

Microsoft's Movie Studio Project Analysis

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Introduction

- Exploring data to help Microsoft make informed decisions in the movies industry.
- Main aim is to provide insights into popular genres, profitability and audience preferences.

Business Understanding

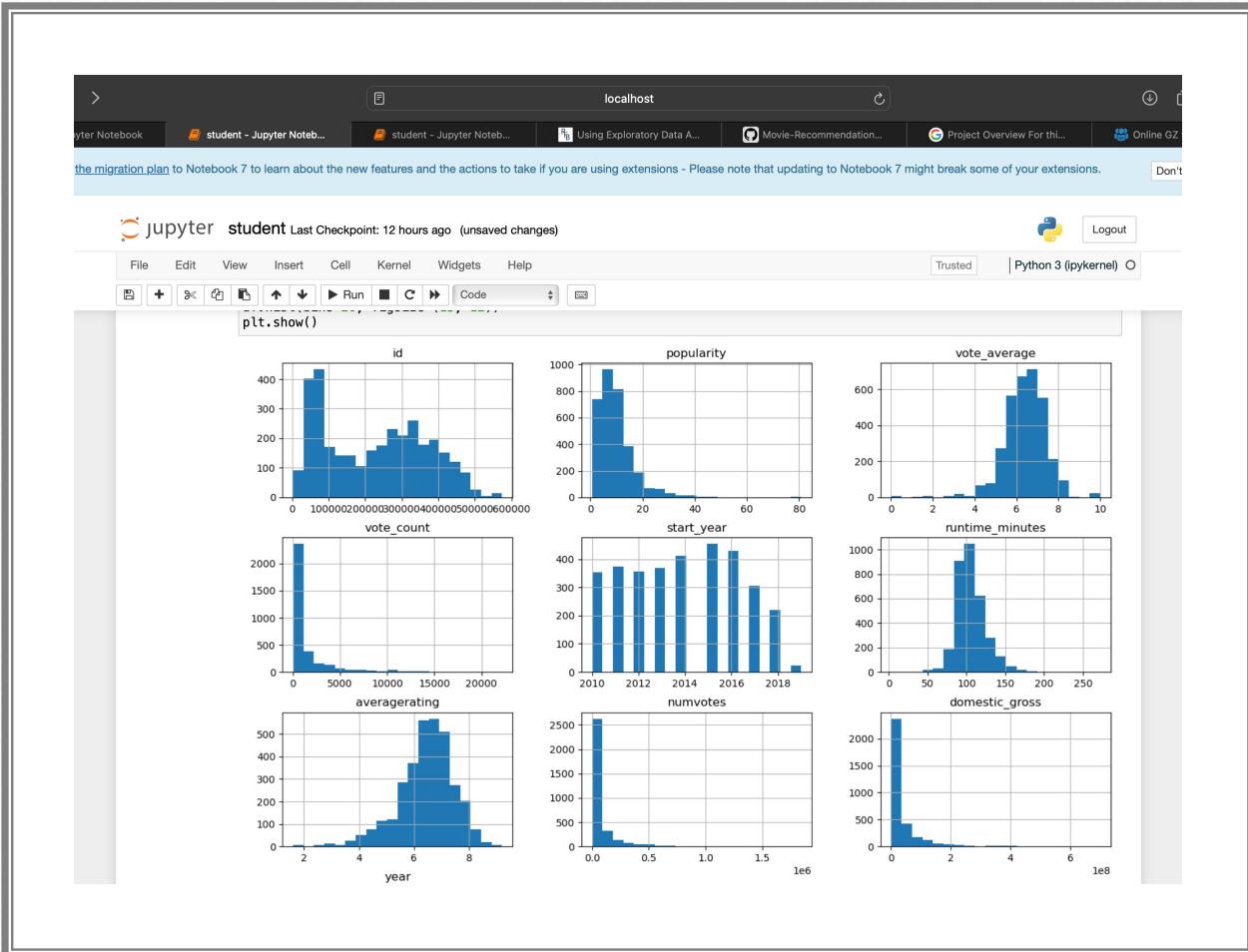
- Problem Statement: Microsoft have a studio and want to start creating movies but they do not know how to.
- Key Questions:
 1. How many movies are being made in each genre?
 2. Which genres of movies are the most profitable?
 3. What genres of movies are highly rated and most popular among the audience?

Data Understanding

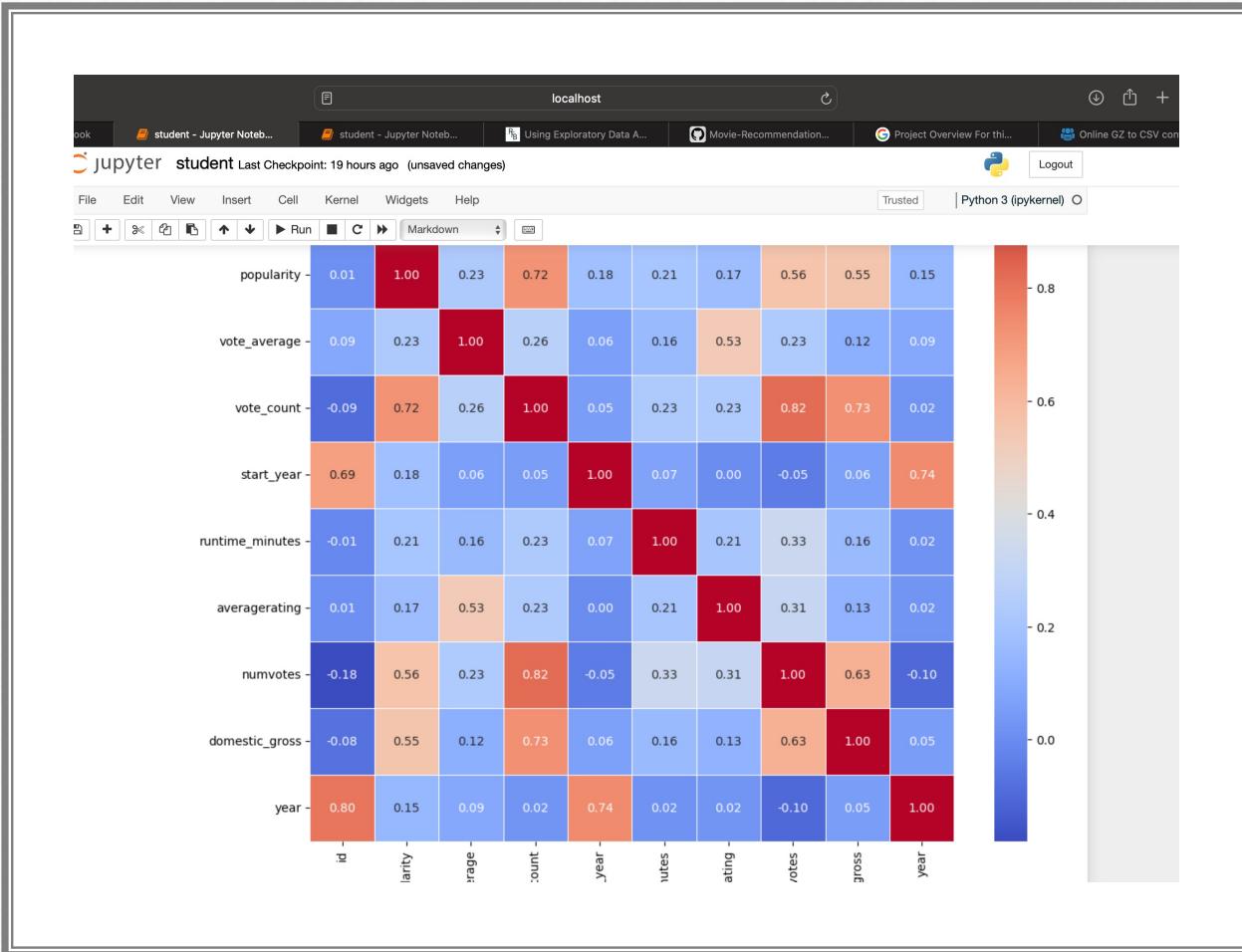
- Data Sources: The Movie Database, IMDb and Box Office Mojo datasets.
- Data Overview: 3,297 movie records with key statistics.
- The target variables for this analysis are release year, gross earnings, genres, and audience ratings.

Exploratory Data Analysis

- To create meaningful visualizations to answer the questions outlined in the business problem.
- The distributions of the variables are positively skewed with vote average having a normal distribution.

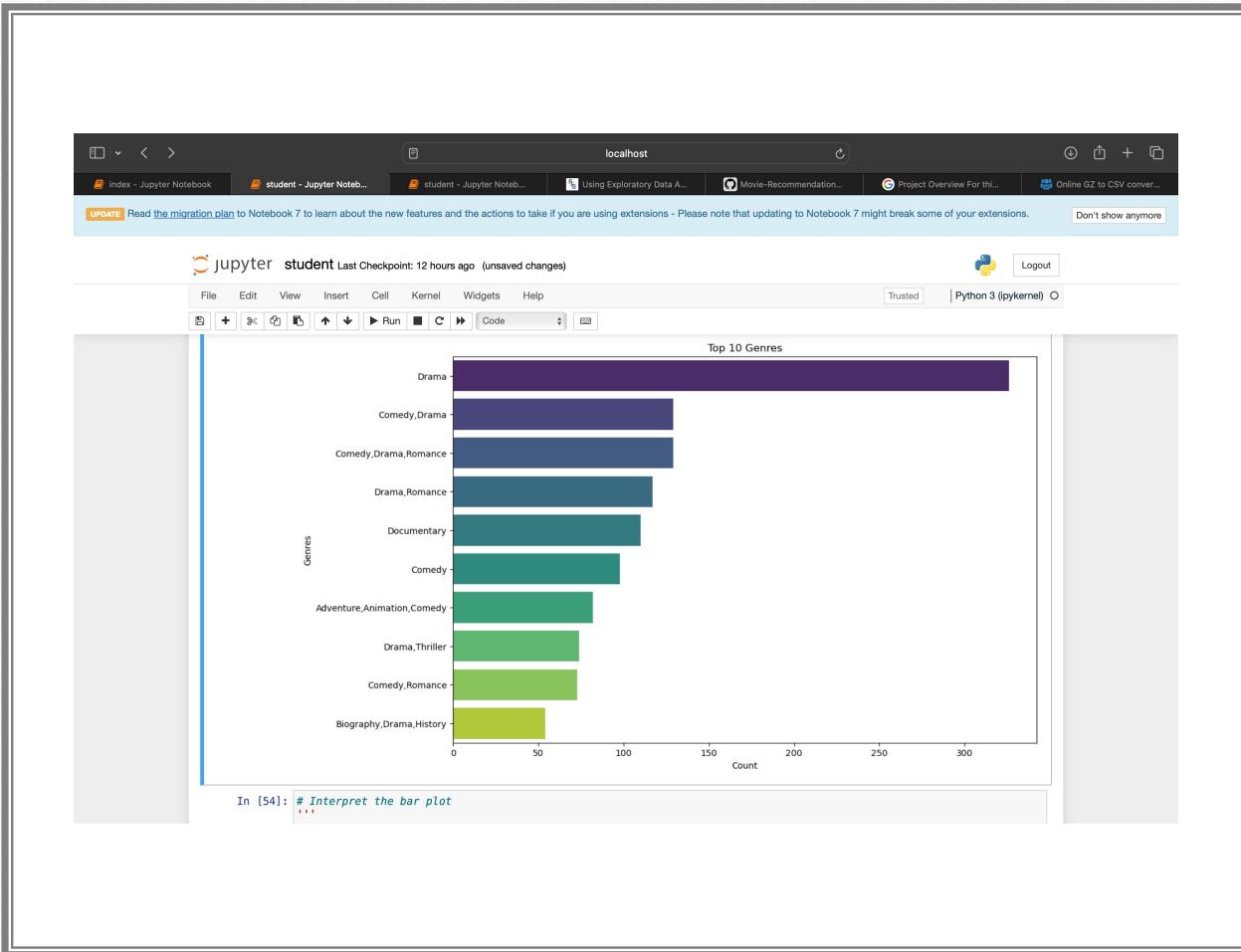


Correlation Analysis



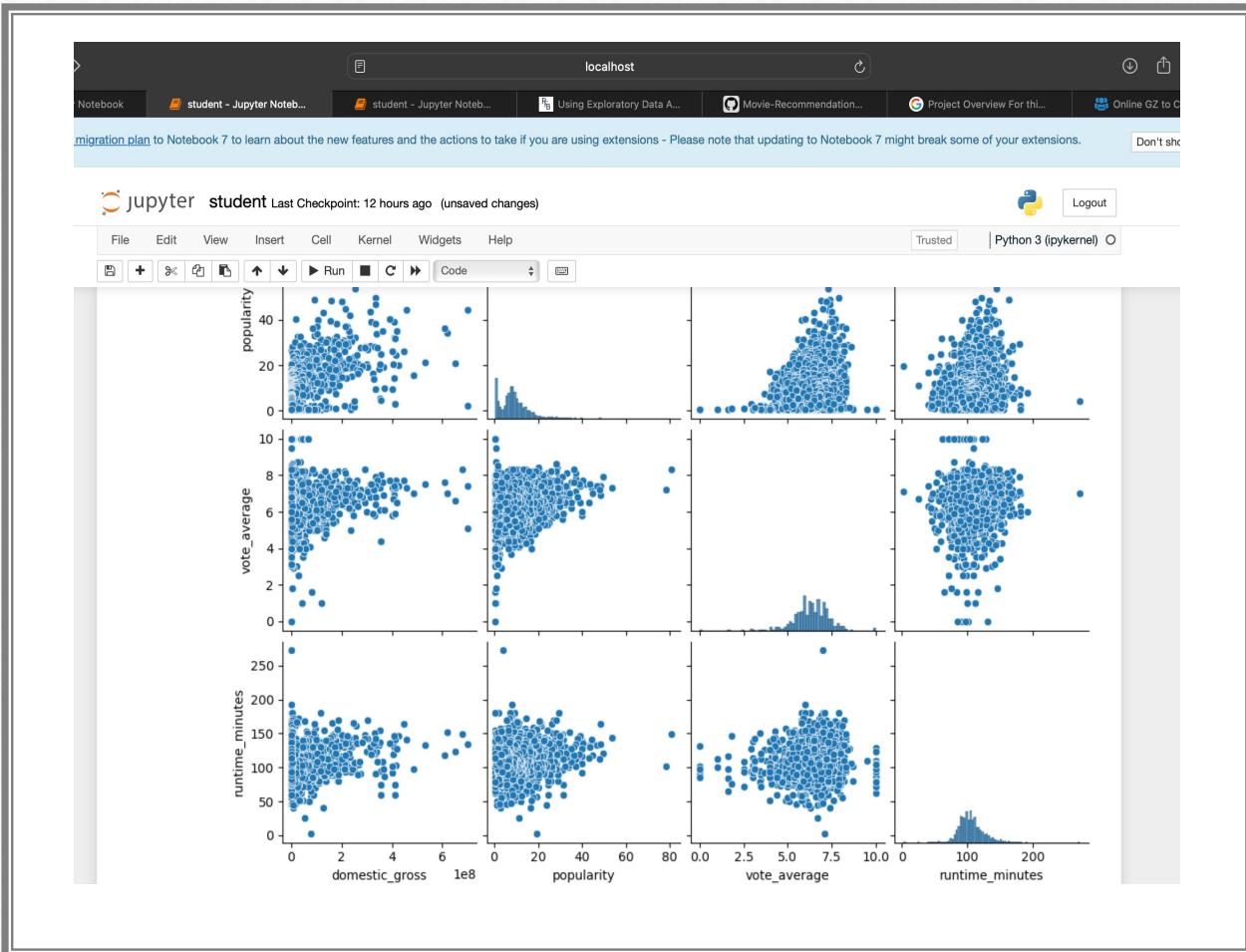
- This shows independence in the relationships between the variables since there are no variables that are perfectly correlated.
- This heatmap shows how the variables interact and impact each other in the movie dataset.

Genre Analysis



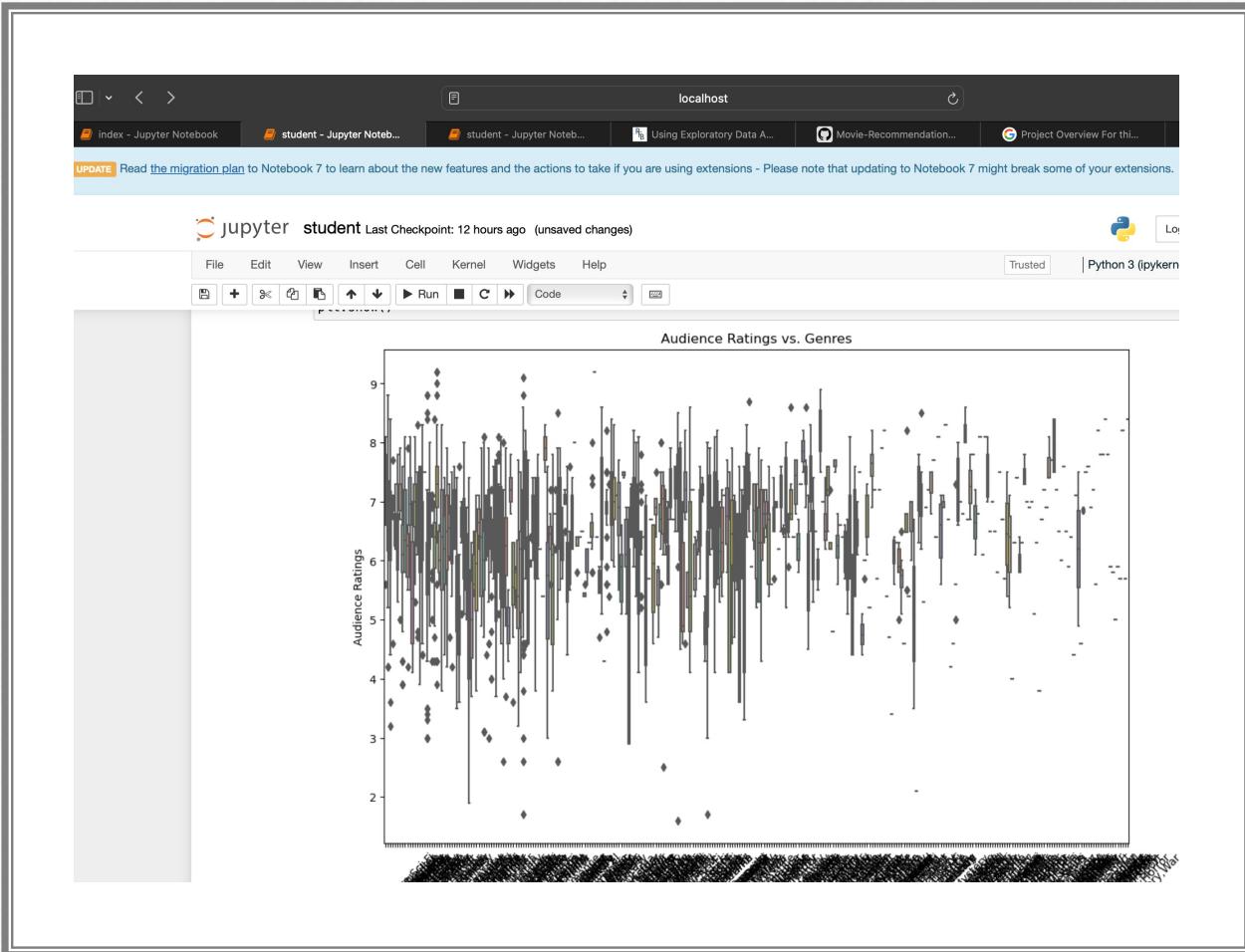
- Drama appears to be the most prevalent among the top 10 genres with the highest count.
- This enables Microsoft to know which genre is the most popular to retain their target audience.

Domestic Gross Vs. Other Features



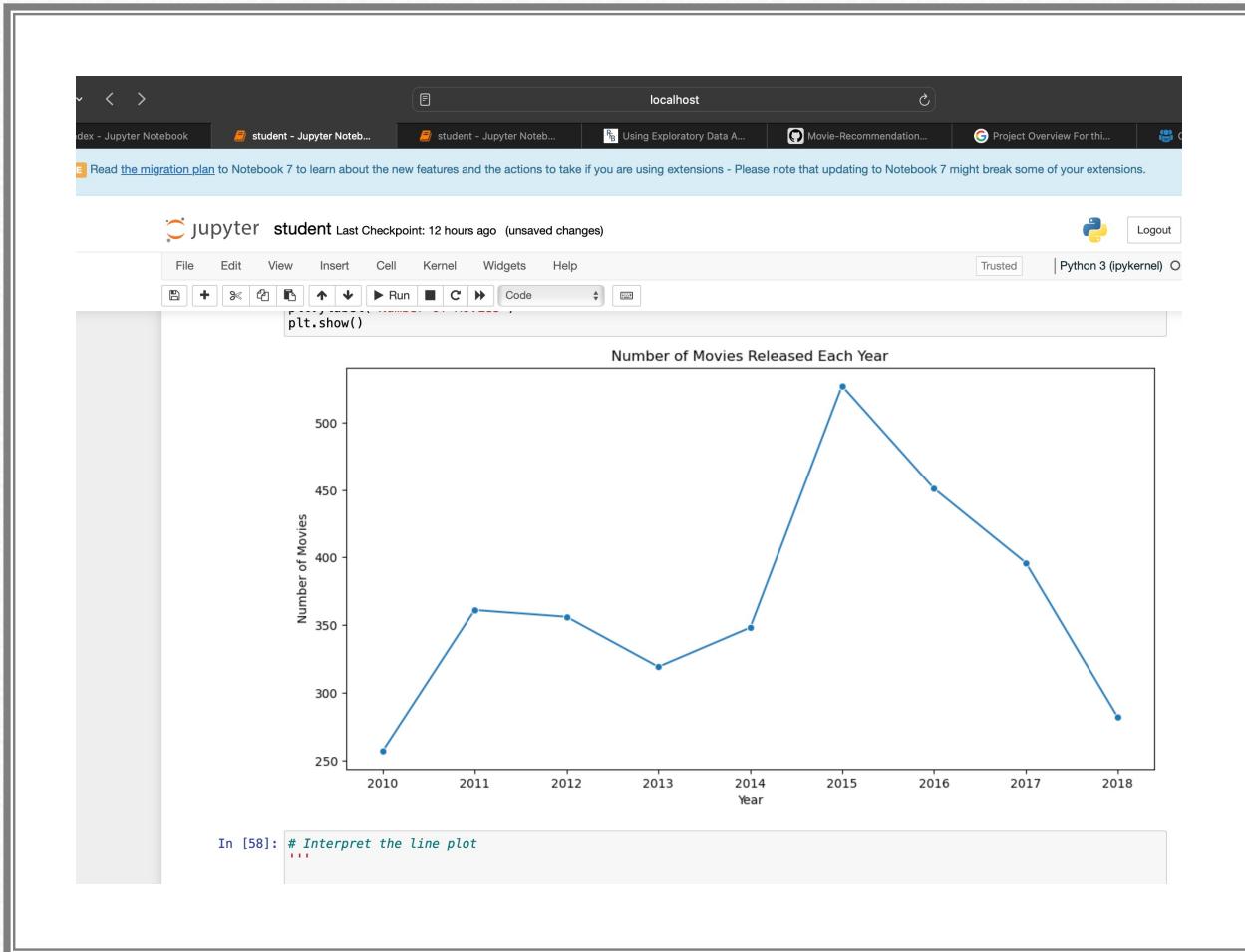
- The points on the scatter plots show an upward trend, suggesting that movies with higher popularity scores and higher vote ratings are more profitable.
- This demonstrates the financial implications for Microsoft's movie ventures.

Audience Ratings Vs. Genres



- A taller box indicates a larger spread of audience ratings within that genre. Drama had the tallest box.
- This showcases audience preferences by connecting audience ratings to the success of Microsoft's movies.

Release Year Analysis



- There seems to be an overall increasing trend in the number of movies released each year, with some variations indicating potentially significant periods for the movie industry.
- Understanding these trends could be valuable for Microsoft to make strategic decisions regarding the timing and volume of movie releases.

Limitations

- Data limitations include:
 1. Missing values in some columns.
 2. Potential biases in ratings.
 3. Variations in financial reporting.
- These limitations may impact the precision of recommendations.

Recommendations

- This analysis leads to three recommendations of what movies Microsoft's new studio should produce:
 1. Microsoft should consider prioritizing movie production in popular genres like Drama, Comedy, and Thriller to align with current industry trends and audience preferences.
 2. Microsoft should conduct a detailed analysis on genres that exhibit higher domestic gross earnings to guide their focus on genres that are highly popular like Drama and Comedy which have been seen to be more profitable.
 3. Microsoft should prioritize genres that receive high audience ratings and are popular, ensuring a positive reception among viewers thus meeting their preferences.

Stakeholders can leverage this information to optimize decision-making and enhance Microsoft's success.

Conclusion & Next Steps

- Further analyses could yield additional insights to further improve Microsoft's decision-making process in determining what genre of movie to create as explained below:
 1. Explore specific sub-genres within popular categories to identify niche opportunities and potential untapped markets.
 2. Conduct in-depth audience surveys or engage in focus groups to gain qualitative insights into specific audience preferences and genre popularity.
 3. Explore partnerships with acclaimed directors or actors in popular genres to enhance the quality and appeal of movie productions.

Thank You

Q&A Session

