

Analysis of the Relationship Between IMDb Ratings and Movie Budgets

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Do higher-budget movies generally receive better ratings?

Summary: What I want to research in this project is whether one of the fundamental ideas of the cinema world, that a high budget corresponds to high audience approval, holds true specifically for the films on the IMDb Top 250 list. The IMDb Top 250 list represents the films that have received the highest ratings from movie audiences worldwide, both in terms of critical and popular acclaim. I also believe that for someone who wants to watch films, the IMDb Top 250 list can be a very accurate and general source. Therefore, comparing the budget and rating data of the films on the list provides a good cross-section to understand the relationship between investment cost and artistic / audience success. Movies are produced across a wide budget range, from independent productions costing tens of thousands of dollars to major studio productions costing hundreds of millions of dollars. According to common belief, large budgets provide better visual effects, star-studded casts, and extensive marketing opportunities, thereby increasing a film's quality and, consequently, audience approval. However, audience approval (ratings) depends not only on the technical advantages that the budget brings, but also on the strength of the storytelling, the depth of the acting performances, the director's vision, and the emotional impact of the film. The main aim of the project is to quantitatively reveal the correlation between these two variables: As the budget increases, do ratings systematically rise, or can low-budget films achieve similar or even higher success compared to budget giants? In this study, the R programming language and statistical analysis techniques will be used. The analysis will primarily include visualizations of the relationship between these two variables. Then, by calculating the correlation, the direction and strength of the relationship will be determined. The obtained correlation value and graphical findings will provide concrete insights into the role of budget in cinema success. The outputs of the project will shed light on budget planning for film producers and investors, while also giving the audience an opportunity to understand the value of creativity beyond money. This analysis also aims to develop skills in data analysis, data visualization, and interpreting the statistical results of data in a real-world context in R Studio. I believe that this project may tend to show that the budget is just a tool in a film's success, but artistic value could be the real determining factor.

I will use for source <https://www.kaggle.com/datasets/rajugc/imdb-top-250-movies-dataset?resource=download>