Movie Analysis

By Meredith Newhouse

Overview

This analysis will investigate the following questions:

❖ Does movie runtime impact the rating of the movie, is there an ideal runtime?
❖ What is a suggested budget and how does it affect profit?
❖ How does genre affect popularity?

Data

The data used in this analysis was provided by Flatiron from IMDB and TMDB

Movies from the past ten years (2010 - 2020) were used to analyse the budget, profit, runtime minutes and genres.

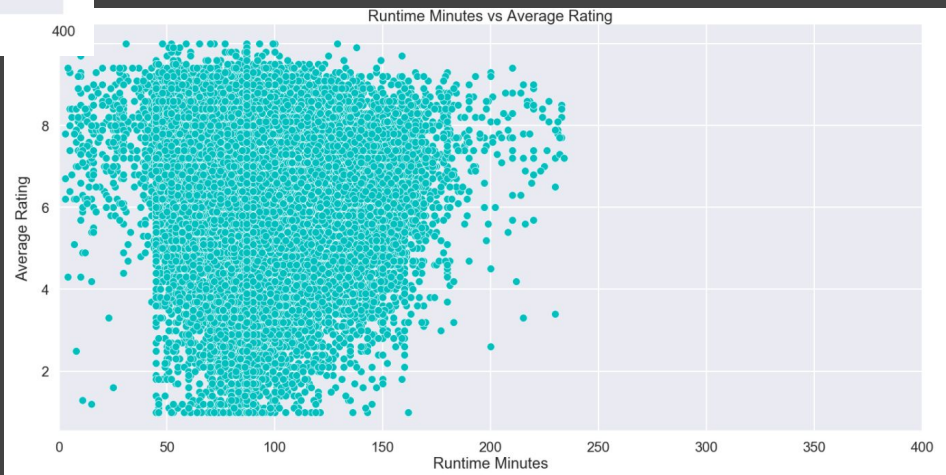Profit was calculated by subtracting the worldwide gross revenue from the budget
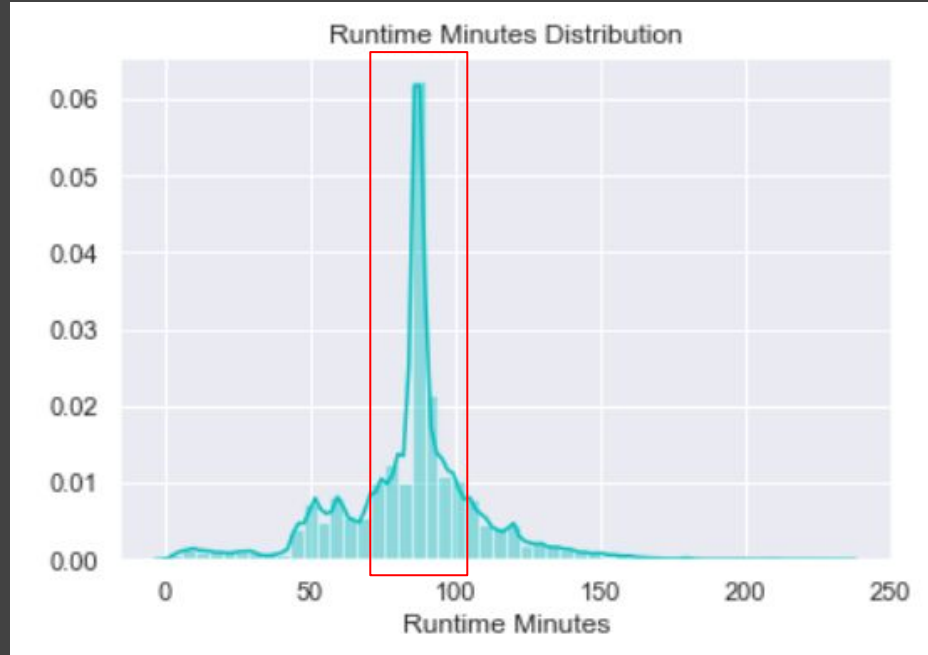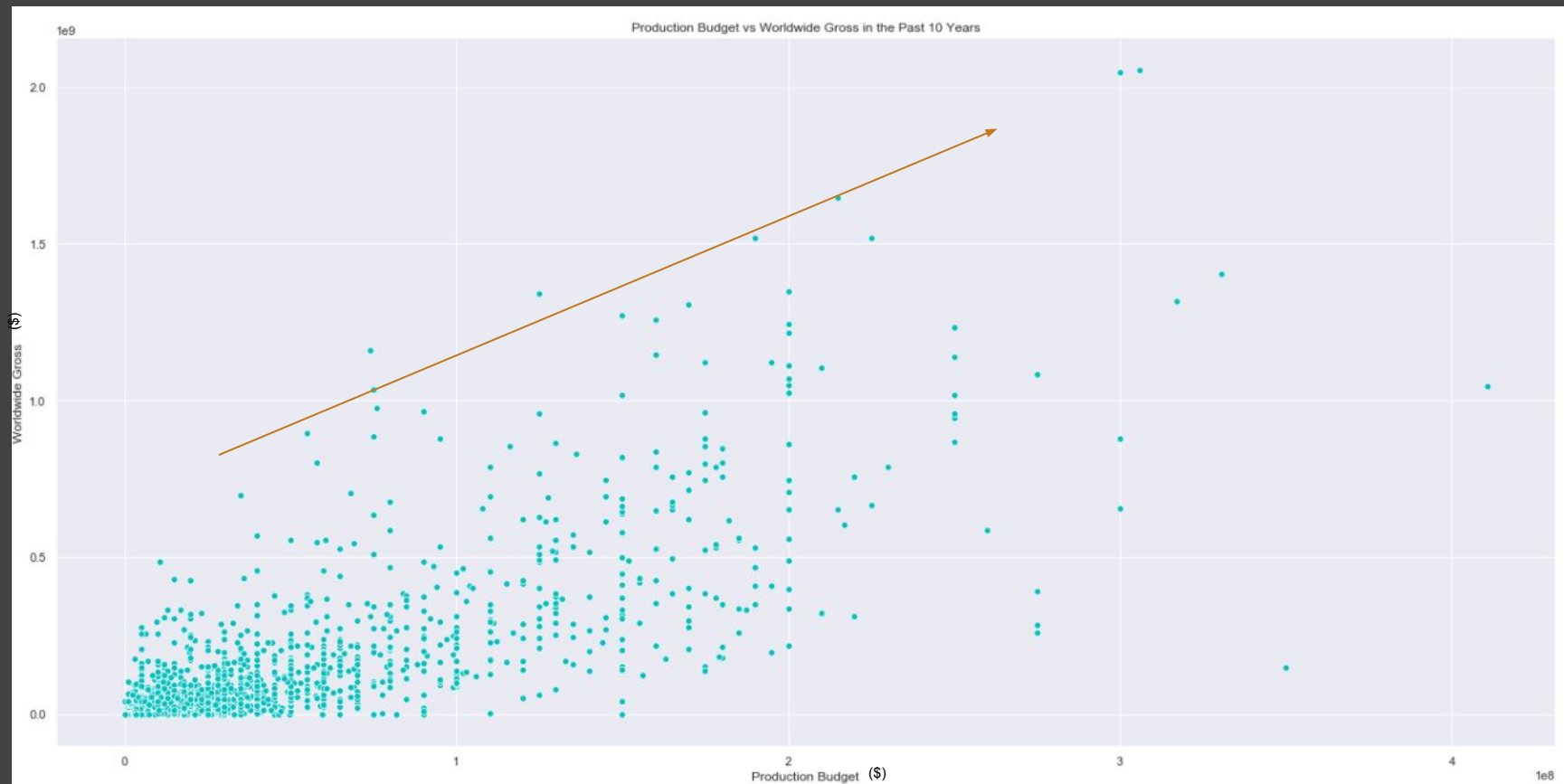
Movie Length

With Outliers

Without Outliers

Runtime Minutes Distribution

Mean: 85.1 minutes

Median: 87 minutes

Runtime Minutes Distribution
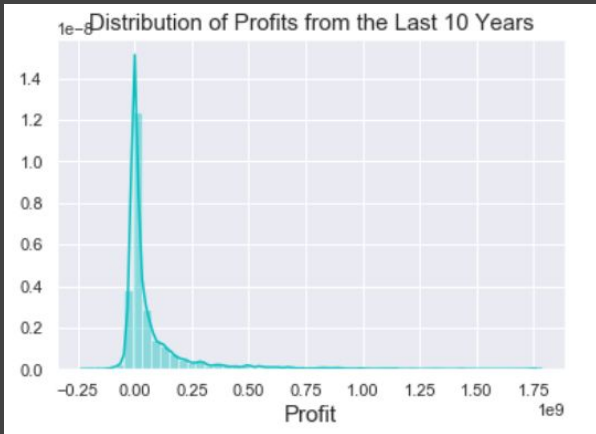
Budget Analysis

Production Budget vs Worldwide Gross in the Past 10 Years

Budget Analysis Cont.

Production Budget vs Profit in the Past 10 Years

Budget and Profit Distribution

Profit:
Mean: $75,359,890

Median: $8,366,398

Distribution of Profits from the Last 10 Years

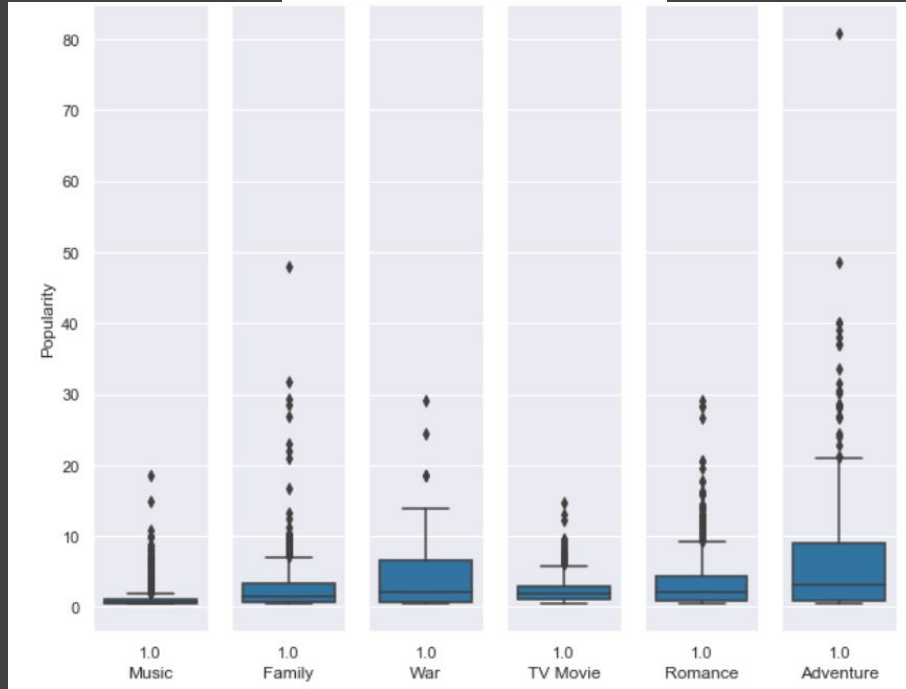The Budget and the Profit distributions are positively skewed so the mean is affected by the higher outliers and is much greater than the median

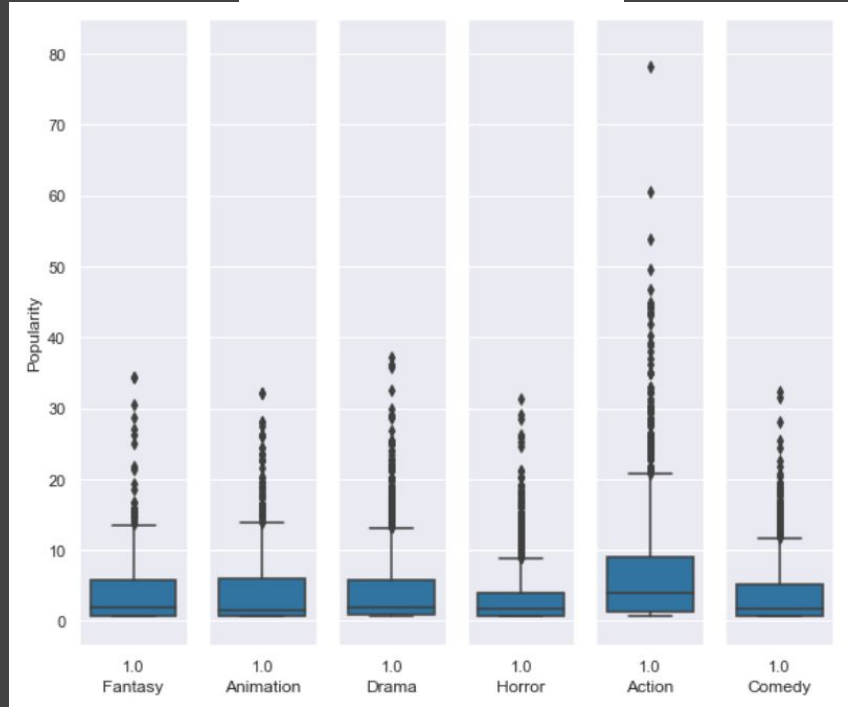Distribution of Movie Budgets from the Last 10 Years
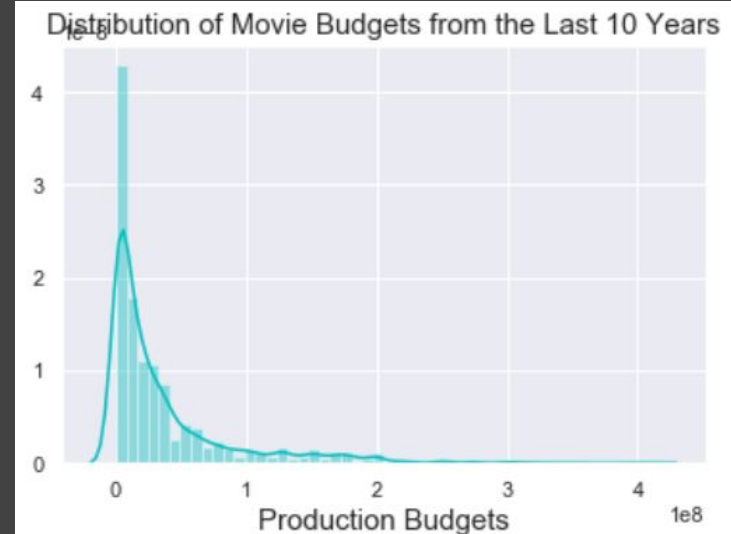
Budget:
Mean: $36,533,470

Median: $16,900,000

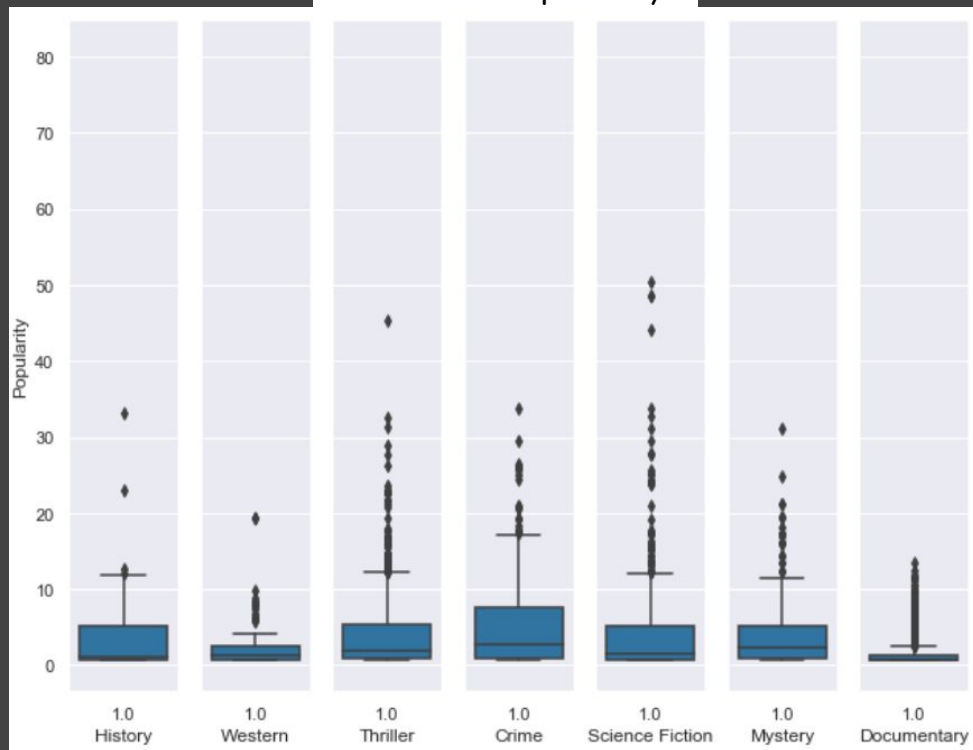# Genres Vs. Popularity

Genres vs. Popularity 1

Genres vs. Popularity 2

Genres Vs. Popularity Cont.

Genres vs. Popularity 3

Conclusion and Recommendations

❖ Runtime does not significantly impact average rating, though outliers indicate that if a movie is longer the average rating is often high. The recommendation is to aim for a runtime around the median runtime, 87 minutes, however if the film is longer, it should not be negatively impacted.

❖ There is a positive correlation between budget and worldwide gross revenue. There is also a positive correlation between budget and profit, although not as steep. Unfortunately some data for worldwide gross revenue was 0, which effects exact number recommendations. Profit does generally increase as budget increases. The standard deviation of the movie budgets is $51,544,150. This indicates there is about $50,000,000 of room for the budget to deviate from the average of $36,533,470 to adjust the budget for the production's specific needs, while staying around the average movie budget.

❖ Action and Adventure were two genres that were included in movies with the highest general popularity. Other popular genres include, Crime, Thriller, and Science Fiction. The recommendation is to include at least one of these genres in the film, especially Action or Adventure.

Thank You

❖ Check out my github repo here:
https://github.com/newhousem/movie-project
❖ Contact me: meredithnewhouse@gmail.com
❖ Thank you to Flatiron for providing the data sets used in this analysis.