Movie Data Analysis for Microsoft

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Summary

Analysis of movie data from IMBD and The Numbers reveal several features that lead to successful movies:

- Larger budget movies generate higher profits and ratings
- Animation, Adventure, and Sci-Fi genres generate the highest gross profits, while Mystery and Horror movies provide the greatest return on investment
- The summer and holiday months are the best time to release a new movie

Outline

- Business Problem

- Data

- Methods

- Results

- Conclusion

Business Problem

- Microsoft is opening a new movie studio

- What types of movies should Microsoft develop to maximize profits and ratings?

Data

- Combined data from IMDb and The Numbers containing over 1300 movies from 2010 to 2020

- Features of Interest:
  - Region
  - Genre
  - Ratings
  - Release Date
  - Budget
  - Gross Profits

THE NUMBERS®
Where Data and the Movie Business Meet
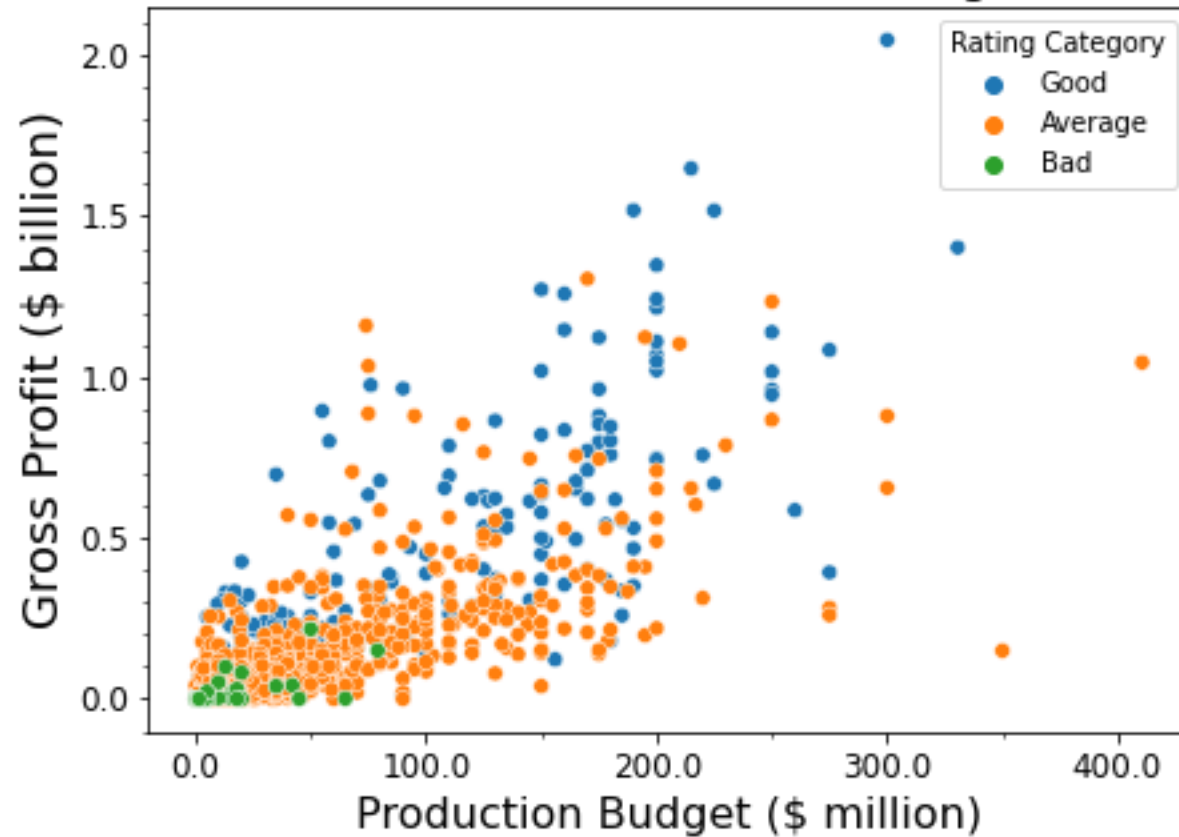
Methods

- Data Preparation
  - Selecting columns
  - Converting data types

- Dataset Joining/Merging

- Feature Engineering
  - ROI
  - Rating Category

- Trending and Summary Statistics
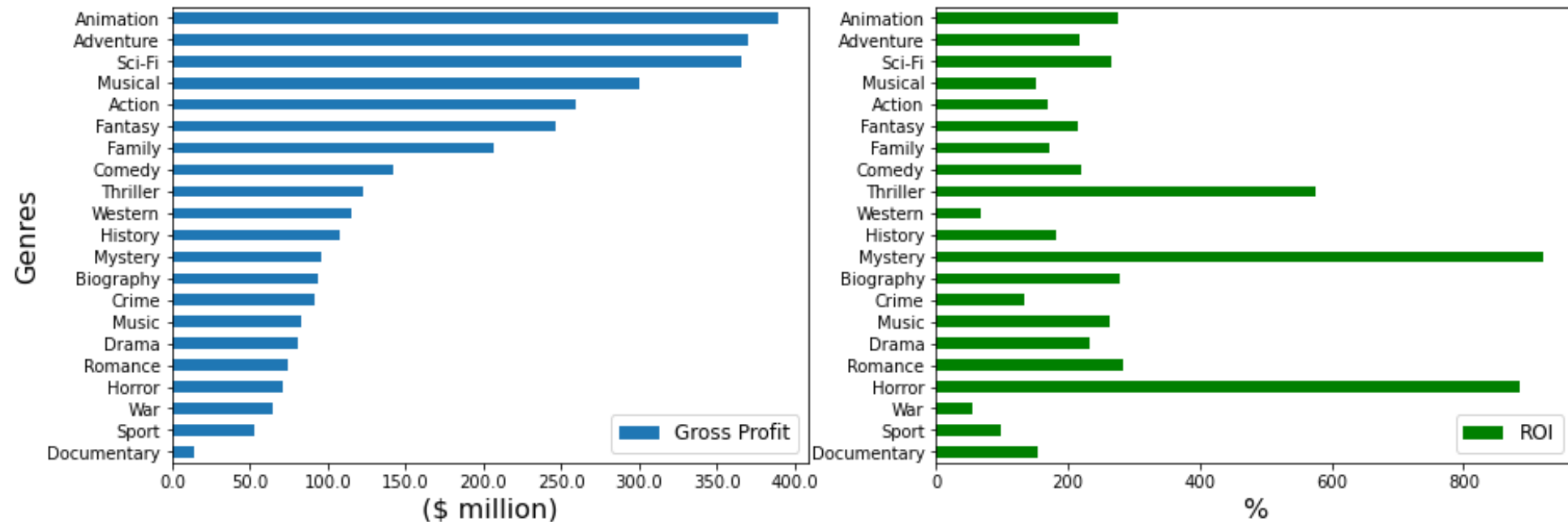 - Scatter plots
  - Mean/Sum

Results

The Postive Correlations of Production Budget with Gross Profit and Ratings

Results

- Animation, Sci-Fi, and Adventure generate highest average gross profits

- Mystery and Horror offer greatest return on investment

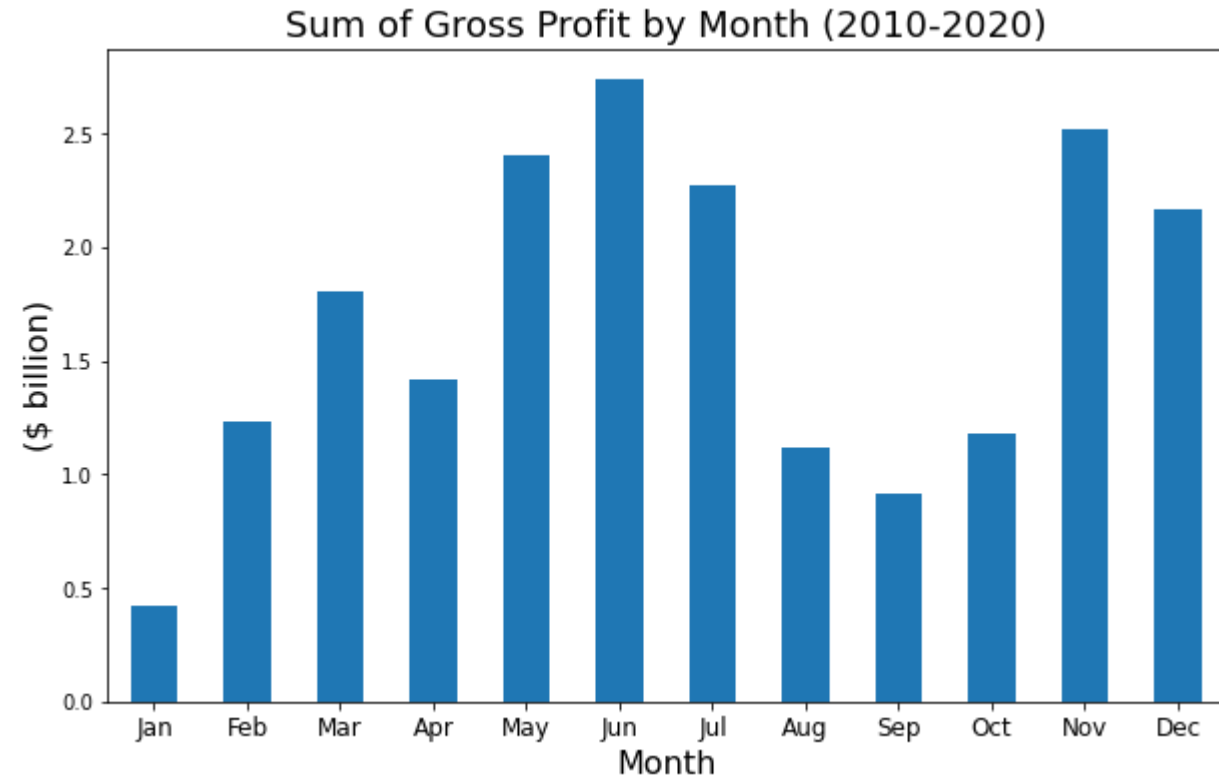Average Gross Profit and ROI by Genre

Results

- Summer (May-July) and holiday (November-December) months have seen the highest gross profits over the last 10 years

Sum of Gross Profit by Month (2010-2020)

Conclusions

- Invest in larger budget movies in the animation, sci-fi, and adventure genres that generate high profits

- Fill out movie collection with lower budget mystery and horror films that provide a greater return on investment

- Schedule movies to be released during the summer and holiday months

Next Steps:

- Determine what other factors impact ratings

- Explore the impact of cast and crew on movie success

- Analyze the impact that streaming has had on box office profits

Thank You!

Questions?

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