

Film Success Analysis: Language , Budget and Movie Category

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Overview

Microsoft, a global technology giant known for its software and hardware products, has ventured into the entertainment industry by establishing its own movie studio. Film production encompasses the critical business aspects, including box office performance, budget allocation, and audience engagement among other variables. Our methods encompassed exploratory data analysis and visualizations. Key findings include the most common language used in movies, the success of franchises as compared to stand alone movies, and the correlation between production budget and gross earnings. We have also included recommendations to guide Microsoft's film production strategy.

Business understanding

In response to the evolving landscape of the entertainment industry, Microsoft embarked on an initiative to establish its own movie studio. The objective was to explore the creation of original video content. This project aims to provide actionable insights to guide Microsoft's new movie studio in deciding what types of films to create.

Data Understanding

The data used was sourced from popular movie data sites i.e., Box Office Mojo (Box Office), The Movie Database (TMDb), and The Numbers (TN). The datasets contain columns and key variables helpful to our analysis; Movie title, original language, domestic gross, worldwide gross, popularity and production budget.

- ### Data cleaning

We started by inspecting the dataset to gain an understanding of its structure and content.

We then handled the missing data by identifying them and either dropping or imputing depending on the analysis.

Next, we detected duplicate records by Identifying and removing duplicate rows from the dataset. Duplicate records can skew statistical analyses and produce inaccurate results.

Finally, we converted data types to ensure that data types are consistent with the intended analysis by:

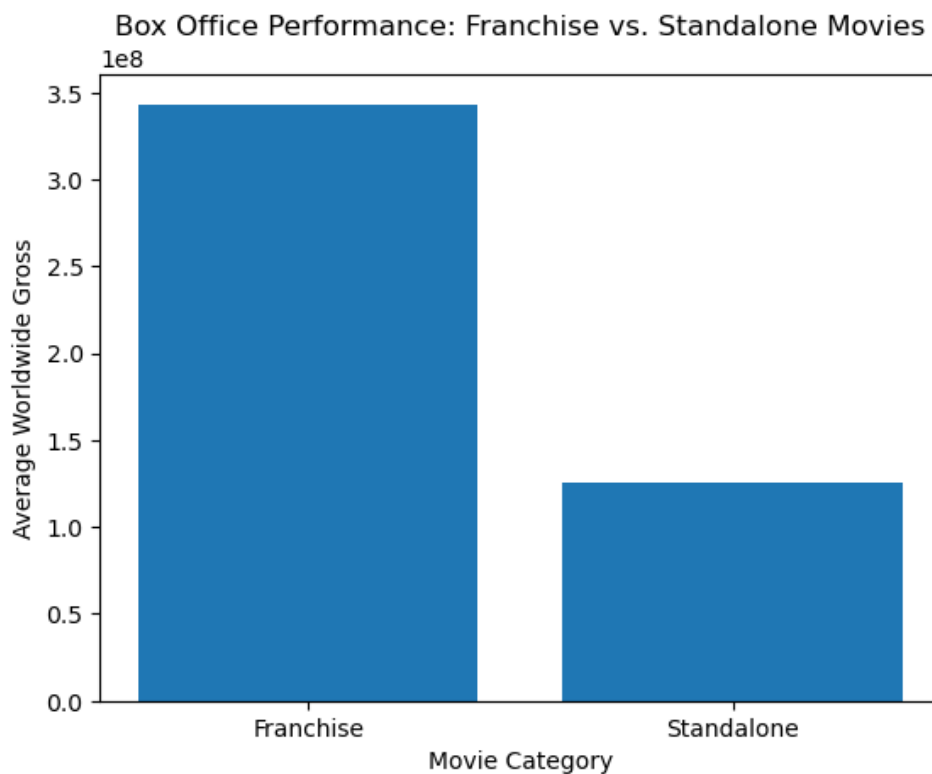
- Converting data to the appropriate data types (e.g., dates, integers, strings).

- Standardizing data formats to ensure that data is consistently formatted (e.g., date formats, currency symbols).

Data Analysis

1.Evaluating Franchise Success

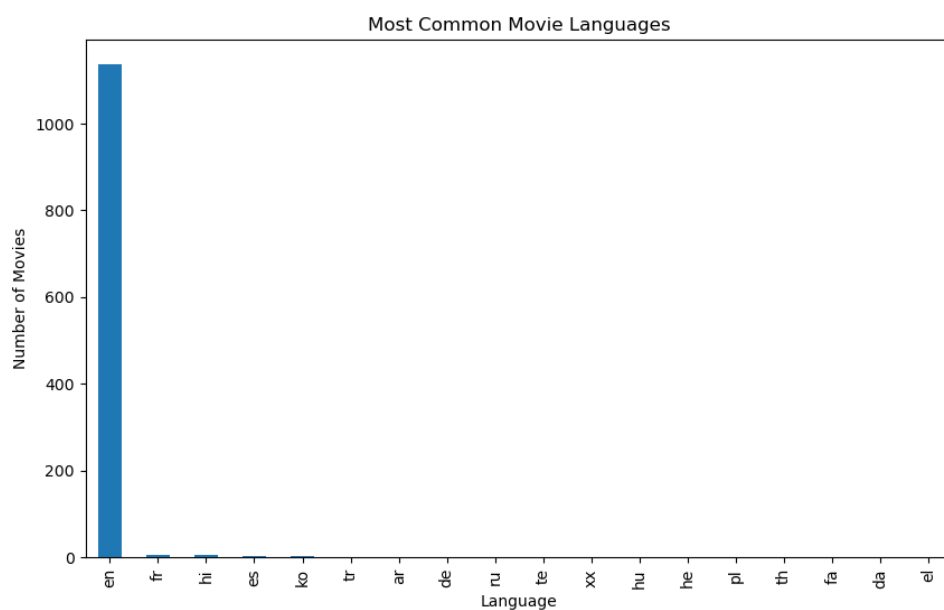
The chart below illustrates the average worldwide gross earnings for two movie categories: franchise and standalone. The horizontal axis (x-axis) represents the movie categories: "Franchise" and "Standalone." The vertical axis (y-axis) represents the average worldwide gross earnings in dollars (\$). Franchise movies have a significantly higher average worldwide gross compared to standalone movies. The data suggests that, on average, movies associated with a franchise tend to perform substantially better in terms of worldwide box office earnings compared to standalone movies.



2. Identifying most common movie language

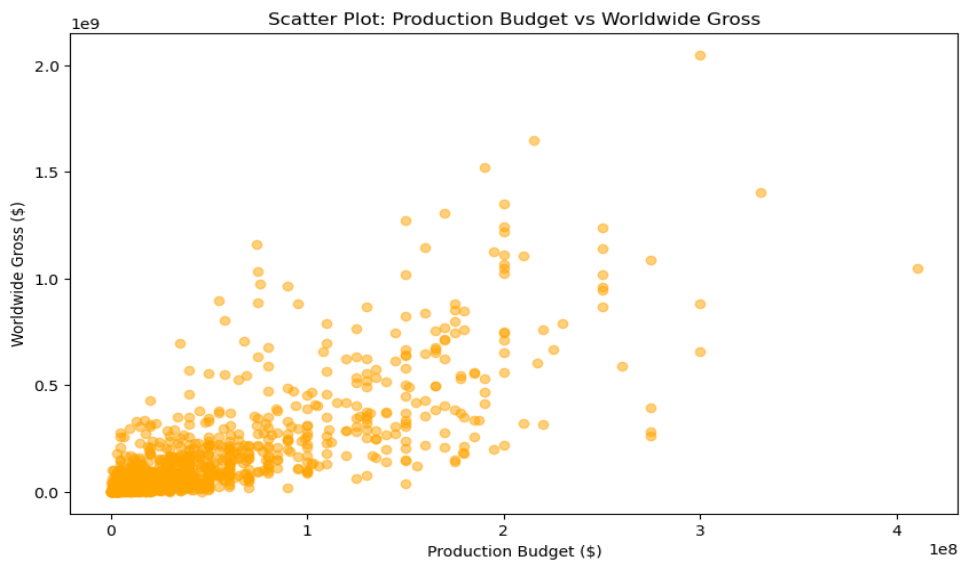
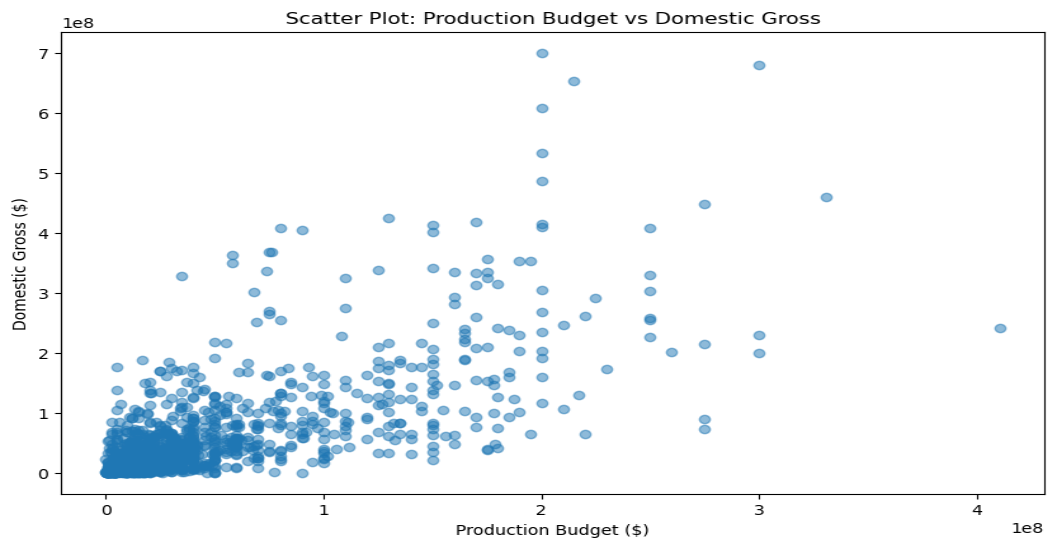
The chart below illustrates the distribution of movies across various languages. English, represented by the tallest bar, is by far the most common language in which movies are produced. Other languages, indicated by shorter bars, have significantly fewer movies associated with them. The data clearly illustrates that English dominates the film industry, serving as the primary language for a large majority of movies. The substantial number of

English-language movies suggests the global influence and reach of English-speaking cinema.



3. Investigating the relationship between production budget and gross earnings

These plots illustrate the relationship between production budgets and movie earnings, both domestically and worldwide. In both plots, there is a concentration of movies with low budgets and correspondingly lower gross earnings. However, movies with medium or higher budgets are spread out more evenly across different levels of gross earnings. Some high-budget movies have achieved high gross earnings, while others have only reached average or lower gross figures. The data suggests that a significant portion of movies operates within limited budgets, and their earnings tend to align with their budget levels.



Recommendations

- **Strategic Budget Allocation:** Analyse the relationship between production budget and earnings. Allocate budgets strategically, considering the specific needs of each project. High budgets may not always guarantee high returns; focus on quality and audience appeal.
- **Diversify Language Offerings:** While English dominates the film industry, consider producing movies in other languages, especially if there is a substantial audience demand. This can expand your global reach and cater to diverse audiences.
- **Leverage Established Franchises:** Given the success of movie franchises at the box office, consider acquiring or developing popular franchises to ensure a steady stream of successful films

Next Steps

Franchise Acquisition: If pursuing franchises, initiate negotiations or partnerships with franchise owners or creators. Ensure that agreements align with your studio's vision and objectives.

Budget Planning: Refine the budget allocation process based on the analysis of the relationship between production budgets and earnings. Establish budget control mechanisms and monitor spending closely.

Market Research: Conduct in-depth market research to understand audience preferences, market trends, and competitive landscapes. This will inform content creation and marketing strategies.