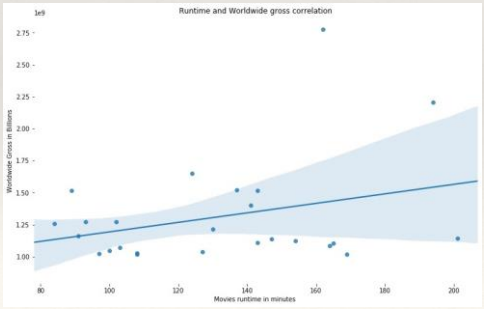
positive correlation is. With all this information we can say that the bigger the production budget the higher the potential profits

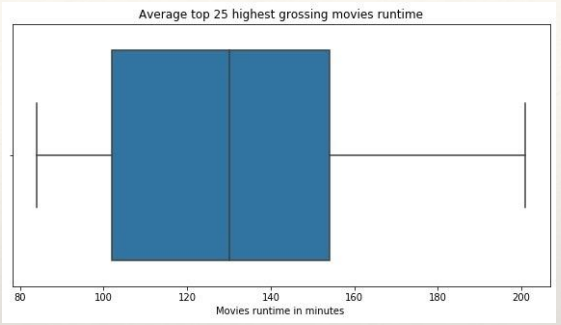
Findings 4: Runtime v Total Gross

Top 25 grossing movies average runtime

Average runtime: 131 min

Top 25 highest grossing movies have an average runtime of 131 minutes.
However, correlation is only slightly positive, sitting at:
0.252034





Conclusion

It doesn't seem to be a correlation between runtime and total gross. However, it will be safer to have a movie with a length between 100 and 150 minutes

I wanted to see if Runtime had any effect in the total gross. For that I used the top 25 highest grossing average runtime. The average itself is 131 minutes. However, movies run from 110 and 150 minutes.
Looking into the correlation graph, we can see that there is almost not correlation between runtime and worldwide gross. It also has a

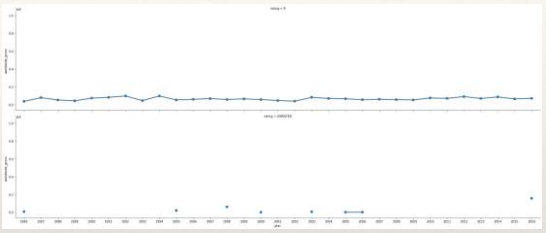
correlation coefficient of 0.25. The closer the correlation is to 0 the more neutral is the correlation is!
Having made this assessment it can be concluded that there is no correlation between runtime and total gross. However, sticking to 100 and 150 minutes runtime would be a good idea.

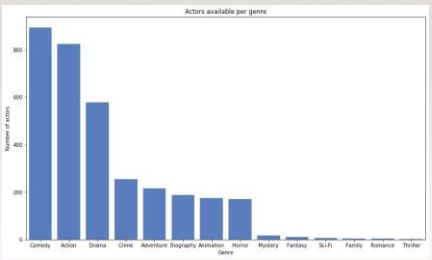
Conclusion

- Bigger production budget leads to bigger total gross
- Runtime between 110 and 150 minutes
- With a bigger production budget, better directors can be hired which can lead to higher total grossings
- Top 10 directors have mainly done action, animation and adventure movies, which concord with the top 3 genres.

Future work

- Check different variables such as:
  - How the total gross has changed over the years on different ratings.
- Check how leading actors affect the total gross as well.
- Availability of actors per genre





In future work, maybe I can expand into how the total gross has changed over the years in a particular rating such as R rating, which the average total gross is quite stable between 0.1 and 0.2

I can also explore further how having a leading actor can have an effect on the total gross.

Or if finding an actor can change

something, the more actors there are in a certain genre the more possibilities there are to find the best fit for the role.
This is everything. Thank you for your time.

Thank you!

- Any Questions?