

Microsoft Studios Film Profit Analysis

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Outline

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Business Problem



Produce films that have a high chance for success



Provide guidelines for choosing budget, genre, MPAA rating, and release month



Consider results from the perspective of a large studio with ample capital for investment

Data

- Profit data for over 1500 films made from 2011-2020 in the US
- Includes worldwide gross, budget, genres, MPAA rating, and release date





Methods

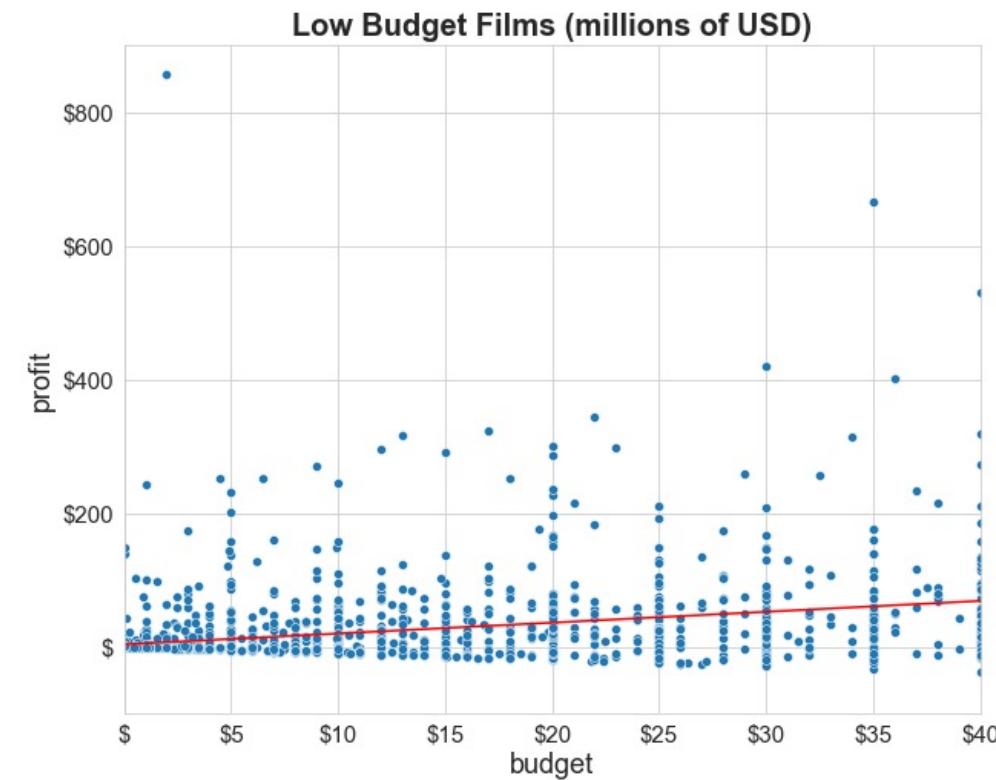
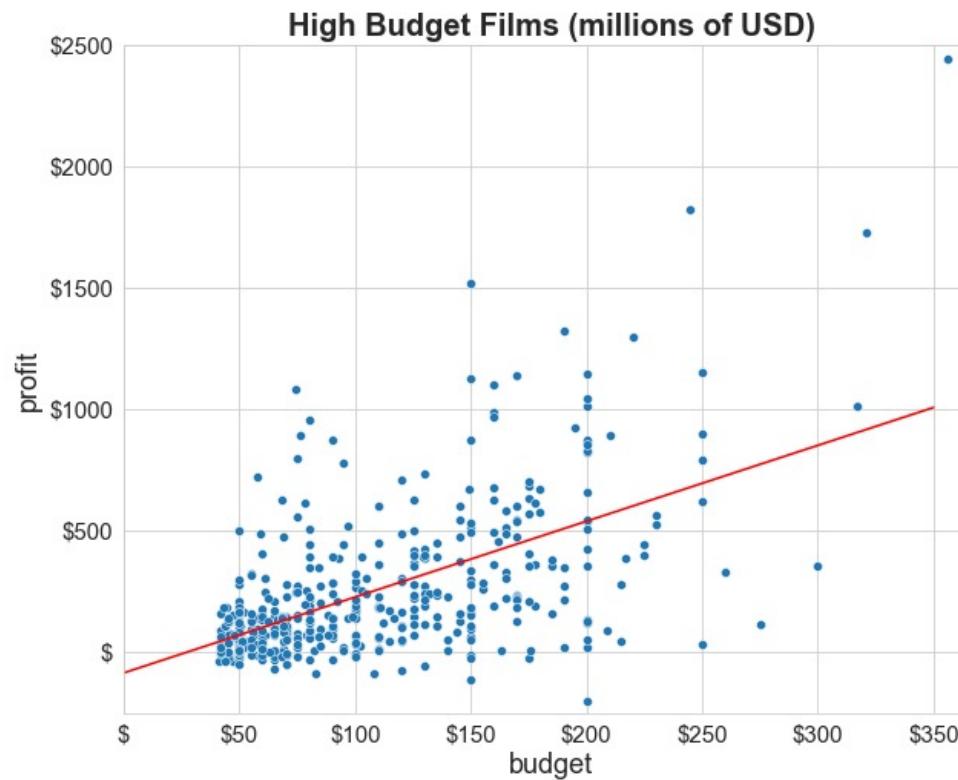
Conducted a descriptive analysis of films released in the US over the last 10 years to reveal the relationship of profit to budget, genre, MPAA rating, and release month.

Questions Answered:

- Is budget size correlated with profit?
- Which genres tend to perform best?
- Which MPAA ratings perform best? Is this dependent on genre?
- Which release months have the highest profit?

Budget and Profit

Films with budgets over \$40 million are more likely to increase profit as budget size increases.

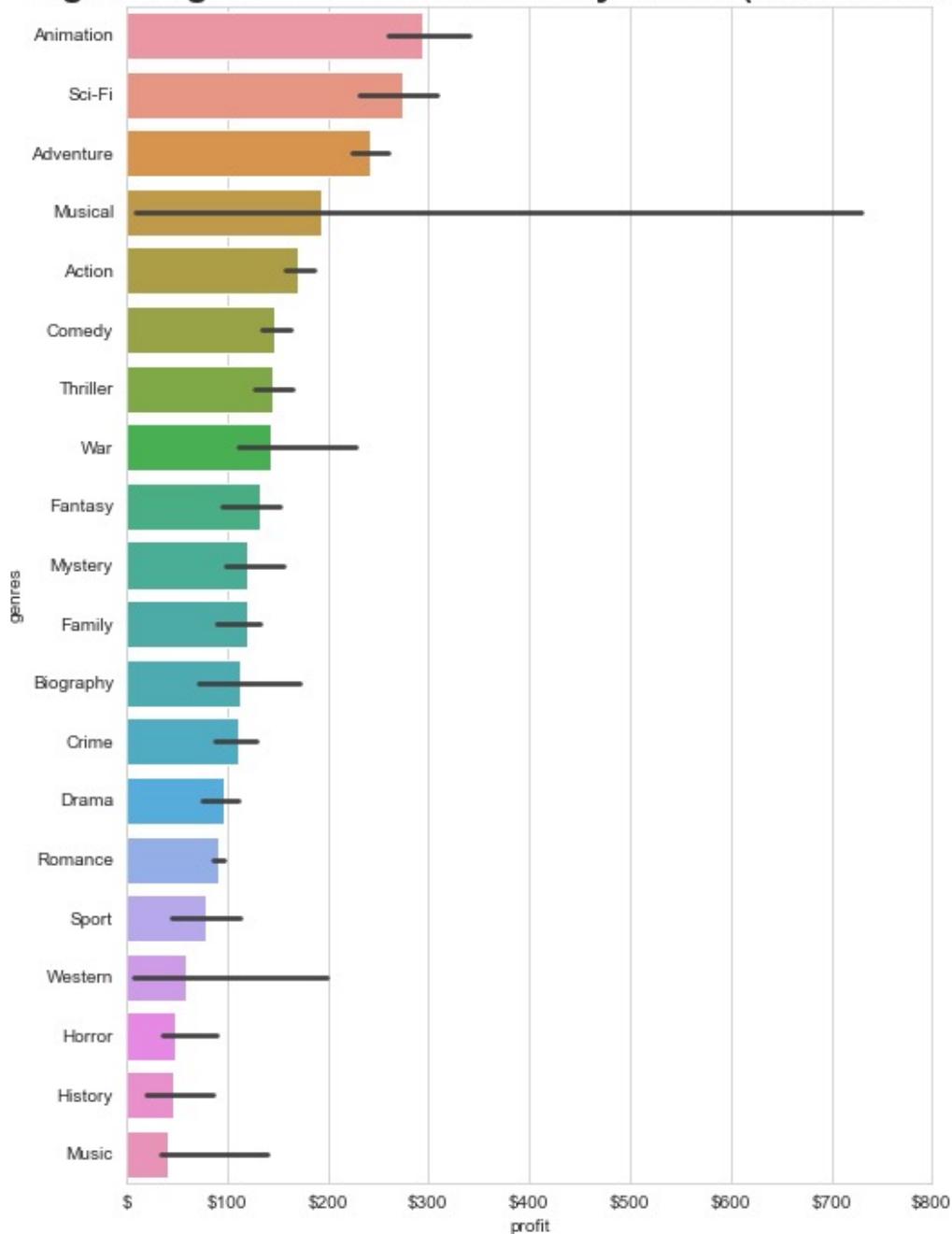


Genre

High-budget films whose genres can be classified as Animation, Sci-Fi, Adventure, Action, and Musical have the highest profits.

*Musical genre only contained four films, which is not enough data to justify recommending this genre.

High Budget Film Median Profit by Genre (millions of USD)



MPAA Ratings

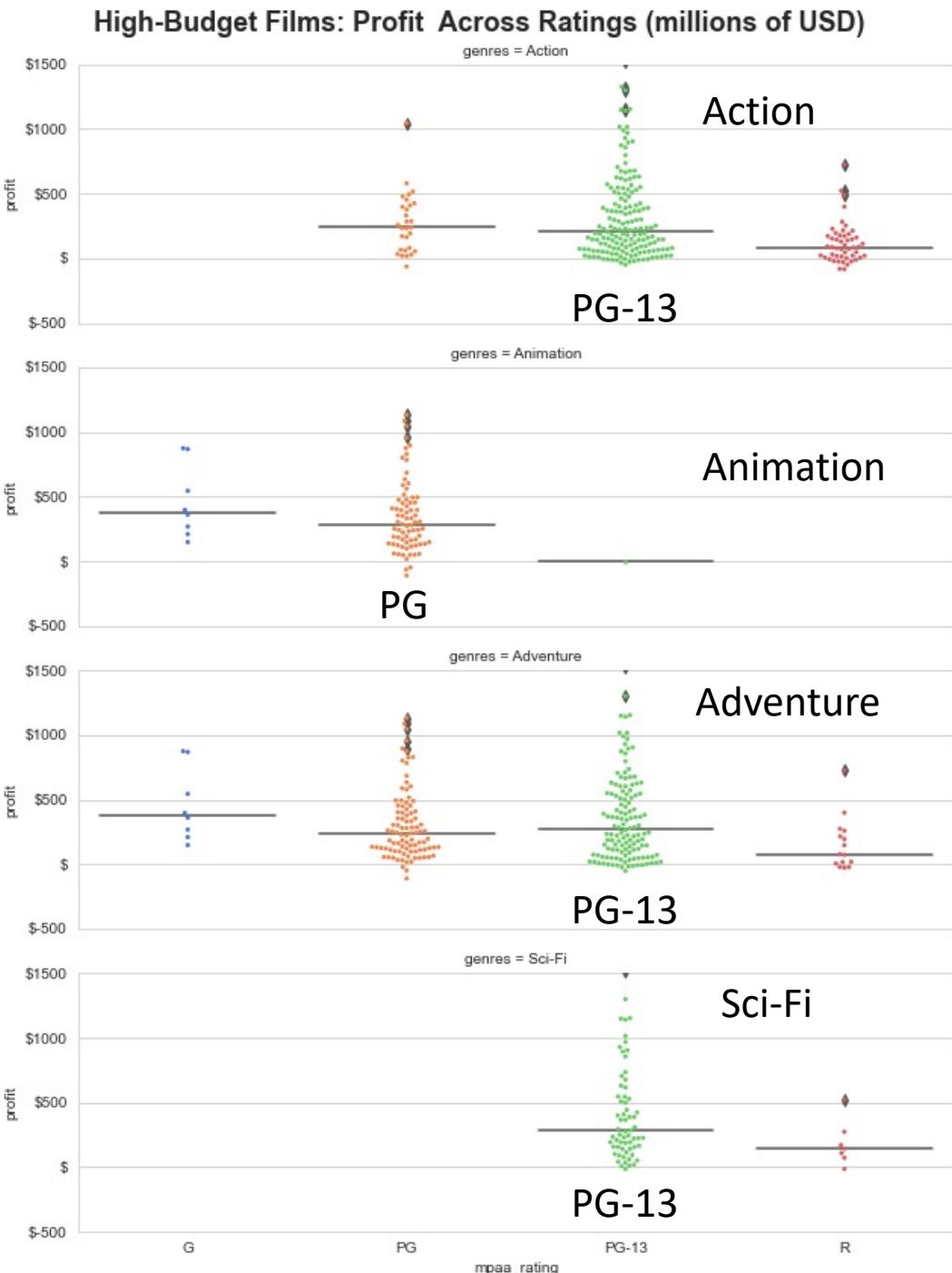
MPAA rating recommendations for the top four genres:

Action: PG-13

Animation: PG

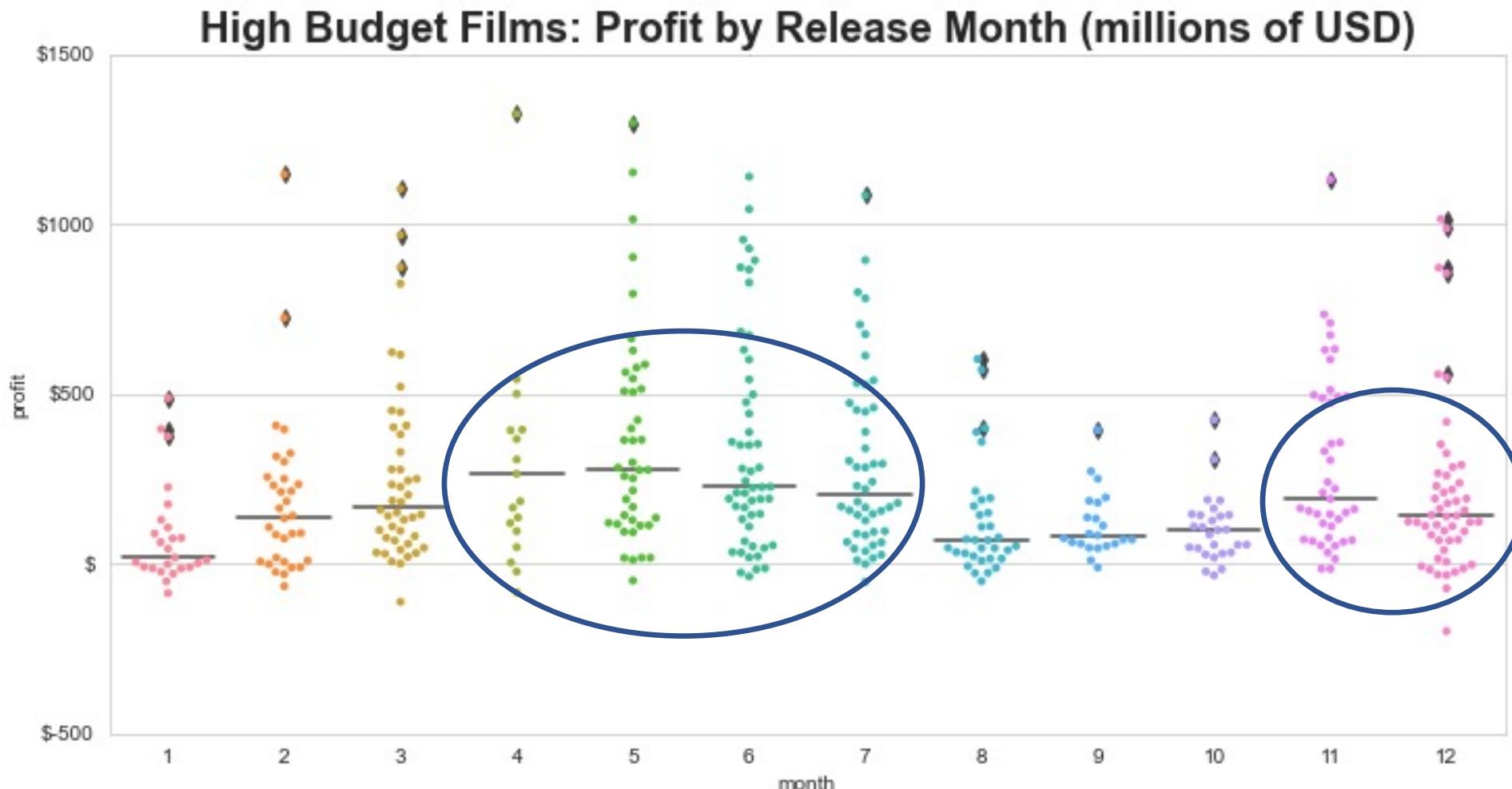
Adventure: PG-13

Sci-Fi: PG-13



Release Month

High-budget films tend to have higher profit between April-July and November-December. This is similar across genres.



Conclusions

- Invest in high-budget productions
- Produce films that can be classified as one or more of the top genres: Action, Adventure, Animation, Sci-Fi
- Examine which MPAA ratings are most successful by genre
- Choose release months that have been historically successful: April-July and November-December



Next Steps

- Other variables such as lead actors, director, and type of plot can be analyzed
- More complex models can help predict box office revenues
- Scripts can be analyzed by machine learning models to predict individual film outcomes and aid in choosing projects within wider categories



Questions

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Github repository: <https://github.com/morganFitzg/dsc-phase-1-project>