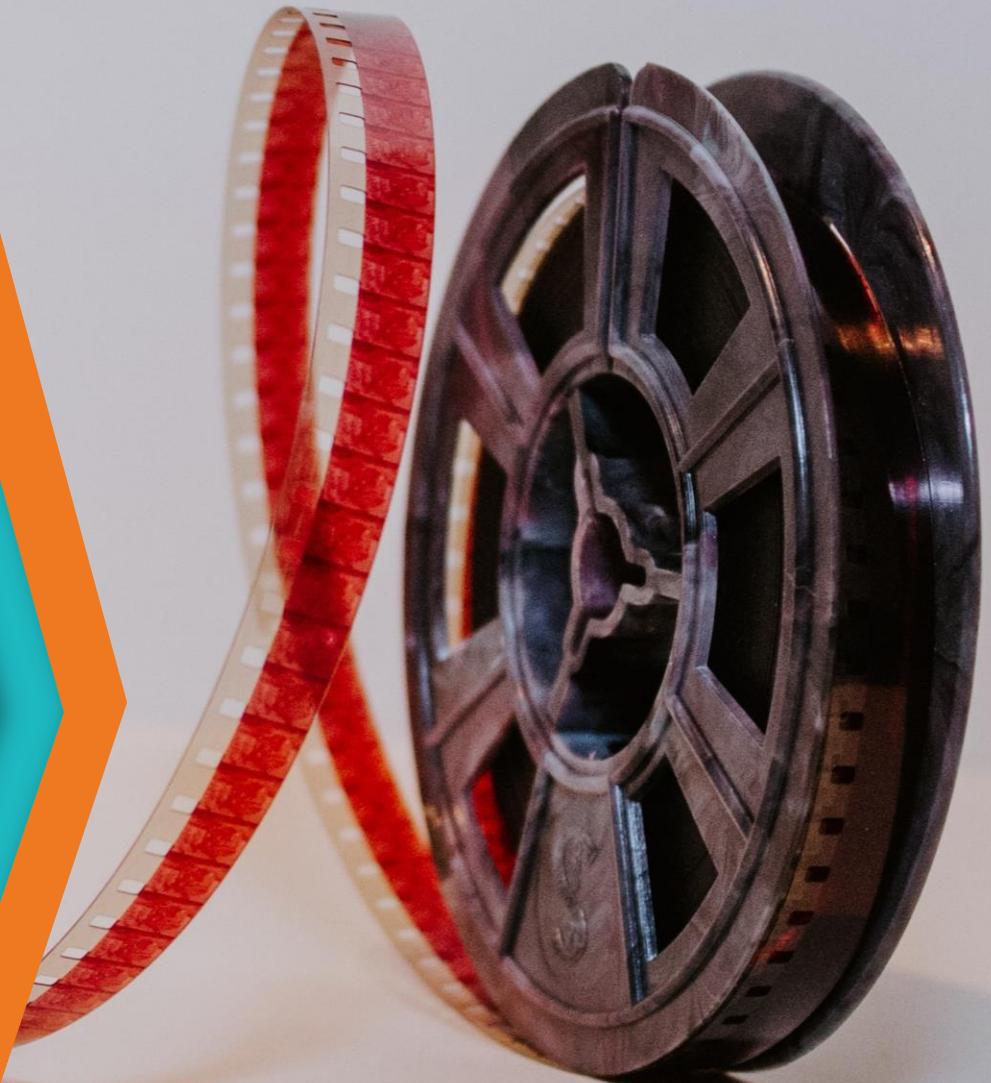


MICROSOFT NEW MOVIE STUDIO

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AGENDA

- Introduction
- Business Understanding
- Project goals
- Data Mining and cleaning
- Data analysis and Visualization
- Recommendations

Introduction

Welcome to the introduction of Microsoft new movie studio. Microsoft has decided to enter the movie industry by creating its own movie studio. Our goal is to provide actionable insights that will help Microsoft make informed decisions about what types of movies to produce and when to release them.

Business Understanding

In this presentation, I will begin by giving an overview of the movie industry and the current trends in movie production and distribution.

The movie industry is a highly competitive and dynamic industry that produces and distributes films to audiences worldwide.

Microsoft, a well-known technology company, has decided to enter the movie industry by creating its own movie studio. This marks a new venture for Microsoft and represents a significant move into a new market. Microsoft's entry into the movie industry is likely to increase the competition within the industry, as they will be competing against established players who have been in the industry for decades.

However, with its vast resources and technological expertise, Microsoft may have a significant advantage in creating high-quality films and distributing them to audiences through its various platforms.

Project Goals

Based on the business understanding, the following are the potential project goals for exploring the types of films that are currently performing well at the box office and providing actionable insights to the head of Microsoft's new movie studio:

- Identify the most successful film genres at the box office in recent years.
- Determine the common characteristics of successful films within these genres, such as themes, storylines, target audience, and marketing strategies.

- Analyze the performance of films produced by different studios to identify best practices and trends.
- Provide actionable insights to the head of Microsoft's new movie studio on what types of films to create, taking into account the target audience, budget, and resources available.
- Develop a data-driven approach to evaluate the success of Microsoft's films based on box office revenue, critical acclaim, and audience reception.

Data Mining and Cleaning

There were various sets of data that I used for this project. They are:

- Box Office Mojo
- Rotten Tomato
- The Numbers

After mining the data, it went through the data cleaning process. Data cleaning is the process of identifying and correcting or removing errors, inconsistencies, and inaccuracies in data.

Data cleaning is an important step in data analysis and is necessary to ensure that the results are accurate and reliable.

Data Analysis and Visualization

Data analysis and visualization are the processes of examining and understanding data using statistical and visualization tool.

The process includes the following steps:

- 1. Conducting Exploratory Data Analysis(EDA) to understand the structure, distribution, and relationships within the dataset. This can involve calculating summary statistics, visualizing the data, and identifying patterns or trends.**

2. Creating visualizations to communicate the results of the analysis. This can include charts, graphs, and interactive dashboards.

Lets take a look at the various visualizations from the different sets of data:

❑ Box Office Mojo

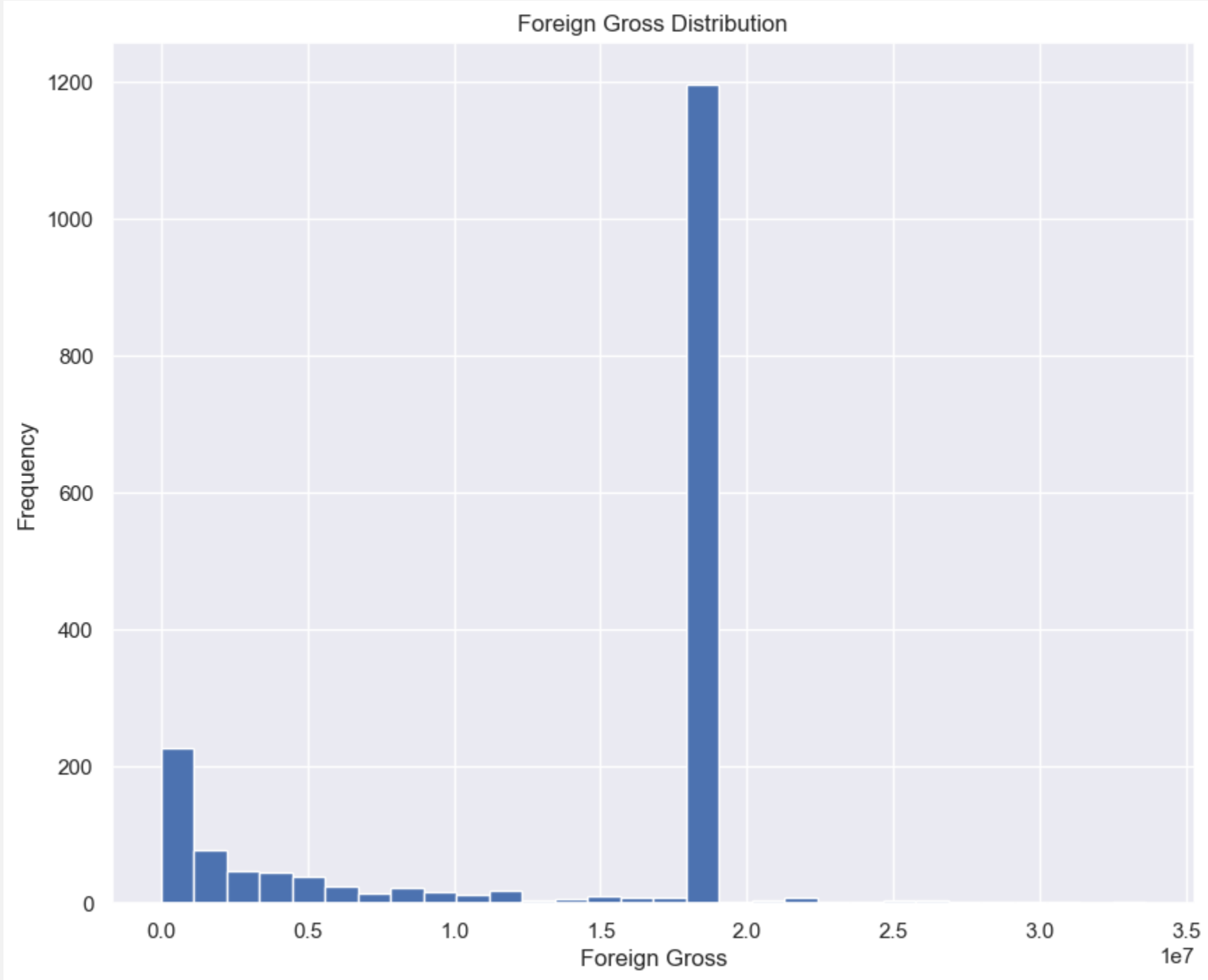
I plotted two histograms representing foreign gross distribution and domestic gross distribution.

Foreign gross and domestic gross are important metrics in the movie industry that help in data analysis and visualization. These metrics provide insight into how a movie performs in different markets and can help Microsoft make strategic decisions regarding production, distribution, and marketing.

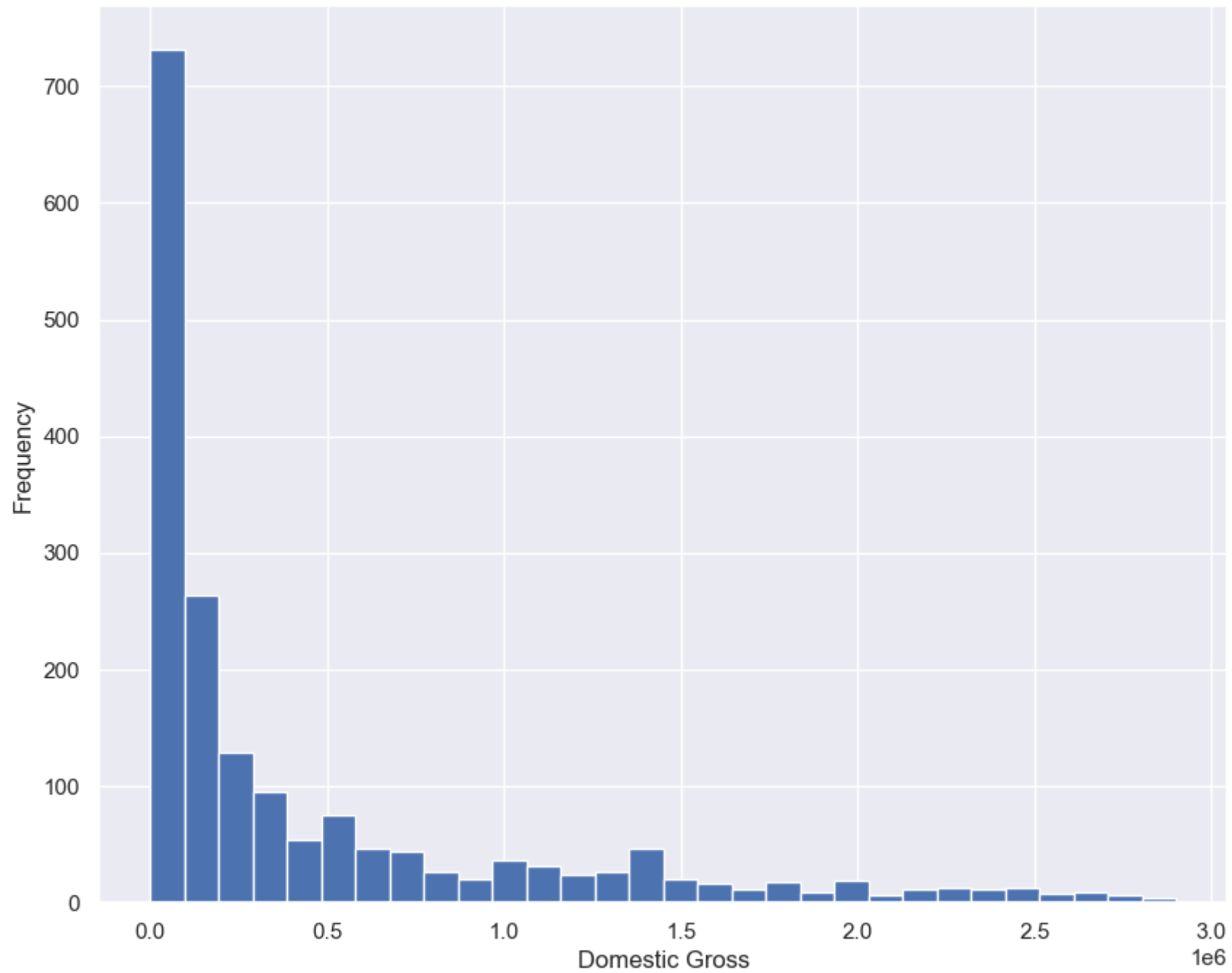
Here is some way in which foreign gross and domestic gross can be used in data analysis and visualization:

- Comparison: Comparing foreign gross and domestic gross can help identify which markets a movie performs well in and which ones it struggles in. This can help studios make informed decisions about where to release the movie and how to target marketing efforts.

From the graphs below we can be able to see and analyze which market Microsoft will focus on:



Domestic Gross Distribution

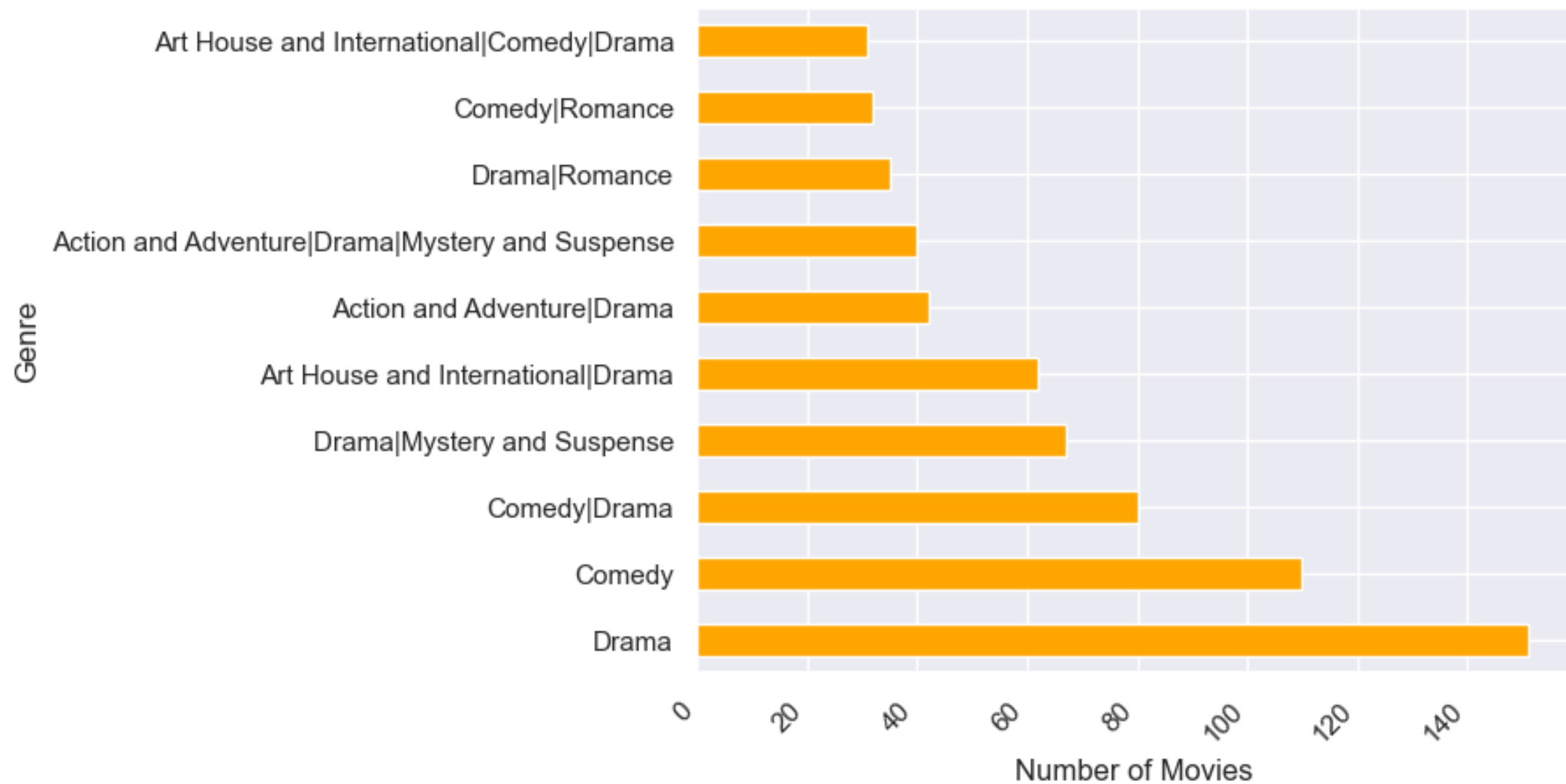


Overall, foreign gross and domestic gross are important metrics that can help studios make strategic decisions about movie production, distribution, and marketing. Analyzing and visualizing these metrics can provide valuable insights and inform key business decisions.

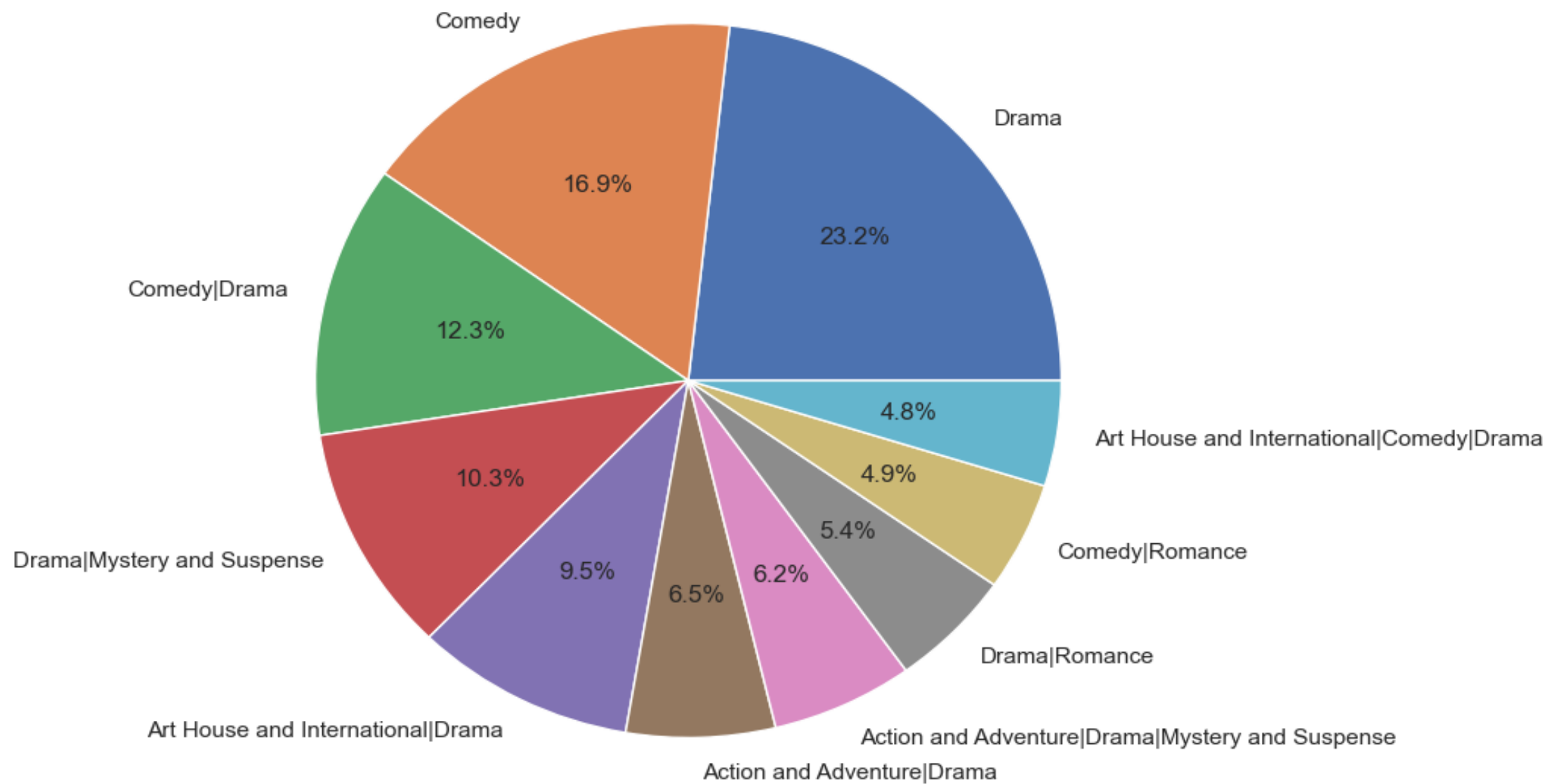
❑ **Rotten Tomatoes(rt)**

I plotted a horizontal bar chart and pie chart to represent the top 10 movie genres .The bar chart showed the number of movies while the pie chart represented percentages as shown below:

Top 10 Movie Genres



Top 10 Movie Genres





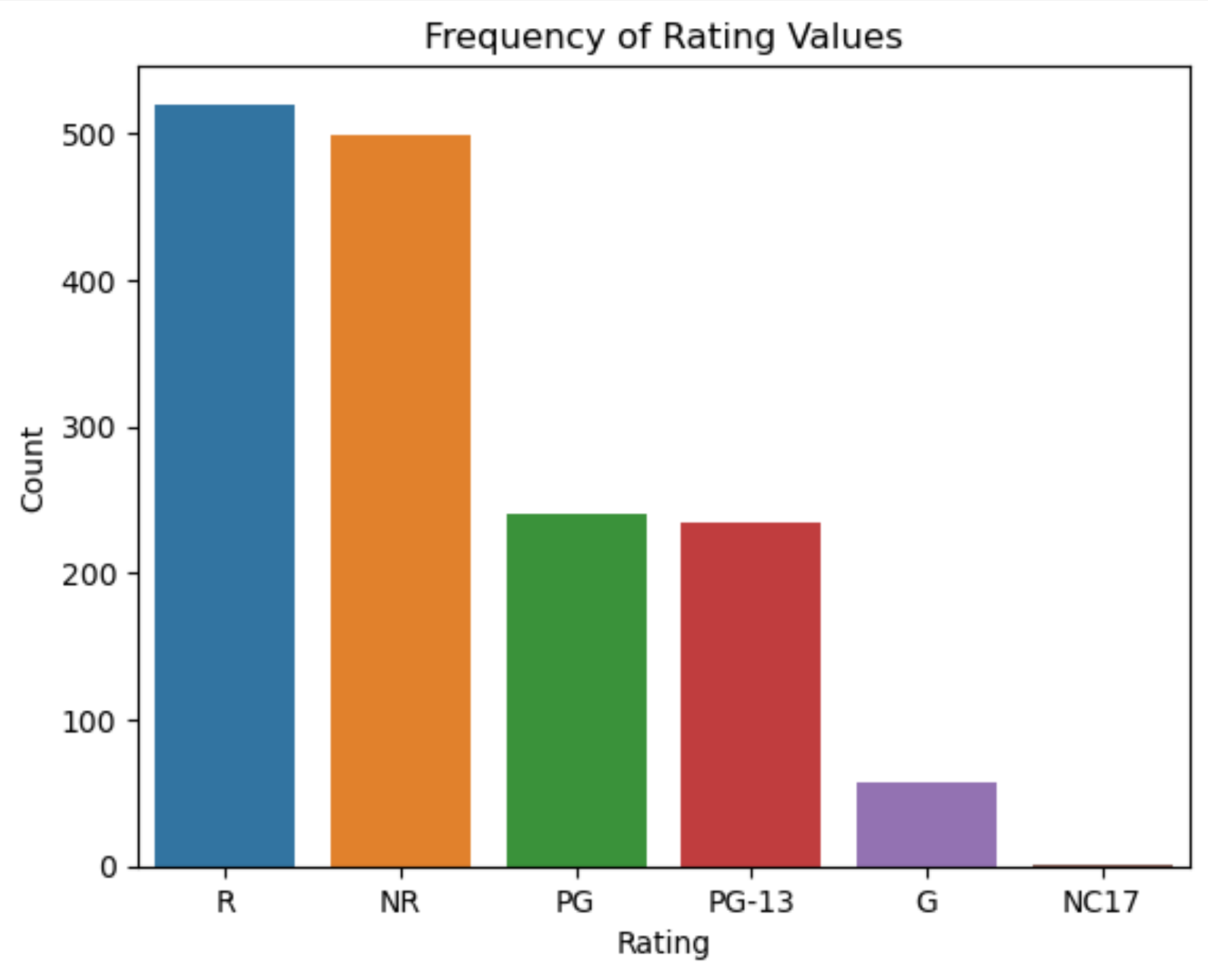
Analyzing the top 10 movie genres can help identify trends in movie preferences among audiences. This information can be used to make decisions about which genres to invest in and which ones to avoid.

Understanding the top 10 movie genres can help studios create content that resonates with audiences. This information can assist in making decisions about script development and casting.

Understanding the top 10 movie genres can help studios conduct market research and identify target audiences for their movies. This information can be used to make decisions about marketing and distribution strategies.

In general, analyzing the top 10 genres in the movie industry can provide valuable insights for data analysis and visualization. This information can inform key business decisions and help studios stay competitive in a rapidly changing market.

Also to analyze the ratings I plotted a bar graph as shown below:



By analyzing the frequency of rating values, you can gain insights into the types of movies that are most popular among audiences.

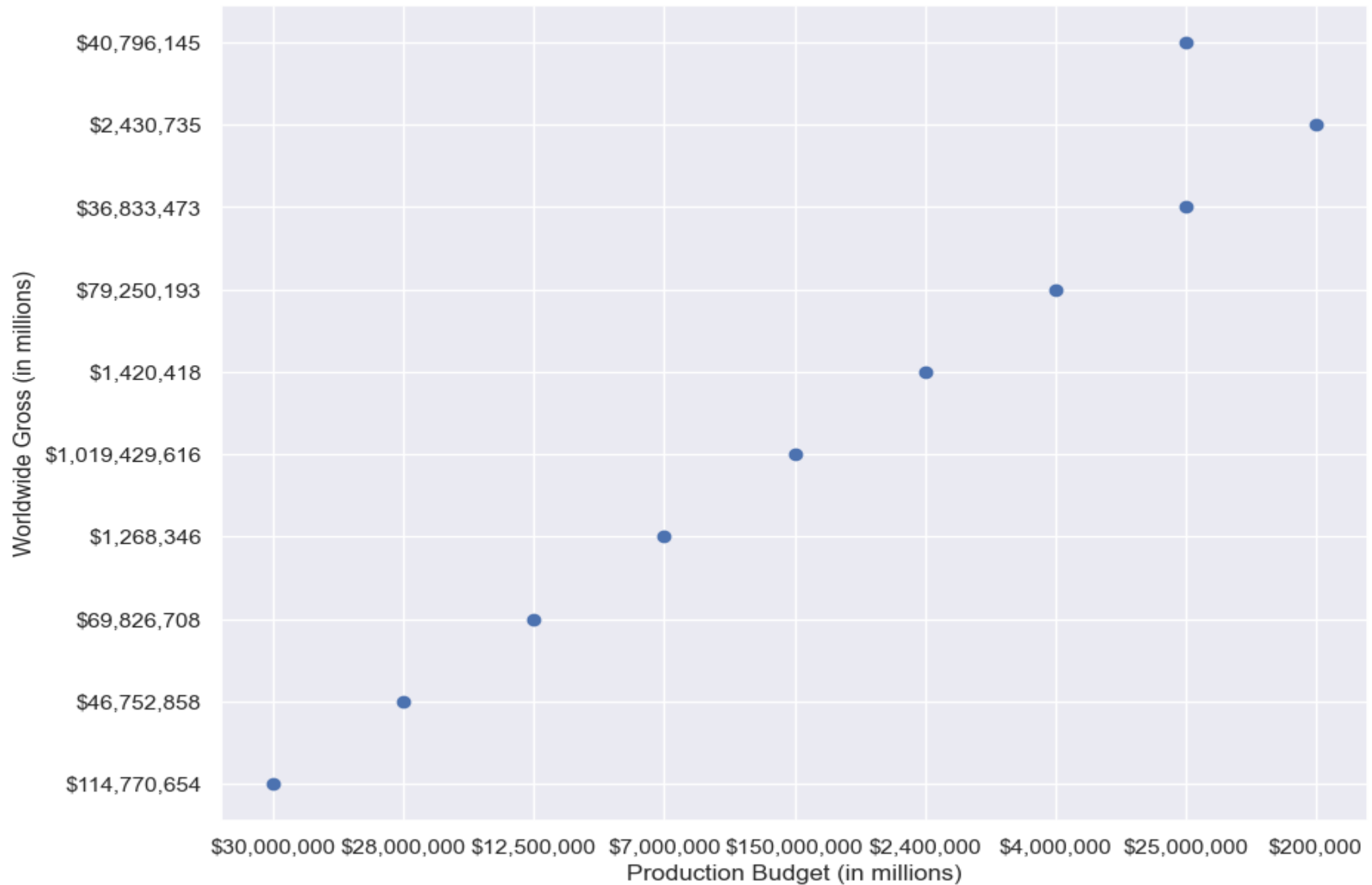
You can also identify trends in audience preferences and how they may be changing. For example, if you find that the frequency of 'R'-rated movies has increased over the past decade, you can infer that audiences may be more interested in edgier or more mature content. As a result, high "R"-rated movies may be more appealing to older or more mature audiences who are interested in more intense or mature subject matter.

In general, analyzing the frequency of rating values can help you better understand how users rate movies and identify patterns that can inform future analysis and decision-making.

❑ The Numbers

I plotted a scatter plot representing Production budget vs Worldwide gross as shown below:

Production Budget vs Worldwide Gross



The relationship between production budget and worldwide gross is an important factor to consider in the film industry as it can help determine the financial success of a movie. A higher production budget often indicates a larger investment in the film, which can lead to higher quality production values, better marketing, and wider distribution. However, a movie with a lower production budget can still perform well if it has a compelling story, good reviews, and strong word-of-mouth promotion.

I also analyzed the release month and I realized that Based on this data, we can see that movies released in May tend to have the highest average worldwide gross, followed by movies released in June and July. This suggests that the summer months are the most profitable for movie releases.

Release month

1	4.656382e+07
2	7.154453e+07
3	8.063337e+07
4	5.992026e+07
5	1.622680e+08
6	1.425230e+08
7	1.409636e+08
8	6.097841e+07
9	4.669369e+07
10	4.946456e+07
11	1.357416e+08
12	1.016932e+08

Name: worldwide gross, dtype: float64

On the other hand, movies released in September and April tend to have the lowest average worldwide gross, indicating that these months may not be the best for movie releases. However, it's important to keep in mind that there may be other factors that affect the performance of movies during different release dates, such as competition from other movies or major events happening around the same time.

To finalize on this data, I analyzed the top grossing movies. The highest grossing movies of all time can serve as a benchmark for box office success. Comparing the worldwide gross of the movies in the dataset to industry benchmarks can give a sense of their performance relative to other movies'

3. Interpretation of the results of the analysis and drawing insights or conclusions from the data.

- Foreign gross has a higher frequency than domestic gross, indicating that international markets are crucial for the success of movies.
- Comedy and drama are the leading genres in terms of frequency, implying that these genres have broad appeal to audiences.
- R-rated movies are leading in terms of frequency, suggesting that adult-oriented content is in high demand.

- Movies with high production budgets tend to have higher worldwide gross, indicating that investment in production can translate to higher box office returns.
- Movies released in May have the highest average worldwide gross, followed by June and July, which suggests that summer months are the most profitable for movie releases.

These visualizations provide insights into the factors that contribute to a movie's success at the box office. Filmmakers and producers can use this information to make informed decisions about the genres, rating, budget, and release dates of their movies.

4. Communication of the results of the analysis to decision-makers in a clear and concise manner.

Based on the analysis of the provided visualizations, I have identified several key insights that can inform decision-making and strategy for movie production and distribution.

- Firstly, foreign gross has a higher frequency than domestic gross, indicating that international markets are critical to the success of movies. Therefore, it may be essential to consider international markets when planning the distribution and marketing of a movie.
- Secondly, comedy and drama are the leading genres in terms of frequency, implying that these genres have broad appeal to audiences. Therefore, producers can consider focusing on these genres to maximize the potential audience reach.

- Thirdly, R-rated movies are leading in terms of frequency, suggesting that adult-oriented content is in high demand. This information can help guide decisions around rating and target audience.
- Fourthly, movies with high production budgets tend to have higher worldwide gross, indicating that investment in production can translate to higher box office returns. Therefore, it is crucial to consider budget allocation when planning a movie's production.
- Finally, movies released in May have the highest average worldwide gross, followed by June and July, suggesting that the summer months are the most profitable for movie releases. This information can inform decisions around release dates and marketing campaigns.

Recommendations

- Consider international markets: Given the higher frequency of foreign gross, it is essential to consider international markets when planning the distribution and marketing of a movie. Focus on developing strategies to appeal to a global audience and consider partnering with local distributors to maximize reach.
- Focus on comedy and drama genres: As comedy and drama are the leading genres in terms of frequency, it may be worth considering focusing on these genres to maximize the potential audience reach. However, it is also important to keep in mind the target audience for the movie and create content that aligns with their interests and preferences.
- Consider R-rated content: Given the high demand for adult-oriented content, decision-makers may want to consider producing R-rated movies or including mature content to appeal to this segment of the audience.

- Allocate appropriate budgets: As movies with high production budgets tend to have higher worldwide gross, it is crucial to consider budget allocation when planning a movie's production. Allocate appropriate resources to areas such as production quality, marketing, and distribution to maximize returns on investment.
- Release during summer months: Given the higher average worldwide gross during the summer months, decision-makers may want to consider releasing movies during this period to maximize box office returns. However, keep in mind the competitive landscape and ensure that the release date aligns with the movie's target audience and genre.

Thankyou

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