

# Movie Data Analysis for Microsoft

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BENJAMIN TOLER

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# Summary

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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

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- Business Problem
- Data
- Methods
- Results
- Conclusion

# Business Problem

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- Microsoft is opening a new movie studio
- What types of movies should Microsoft develop to maximize profits and ratings?



# Data

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- 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 IMDb logo is displayed in a bold, black, sans-serif font. The letters are slightly irregular, giving it a hand-drawn or typewriter-like appearance. It is centered within a bright yellow rectangular background with rounded corners.The logo for 'THE NUMBERS' is set against a dark purple background. The words 'THE' and 'NUMBERS' are in a large, white, blocky font with a 3D effect. The letters are filled with a pattern of small, light purple numbers. A registered trademark symbol (®) is at the end. Below the main text, the tagline 'Where Data and the Movie Business Meet' is written in a smaller, white, sans-serif font.

Where Data and the Movie Business Meet

# Methods

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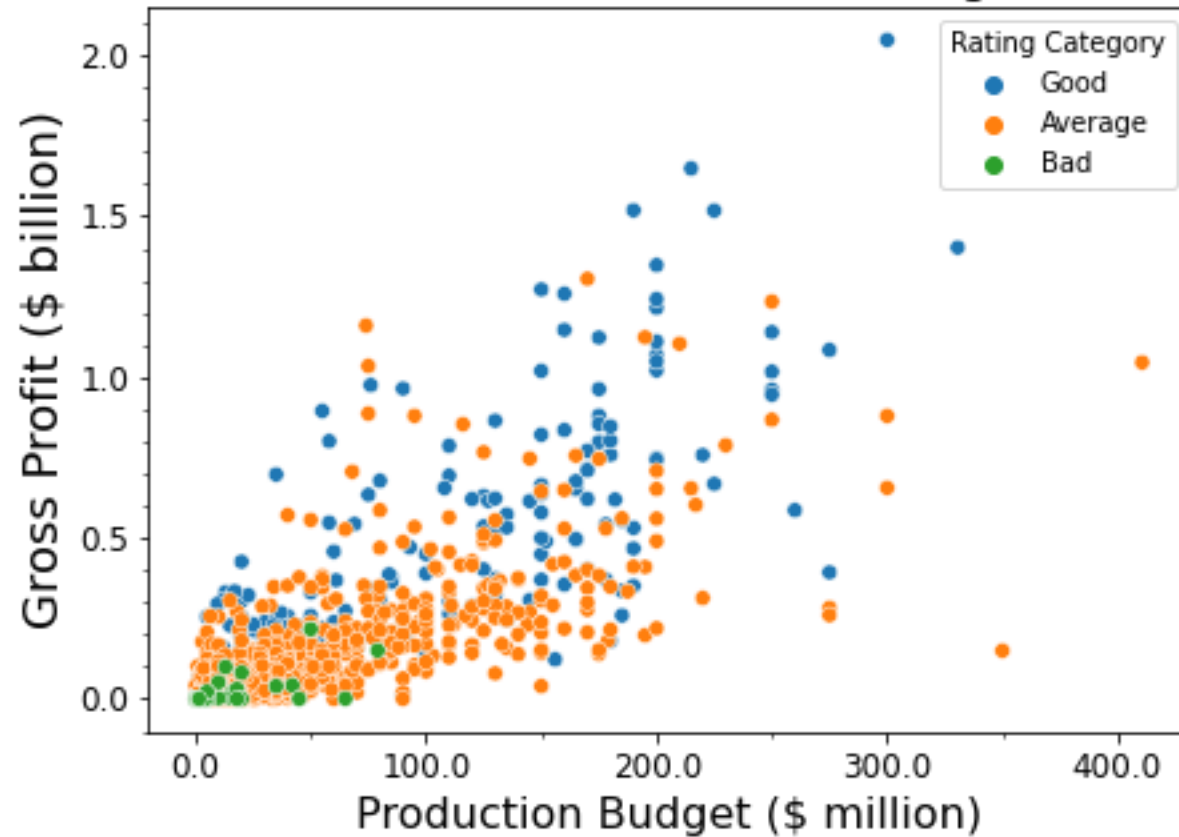
- Data Preparation
  - Selecting columns
  - Converting data types
- Dataset Joining/Merging
- Feature Engineering
  - ROI
  - Rating Category
- Trending and Summary Statistics
  - Scatter plots
  - Mean/Sum



# Results

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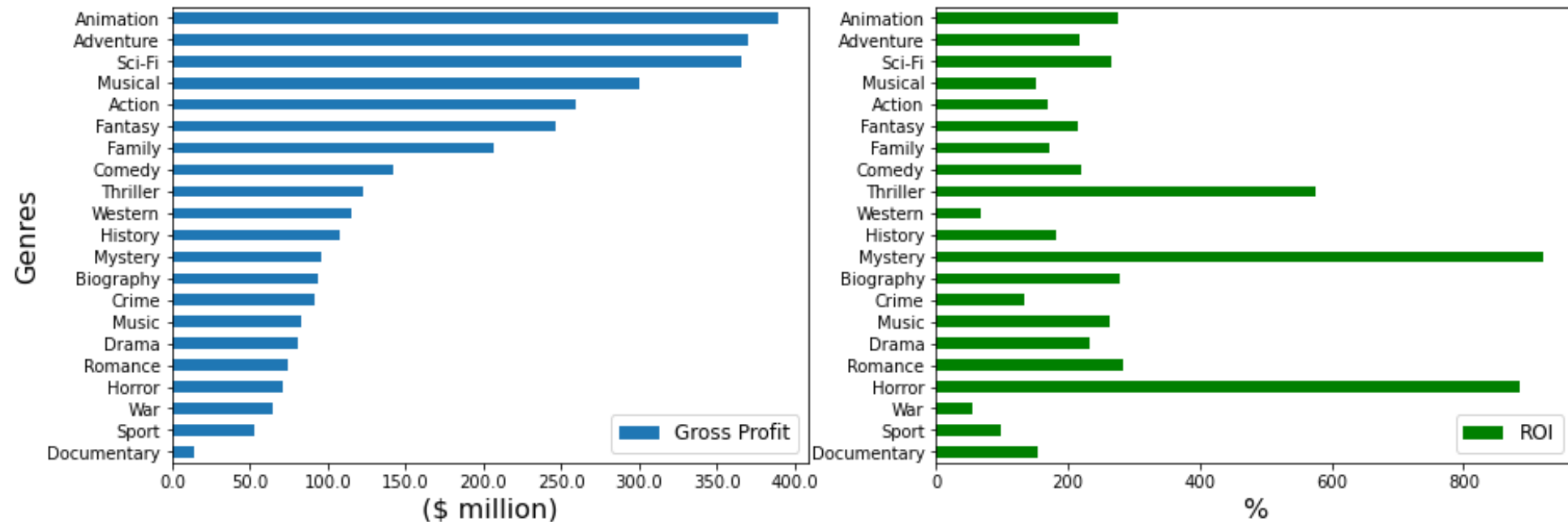
The Postive Correlations of Production Budget  
with Gross Profit and Ratings



# 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

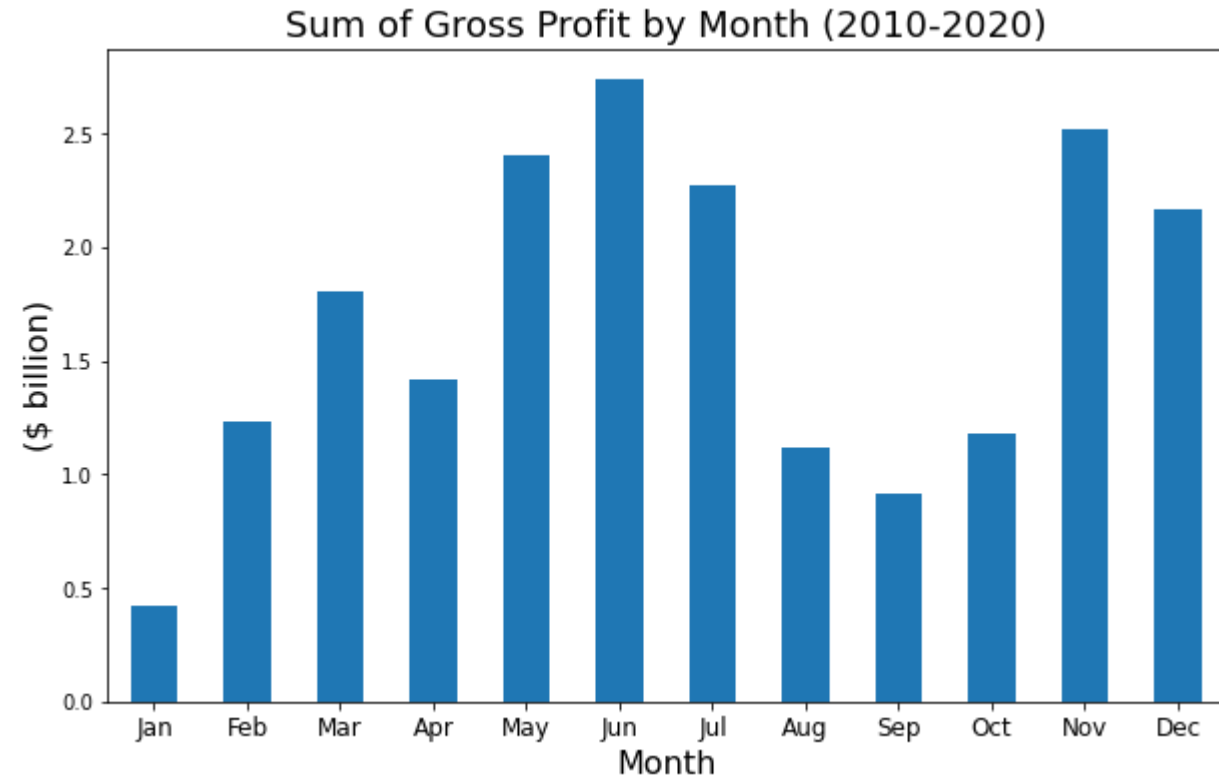




# Results

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



# Conclusions

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- 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!

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## Questions?

- Email: [bentoler22@gmail.com](mailto:bentoler22@gmail.com)
- Github: [@bentoler22](https://github.com/bentoler22)
- LinkedIn: [www.linkedin.com/in/benjamintoler22](https://www.linkedin.com/in/benjamintoler22)