Making Money Making Movies

Outline

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Goal

What should a new movie studio do in order to make profitable, well-received movies?

I looked at how the budget, genre, and casting/directing are related to the profitability and viewer ratings of movies.

Data

IMDb

Includes movies released since 2010.

Has viewer ratings and information about actors and directors.

THE NUMBERS

Includes movies dating back to 1915.

Has information about the budget and domestic/worldwide gross.

Methods

Used Pandas within Python to analyze the data.

I combined the data so I had the financial information and ratings for each movie.
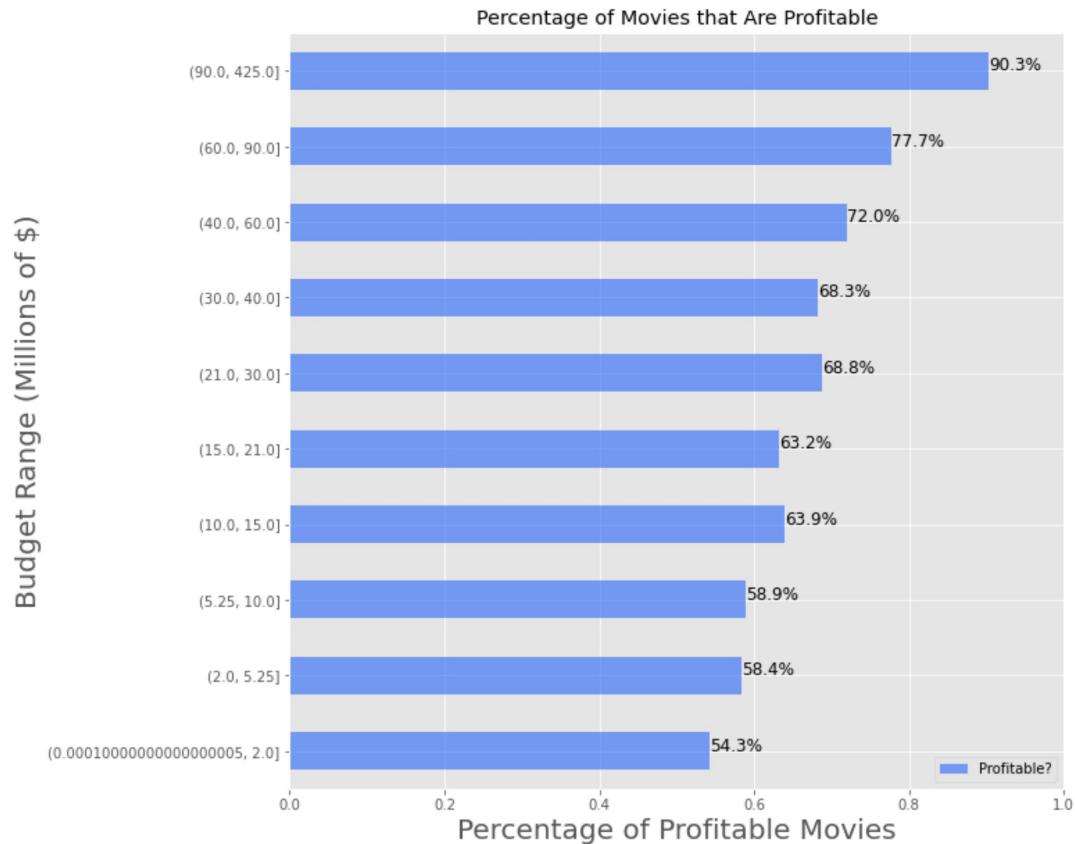
I manually edited some of the movie titles so that the two datasets matched.

Final dataset includes 1654 movies since 2010
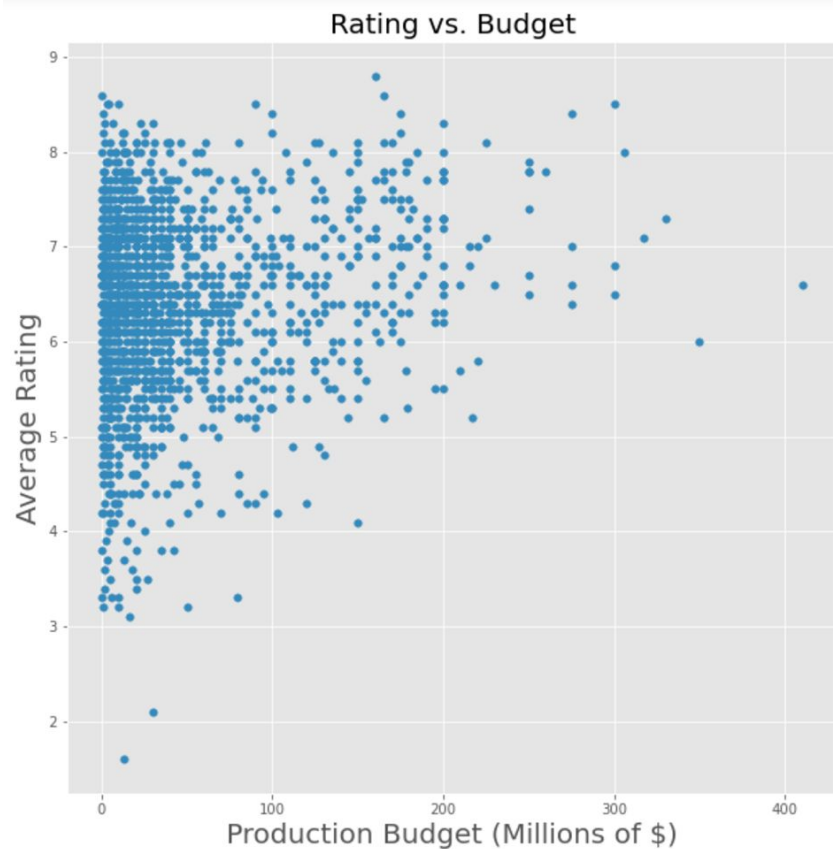
Spend More → Make More

Movies with larger budgets tend to make money more often.

Movies that cost over $90 million made money 90% of the time.

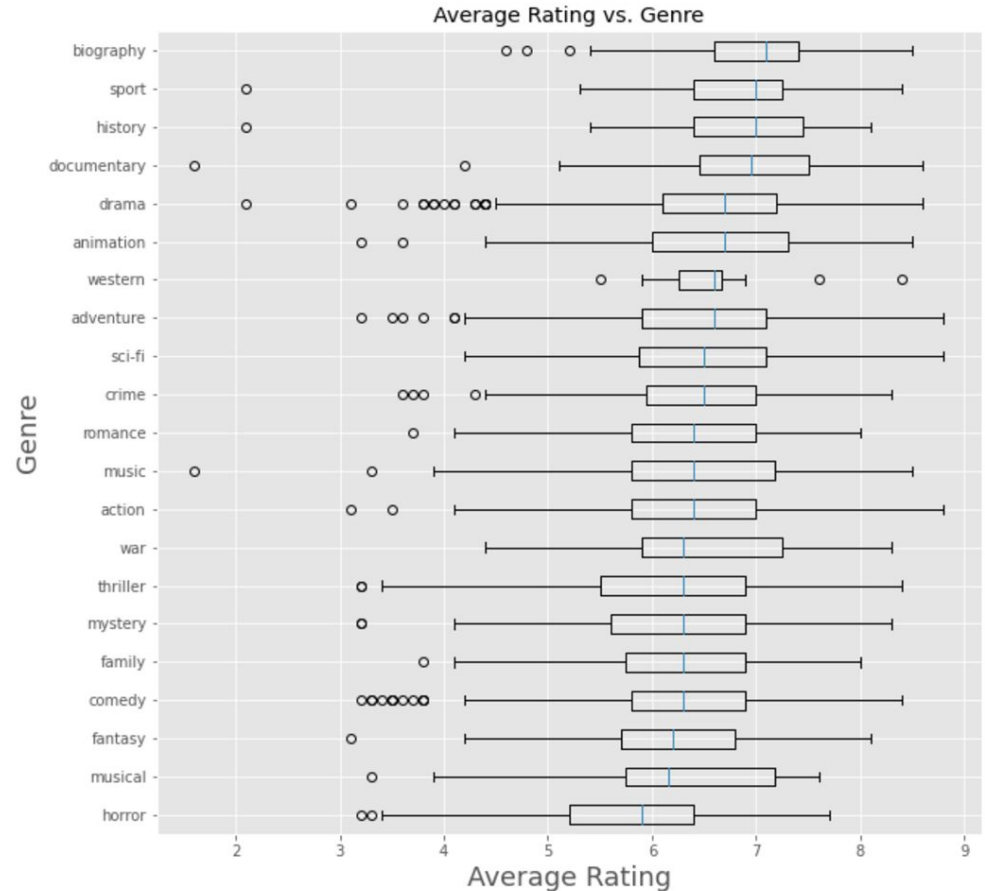Percentage of Movies that Are Profitable

Budget Range (Millions of $)	Percentage of Profitable Movies
(90.0, 425.0]	90.3%
(60.0, 90.0]	77.7%
(40.0, 60.0]	72.0%
(30.0, 40.0]	68.3%
(21.0, 30.0]	68.8%
(15.0, 21.0]	63.2%
(10.0, 15.0]	63.9%
(5.25, 10.0]	58.9%
(2.0, 5.25]	58.4%
(0.00010000000000000005, 2.0]	54.3%

Profitable?

Budget and Ratings

Higher budget movies are much less likely to receive a very low rating.

Rating vs. Budget

Ratings and Genre

IMDB includes 20 genres.

Highest rated genres tend to be based on true-stories.
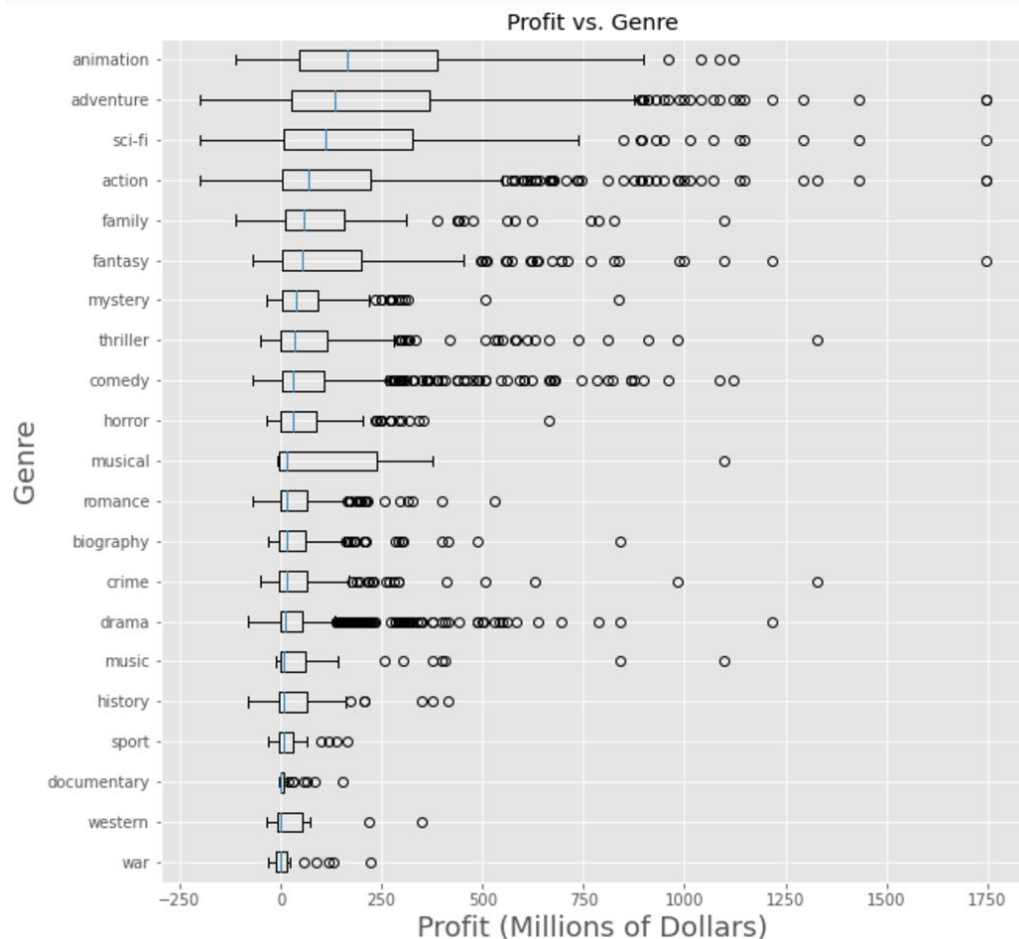

Average Rating vs. Genre

Profit and Genre

Most profitable:

Animation, adventure, sci-fi, action.
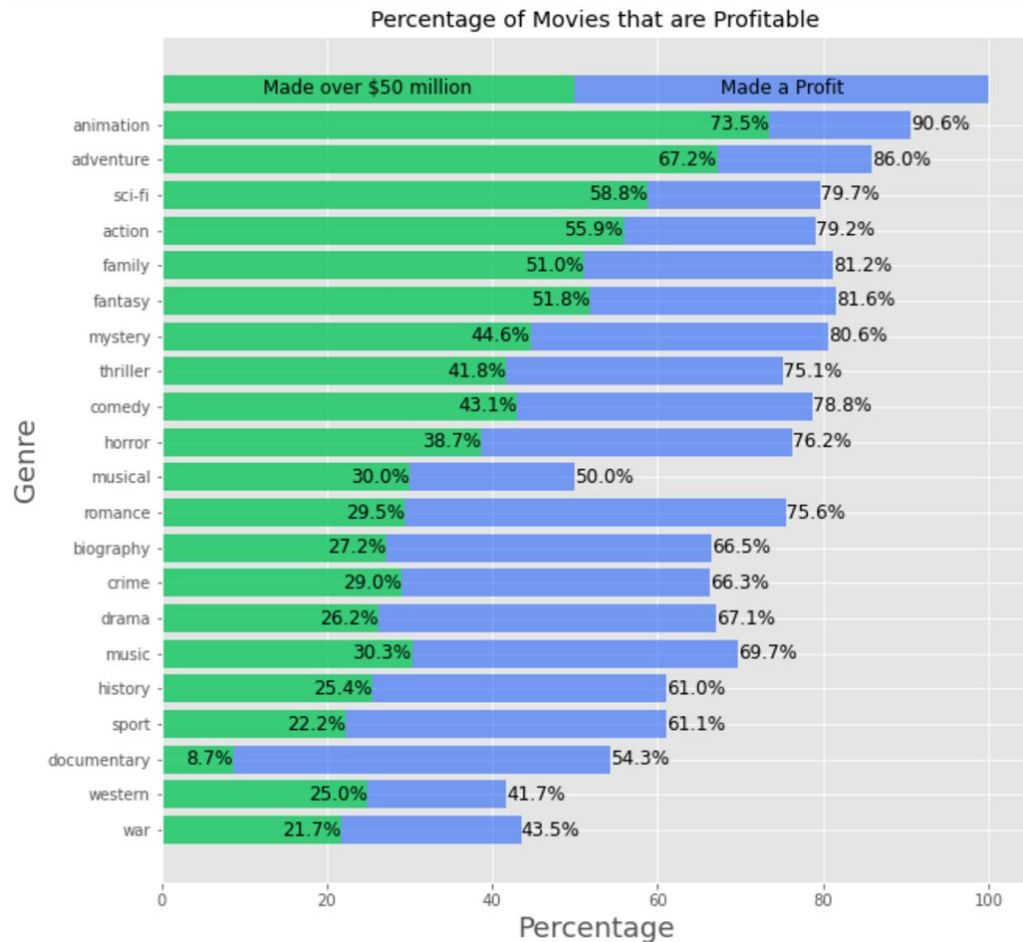
Least profitable:

War, western, documentary, sports, history.

Profit vs. Genre

Profit and Genre

All genres capable of making a profit, but animation, adventure, sci-fi, and action are the safest choices.

Documentaries are well-received, but don't make money.

Percentage of Movies that are Profitable

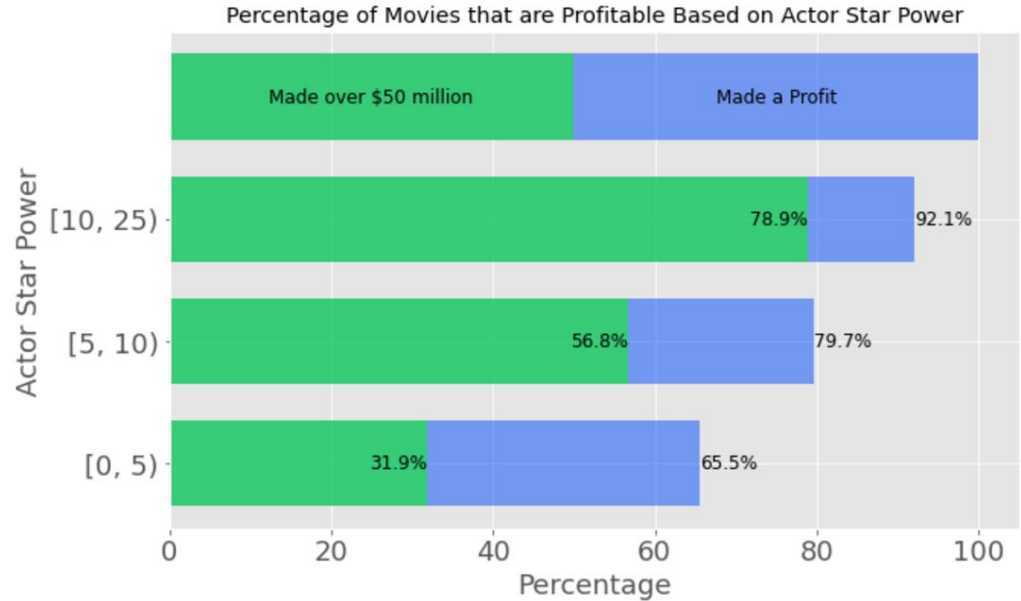| Genre	Made over $50 million	Made a Profit
animation	73.5%	90.6%
adventure	67.2%	86.0%
sci-fi	58.8%	79.7%
action	55.9%	79.2%
family	51.0%	81.2%
fantasy	51.8%	81.6%
mystery	44.6%	80.6%
thriller	41.8%	75.1%
comedy	43.1%	78.8%
horror	38.7%	76.2%
musical	30.0%	50.0%
romance	29.5%	75.6%
biography	27.2%	66.5%
crime	29.0%	66.3%
drama	26.2%	67.1%
music	30.3%	69.7%
history	25.4%	61.0%
sport	22.2%	61.1%
documentary	8.7%	54.3%
western	25.0%	41.7%
war	21.7%	43.5%

Do We Need Famous Actors and Directors?

To measure the effect of having famous people involved with a movie, I created a metric called "Star Power"

Star Power measures how many previous movies an actor starred in or director directed.

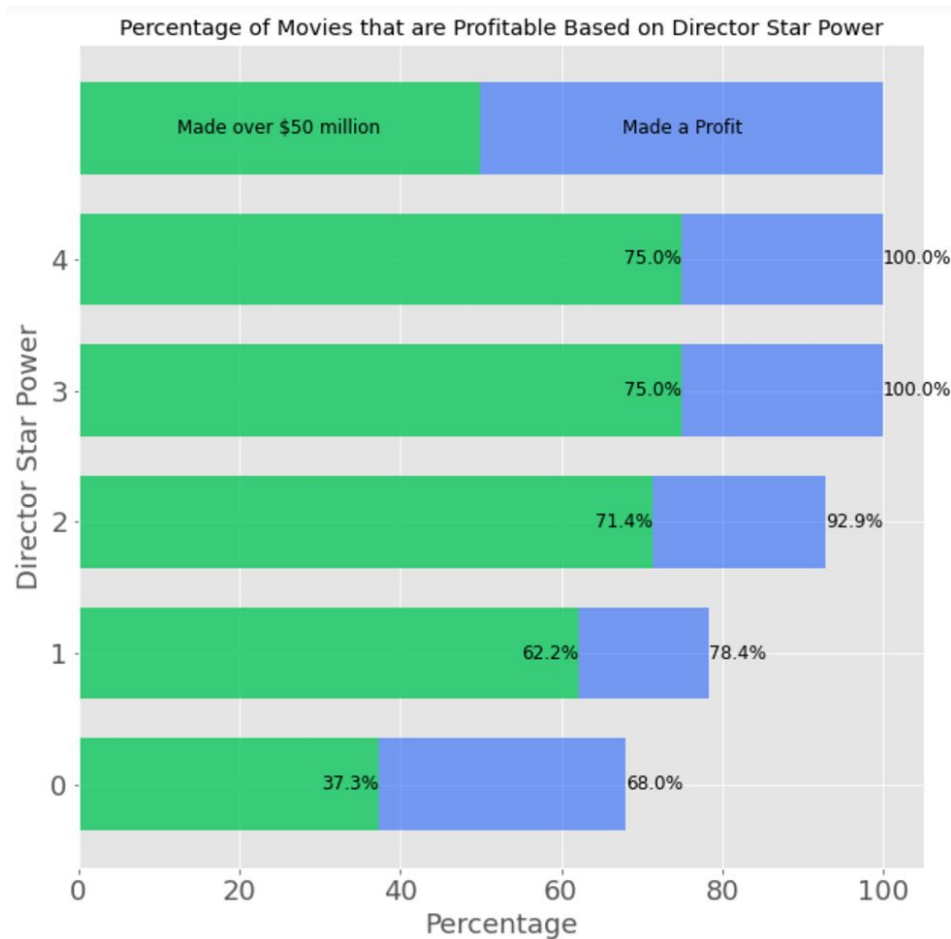I only measured movies that made a profit of greater than $50 million.

Profit and Casting

Movies with more recognizable actors make money more often.

Percentage of Movies that are Profitable Based on Actor Star Power

Profit and Directing

Movies with directors who have made profitable movies in the past tended to be more profitable.

Percentage of Movies that are Profitable Based on Director Star Power

Conclusions

1. Be willing to spend $100 million or more to make a movie.

2. Any genre can be successful, but animation, adventure, sci-fi, and action are the safest bets.

3. Pursue recognized actors and experienced directors.

Thank You!

Email: david.eric24@gmail.com
GitHub: @daviderics
LinkedIn: linkedin.com/in/david-schenck-57183b264/