

Movie Industry Data Analysis

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Main Goal

To provide data related insights to the company stakeholders who want to enter the movie industry by creating a new movie studio.



Business Problem

The company has decided to enter into the movie production industry by creating a new movie studio. However, the stakeholders lack the knowledge on which types of films perform well in the box office industry. Without understanding films that are currently performing best commercially, the studio risks investing heavily in movies that fail to attract audiences or generate revenue.

Objectives

- To determine the relationship between the production budget and the profitability
- To determine the impact of ratings and vote counts on the gross revenue
- To explore trends in movie performance over the years
- To examine the performance of existing studios.
- To assess the combined effect of vote count, ratings and budget on worldwide revenue.

Data Understanding

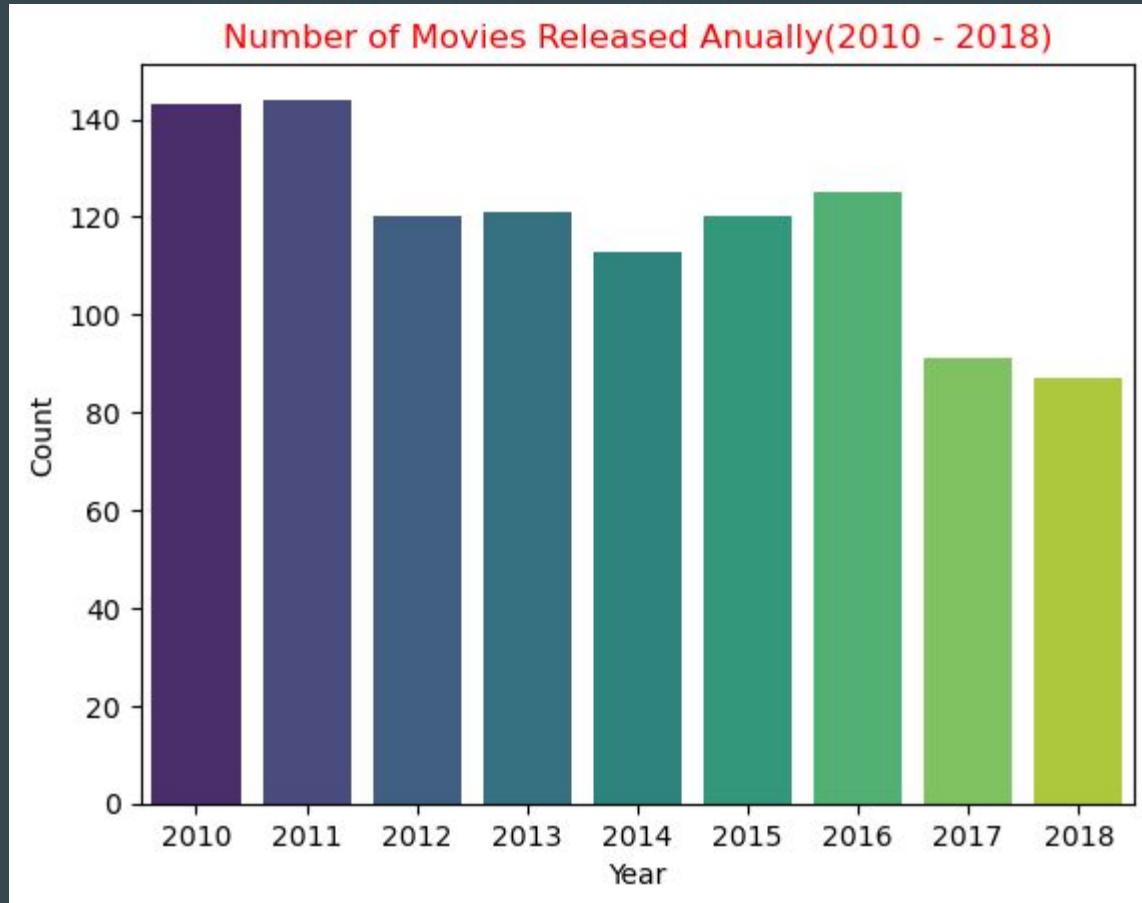
We source the data from

<https://github.com/learn-co-curriculum/dsc-phase-2-project-v3>. For streamlined data analysis, a new database is created and named movie_Data. The dataset contains four main tables:bom_movie_gross, movie_basics, movie_ratings, tn_movie_budgets.

Data Preparation and Cleaning

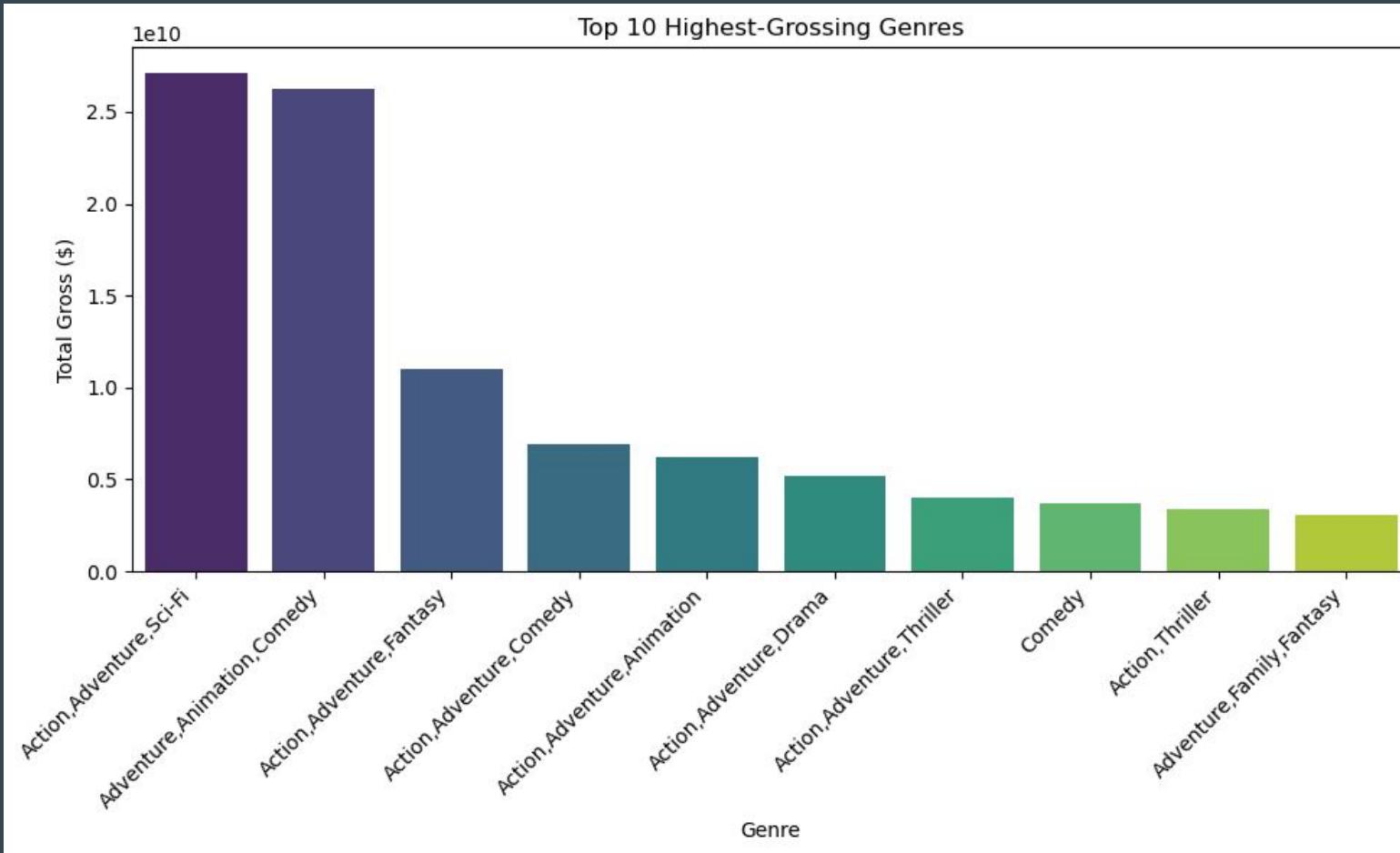
During this stage the data was cleaned by handling the missing values and data types correctly formatted. A comprehensive table, final merged, was also engineered from tables in the database to create reliable foundation for the analysis.

Movie Performance Trend Over The Years



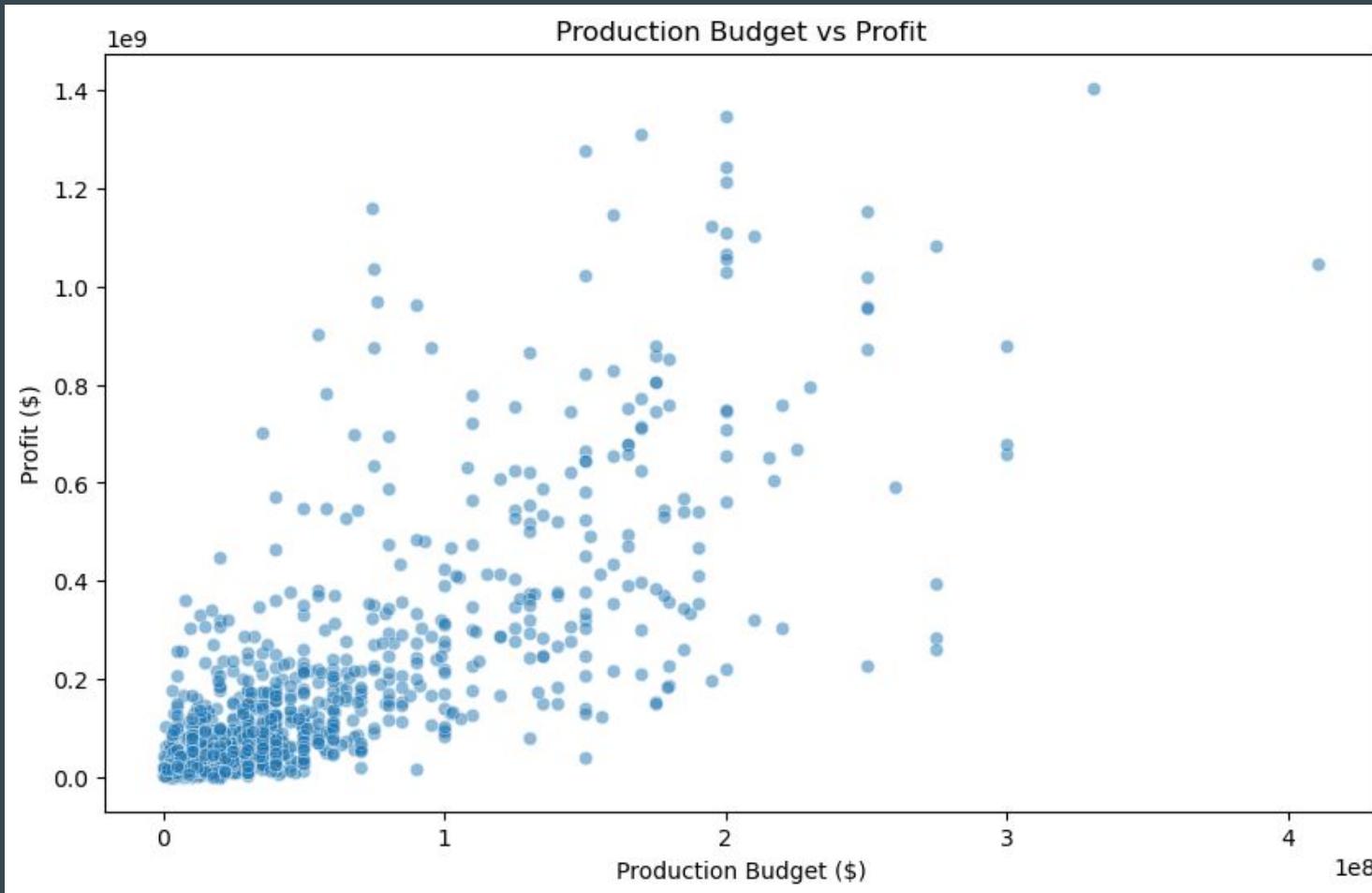
Movie production showed minor ups and downs from 2010 to 2018, reaching its highest point around 2015–2016. After that, the number of movies produced dropped, showing a clear slow down by 2018. This dip might reflect a strategic move toward quality over quantity or uncertainty in the market.

Most financially successful movie genres



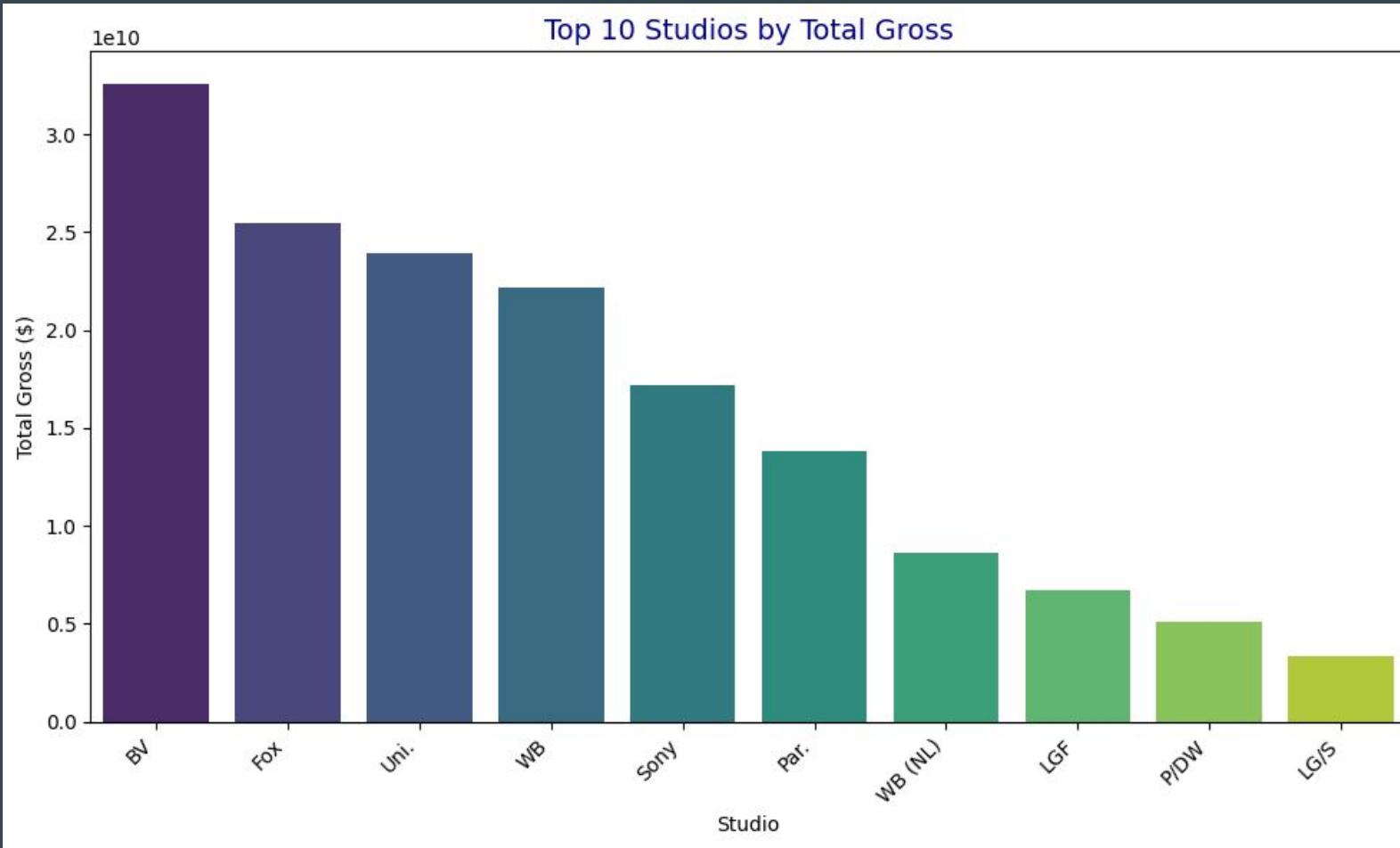
Profitability is not tied to a single genre, it comes from blending high energy elements with creativity and humor. These combinations appeal to wider audiences making them commercially powerful.

Impact of Production Budget on Profitability



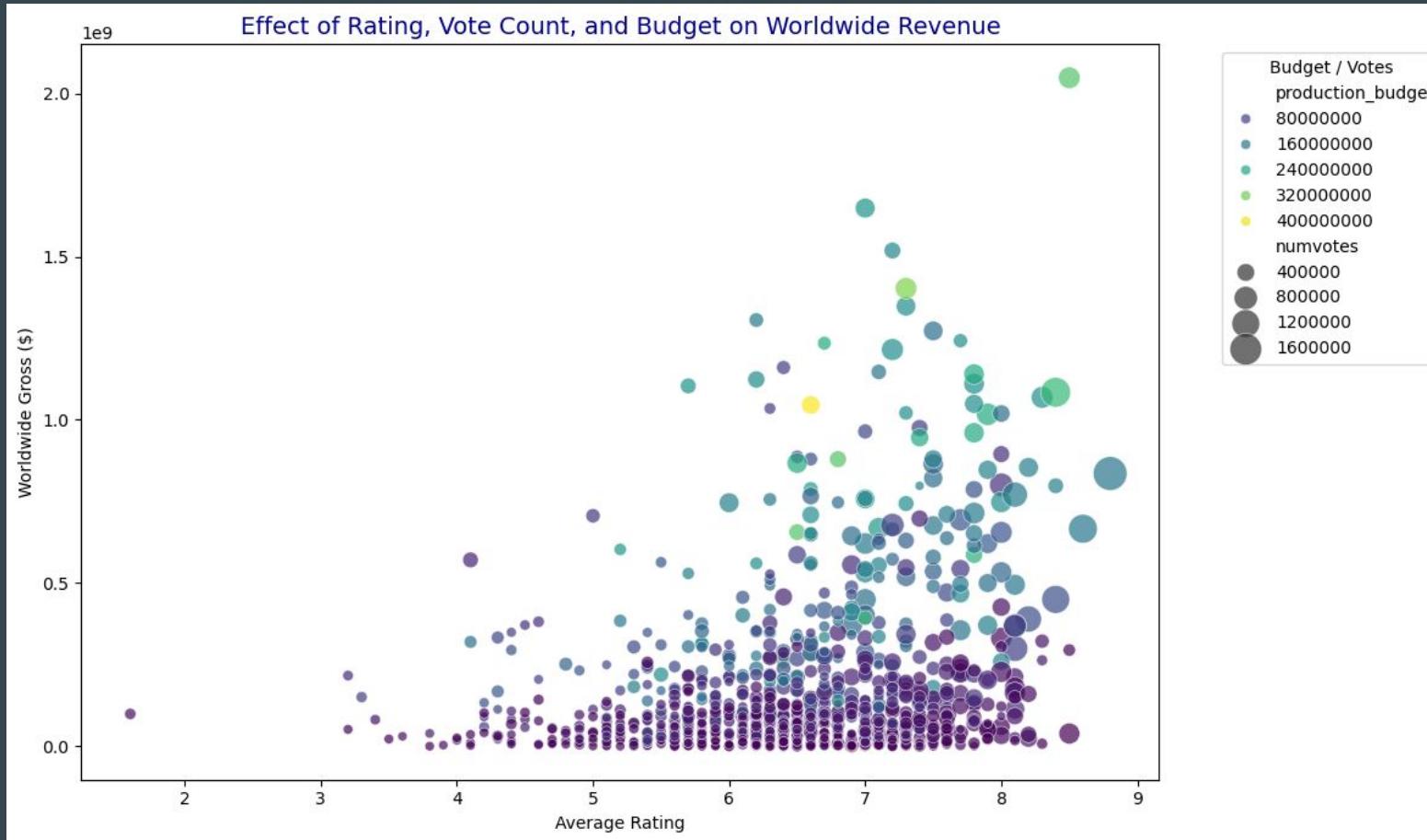
There is positive relationship between production budget and profit. The data points however vary showing that spending more increases the potential for profit but not the certainty of it.

Performance of existing studios



There is a sharp drop after the top studios showing that only few studios dominate the box office.

Impact of Average Rating, Vote Count and Production Budget on Worldwide Revenue



There is a general positive relationship between all variables showing that high revenue is not just about money spent, it's a mix of quality investment and audience interest.

Summary and Conclusion

The analysis highlights main factors driving movie success in the box office:

- Budget vs Profit: Higher production budgets generally lead to higher profits.
- Ratings vs Revenue: There is a weak positive relation showing audience interest needs other key factors to guarantee success.
- Studio Performance: The industry is dominated by few major studios.

Recommendations

- Smarter Budget Use: Invest in high-potential films while maintaining cost efficiency to avoid expensive flops.
- Boost Audience Engagement: Improve storytelling quality and use digital marketing to increase ratings, votes, and visibility.
- Invest in Winning Genres & Franchises: Focus on Action, Adventure, Sci-Fi, Animation and expand successful franchises or universes.
- Diversify Strategies: Explore niche markets, streaming platforms, and lower-budget creative films; partner with bigger distributors when needed.
- Use Data for Decisions: Track performance metrics to forecast trends, reduce risk, and guide future investments.

Thank you.

