MICROSOFT FILM PERFORMANCE INSIGHTS

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Background

The primary objective of the project is to conduct an exploratory data analysis (EDA) to identify the types of films that are currently performing well at the box office. The analysis will provide actionable insights to guide Microsoft's new movie studio in making informed decisions about the genres, themes, and characteristics of films they should focus on producing.

Expected Outcomes

❖ Genre Recommendations: Identify top-performing genres that Microsoft should consider focusing on.

❖ Optimal Budget Ranges: Provide insights into budget ranges that maximize profitability.

❖ Release Strategies: Recommend optimal release times to enhance box office performance.

❖ Audience Insights: Understand the target demographics for different types of films to tailor content accordingly.

Scope of Analysis

❖ Box Office Performance: Analyze the financial success of films over recent years, considering both domestic and international box office revenues.

❖ Genre Analysis: Examine which genres are most popular and profitable.

❖ Budget vs. Revenue: Investigate the relationship between production budgets and box office returns.

❖ Release Timing: Determine the impact of release dates and seasonal trends on box office performance.

❖ Audience and Critic Ratings: Assess genre prevalence based on audience and critic reviews, and vote count.

Outline

- ❖ Data Description
- ❖ Data Loading and Understanding
- ❖ Data Cleaning
- ❖ Descriptive Analysis and Summarization
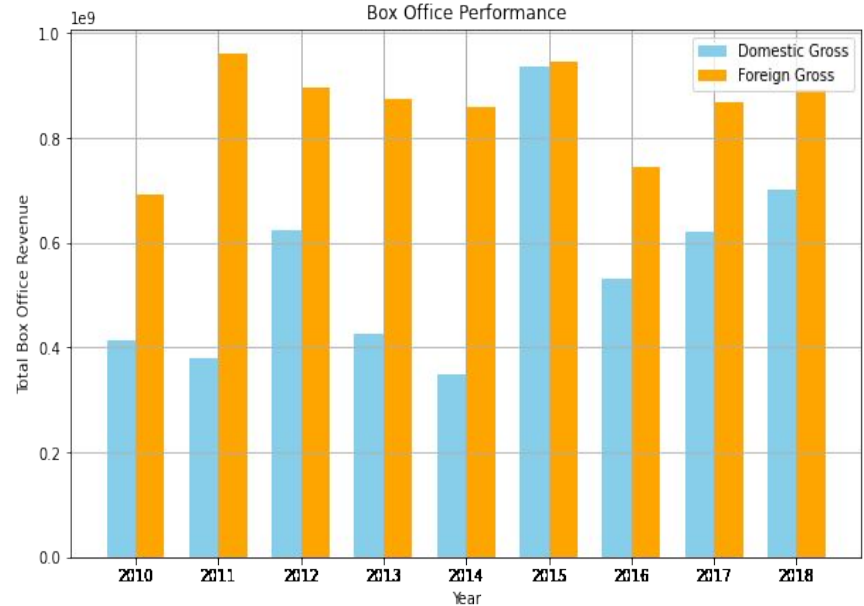- ❖ Recommendations

Data Description

The data is sourced from four prominent websites: Box Office Mojo by IMDb Pro, The Numbers, IMDb, and Rotten Tomatoes.

- ❖ Box Office Mojo by IMDb Pro - (URL:https://www.boxofficemojo.com/). Data Collected: Movie Title, Studio,Domestic and Foreign Gross and Year
- ❖ The Numbers - (URL: (https://www.the-numbers.com/). Data Collected: Movie release dates, Movie Title, Production budget, Domestic and Worldwide Gross
- ❖ IMDb - URL: (https://www.imdb.com/). Data Collected: Movie metadata (directors, known for, movie_akas, movie_ratings, persons, principals and writers)
- ❖ Rotten Tomatoes -URL: (https://www.rottentomatoes.com/). Data Collected: Movie synopsis and genre, User ratings and reviews, Movie metadata (director, writer, theater date and dvd date) runtime, Box Office, and Studio
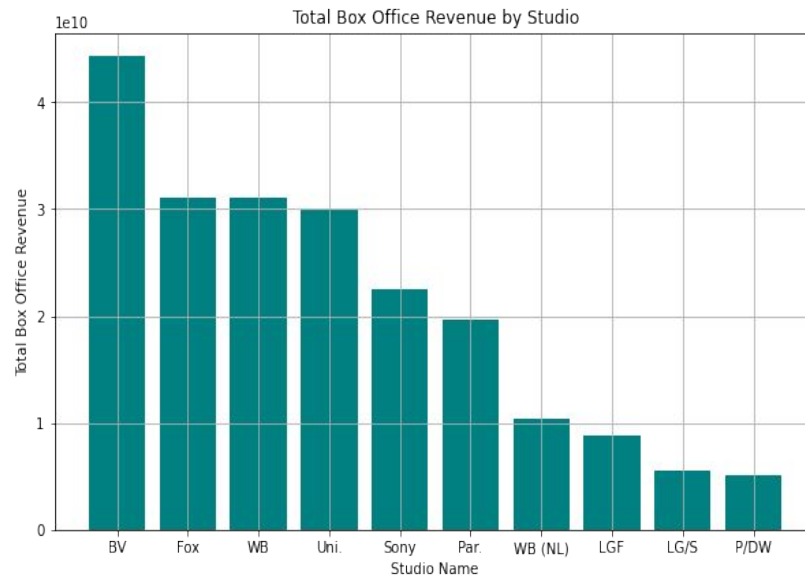
Descriptive Analysis

Box Office Performance

❖ International box office revenue is generally greater than domestic revenue.

❖ Global expansion of the film industry, emerging markets, and better marketing strategies witnessed in the early 2010's

❖ Possibility of market saturation, increased popularity of streaming services, and a possible improvement in the quality and variety of domestic content between 2015 and 2018

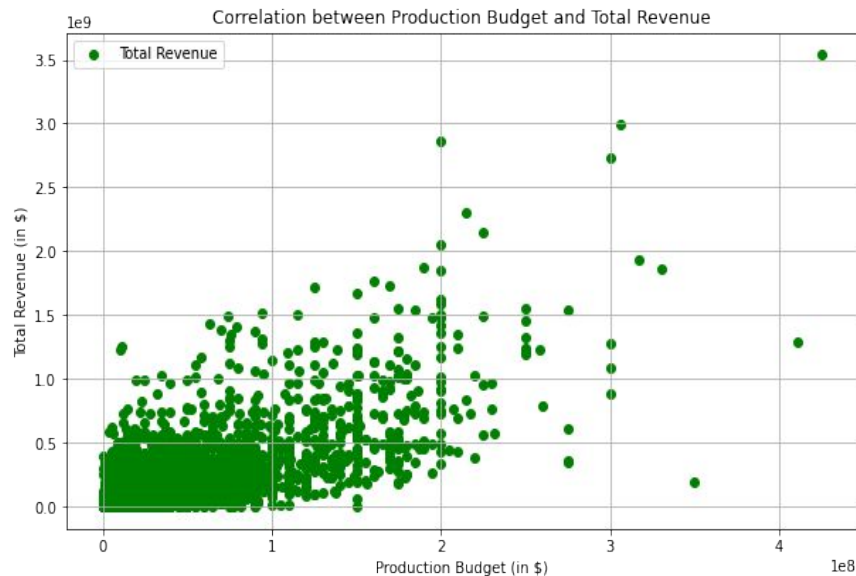# Descriptive Analysis

Top 10 Studios in Revenue

❖ The top 5 studios in terms of revenue (foreign and domestic) generated between 2010 and 2018 are BV (Buena Vista (Walt Disney Studios Motion Pictures)), Fox (20th Century Studios, formerly 20th Century Fox), WB (Warner Bros. Pictures), Uni (Universal Pictures) and Sony (Sony Pictures Entertainment).

Total Box Office Revenue by Studio

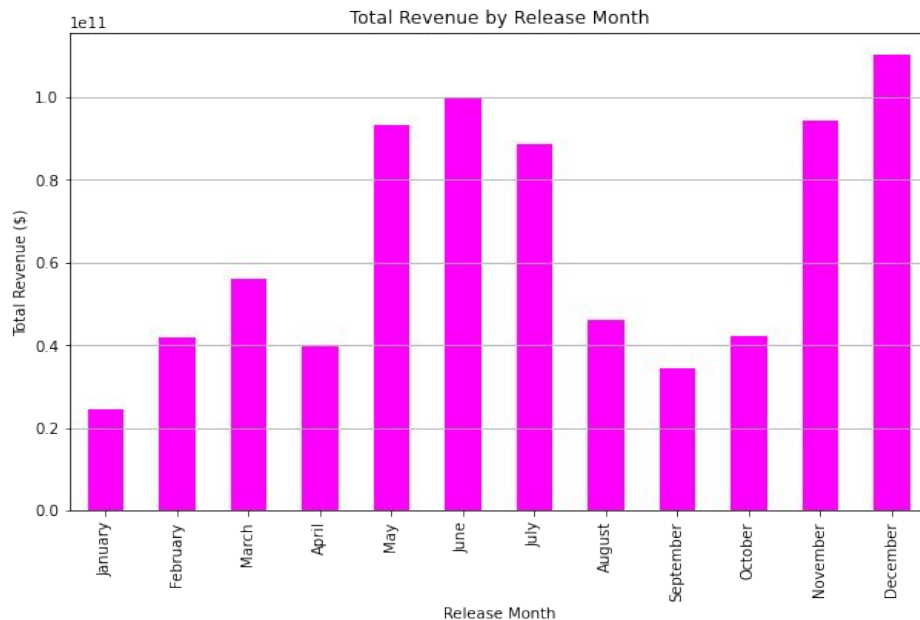# Descriptive Analysis

Production Budget and Revenue Correlation

❖ There is a strong positive correlation between production budgets and box office returns.

❖ Higher production budgets generate higher box office returns

❖ Films with high production budgets may have higher financial risks, since some films with high production budgets have very low revenue.

Descriptive Analysis

Release Timing
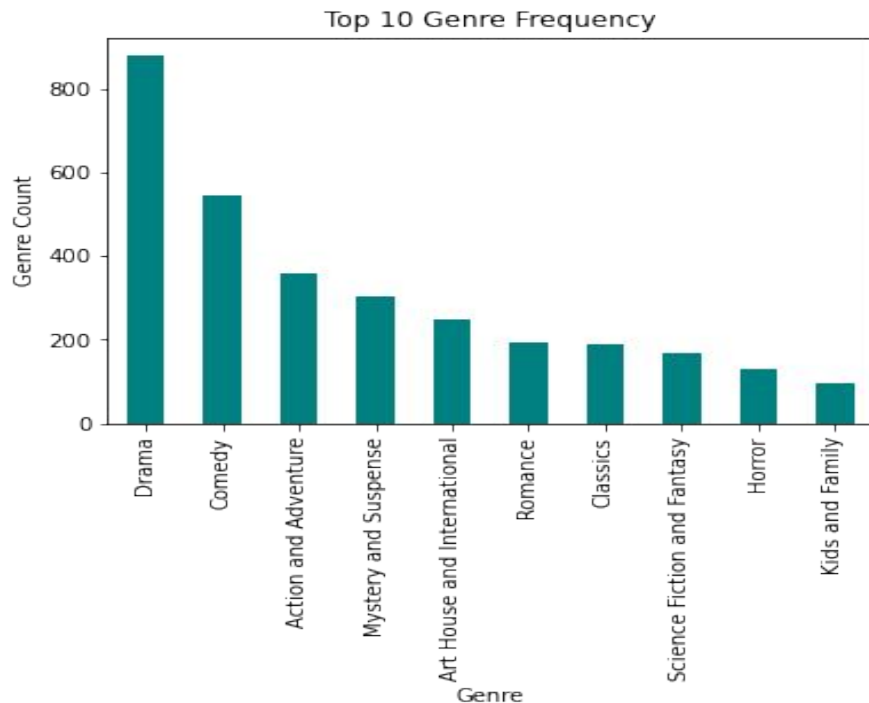
❖ There is a seasonal trend in revenue generated based on the release month

❖ Periods of increased consumer spending appear to generate more revenue compared to periods of reduced consumer spending

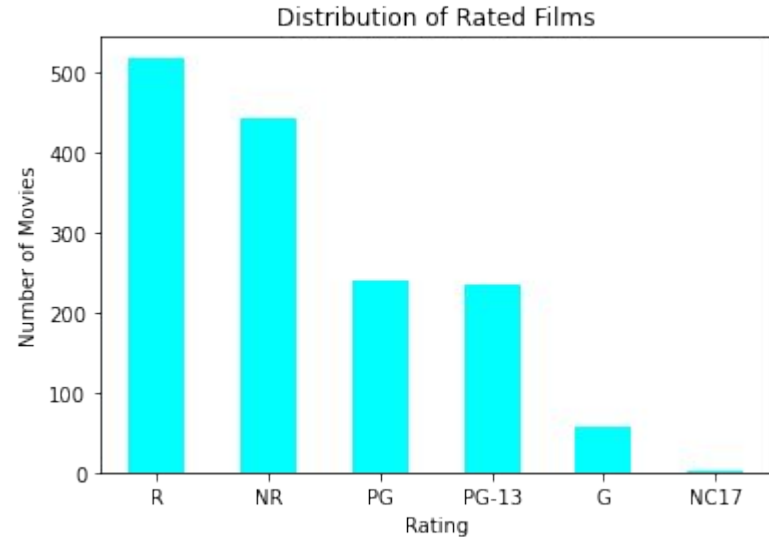Total Revenue by Release Month

Descriptive Analysis

Genre Popularity

❖ Drama is the most popular genre, followed closely by Comedy, and Action and Adventure.

❖ The top 10 genres indicate strong audience preference for story-driven content that often explores complex characters, emotional narratives, and real-life situations.

Top 10 Genre Frequency
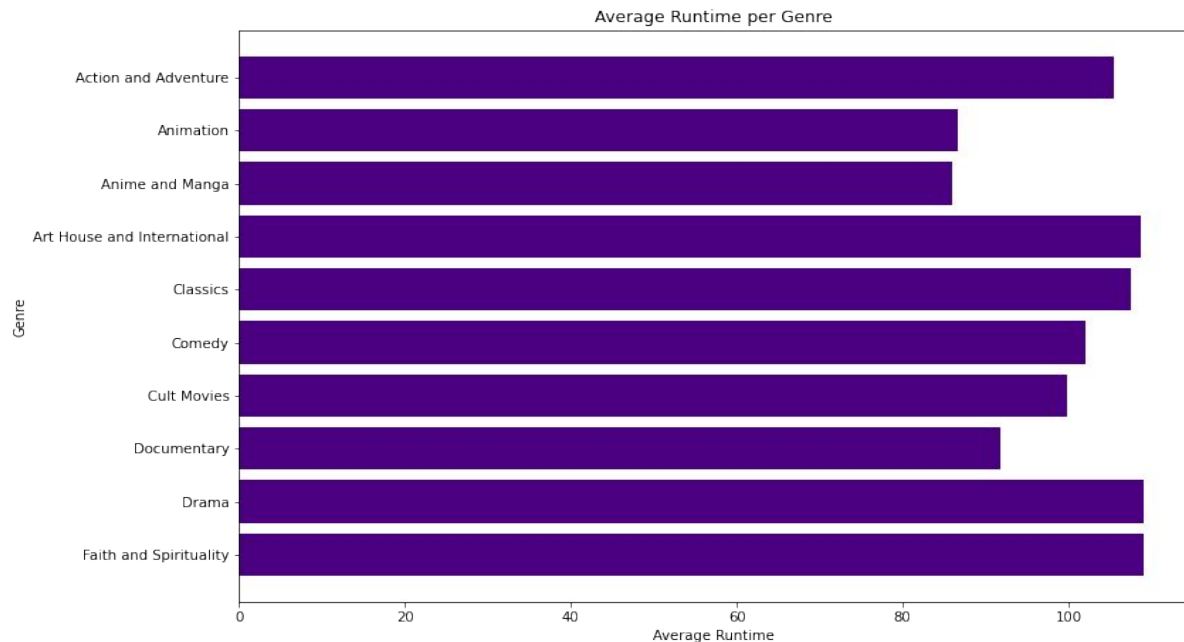
Descriptive Analysis

Rated Vs General Audience Films

❖ Films with rated content are more popular than general audience films

❖ This indicates the need for a dual strategy to appeal to all audience segments

Distribution of Rated Films

Descriptive Analysis

Genre Average Runtime
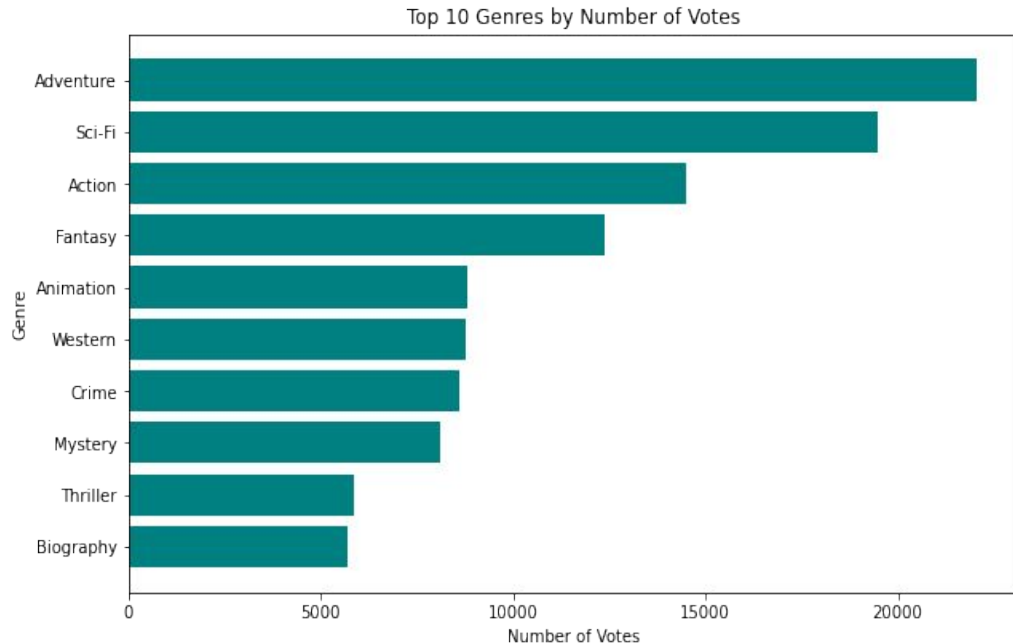
❖ Genres like Drama, Faith and Spirituality, Action and Adventure, and Art House and International have longer runtimes.

❖ Longer runtimes may be associated with higher production costs

Average Runtime per Genre
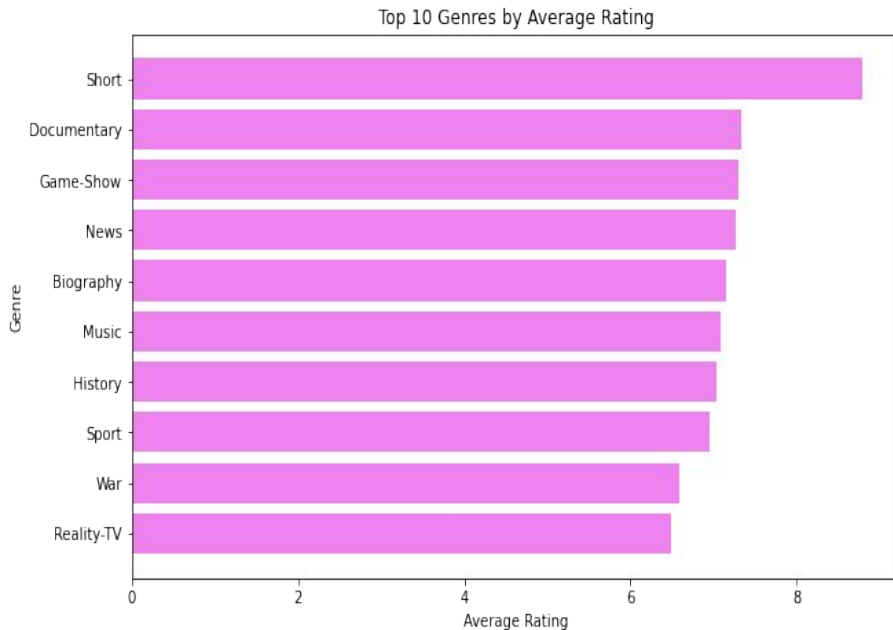
Descriptive Analysis

Top 10 Genre by Vote Count

❖ Adventure, Sci-Fi, and Action have the highest vote counts respectively.

❖ This indicates that these genres are not only liked by critics but are also popular among a broad audience base.

Top 10 Genres by Number of Votes

Descriptive Analysis

Top 10 Genre by Ratings

❖ Short films, Documentaries, and Game shows have the highest average ratings.

❖ This indicates that the genres are likely to be well-received by critics, and have a strong audience engagement

Top 10 Genres by Average Rating

Recommendations

- ❖ Prioritize producing films with broad international appeal
- ❖ Prioritize producing high-quality, original content that resonates with audiences, by potentially securing valuable intellectual properties or forming partnerships with established filmmakers and production companies
- ❖ Strategic Release Timing, during periods that coincide with increased consumer spending
- ❖ strategically focus the initial film productions on popular genres such as Drama, Comedy, and Action and Adventure. These genres exhibit high audience engagement and offer a favorable market entry point.

Thank You!

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