Phase 1 Project

Microsoft Movie Studio

Nick Subic & David Shin

Business Problem

Create a New Movie Studio that Reproduces the Success of the biggest Movies at the Box Office

Analyze current movie data to find attributes of a successful movie

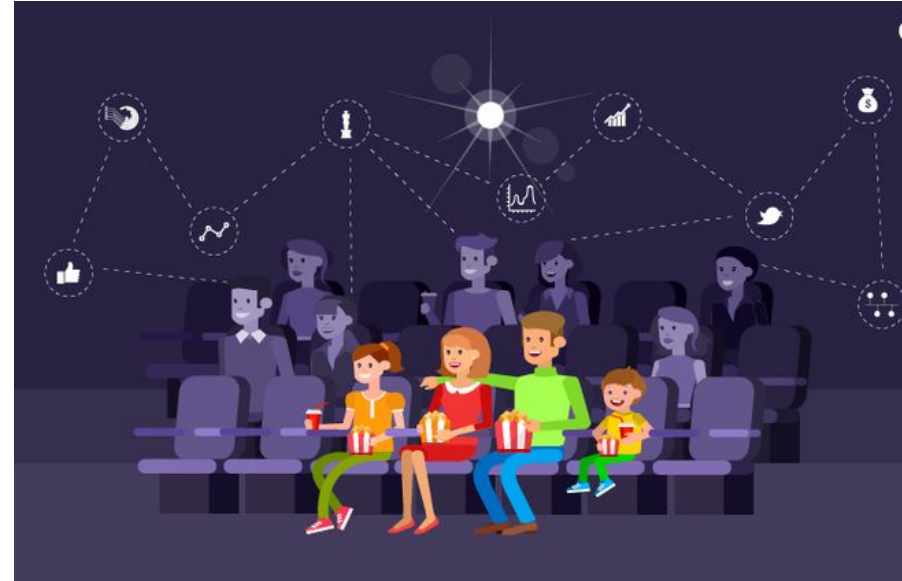Generate recommendations to reproduce that success

Hypothesis

- Movies are more profitable during certain months
- Some genres are more profitable than others
- There is a production budget window that maximizes profit
- Better ratings generate higher profit returns
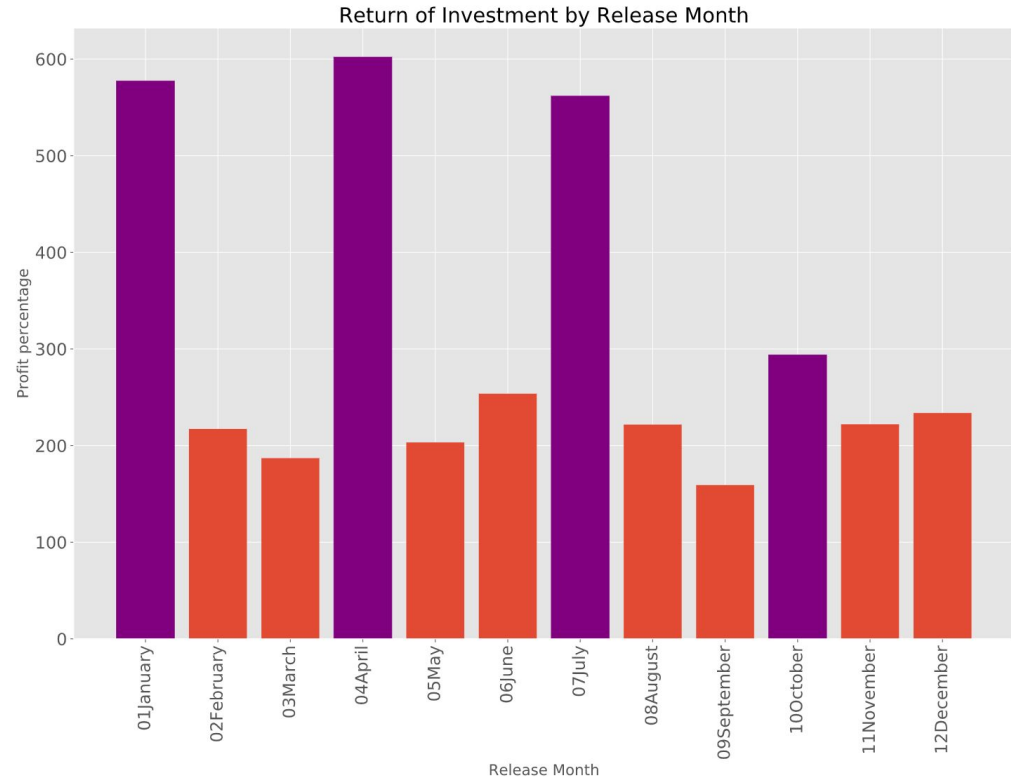

© David Izquierdo

Data Analysis

- Combined Production Budget and Gross data to generate profit figures
- Analyzed the relationships of our hypotheticals with profit
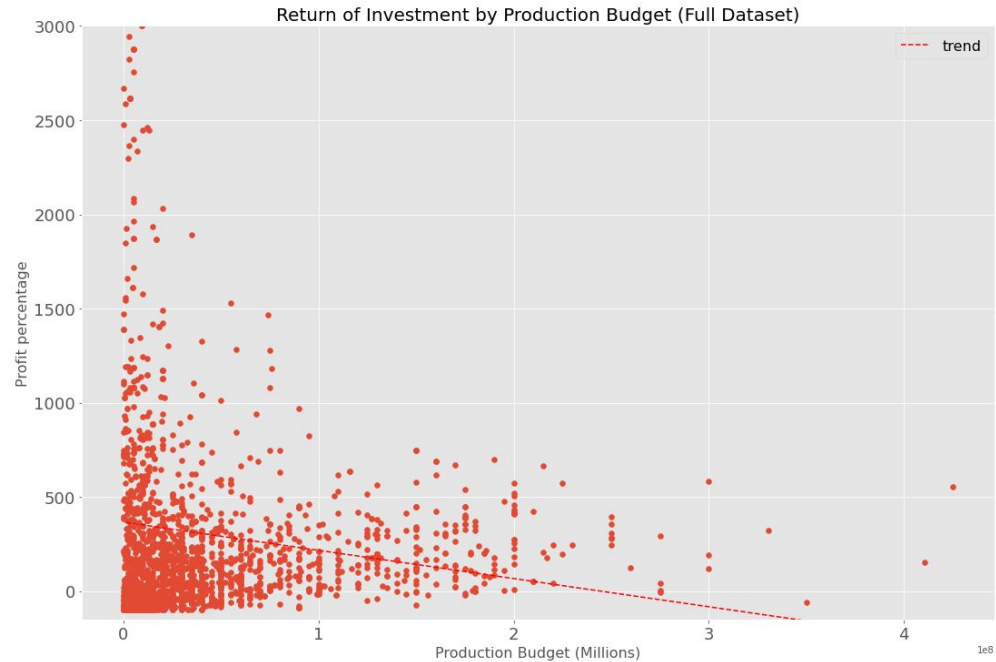- Plotted and Tested our Data

Release Month

- Release Month vs. Profit Percentage (ROI)
- Peak Release Months:
    - January
    - April
    - July
    - October

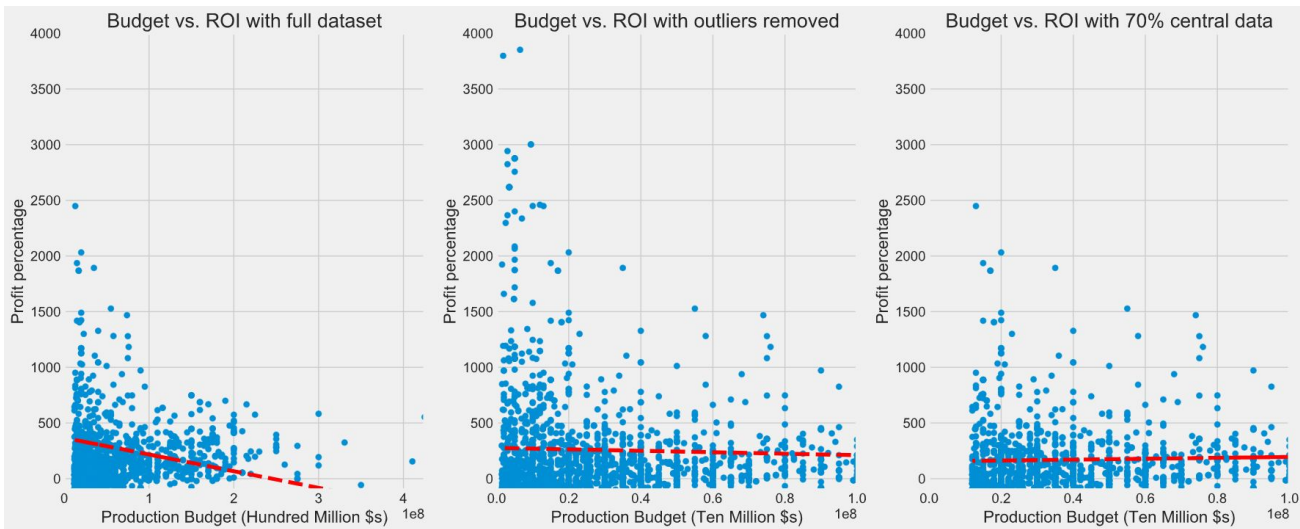Return of Investment by Release Month

Production Budget

- Production Budget vs. Profit Percentage (ROI)
- Initial results show a loss of profit as budgets increase
- Higher production budget =/= ROI

Return of Investment by Production Budget (Full Dataset)
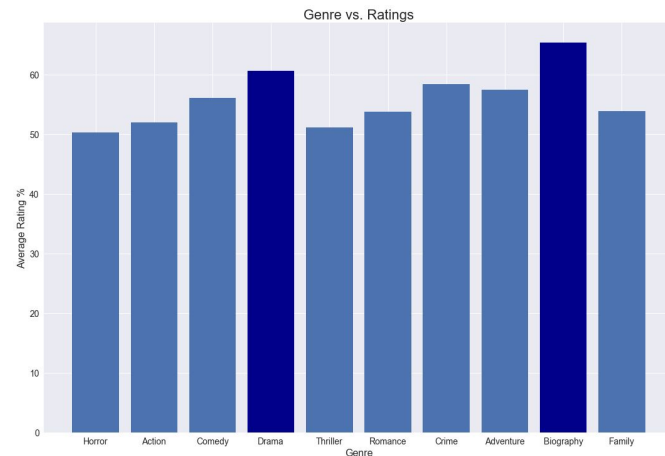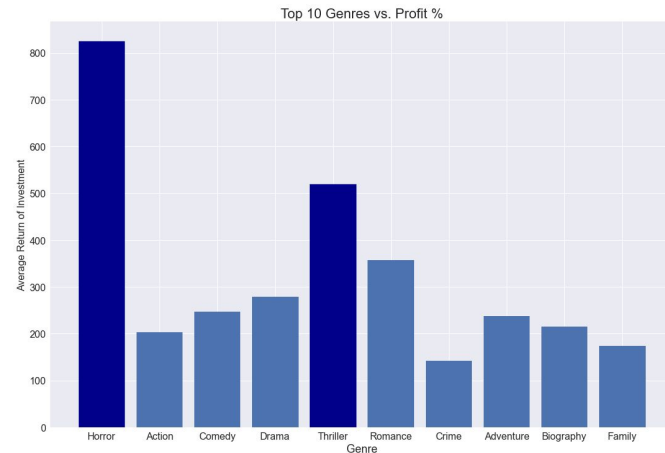
Production Budget

- Removed outlier data
- Found slight positive correlation between budget and profit percentage between 12 mil and 300 mil
- Likelihood of profit is higher in that window

Genres

- Plotted Genre vs Profit Percentage (ROI)
  - If movie had multiple genres, movie was plotted multiple times
- More profitable movies were in the Horror and Thriller genres
- Horror movies also received the lowest ratings
  - Very small correlation between ratings and profit

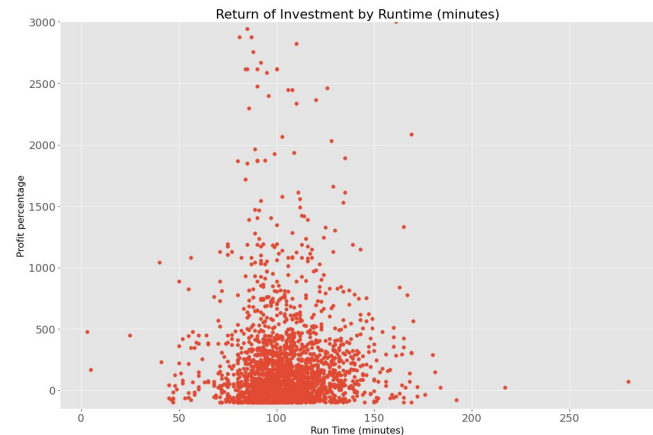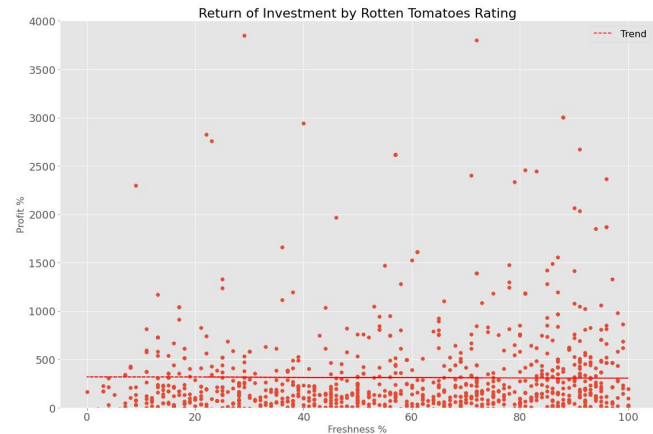Top 10 Genres vs. Profit %

Genre vs. Ratings

Ratings and Run Time

Overall, Ratings and Run time had the least impact on profit percentage (return on investment).

Our IMDb and web scraped Rotten Tomatoes data agreed

Most movies fall between in a small window to Run Times, making the data less relevant

Return of Investment by Rotten Tomatoes Rating

Return of Investment by Runtime (minutes)

Conclusions

- The most profitable movies are from the Horror and Thriller genres
- The best times to release movies are in January, April and July
- The ideal production budget falls in the window of $12mil to $200mil
- Ratings and Run Time have very little impact on predicting successful movies

Thank you.