

Group 14

Individual Report

ZHANG Hongyi

h1kari@connect.hku.hk
3036408959

November 27, 2024

1. My Work in the Project

My work in this group project can be divided into two parts: Writing the proposal and the final report, and making visualizations on the topic of *Factors Affecting Movie's IMDb Ratings*.

2. Writing Proposal and Final Report

I used notion.so^o as the collaboration platform to finish the co-writing with another group member LI Yinghua. And for the final report, with using notion.so^o as the collaboration platform, I used **typst**, a new markup-based typesetting system for the sciences, and a community template **simple-typst-thesis** to finish the report.



Figure 1: Screenshots of Group Proposal and Final Report on notion.so^o

3. Factors Affecting Movie's IMDb Ratings

3.1. Introduction

In this part, I divide the factors which influence the IMDb rating into 4 parts, including budget, content rating, region and era.

3.2. Visualization and Analysis

3.2.1. IMDb Rating vs. Budget

A scatter graph is employed to explore the relationship between a movie's budget and its IMDb rating. This analysis aims to identify whether higher production budgets consistently correlate with better audience reception or if low-budget films occasionally achieve critical acclaim.

From Figure 2, it is easy to see that movies with low IMDb ratings tend to have rather low budgets, while movies with relatively high budgets (e.g. over \$180,000,000) can achieve at least a moderate rating (e.g. over 5.0).

We can also see that movies with quite high IMDb ratings (e.g. *The Godfather*, *Fight Club*) have relatively low budgets compared to others. At the same time, movies with a super high budget, for example, *Pirates of the Caribbean: On Stranger Tides*, have an unsatisfactory rating, which may not correspond to their budget.

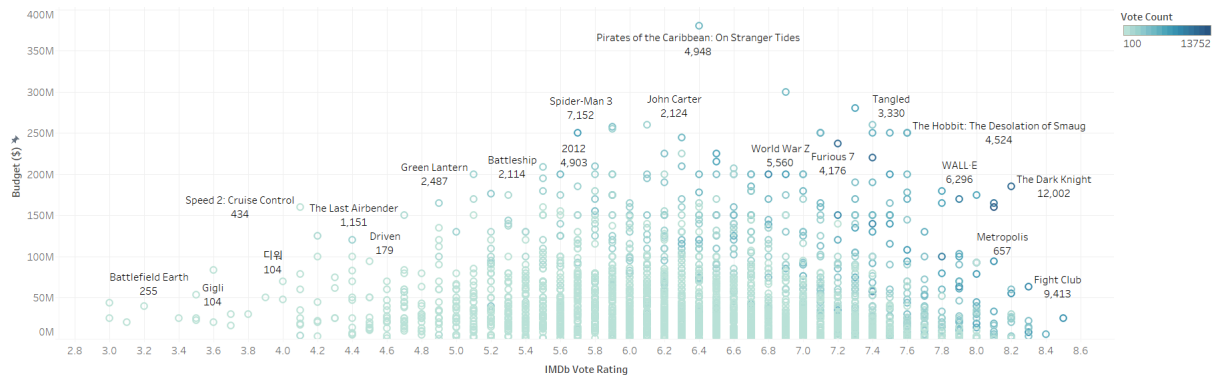


Figure 2: IMDb Ratings vs. Budget

I have the following conjectures about this phenomenon:

1. **High-budget movies often prioritize commercial success over artistic value:** High-budget films are typically aimed at a broader audience, focusing on special effects, action sequences, and star power. These elements may not always meet audience expectations for deep storytelling or innovation. Meanwhile, to ensure a return on investment, high-budget movies often follow proven formulas, remakes, or sequels, which can result in a lack of originality and lower audience ratings.
2. **Low-budget movies tend to focus more on content and creativity:** Low-budget films may allow directors more room for experimentation with themes and expression, attracting audiences who value artistic quality and compelling narratives.
3. **Audience expectation management:** Viewers generally have higher expectations for high-budget films. If the movie fails to meet those expectations, the ratings might suffer. On the other hand, audiences tend to have lower expectations for low-budget films. When these movies exceed expectations, they are more likely to receive high ratings.
4. **Bias in rating samples:** High-budget films attract a more diverse audience, leading to greater variability in ratings. In contrast, low-budget films tend to appeal to niche audiences, resulting in more consistent ratings. Also, film critics and avid moviegoers often appreciate the creativity and narrative depth of low-budget films, while being more critical of “blockbuster” movies.

3.3. IMDb Rating vs. Regions

Utilizing a map chart, this topic examines the geographical diversity of movie production by visualizing the average IMDb ratings of films from different regions. The analysis highlights regional trends, uncovering cultural or industry-specific factors that may impact audience ratings.

Figure 3 illustrates the average ratings of movies in different regions. We can see that the regions that we don't think produce great films can have a fairly high average rating, while the distribution of ratings in the United States is more similar to the overall distribution of global film ratings.

We can draw these conclusions about this phenomenon:

1. **Global Influence of Hollywood:** Hollywood dominates global cinema, reaching diverse audiences and shaping international tastes. Its films align global rating trends with U.S. preferences.

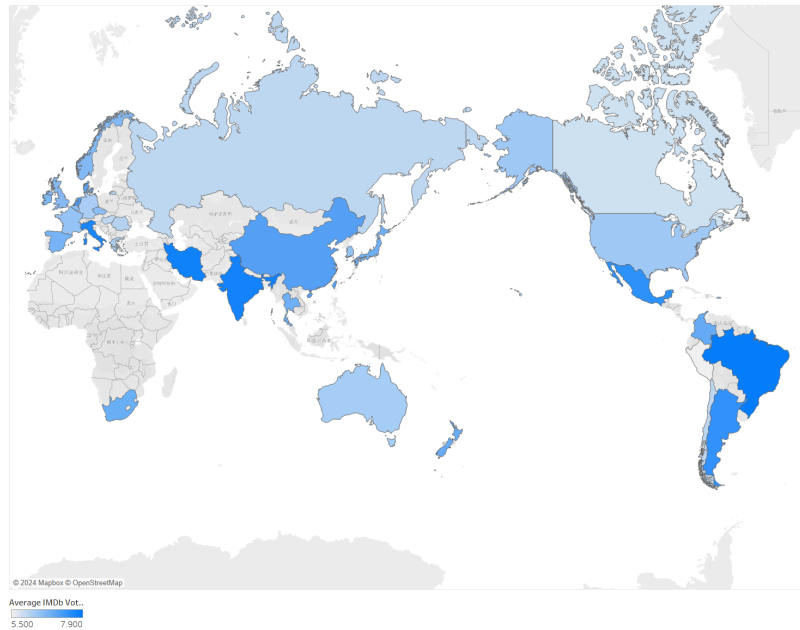


Figure 3: IMDb Ratings vs. Regions

2. **Diversity in Genre and Style:** U.S. films cover a wide range of genres and appeal to global markets, making their ratings reflect varied audience preferences.
3. **Volume and Accessibility:** The U.S. produces a large number of films widely accessible worldwide, leading to overrepresentation in ratings and influencing global trends.
4. **Audience and Rating Behavior:** U.S. films attract diverse global audiences, resulting in balanced ratings. Their broad appeal contrasts with niche films from smaller regions.
5. **Contrast with Non-U.S. Films:** Non-U.S. films often receive higher ratings due to selective exposure, while U.S. films face broader critique, normalizing their ratings to global patterns.

3.4. IMDb Rating vs. Content Rating

Bar charts are used to showcase the average IMDb ratings of films categorized by their content ratings (e.g., G, PG, R). This comparison helps identify which content categories resonate most with audiences and whether content restrictions influence viewer perceptions.

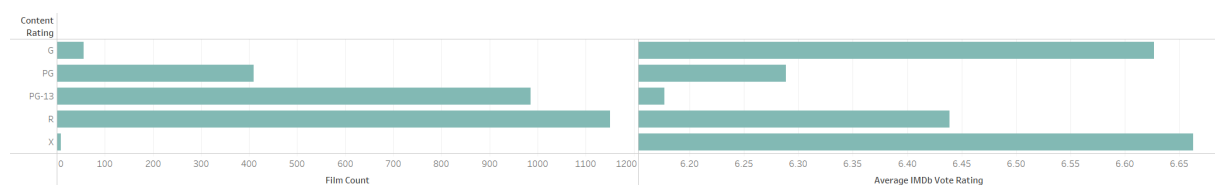


Figure 4: IMDb Ratings vs. Content Ratings

The chart shows that PG-13-rated movies have a high film count, indicating their dominance in the movie industry. This is likely because PG-13 films target a broad audience, including teenagers and adults, making them highly marketable. R-rated films have the highest count, reflecting their popularity among adult audiences, while PG-rated films are also significant, appealing to family audiences. The count of G-rated (General Audiences) and X-rated (Adults Only) films is very low, suggesting that these categories are either less commonly produced or face limited market demand.

Despite their low count, X-rated films achieve the highest average IMDb ratings. This aligns with their niche audience appeal and selective exposure, as discussed earlier. These films are often rated by viewers who appreciate their specialized content, resulting in higher scores. G-rated films achieve the second-highest ratings, reflecting their wholesome, family-friendly content that resonates well with audiences. These films may also benefit from less critical scrutiny. Despite their high production volume, PG-13 films exhibit the lowest average IMDb ratings, likely due to their focus on mass-market appeal, which can lead to diluted quality or overexposure to criticism.

3.5. IMDb Rating vs. Era

By employing bar and pie charts, this analysis investigates IMDb ratings across different eras, revealing trends in audience reception over time. Additionally, the proportion of highly rated films (ratings above 8.0) in each era is examined to understand the evolution of critically acclaimed filmmaking.

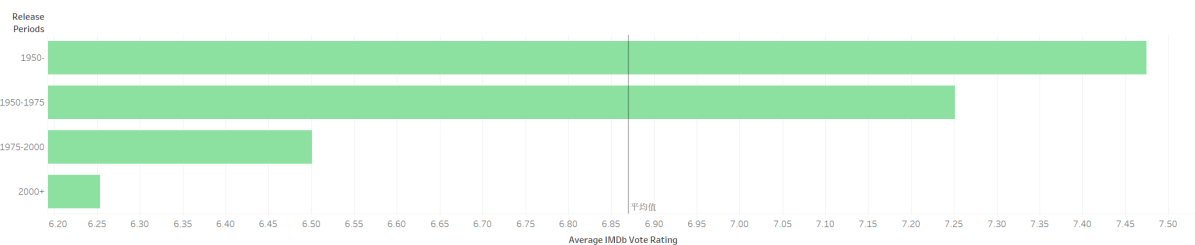


Figure 5: IMDb Rating of Movies Produced in Each Era

From the chart, we can know that the earlier movies can get a relatively higher rating compared with recent ones. Here are some possible explanations for trends:

- **Nostalgia and Historical Significance:** Older films, especially those from 1950 or earlier, may benefit from nostalgic bias and their role as pioneers in cinema. Viewers and critics often hold these films in higher regard due to their cultural and historical value.
- **Changes in Production Models:** As the film industry grew, the focus shifted toward blockbuster franchises and commercial appeal, potentially leading to a dilution of quality.
- **Impact of Modern Audience Expectations:** Post-2000 films face more diverse and critical audiences with higher expectations, particularly due to the ease of access to films globally. Modern audiences often compare films across a broader spectrum, leading to more polarized ratings.

3.6. Summary

The visualizations and analysis above provide a intuitive presentation of factors affecting IMDb ratings, which we believe stands for audiences' preference. The factors influencing budget, region, content rating, and era, highlight the complex interplay between audience expectations, industry practices, and cultural contexts. While high-budget, modern, and mass-market films often face harsher scrutiny or diluted quality, niche, low-budget, and older films benefit from creativity, focused appeal, and nostalgic bias. These insights underscore the subjective nature of film ratings and the varied pathways to audience acclaim.