



BOX OFFICE MOVIE ANALYSIS.

Group – 7 DSFPT09.

INTRODUCTION

Different dynamics have contributed to the continuous evolution of the entertainment industry in recent years. For instance, technology has played a critical role in meeting the high demand for quality and original video content. This reality has prompted many movie companies to reinvent themselves in the production, capture, and share of quality products to the market. Our company is not left behind on these emerging trends. We are setting up a new movie studio with the objective of capturing the market expectations by producing quality and original films. To succeed in this, just like in any other venture, we need a working plan and a comprehensive knowledge of the market trends. First, we need to determine the types of films that are currently dominating the market and analyze key characteristics and factors that contribute to commercial success.

BUSINESS PROBLEM.

Your company now sees all the big companies creating original video content and they want to get in on the fun. They have decided to create a new movie studio, but they don't know anything about creating movies. You are charged with exploring what types of films are currently doing the best at the box office. You must then translate those findings into actionable insights that the head of your company's new movie studio can use to help decide what type of films to create.

BUSINESS UNDERSTANDING.

This project aims to guide the new movie studio in making data-driven decisions on the types of films they should produce to maximize box office success. By understanding the current landscape of the film industry, the company can make informed choices regarding budget allocation, genre focus, and release timing.

The key questions to address are:

1.Which genres are most popular and how have they evolved?

•Identify trends in film genres and determine which genres consistently perform well in revenue and audience engagement.

2.What is the relationship between production budgets and revenue

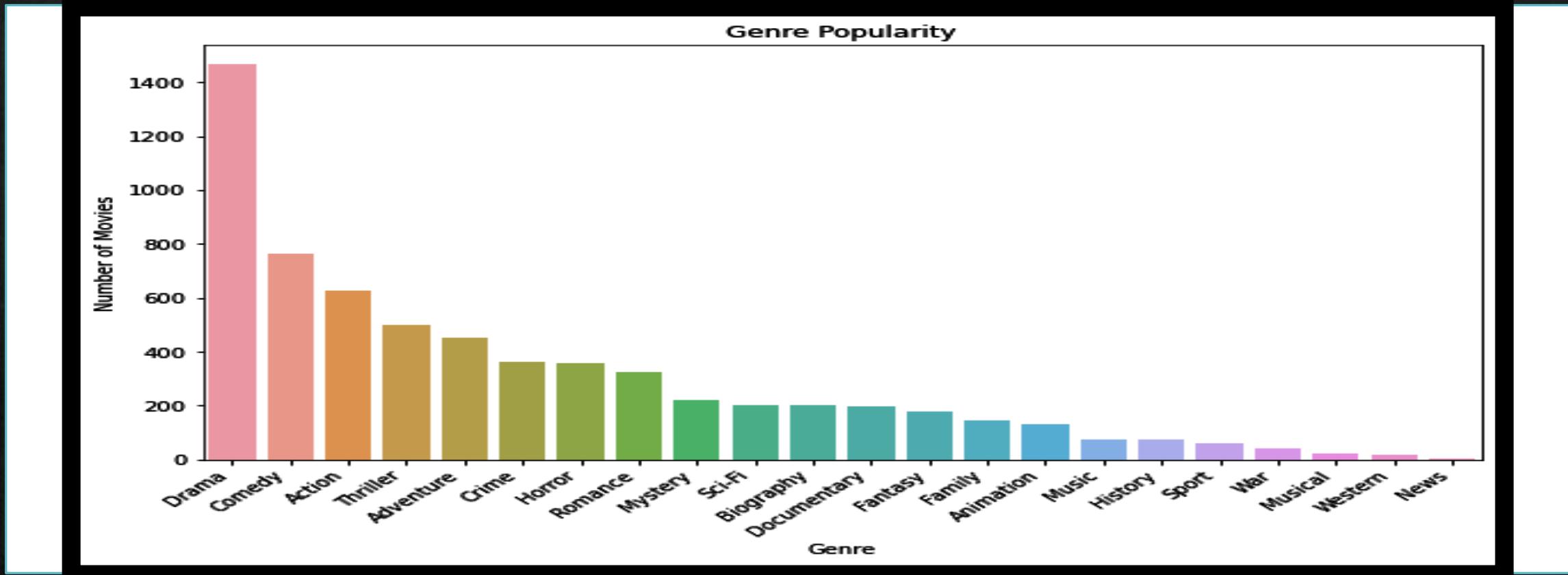
•Understand if there is a correlation between production budgets and revenue (both domestic and worldwide), and how this relationship can inform the studio's financial planning.

3.How can the company determine the optimal budget for producing films in different genres to ensure a high ROI (Return on Investment)?

•Find patterns or trends that show what budgets are needed for specific genres to maximize profit and minimize risk.

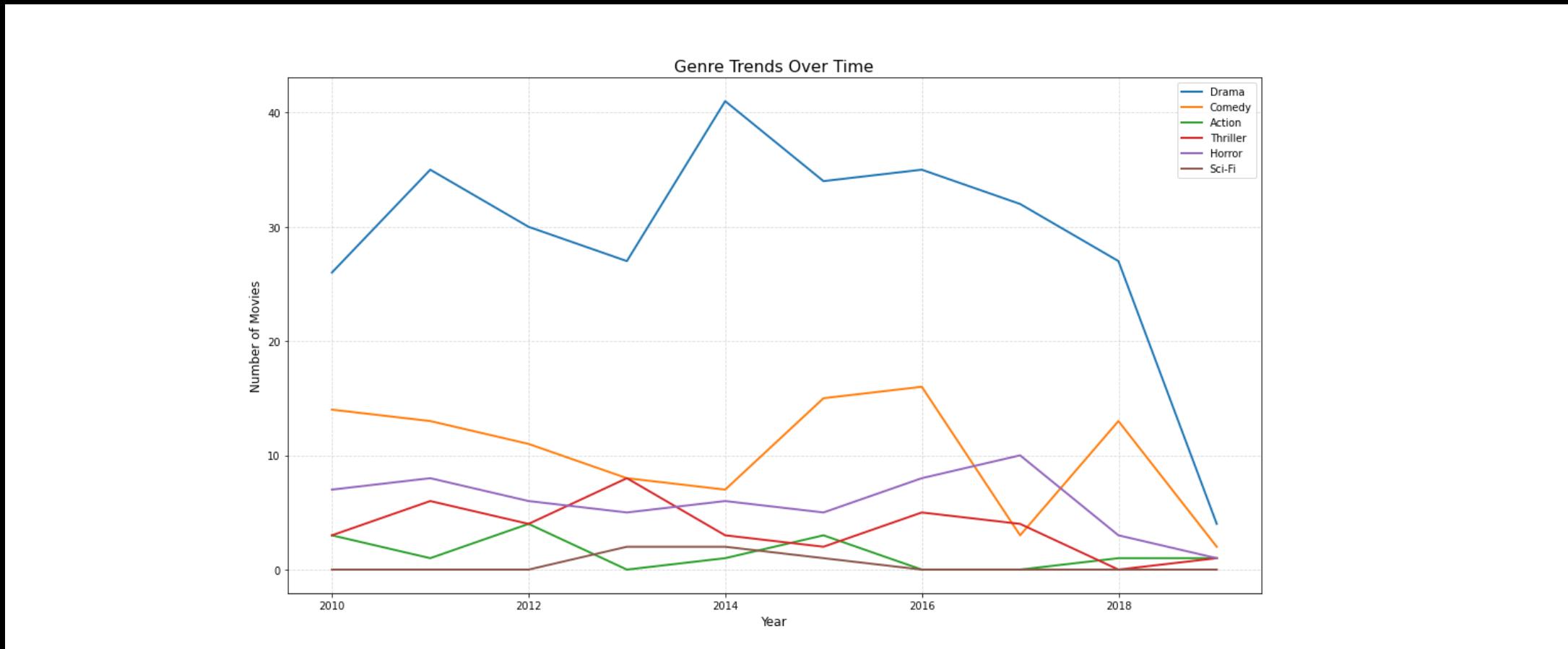
4.What are the seasonal trends in the box office

•Identify peak times for film releases and how they impact revenue performance, helping to determine the best times to release films.



GENRE POPULARITY BY PRODUCTION.

We find that the Drama genre is the most popular. We recommend that we focus on category.

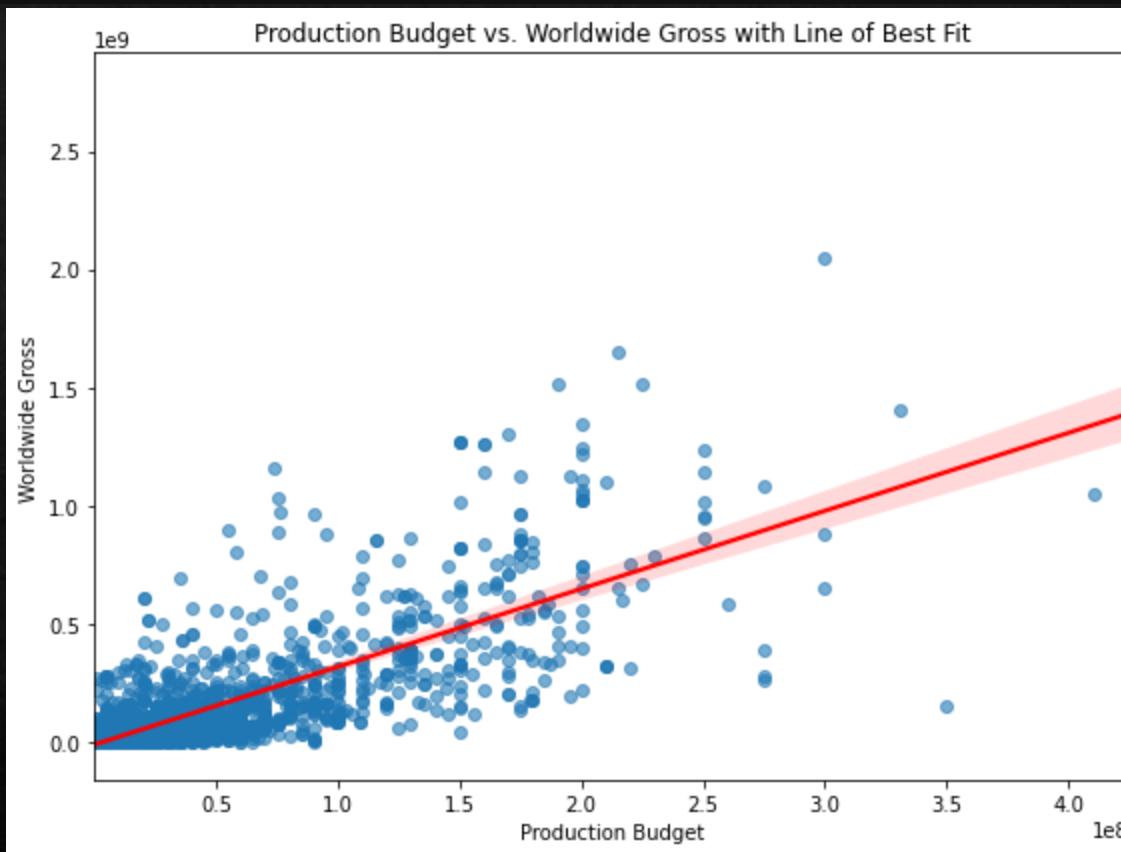


GENRE TRENDS OVER TIME.

The popularity of the drama genre has been steadily declining since 2016.

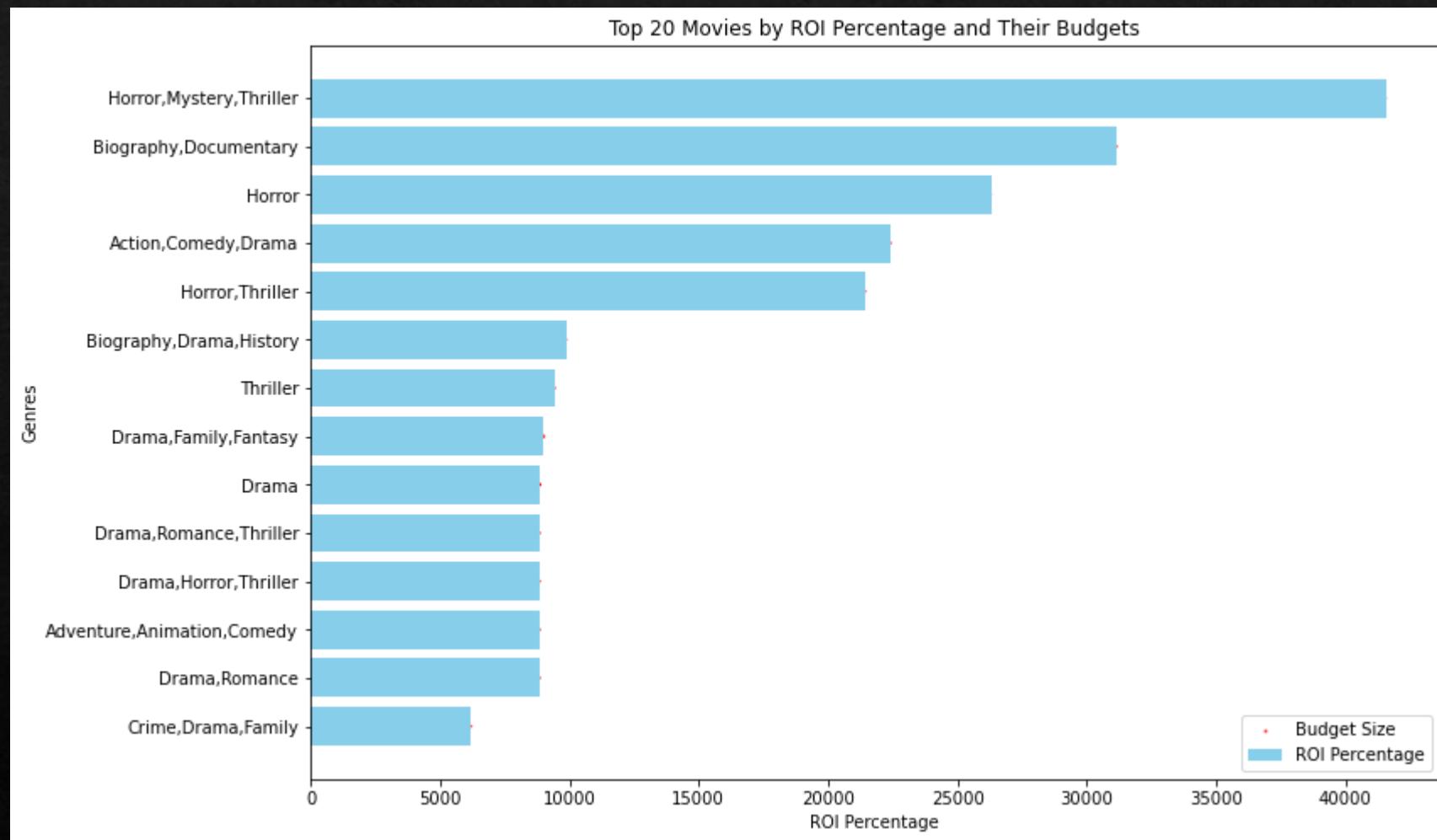
Correlation between Production Budget and Worldwide Gross

There is a high positive correlation between production budget and revenue. With an increase in the production budget, we expect a corresponding increase in revenue.



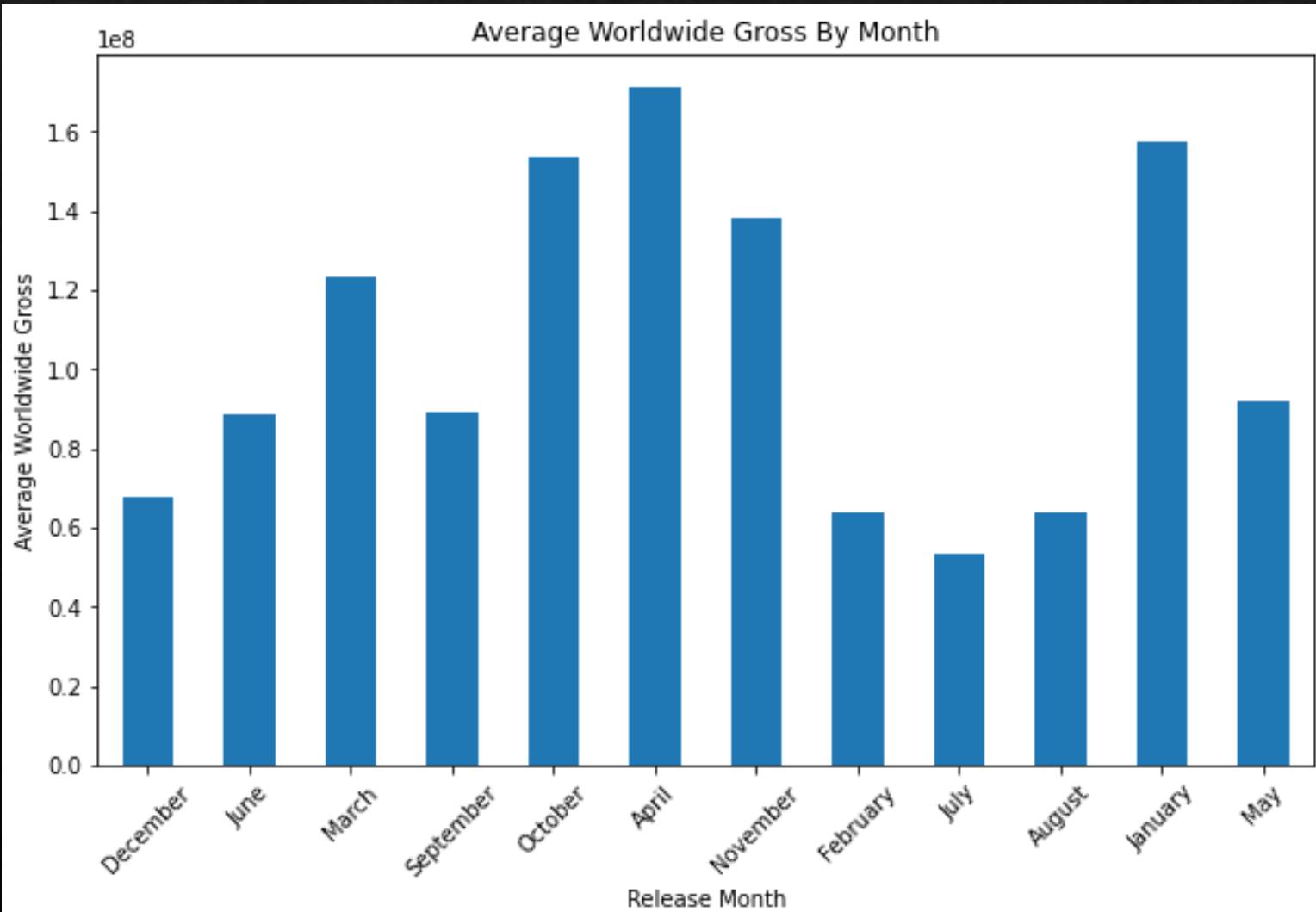
TOP 20 MOVIES BY ROI PERCENTAGE AND THEIR BUDGETS.

Horror, Mystery, and Thriller genres have the most optimal budget generating the highest ROI.



AVERAGE WORLDWIDE GROSS BY MONTH.

April is the best month followed by January and October regarding worldwide gross revenue from movies.



Recommendations

- **Focus on Popular Genres:**

- The analysis shows that the Drama genre is the most popular. However, its popularity has been declining since 2016.
- Genres Comedy, Action, Thriller, Horror, and Sci-Fi have shown consistent performance. It is recommended that new movie productions focus on these genres.

- **Optimal Budget Allocation:**

- There is a high positive correlation between production budget and worldwide gross revenue. Increasing the production budget can lead to higher revenue.
- a lower production budget can still yield a high ROI for genres like Horror, Mystery, and Thriller. It is recommended to allocate budgets efficiently based on the genre to maximize ROI.

- **Seasonal Release Strategy:**

- The analysis indicates that April, January, and October are the best months for movie releases in terms of worldwide gross revenue.
- It is recommended to plan major movie releases during these months to capitalize on higher audience engagement and revenue potential.

- **Leverage High ROI Genres:**
 - Genres like Horror, Mystery, and Thriller have shown the highest ROI. Investing in these genres can provide significant returns with relatively lower risk.
 - Consider producing more films in these genres to maximize profitability.
- **Genre-Specific Strategies:**
 - **Action vs. Comedy Revenue:** Hypothesis testing indicates no statistically significant difference in worldwide gross between action and comedy movies. This suggests that both genres can be equally profitable, and the studio should consider producing a balanced mix of action and comedy films.
 - **Action vs. Comedy Ratings:** There is no statistically significant difference in average ratings between action and comedy movies. This implies that both genres are equally well-received by audiences, and the studio can confidently invest in either genre without worrying about audience reception.
- **Production Budget and Ratings:**
 - The correlation analysis shows no statistically significant correlation between production budget and average rating. This suggests that increasing the production budget does not necessarily lead to higher audience ratings. The studio should focus on other factors such as script quality, casting, and marketing to improve movie ratings.

- **Predictive Modeling for Revenue:**
 - The linear regression model predicts worldwide gross revenue based on production budget. The model can be used to estimate the potential revenue for new movie projects with different budget levels. For example, a movie with a 200 million budget is predicted to generate approximately 635.9 million in worldwide gross revenue.
 - The studio can use this predictive model to set realistic revenue expectations and make informed decisions about budget allocation for future projects.