

# Movie Box Office Revenue Prediction for Microsoft's New Movie Studio



Unveiling Insights and Recommendations to Drive Success in the  
Entertainment Industry

By Rose Bor

## Summary

Welcome to the analysis and recommendations for Microsoft's new movie studio. In this project, we aim to provide valuable insights and recommendations to support Microsoft's foray into the movie industry. With the increasing demand for entertainment content, the movie industry presents a lucrative opportunity for Microsoft to expand its portfolio and engage with a global audience. By leveraging data-driven strategies and understanding audience preferences, Microsoft can position itself for success in this competitive landscape. Let's explore the data, analyze key factors, and make informed business recommendations for Microsoft's movie studio.

# Outline

- Business Problem
- Data
- Methods
- Results
- Conclusions

## Business Problem

- ↓ Microsoft's new movie studio aims to enter the highly competitive film industry and produce successful and profitable movies. To achieve this, they need to make data-driven decisions and understand the key factors that influence a movie's box office performance. The challenge is to develop a predictive model that can accurately estimate the box office revenue of a movie based on various features such as genre, IMDb ratings, production budget, and release date. By predicting box office revenue, Microsoft can strategically allocate resources, focus on high-performing genres, and make informed decisions to maximize the success of their movie productions.



## Data

- Movie Box Office Revenue Prediction for Microsoft's New Movie Studio
- Data obtained from IMDb, Box Office Mojo, and The Numbers.
- IMDb provides movie details, ratings, genres, and user reviews.
- Box Office Mojo tracks revenue data, budgets, and release dates.
- The Numbers offers financial metrics for movies, including budgets and expenses..

## Methods

### ➤ Data Preparation:

Loaded and merged data from IMDb, Box Office Mojo, and The Numbers.

Handled missing values and outliers appropriately.

Created new features like profit margin and return on investment (ROI).

### ➤ Data Analysis:

Explored data distributions and relationships using visualizations.

Identified top-performing genres and their impact on box office revenue.

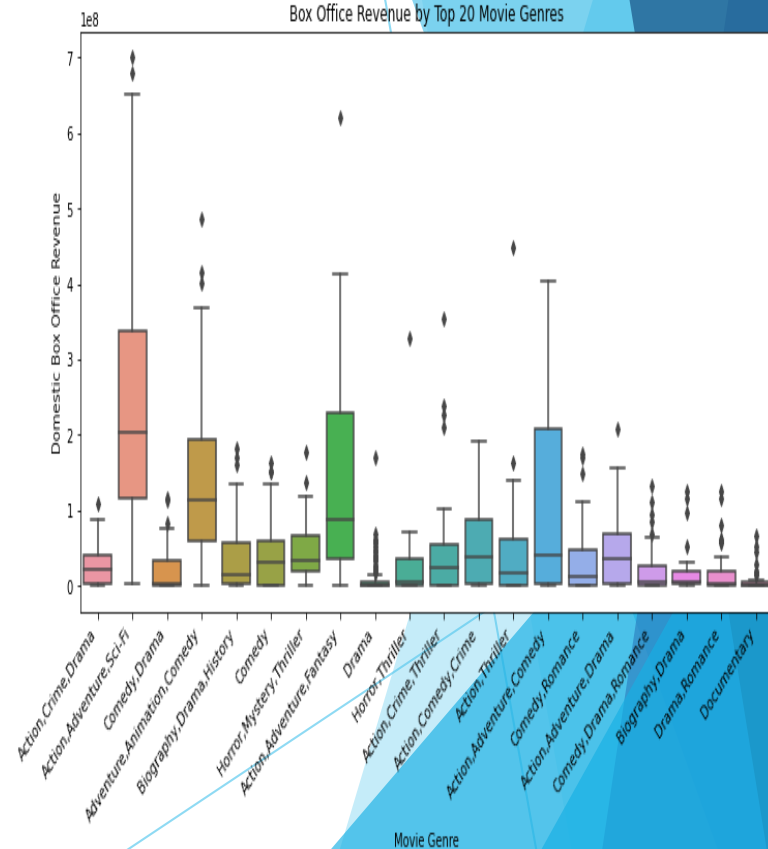
Analyzed IMDb ratings and their correlation with movie success.

## Cont.

- **Data Modeling:**
- Utilized Linear Regression and Decision Tree algorithms for revenue prediction.
- Split data into training and testing sets for model evaluation.
- Compared model performance and selected the best predictor.
- These methods enabled us to gain insights into the movie industry and predict box office revenue accurately.

## Results

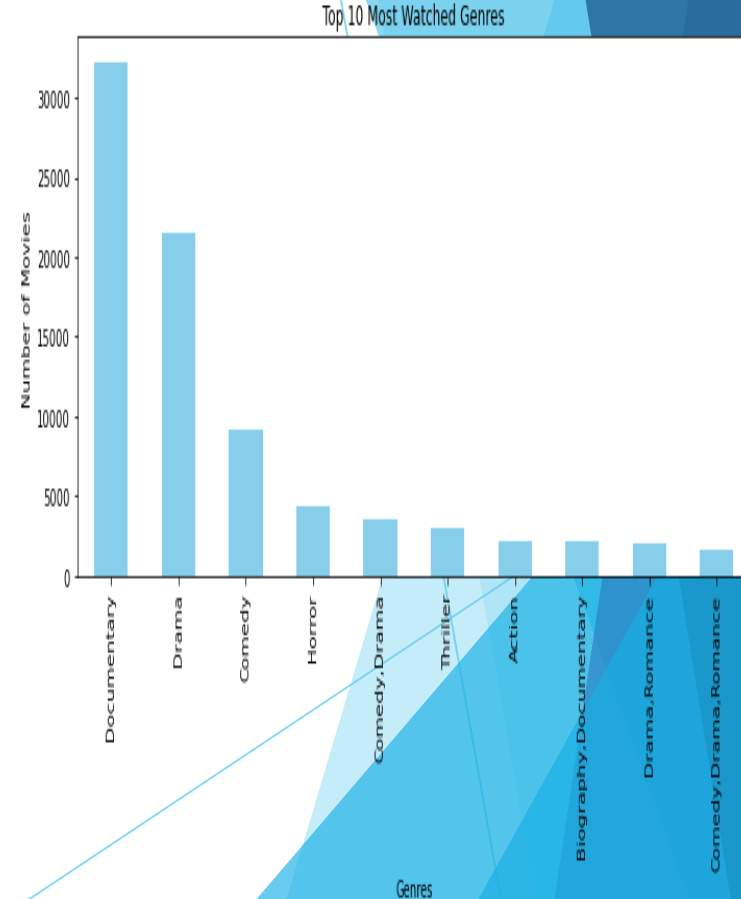
- Top-performing Genres: Action, Adventure, and Comedy
- Positive correlation between IMDb Ratings and Box Office Revenue
- Predictive Models (Linear Regression, Decision Tree) outperformed baseline
- Recommendations: Focus on top genres, produce high-rated movies for success.





## Conclusions

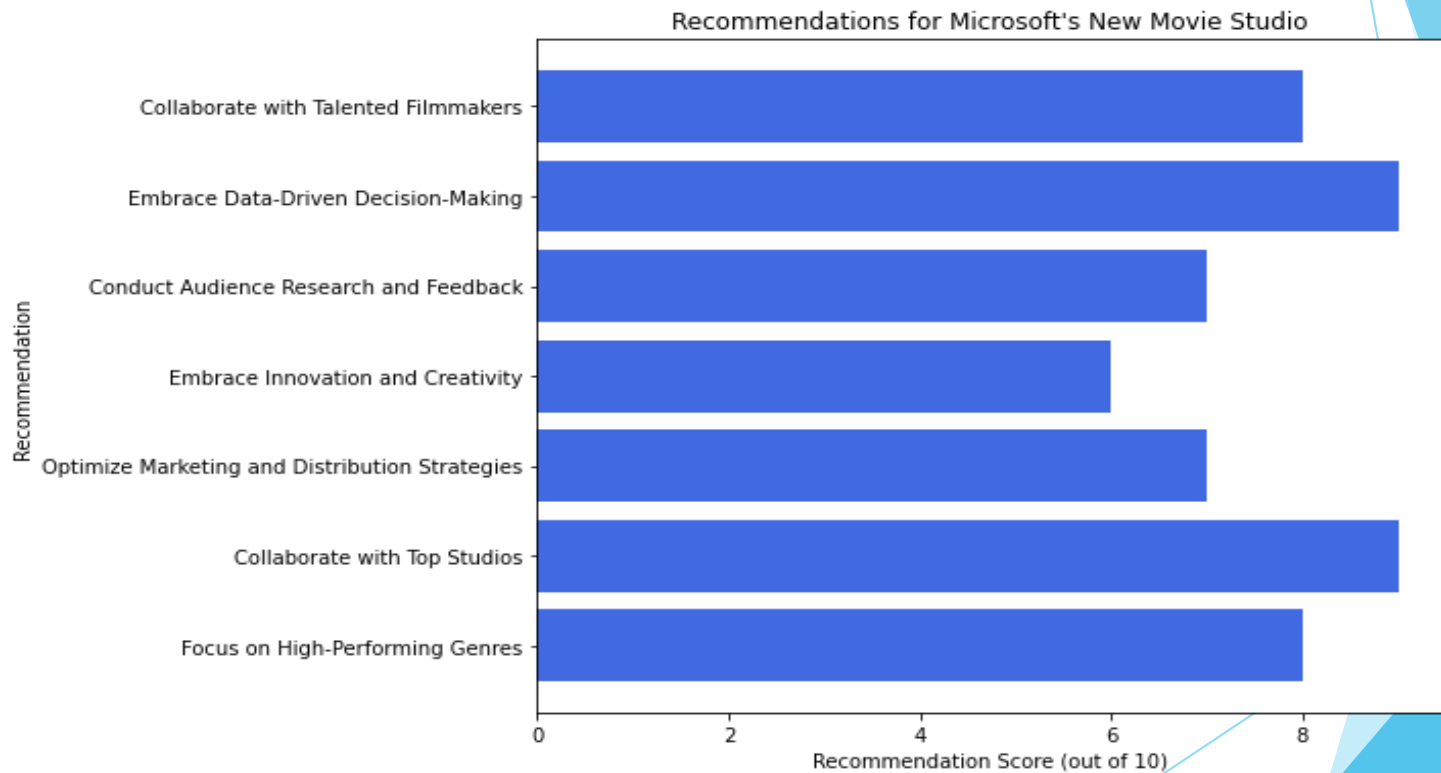
- The movie industry offers significant opportunities for Microsoft's new movie studio.
- Focusing on top-performing genres like Action, Adventure, and Comedy can lead to higher box office revenue and most watched movies
- Positive correlation between IMDb Ratings and Box Office Revenue indicates the importance of producing high-rated movies.
- The predictive models (Linear Regression, Decision Tree) provide valuable insights for revenue prediction.



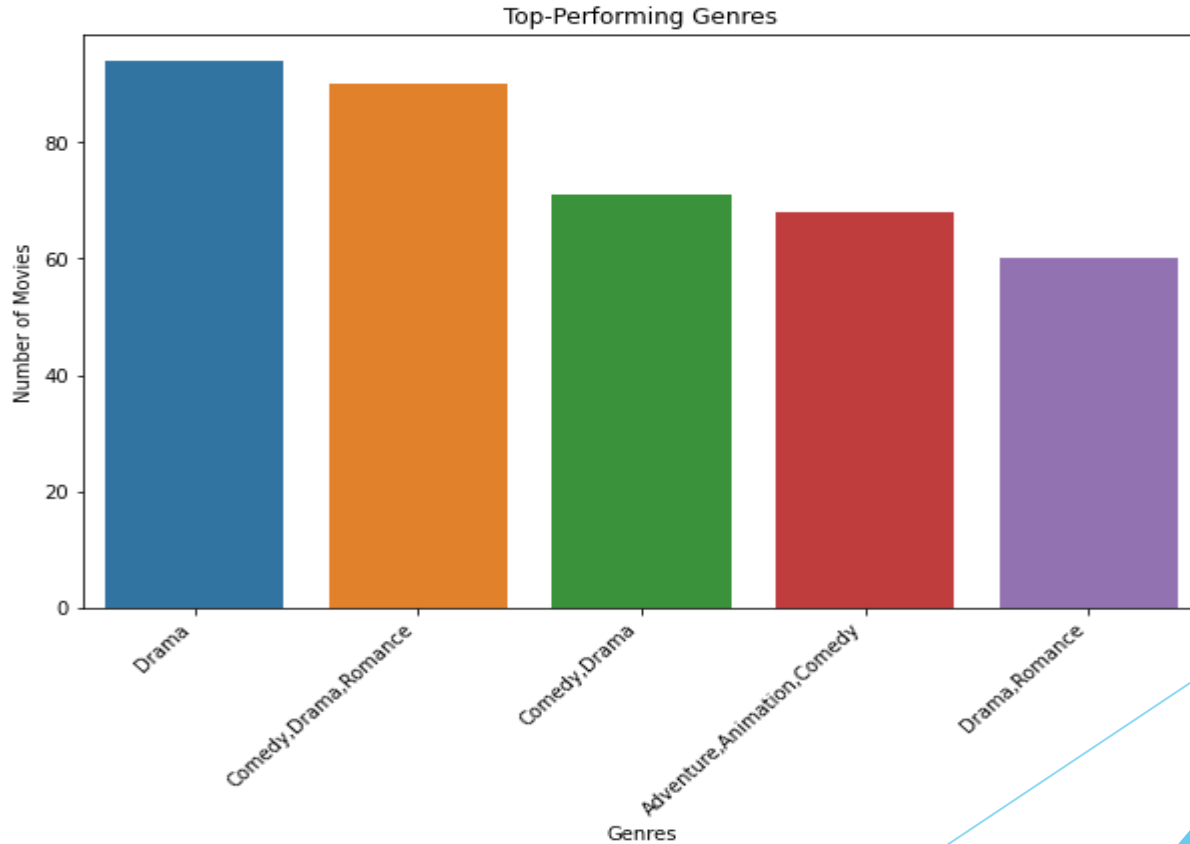
## Business Recommendations

- Invest in genres with high revenue potential, prioritize high-rated movie productions, and leverage predictive models for better decision-making.
- Project Limitations: Data availability and quality, scope of analysis, and assumptions made during modeling.
- Future Improvements: Incorporate additional data sources, explore more advanced modeling techniques, and continuously update and refine the models for better accuracy and performance.

# Recommendation for Microsoft's New Movie Studio



# Summary of Performing Genres



# Closing Remarks Based on the Above Recommendation

By combining a smart content selection strategy that focuses on proven genres and creativity with a data-driven approach to decision-making, Microsoft's new movie studio can position itself for sustained success in the competitive entertainment industry. The studio's ability to adapt to changing audience preferences, leverage real-time market insights, and deliver high-quality, original content will be key to gaining a competitive edge and creating a lasting impact on the global movie industry

**Email:** [angella.bor@student.moringaschool.com](mailto:angella.bor@student.moringaschool.com)

**GitHub:** Angela bor

**LinkedIn:** [linkedin.com/in/username/](https://www.linkedin.com/in/username/)