



# MOVIE PERFORMANCE ANALYSIS

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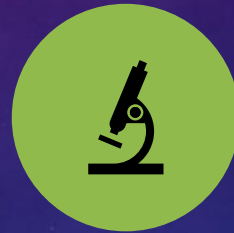
# OUTLINE



BUSINESS  
PROBLEM



DATA



METHODS



RESULTS



CONCLUSION

# SUMMARY

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Descriptive analysis of movie performance (profitability + ratings) was performed to identify which genres perform best and to determine the extent to which performance depends on a film's production budget.

The results of this analysis indicate that:

- ❖ *Animation, Adventure, and Science Fiction (Sci-Fi)* are the most profitable genres when production budget is **large**
- ❖ *Horror and Mystery* are the most profitable genres when production budget is **small**
- ❖ Budget allocated for movie production should always be maximized

# BUSINESS PROBLEM

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This analysis is intended to guide the Microsoft movie studio in its decision regarding which types of films to produce by addressing the following questions:

- ❖ *Which genres of film perform the best financially?*
- ❖ *Which genres of film have the highest ratings?*
- ❖ *Does a film's financial performance and/or ratings depend on its production budget?*



# DATA

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- ❖ Financial data consisting of production budgets and income (domestic and worldwide)
- ❖ Average film ratings from the *International Movie Database (IMDb)*
- ❖ Average film ratings from the *The Movie Database (TMDb)*

# METHODS

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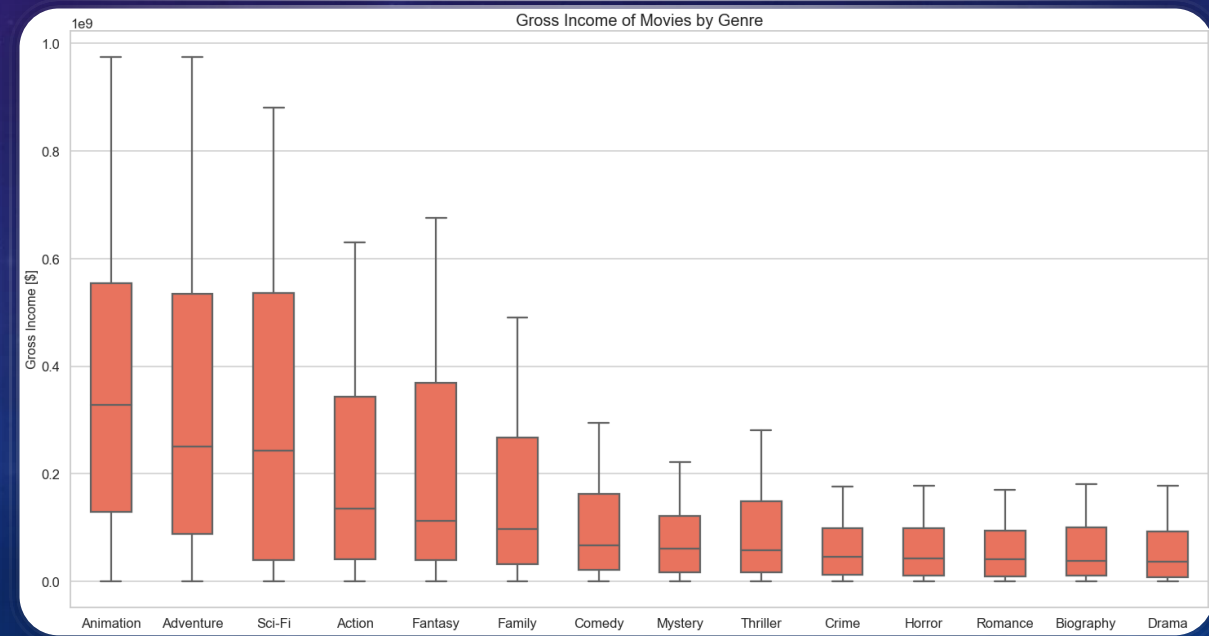
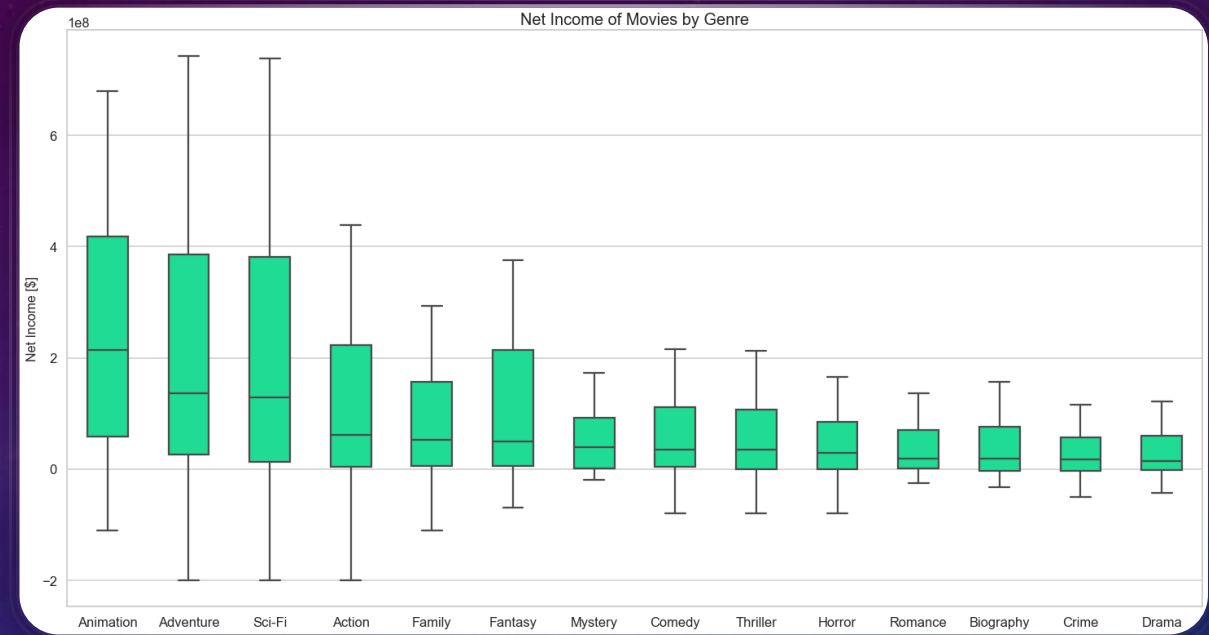
- ❖ Boxplots illustrate the distributions of *gross income*, *net income*, and *cost-to-income ratio* for each genre
- ❖ Bar charts illustrate the overall *TMBd* and *IMBd* rating for each genre
- ❖ Linear regression plots illustrate the correlation of with
  - *production budget vs gross income*
  - *production budget vs net income*
  - *production budget vs TMDb average rating*
  - *production budget vs IMDb average rating*

# RESULTS

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❖ Which genres of film perform the best financially?

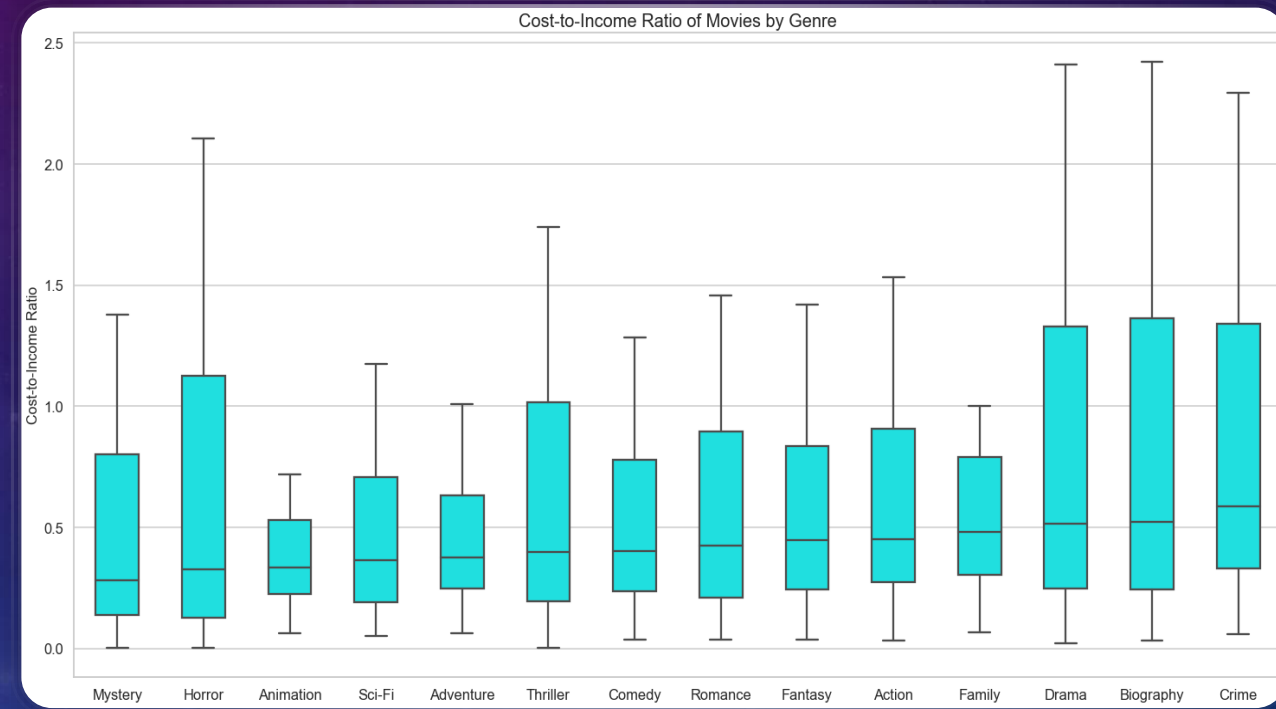
*Animation, adventure, and science fiction perform best in terms of gross income + net income.*





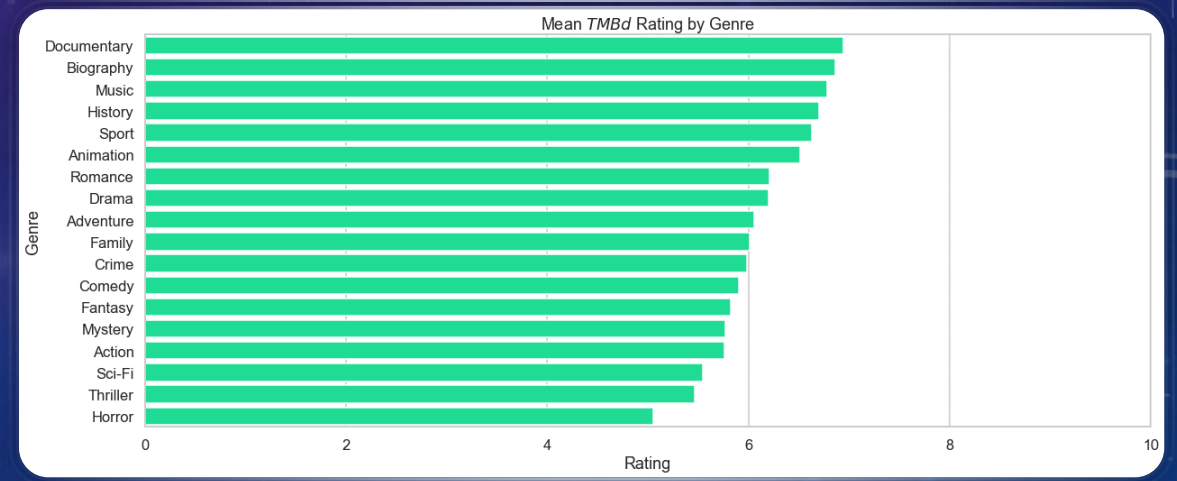
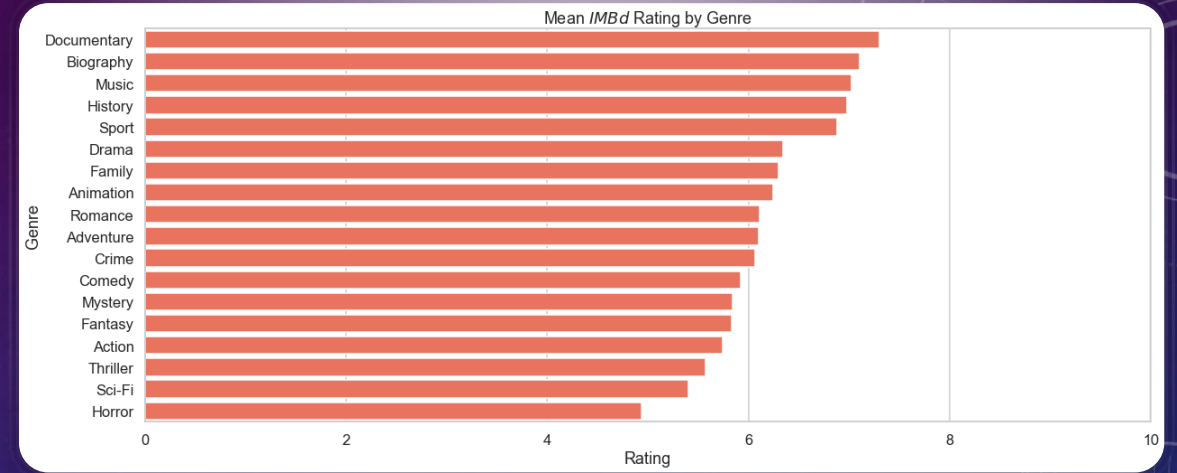
❖ Which genres of film perform the best financially?

*Mystery and Horror films perform best in terms of cost-to-income ratio.*



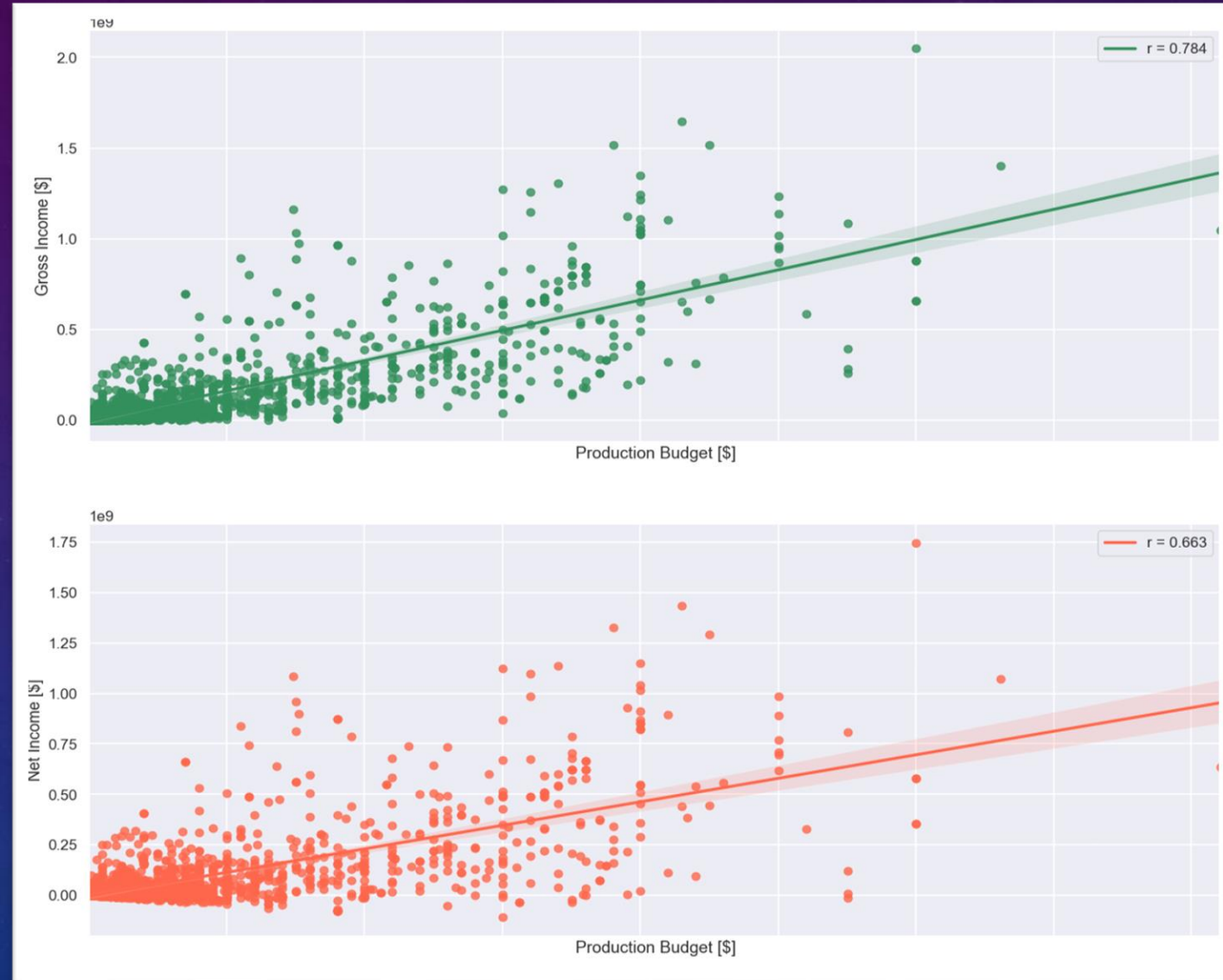
❖ Which genres of film have the highest ratings?

*Documentaries, Biographies, Music, Historical, and Sports films have the highest ratings.*



❖ Does a film's financial performance and/or ratings depend on its production budget?

*Production budget correlates strongly with gross income + net income.*



# CONCLUSION

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- ❖ Production budget matters - ratings should be of secondary concern when deciding what kind of movie to produce
- ❖ Produce an *Animation/Adventure/Sci-Fi* film with a production budget of at least \$100,000,000
- ❖ Produce a *Horror/Mystery* film with a production budget no greater than \$10,000,000



# LIMITATIONS & NEXT STEPS

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- ❖ Financial data is less available and less reliable than other types of data
  - more financial data needs to be collected
- ❖ Financial performance does not correlate with *TMDb* and *IMDb* ratings
  - unwise to rely solely on financial data - investigate ratings from other sources (e.g. *Rotten Tomatoes*) as potential metric for performance
- ❖ Analysis did not address the issue of casting
  - further analysis investigating actors/writers/directors involved in high-performing films should be conducted

# THANK YOU

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