Moringa School

Microsoft's Box Office Analysis for Successful ventures to movie production

Presented by Emmanuel Chasimba

OUTLINE

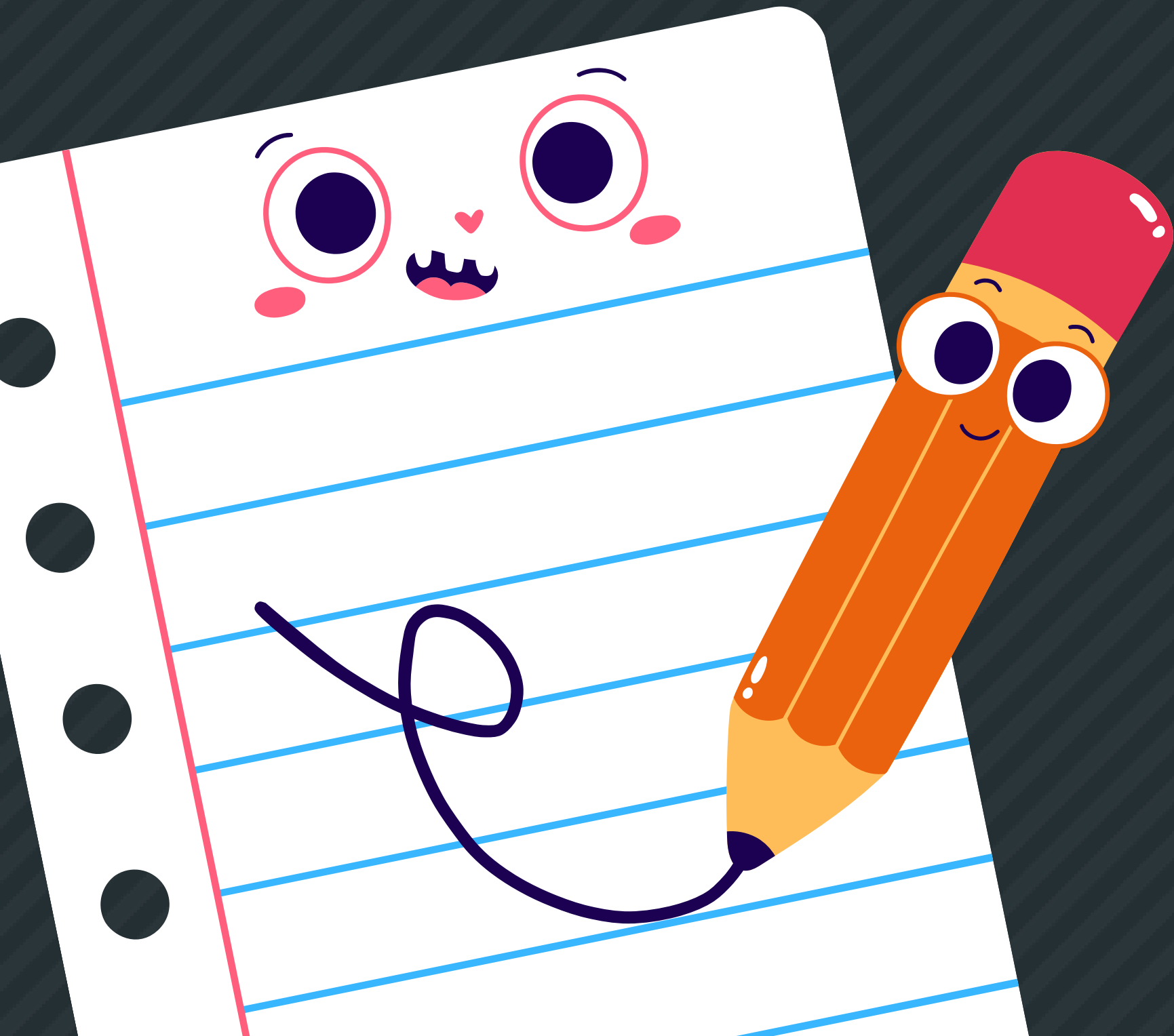# SUMMARY

The objective of the project is to assist Microsoft in identifying the crucial factors for achieving success in the movie production industry. Data from reliable sources such as TMDB and The Numbers was collected, and subsequent data cleaning, transformation, and presentation were performed to derive valuable insights and recommendations.

The analysis revealed that in order to create films that resonate with the audience and generate substantial revenue, several factors need to be taken into account. These factors include, but are not limited to, the movie cast, storyline, target audience, and budget considerations.

A key recommendation is for Microsoft to adopt a strategic approach that incorporates the latest trends and techniques, combining popular genres with captivating storylines. This approach is likely to enhance the prospects of achieving success in the highly competitive movie production business.

Business Problem

The primary objective of the company is to produce highly successful movies that can effectively compete in the current box office market. To achieve this goal, Microsoft must identify the essential elements that contribute to the success of current box office hits and incorporate them into their own films.
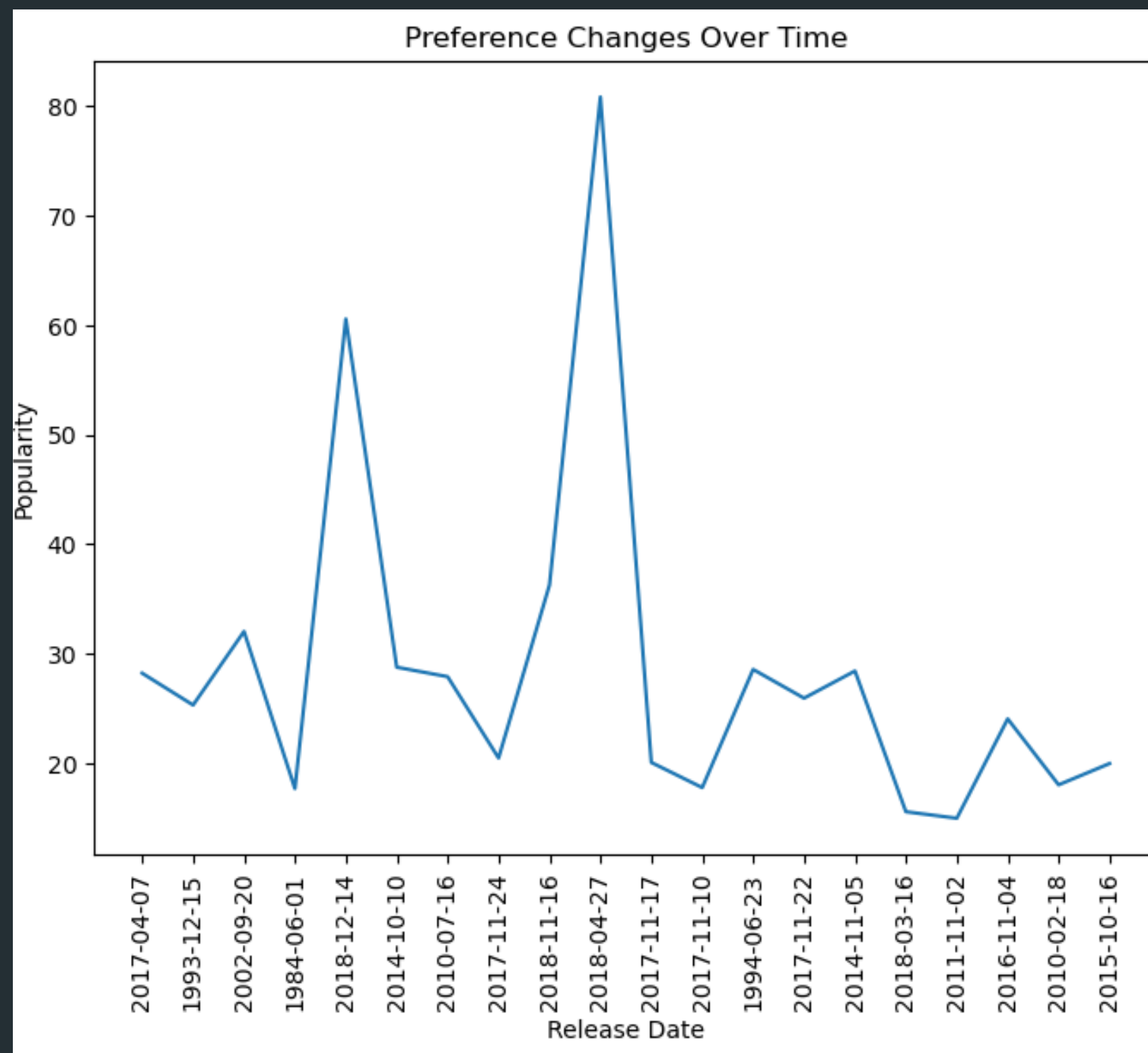
Several key questions need to be addressed in this endeavor. These include determining the critical success factors in the industry, analyzing the types of movies that have achieved significant success in recent years, understanding the highest-grossing films and genres, and identifying the patterns and trends within these categories. By considering these factors, Microsoft can make informed decisions on what types of movies to produce and how to market them effectively, all from a business perspective.

By conducting a comprehensive analysis of these factors, Microsoft can gain valuable insights that will guide their decision-making process and enable them to produce and promote movies with a higher likelihood of success in the competitive movie industry.

Data

The dataset primarily consists of categorical data, including title and genre ids, with frequency count characteristics. Additionally, it includes date/time data, such as release dates with seasonal patterns, and variables like vote averages that exhibit trends and variability.
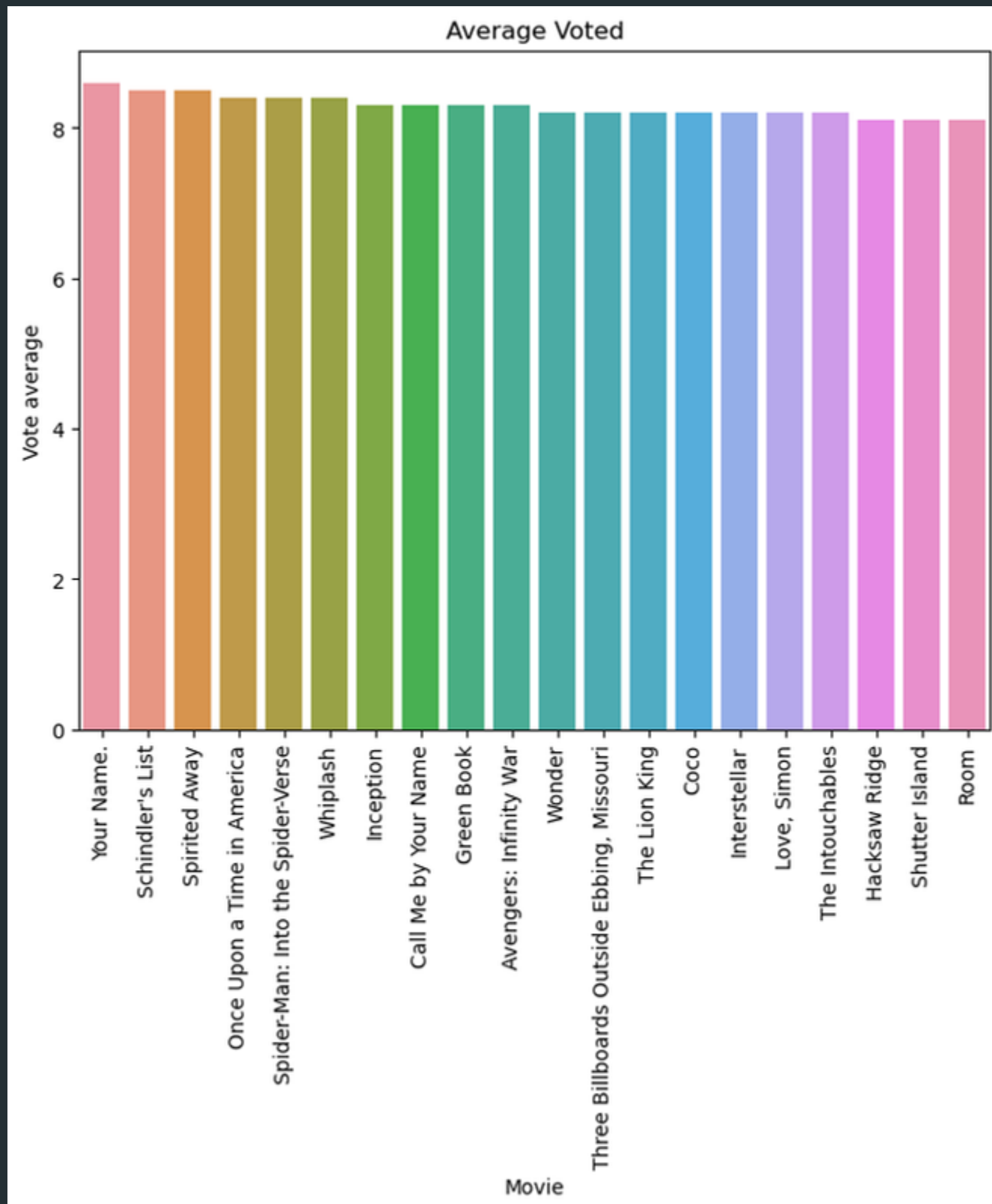
These data attributes have been utilized to conduct iterative ranking processes and create visualizations that provide valuable insights into various behaviors. These insights have proven to be insightful and have facilitated the generation of recommendations based on the observed patterns and trends within the dataset.

Preference Changes Over Time

Plot of Movies popularity vs their Relaease dates

The visualization highlights the prominence of peaks in recent years, indicating that major companies invest heavily in marketing for newer movies.
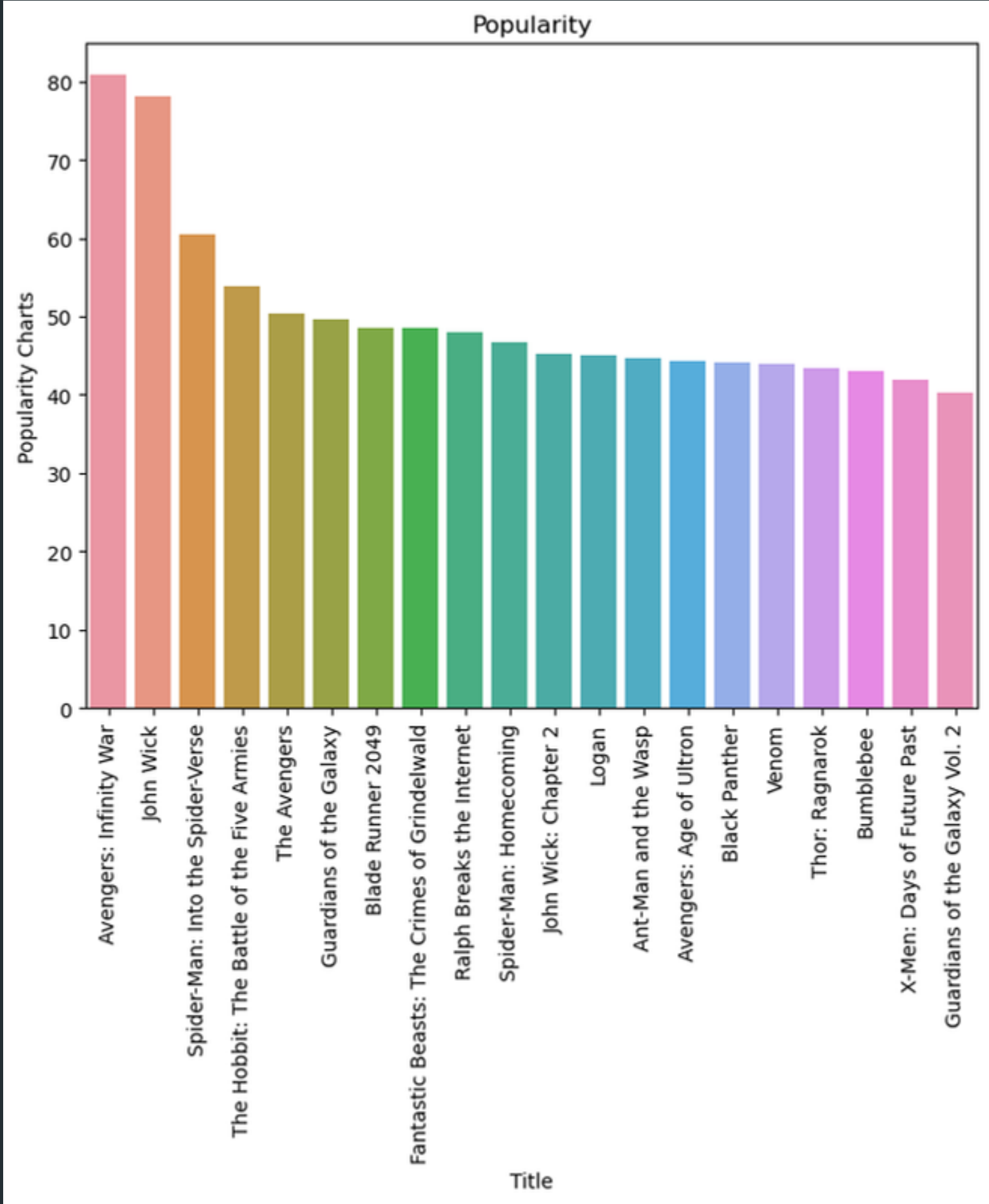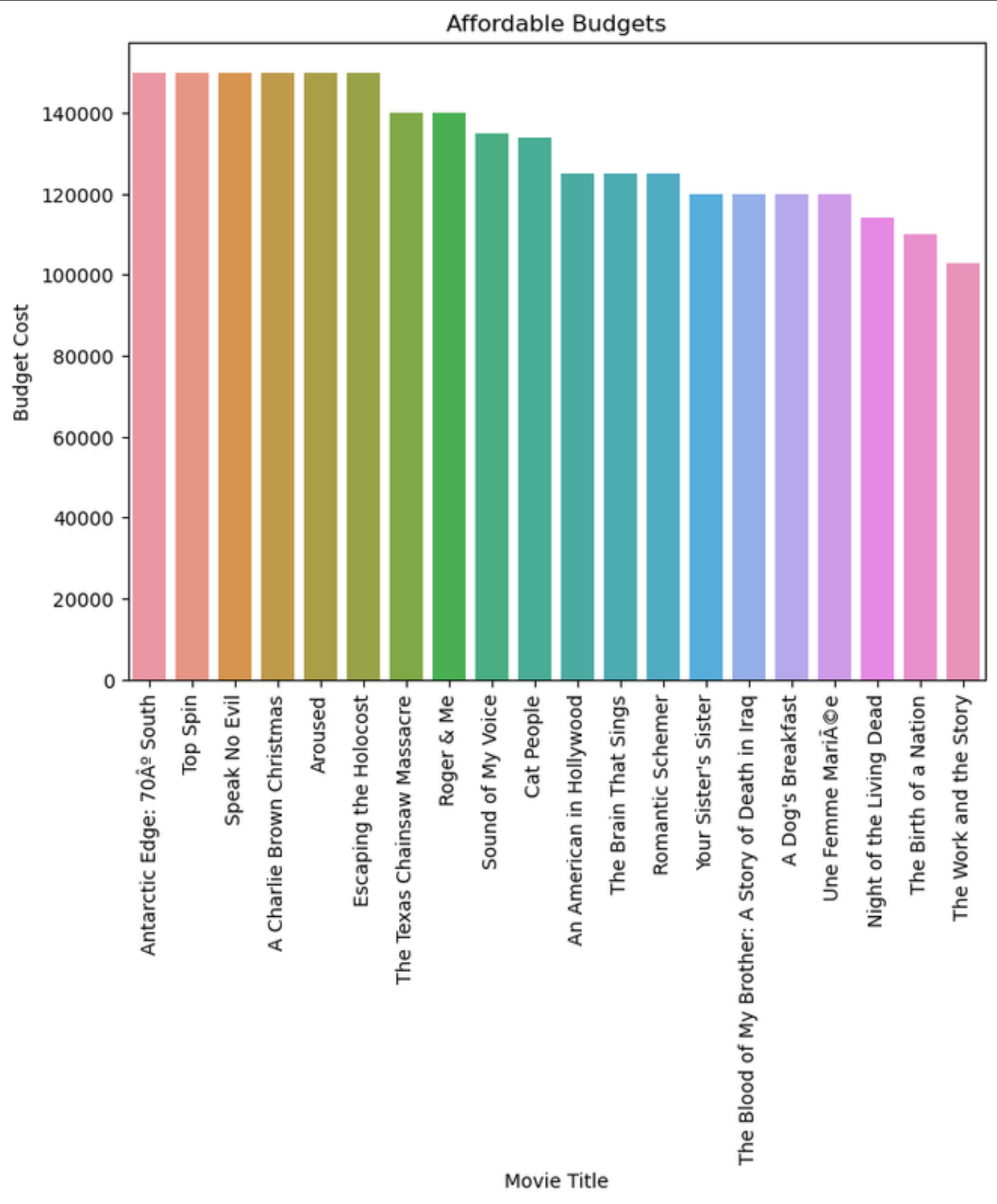
It also demonstrates the higher popularity of recent movies compared to older ones. By aligning with current trends and focusing on improved visual quality, movie production can enhance its reception among the audience.

Average Voted

Plot of vote averages vs movie_titles

The data reveals that the top 20 movies have similar bar heights, indicating that their average votes are comparable.
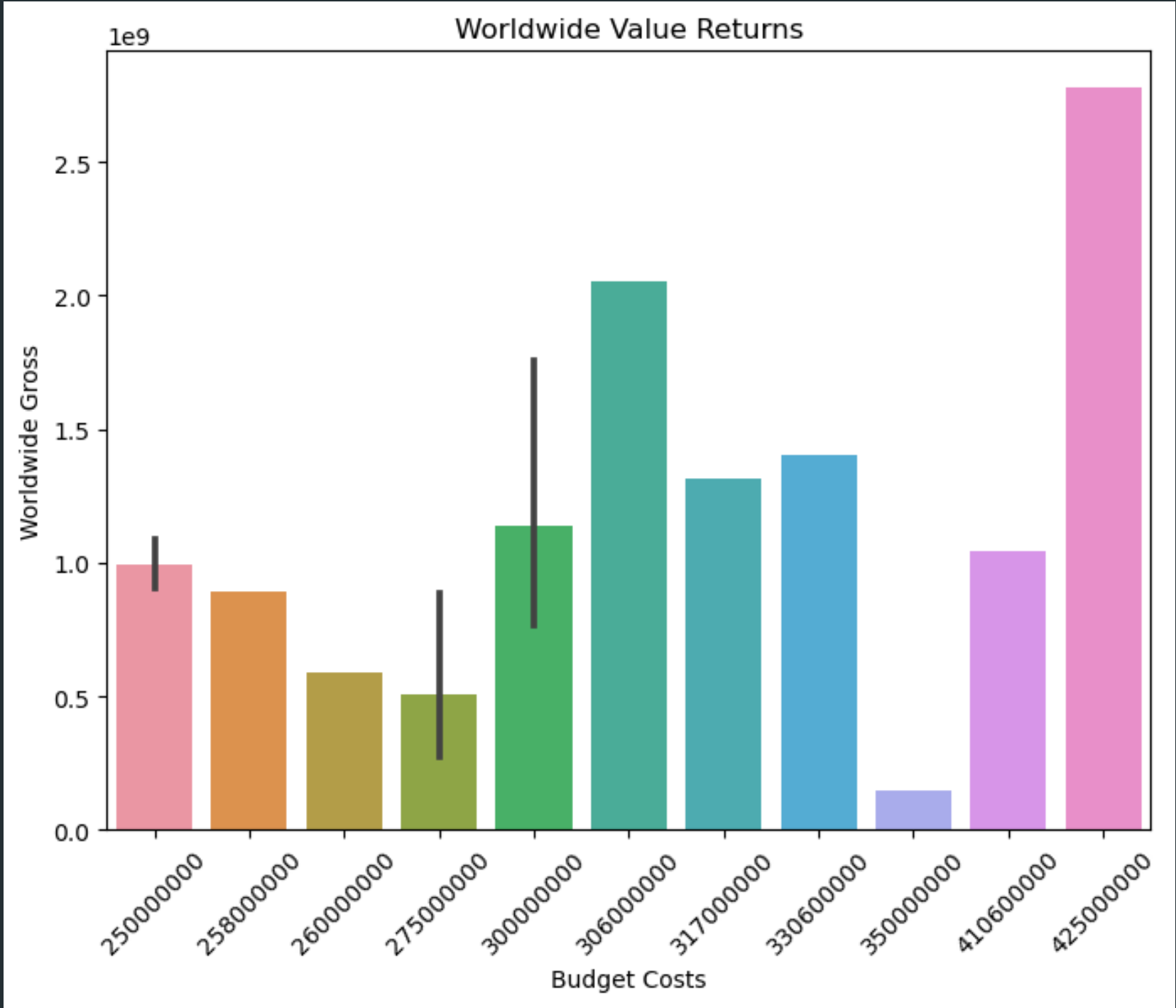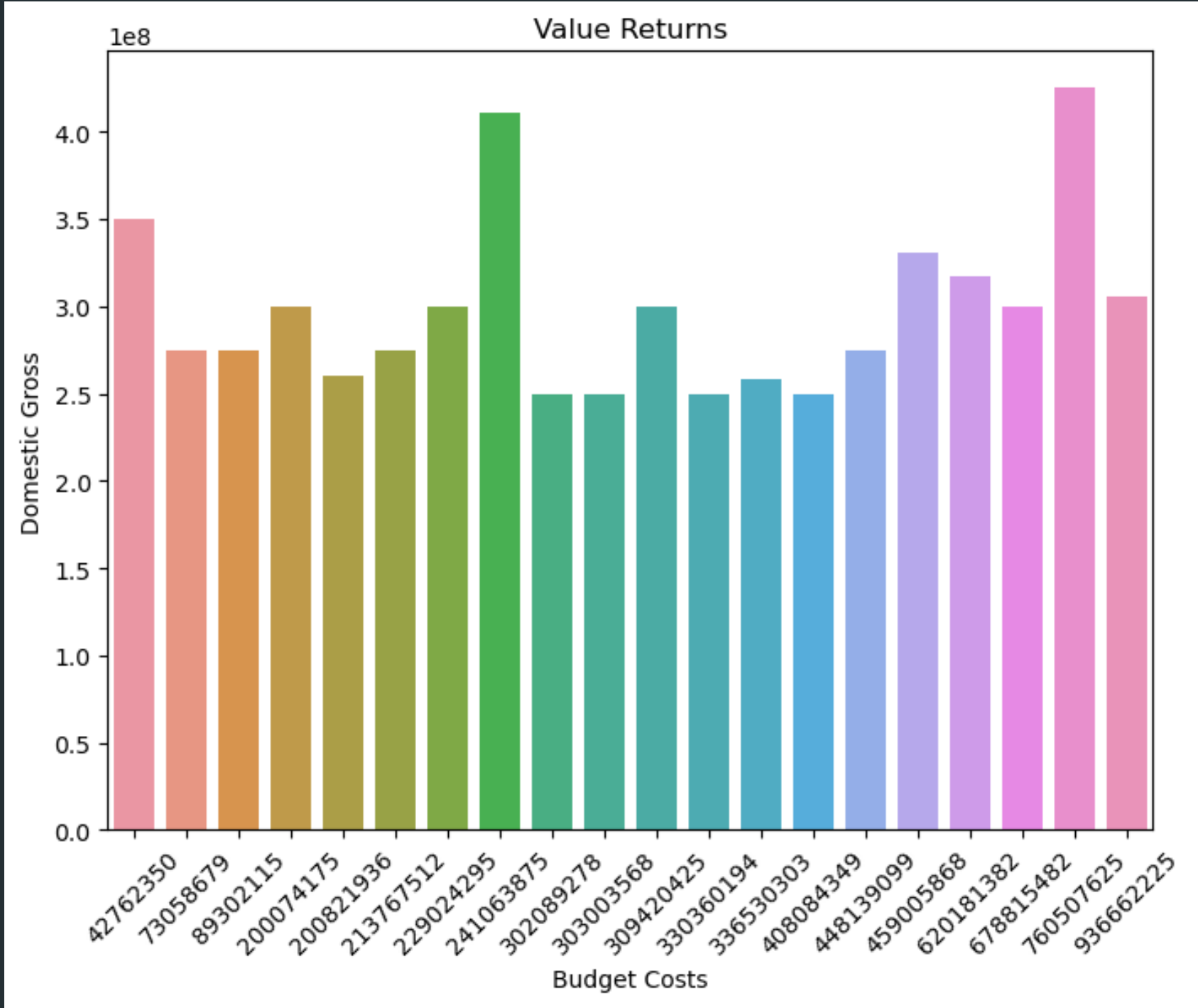
This observation holds true when comparing the bar chart based on movie genres on the x-axis. This suggests that relying solely on genre may not guarantee success in the movie industry.

Affordable Budgets

Budget Cost / Movie Title

- Antarctic Edge: 70° South
- Top Spin
- Speak No Evil
- A Charlie Brown Christmas
- Aroused
- Escaping the Holocost
- The Texas Chainsaw Massacre
- Roger & Me
- Sound of My Voice
- Cat People
- An American in Hollywood
- The Brain That Sings
- Romantic Schemer
- Your Sister's Sister
- The Blood of My Brother: A Story of Death in Iraq
- A Dog's Breakfast
- Une Femme MariÃ©e
- Night of the Living Dead
- The Birth of a Nation
- The Work and the Story

Popularity

Popularity Charts / Title

- Avengers: Infinity War
- John Wick
- Spider-Man: Into the Spider-Verse
- The Hobbit: The Battle of the Five Armies
- The Avengers
- Guardians of the Galaxy
- Blade Runner 2049
- Fantastic Beasts: The Crimes of Grindelwald
- Ralph Breaks the Internet
- Spider-Man: Homecoming
- John Wick: Chapter 2
- Logan
- Ant-Man and the Wasp
- Avengers: Age of Ultron
- Black Panther
- Venom
- Thor: Ragnarok
- Bumblebee
- X-Men: Days of Future Past
- Guardians of the Galaxy Vol. 2
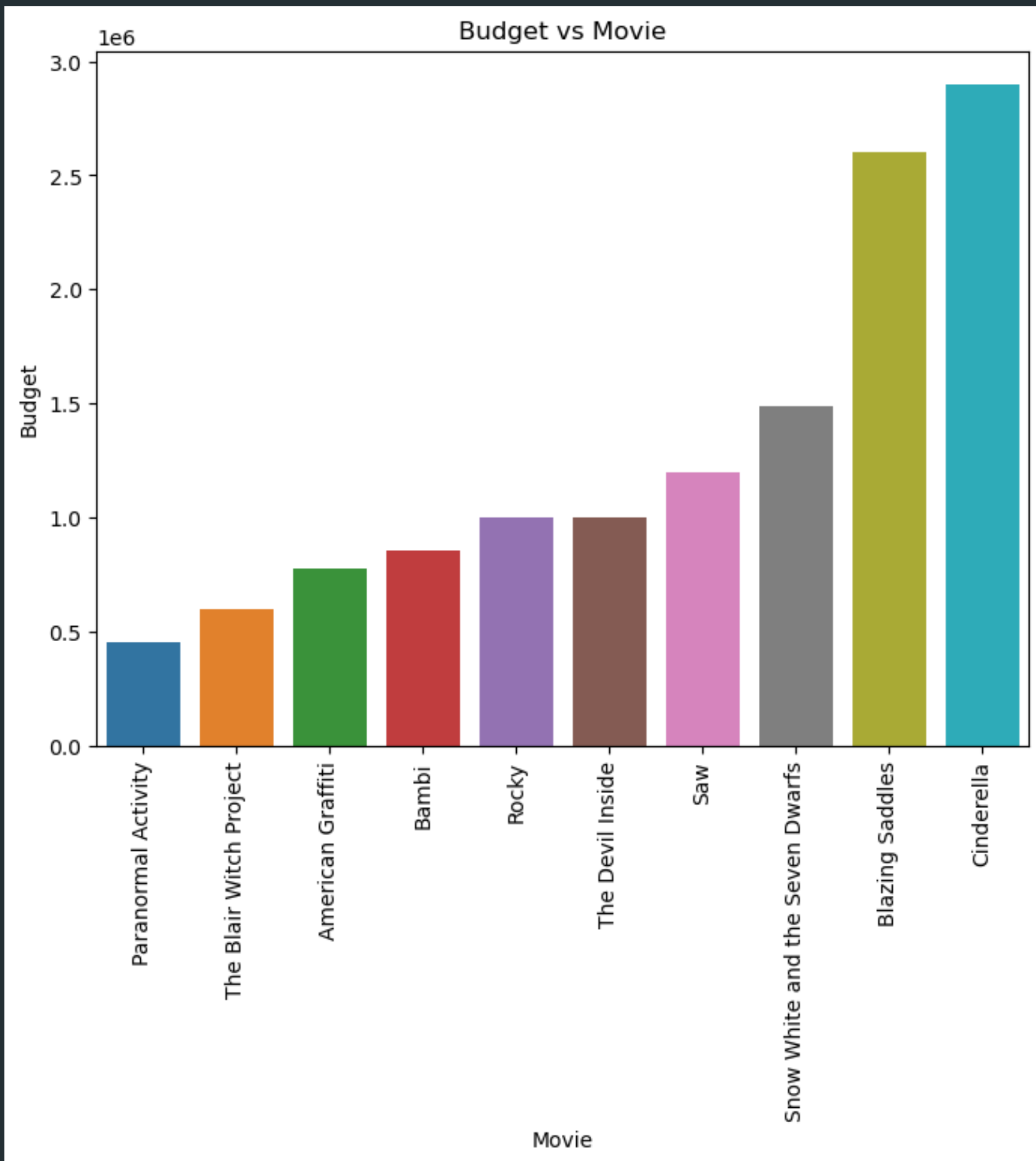
Movie Popularity against Production budget

Based on the analysis of the two preceding charts, it is clear that there is no significant correlation between the budget allocated to a movie and its popularity among viewers. Regardless of the amount of money invested in a movie's production, its level of popularity is influenced by numerous other factors that require further investigation. Therefore, it cannot be assumed that spending more money will guarantee the success or increased popularity of a movie.

Gross Returns

Domestic Vs Worlwide Gross Returns

The observation remains consistent in the two preceding charts, indicating that returns on investment are not solely reliant on the initial investment itself. This emphasizes the importance of considering additional factors such as a compelling storyline, talented cast, and popular genres in order to achieve success..

Plot of the Budgets of the Top performing movies

This presentation focuses on budgeting and showcases movies that have generated significant revenue relative to their initial budgets.
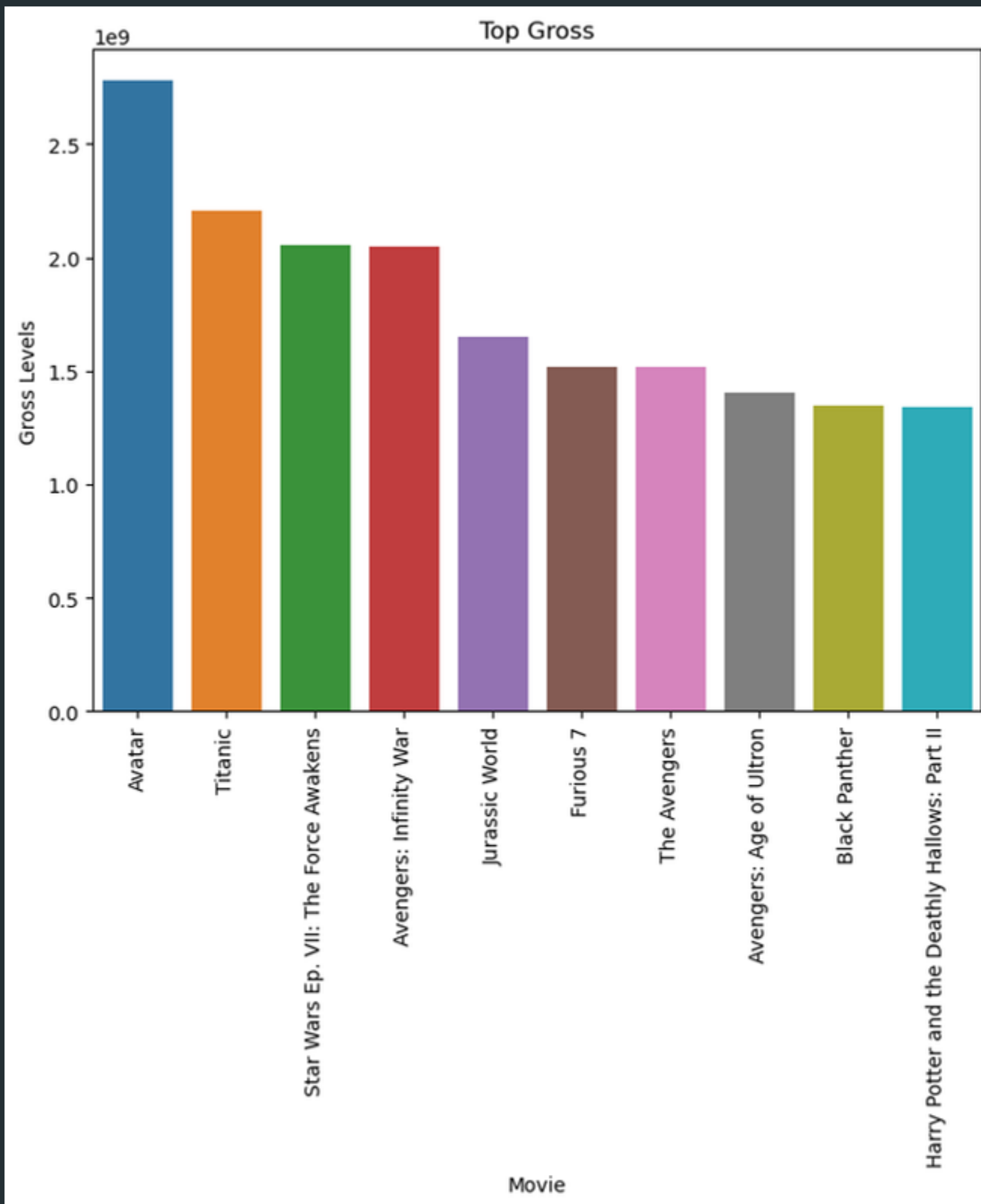
Analyzing the investment decisions made in these cases can assist in mitigating the risks associated with movie production investments.

Plot of Gross earnings of the Top performing movies

This highlights the highest revenue-generating movies.

Examining these movies, their genres, and release dates will provide further insights into the factors contributing to their success.

Another aspect to consider is the target audience and current trends associated with these specific genres.

Methodology

The employed techniques included data cleaning, data transformation, and data visualization. Data cleaning involved removing duplicate rows and irrelevant data for analysis purposes.

Transformation entailed modifying specific columns types to facilitate iterations and highlight variability and frequency counts.

Visualization was achieved using Python libraries; Matplotlib and Seaborn capable of generating graphs for analytical purposes.

<u>Results</u>

The findings demonstrated that factors contributing to success, such as revenue generation and popularity, rely on a combination of elements rather than any single factor.

The study revealed the significance of monitoring trends and identifying appealing genres to cater to the audience. It is advisable to determine the optimal combination of factors, including storyline, cast, and budget, to ensure a successful outcome.

These results provide a promising direction for the business to pursue in order to achieve success in its endeavors.

Conclusion

For Microsoft to thrive in the movie industry after establishing their studio, they should prioritize captivating storylines, high production quality, and effective marketing. They should also consider popular genres and align with audience preferences before embarking on production. By combining these essential factors and executing them diligently, Microsoft can successfully compete with established industry giants over time.

Thank you for your attention.

Emmanuel Chasimba

email: emmanuel.chasimba@student.moringaschool.com

GitHub: @eamboga