A graph showing the budget allocation across zones and mpaa

Description automatically generated

Purpose: illustrate how much financial investment is directed toward various genres under different content ratings.

Justification: A treemap is ideal for this data because it efficiently conveys both the categorical nature of the genres and MPAA ratings, as well as the quantitative variable (production budget). The size and color of each rectangle represent the total production budget, allowing for a clear visual comparison across multiple categories. By organizing the data in a grid-like structure, it is easy to see the proportion of budgets allocated to each genre and rating. The use of hue as the color encoding is effective for this quantitative variable, providing a gradient that represents the varying magnitudes of budgets. The tooltip adds interactivity and enhances the detail in interpreting specific budget values.

Interpret : Action and Drama genres dominate the budget allocation, particularly within the PG-13 and R ratings, indicating a strong focus on content with broad audience appeal and mature themes. The high budgets allocated to these genres suggest that they are considered lucrative and popular choices for producers. Also receiving moderate funding across a spread of MPAA ratings are the Comedy and Adventure genres, reflecting a steady demand for lighter or family-friendly entertainment. This agrees with the versatility of these genres in drawing diverse audiences, although they are generally not budgeted as high as Action or Drama films.

The PG-13 and R ratings are the most frequent ratings for big-budget films across all genres, which testifies to a tendency for producers to invest large sums of money in productions oriented toward a wide but mature audience. This implies a marketing focus on film products, proving accessible both to teenagers and adults who form great divides in the cinematic audience.

Genres like Horror and Black Comedy tend to get relatively smaller budget shares and show more scattering across the rating groups. This might be an indication of the niche appeal of these genres, targeting more specialized audiences, and may not deserve huge financial investments due to their divisive nature.

Less popular genres like Westerns and Musicals get the least budgetary resources for each rating, suggesting they really are the least prioritized in terms of financing. Such infrequency could signal their niche appeal and narrow market demand, which, in turn, indicate smaller capital investments by production companies.

A graph of different colored squares

Description automatically generated

Purpose: To compare the distribution of IMDb ratings across different movie genres, showcasing how the frequency of movies per genre varies within each IMDb rating range.

Justification: The number of movies per IMDb rating is the key variable in this analysis, so it is represented using the aligned length of stacked bars, making it easy to compare quantities. IMDb rating is displayed along the x-axis as a continuous variable, which helps in identifying rating trends across genres. Color (hue) is used to differentiate between genres, which is appropriate for this nominal variable with multiple distinct categories, enabling clear genre comparison within each rating group.

Interpret:

Most films, regardless of genre, are concentrated between the 5.0 and 7.5 IMDb ratings; this means that on average, most films are rated good. Indeed, drama is the most frequent genre for all rating ranges, but leading in mid-range from 5.0 to 8.0 shows its mass market appeal and yet oscillates in reception. Genres like Adventure, Action, and Thriller/Suspense do well in the higher ratings, 8.0+; this indicates that when these films do well, they are rated a little more favorably. Conversely, Horror and Black Comedy are mostly on the lower ratings due to their highly polarizing genres or too specific niche appeal. Western and Musical genres are much rarer throughout the dataset, reflecting their more niche production and average reception since they are not in the majority of any rating category.