

Making a Debut:

An Exploratory Analysis of the Film Industry

Summary

Analysis of movie production and release data shows successful projects in the industry follow several indicators:

- The size of a film's budget corresponds to its gross revenue
- Gross revenue is tightly coupled to film genre
- Despite notable flops, most films break even!

Outline

- Business problem
- Data and Methods
- Analysis/Results
- Recommendations

Business Problem

Microsoft sees all the big companies creating original video content and they want to get in on the fun. They have decided to create a new movie studio, but they don't know anything about creating movies. You are charged with exploring what types of films are currently doing the best at the box office. You must then translate those findings into actionable insights that the head of Microsoft's new movie studio can use to help decide what type of films to create.

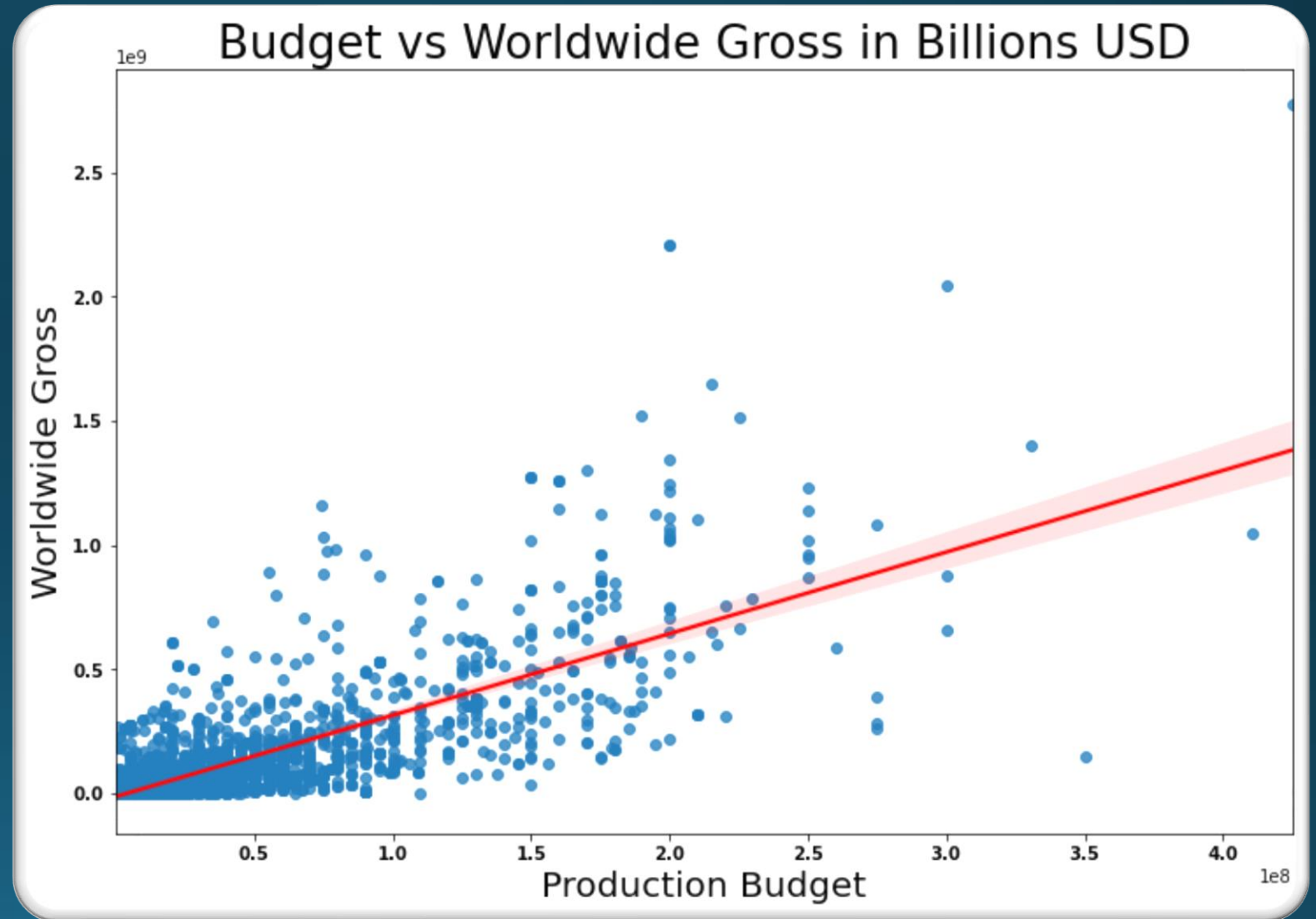
Data and Methods

- Data taken from four datafiles, with data in over a dozen categories for more than 125,000 titles.
- Tables cleaned and prepared for analysis using pandas methods.
- New features engineered from merged dataframes
- Visualizations created using Seaborn

Analysis: Budget and Worldwide Gross

With a Pearson's correlation coefficient of 0.76, a film's budget appears to be a decent predictor of worldwide gross.

To turn this insight into an actionable item, it might be wise to scrutinize a project's finances with the studio's revenue goals and needs.

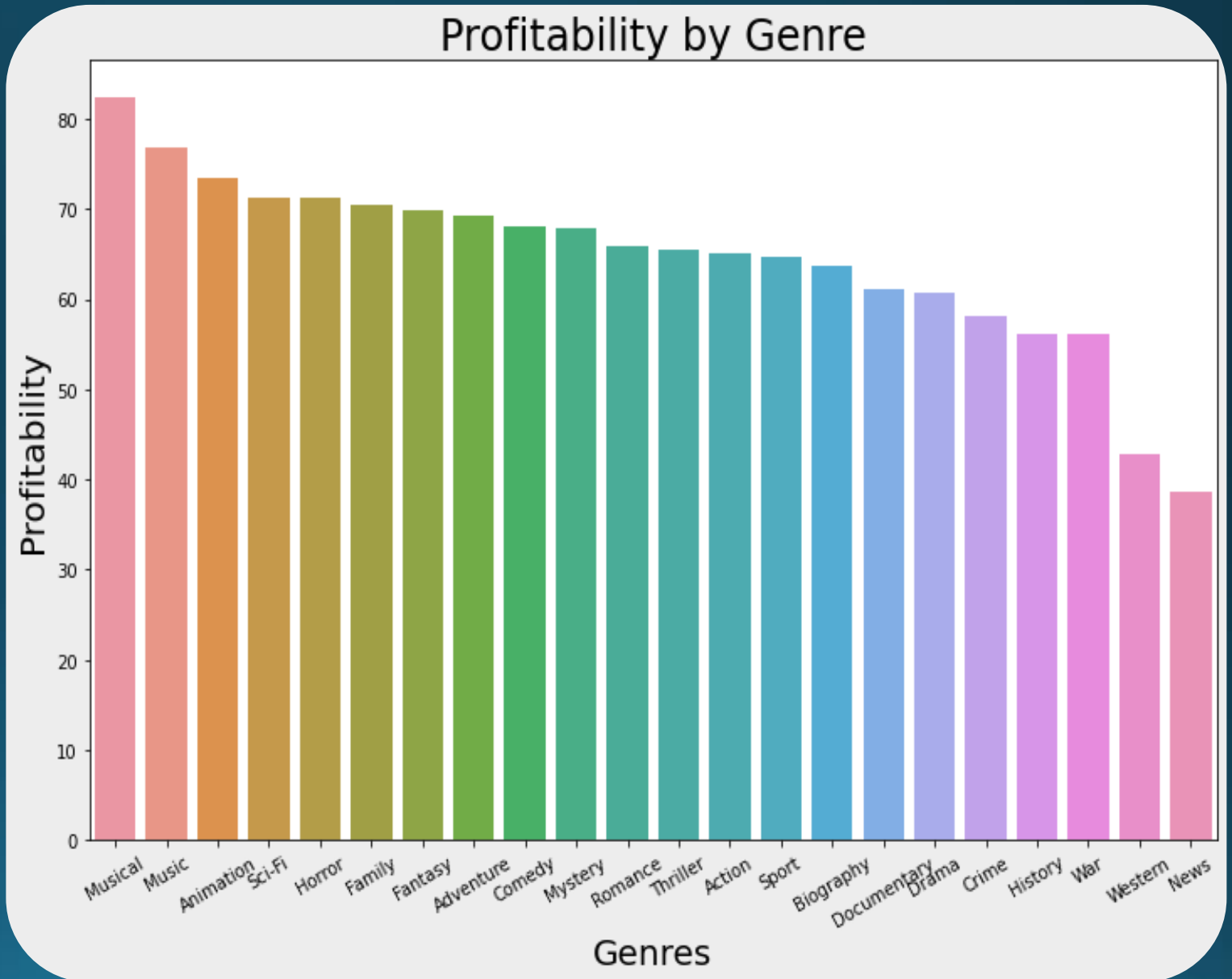


Analysis: Average Worldwide Gross by Genre

The plot at right shows the median profitability by genre.

While all genres appear to be profitable, some are clearly more so than others.

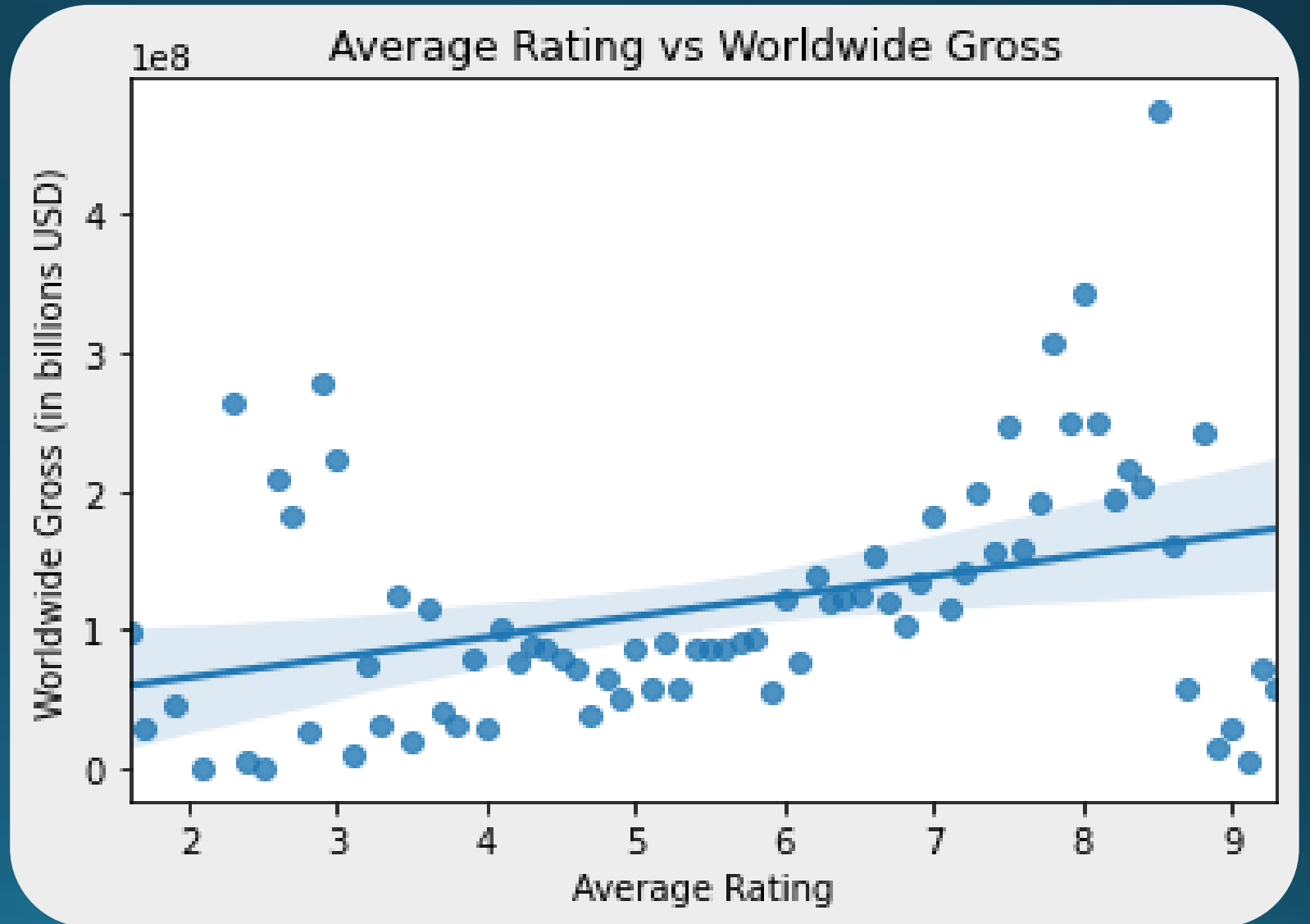
It bears keeping in mind however that profitability is a multi-factored metric and a number of variables can lead to a film's success and/or failure beyond genre.



Analysis: Influence of ratings on gross?

There doesn't appear to be much of a relationship here beyond a higher grossing film being more likely to have a greater number of reviews.

That said, a well-liked film can be spun-off or remade, and further analyses might want to consider looking at the success or failures of sequels and franchises.



Recommendations

- Plan budget according to further study of relationship between budget and gross (e.g. regression analysis, optimization)
- Stick to genres that historically have outperformed in the box office. These genres include action, adventure, animation, and scifi. Think Marvel Studios type releases.
- Remakes, reboots, and sequels of beloved titles might be a safer option than entirely new titles.

Future Directions

- Further analysis might delve into regression analysis and function optimization for gross vs budget correlation
- How do sequels and franchises perform versus completely new titles?
- To what extent does time of year affect box office performance?
- How do direct-to-video releases compare to theatrical release titles?