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Exploratory Visual Analysis

From first glances after looking at the data set for movies I was left wondering if there was any correlation between movie location releases and profit. My thoughts were that US would have the highest profits in the world for movies because we as a nation spend a lot of money on entertainment. First, I had to find out which movies were released only in the US. I did this by looking at US gross and worldwide gross. I found which movies had no US Gross and movies that had US gross and increased worldwide gross. That information helped me found out which movies were never released in the US and then I found which movies were released in both the US and outside the US.

This visualization was made to help show me how many movies were released in which locations. I found 54 movies that was missing data so their locations are unknown and leave my visualizations open to a small margin of error. Without the full data set for every movie nothing is 100% accurate. After looking at this visualization I was shocked to see how many movies were released in the US compared to the rest of the world. Knowing that information I started looking at profit. In order to get profit, I took US gross or worldwide gross (this depended on which location the movie was released in, worldwide for joint US and Non-US and Non-US. US Gross for US.) minus production budget for each movie.

From this visualization, I found that most movies in the US and countries outside the US had outrageous production budgets which often spent more on the production of a movie than what they had made in revenue for the movie. Movies that released in both the US and outside the US had the most profit. I found that based off of this data set a movie will not make money unless it is released in the US and it will make even more money if it is released in the US and outside the US. Looking at this visualization left me unsatisfied with my results. Now I thought of a new question to look at: Is there a correlation between genre and profit?

In order to look for a correlation between genre and profit I had to look at which genres are most commonly released. From my data-set I took genre and sorted each movie into a genre category. 275 movies were missing data on genre out of 3201 movies. I was expecting Action movies to be the most popular genre that is produced. I was surprised when my visualization proved otherwise. According to my visualization Drama was the most popular genre that is produced. Now I was left wondering so if Drama, Comedy, Action movies were the most popularly produced movie genres were they also the most profitable?

Before I could produce this visualization, I had to sort each movie into their respective genre then I found their worldwide gross and production budget I then subtracted worldwide gross by production budget to get profit. Then I added all movies profit by genre in order to find out which genre is most profitable. I even kept track of profit for unknown genre movies so there is 2.1 billion dollars that could be split into these genres or other genres. The visualization shows that Adventure, Action, and Comedy are the most profitable genres. From my research, so far now I know that profitable movies should be released in the US and outside the US, and it should be either Adventure, Action, or Comedy movie. At this point I wanted to check to see if ratings had any effect onto profit.

In this visualization, I took the most popularly released genre from the last visualization which was Dramas, then I found the top 5 most profitable movies. I would like to call myself a movie buff as I have seen thousands of movies but I was not expecting the Twilight series to be part of the top 5 most profitable dramas.

In order to produce this visualization, I had to sort Rotten Tomatoes Ratings by genre for each movie. Once I did that I took the average for each movie represent it as genre. This visualization was strange and I wasn’t entirely sure what to think about this data. This visualization I think is too inaccurate due to missing data. Because Documentaries, Unknown, Musical genres received the highest ratings. In order to double check the inaccuracies of this visualization I took the highest rated genre by Rotten Tomatoes and found its Top 5 most profitable movies.

The results were as I expected I was missing too much data to look at Rotten Tomatoes Ratings. If you look at the profit of these documentaries, they aren’t as high as the Top 5 drama movies profit. If there was a correlation between ratings genre and profit, then we would expect each of these movies to be profitable. From this point, I decided to check out IMDB Ratings by genre. In order to produce this visualization, I sorted each IMDB rating for each movie by genre and then I took the average rating for each genre.

This visualization shows Documentaries being the top rate genre. I was able to produce this visualization by sorting each movies IMDB rating into genre, then I took the average of all movie ratings in genre. I wasn’t expecting genre to be the number one highest rated genre again by two different rating databases. Although this visualization shows different placement for the other genres. Documentaries, Westerns, and Black Comedy were found to be the highest rated genres in this visualization. At this point I only had one rating type left to explore, the average number of popular votes for each movie by genre.

In this visualization, Action, Adventure, and Black Comedy were the highest rated genres. Action movies won the popular vote. This chart also closely resembles which genre is most profitable by having portrayed 5 out of the 13 genres. Now I have come to the solution that there is a correlation between location, genre, profit, and popular vote. My research shows that Movies that are released in both the US and outside the US, Movies that are of the following genres: Action, Adventure, Drama, and Comedy, tend to be most profitable and gain the most ratings and popular votes.

This visualization portrays the top 5 most profitable action movies by popular vote. These strengthens my solution showing that action movies make will make the most money, when they are released in both the US and outside the US. I show the amount of money each movie made by searching for the top 5 most profitable action movies and I take their worldwide gross and subtract their production budget respectively for each movie.

This visualization portrays the top 5 rotten tomatoes adventure rated most profitable movies. These strengthens my solution showing that action movies make will make the most money, when they are released in both the US and outside the US. I show the amount of money each movie made by searching for the top 5 most profitable adventure movies and I take their worldwide gross and subtract their production budget respectively for each movie.