Data Analysis To Guide Microsoft New Movie Studio

Alex Miningwa

01

▶

Overview

The goal of the project is to leverage data-driven insights to inform strategic decisions regarding film production.

Microsoft aims at using various data provided so as to explore what types of films are currently doing the best at the box office.

Importance of Data-Driven Decision-Making:

- In today's competitive entertainment industry, understanding audience preferences and market trends is crucial for success.
- By analyzing comprehensive data from various sources, we can identify patterns, anticipate audience demand, and optimize our film production strategy.
- Ultimately, data-driven decision-making enables us to mitigate risks, maximize returns, and enhance the overall competitiveness of Microsoft's new movie studio

02

▶ **Business Understanding**

Problem Statement

- Microsoft is venturing into the movie industry with the establishment of its new movie studio.
- However, lacking expertise in the field, Microsoft faces the challenge of determining which film genres are most likely to yield success at the box office.
- Without this critical insight, Microsoft risks investing resources in projects that may not resonate with audiences or generate significant returns.

Objective

Our goal is to assist Microsoft's new movie studio in understanding the current landscape of the film industry to make informed decisions about the types of films to produce.

Stakeholders

- Executives
- Marketing teams
- Production teams
- Data Analysts
- Customers

Business Questions

1. What genres of movies are currently popular at the box office?
2. What factors contribute to the success of a movie?
3. What audience demographics should Microsoft target?

The effectiveness of recommendations will be measured by metrics such as increased box office revenue, improved audience engagement, and positive critical reception.

03

▶ **Data Understanding**

Dataset

- Our analysis utilizes data from various sources, including IMDb,TheMovieDB, and The Numbers.
- These sources provide comprehensive information on box office performance, audience ratings, critical reviews, and film metadata.

Overview Of Dataset

- IMDb furnishes comprehensive information encompassing movie titles, genres, release dates, and details regarding cast and crew. Within its database, the movie_basics table offers specifics on titles, genres, and release years, while the movie_ratings table houses IMDb user ratings and reviews.

- TheMovieDB serves as an extensive repository containing details about movies and TV series, encompassing data such as titles, genres, release dates, vote averages, vote counts, and official languages. This dataset enhances our analysis by offering supplementary metadata and promotional content for films, aiding in the comprehension of their production and promotional tactics.

- The Numbers is a movie industry data website that offers detailed box office revenue information, including domestic and international earnings, production budgets, movie titles,release dates and marketing expenses.

04

Data Analysis

- We read the data from the various datasets
- We then managed to clean and analyze the data by removing null columns and rows.
- We then looked at the number of the final rows and columns of each dataset we used, checked the information that the dataset has, and also described the data to have the count, mean and standard deviation of the various datasets.
- **Through our data analysis, we gained valuable insights into audience preferences, box office trends, and financial metrics, which will inform our recommendations for Microsoft's new movie studio.**

05

Recommendations

Relationship between Movie Releases by Month
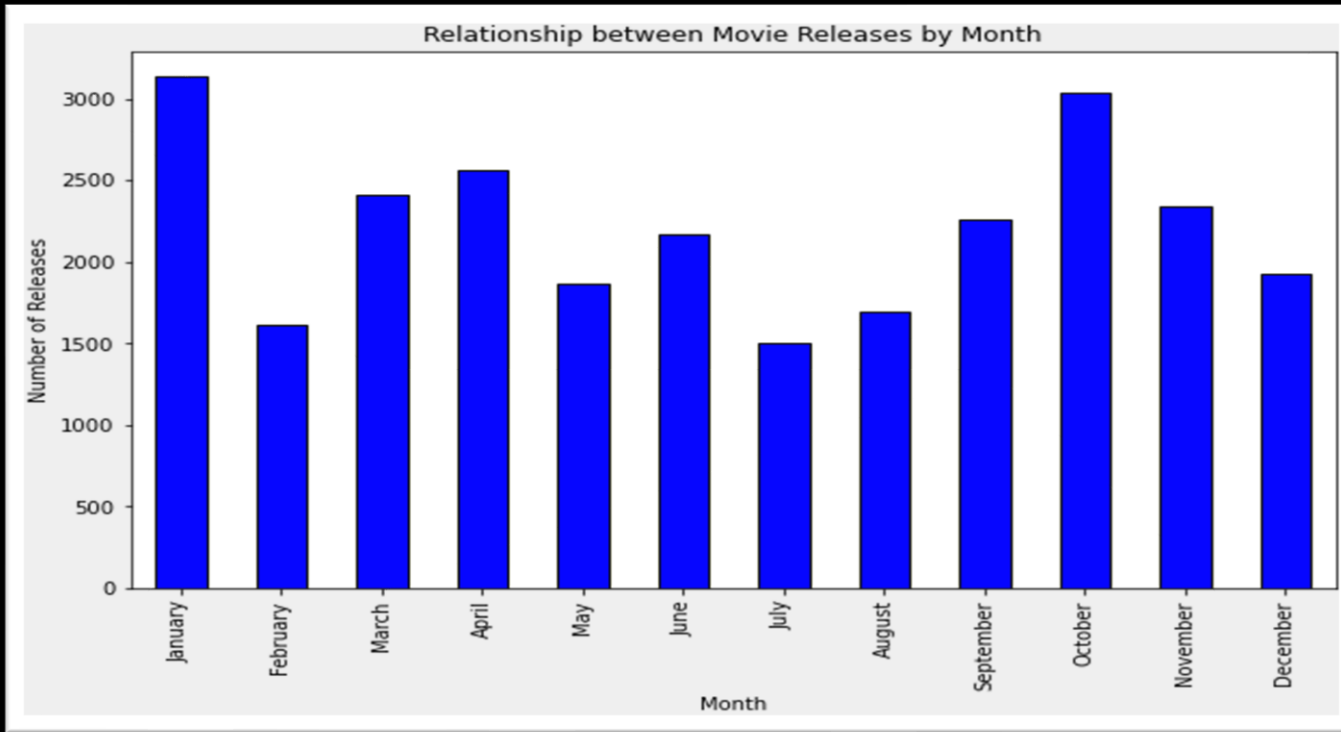
Microsoft should consider the distribution of movie releases by month to inform their release timing strategy, seasonal planning, competitive analysis, and long-term business planning. Based on the graph, Microsoft could prioritize releasing the majority of movies in January and October to capitalize on audience engagement trends during those months
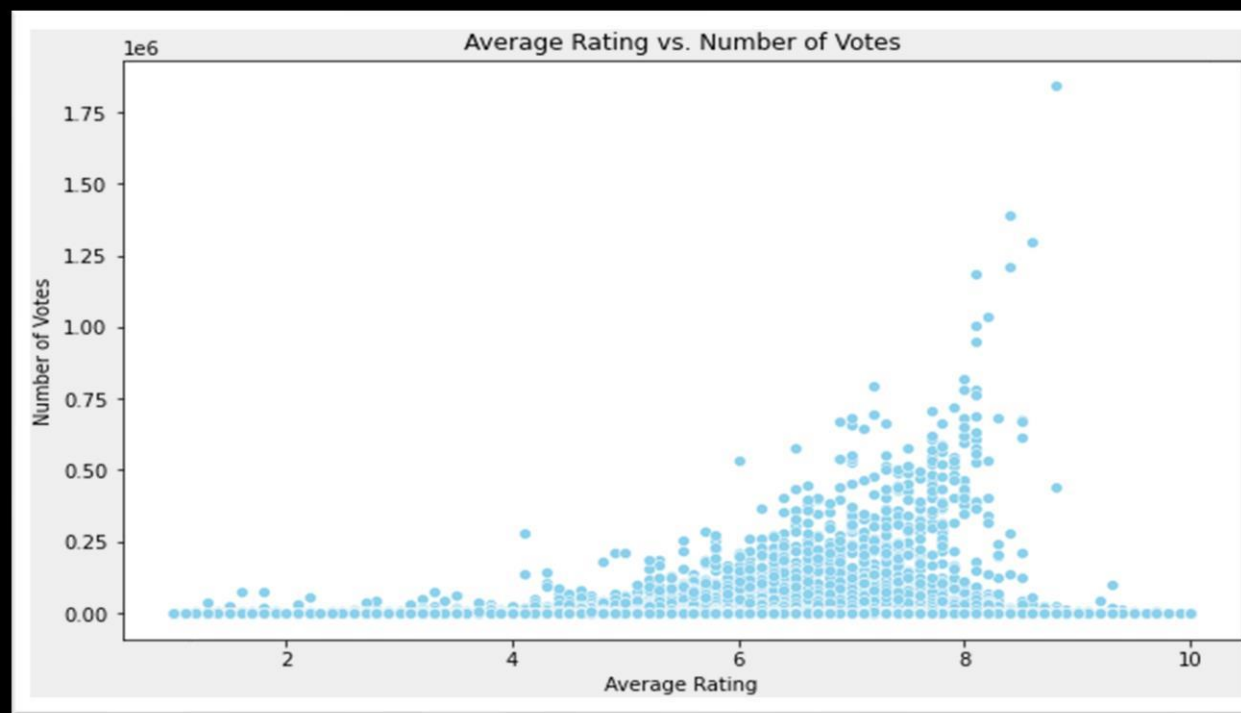
Top 10 Movie Genres
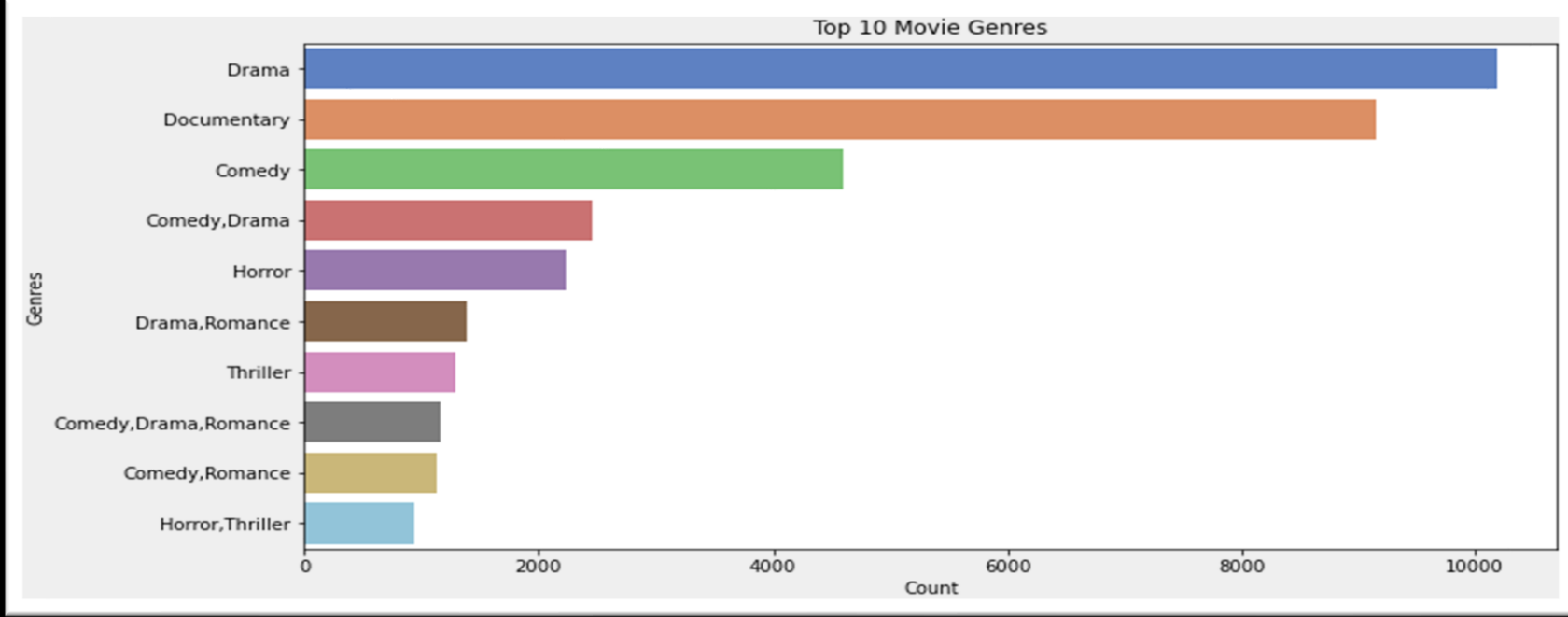
From the graph that we plotted of Genres against the count, we recommended that Microsoft should consider Drama genre more and Documentaries since more people like them
We can understand what genres audiences prefer, which can help businesses decide which movies to make, how to promote them, and what types of movies to get for their platforms.

From the scatter plot,Microsoft should closely analyze the relationship between the average rating of movies and the number of votes they receive to understand the connection between audience feedback (ratings) and engagement (number of votes). By examining this relationship, Microsoft can gain insights into audience preferences and behavior, helping them make informed decisions about movie selection, advertising strategies, and audience targeting.

Distribution of Movie Ratings
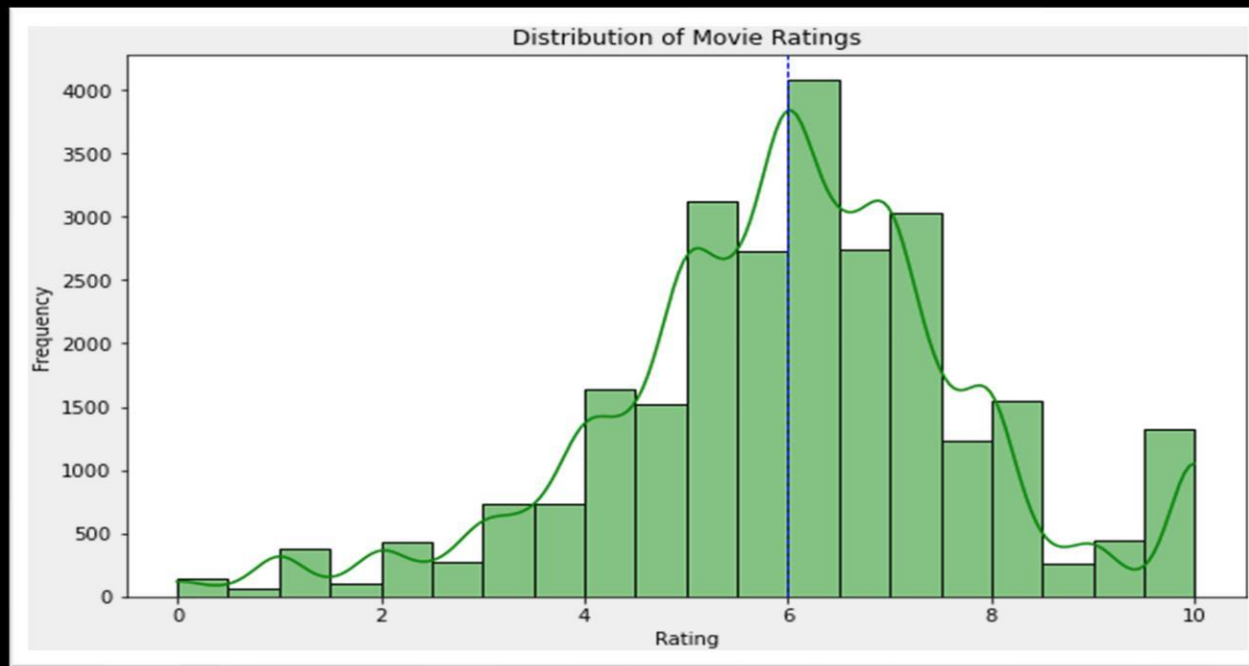
From the Histogram, Microsoft should use the distribution of movie ratings to understand audience preferences and perceptions of film quality. They can benchmark their movies against industry standards, ensuring alignment with viewer expectations. By analyzing trends within the distribution, Microsoft can tailor their productions to target specific audiences and genres, maximizing commercial success

Distribution of Production Budget
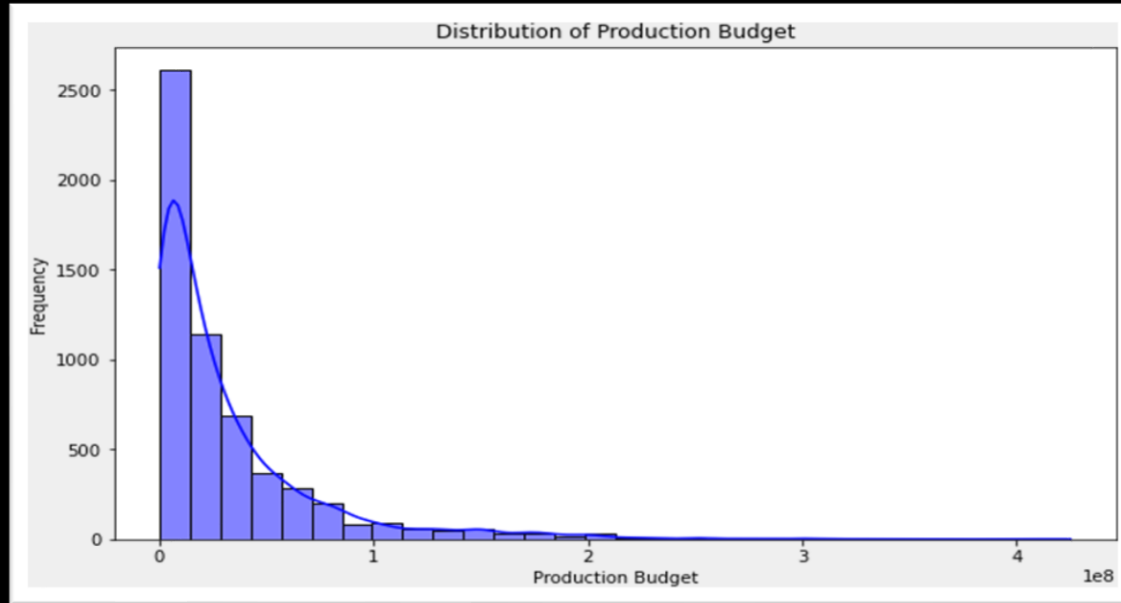
From the histogram, Stakeholders can observe prevalent budget ranges and outliers, aiding in budgetary planning and allocation.
Microsoft should analyze the budget distribution to identify common investment levels in movie production. This insight can inform budget planning for their movie projects, ensuring optimal resource allocation

Contact Info

Name- Alex Miningwa