Movie Analysis - Advising Microsoft on first feature film release

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Summary

- The film industry has undergone massive transformation over the past 10 years
- Films are being marketed on Facebook, Twitter, Instagram, and nearly every social media platform
- Franchise releases are becoming the backbone of movie studio revenue
- Records for worldwide gross are being broken
- Streaming has become the dominant platform for movie goers
- Indie films are winning awards as the influence of power producers diminishes
- Microsoft, with a surplus of cash, has an opportunity to compete in the streaming marketplace and begin producing original content

Outline

- Business Problem
- Data
- Methods
- Results
- Conclusions

Business Problem

Competitors, such as Amazon, Netflix, and Disney have not only released streaming platforms, but they are producing original content faster than viewers can keep up. Microsoft, acknowledging how diversifying revenue streams and building subscription based platforms can be beneficial, wants to create a new movie studio. The problem is they do not have experience in this domain.

The analytics team must advise Microsoft on the characteristics that make a film successful. The team will provide 3 actionable insights based on their findings.

Data

- Tapped from: IMDB, The Numbers, and Filmsite
- Cleaned the data to sort by commercial budget US releases exceeding 80 minutes in runtime
- Sliced out films from the past 10 years as they more accurately reflect the current state of the movie market
- Viewed success metrics as a combination of worldwide gross and domestic gross compared to production costs
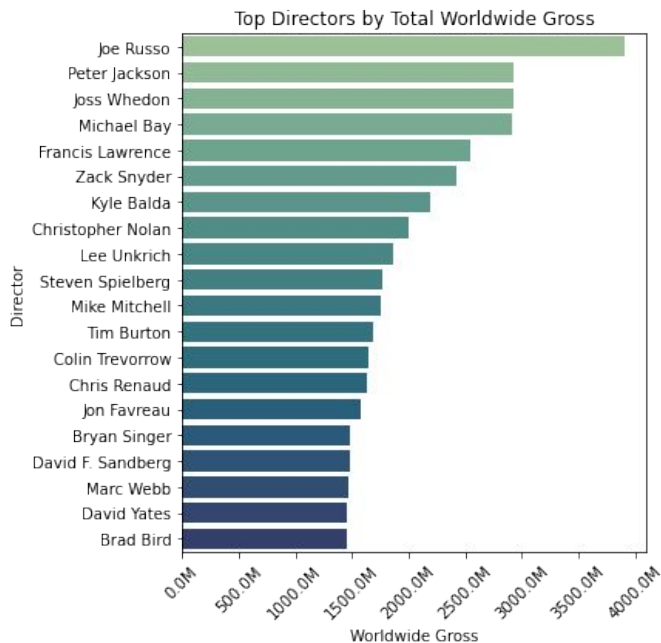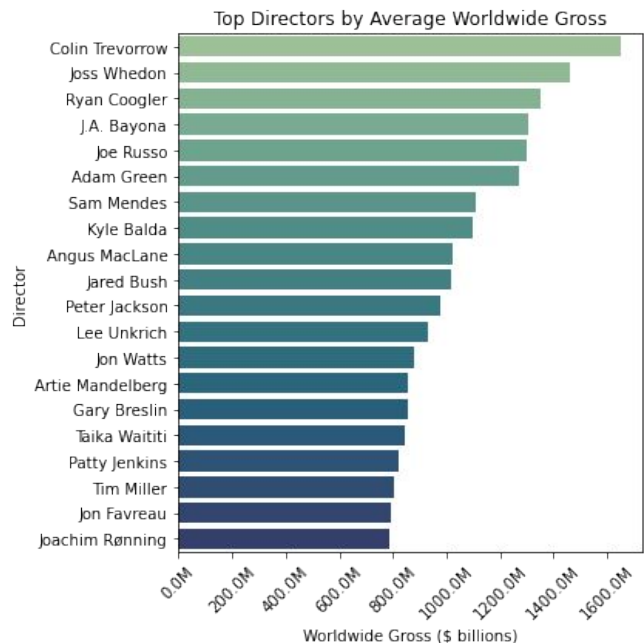
References: https://www.filmsite.org/series-boxoffice.html

Data: https://github.com/kuninethan95/dsc-phase-1-project/tree/master/zippedData
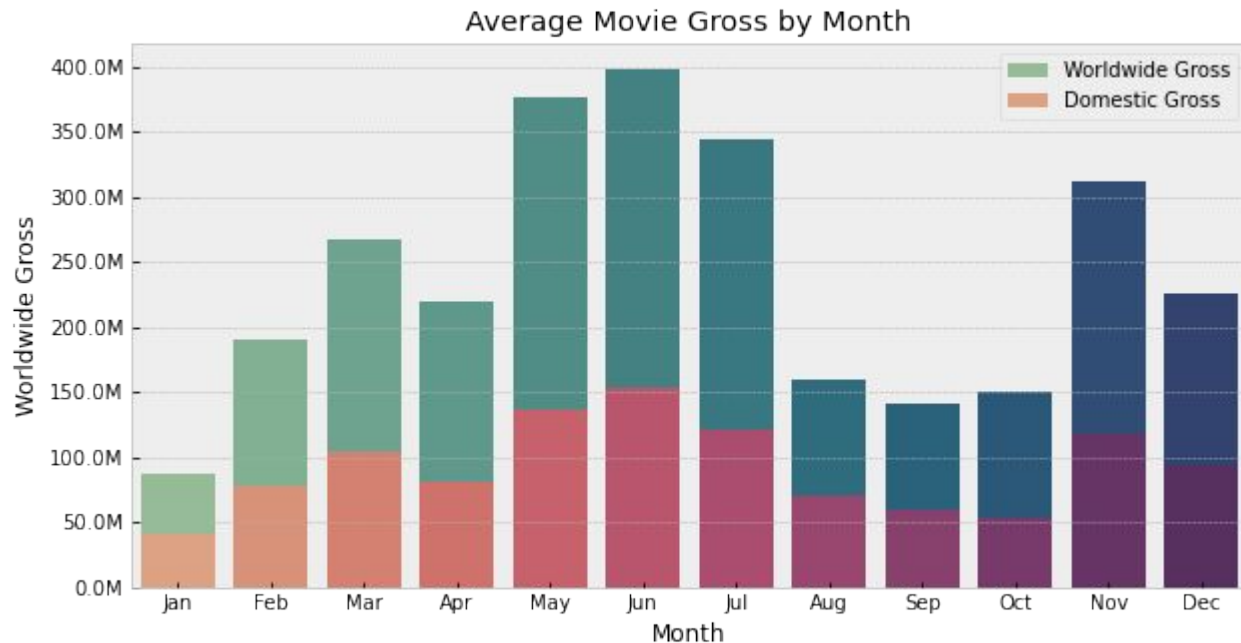
Methods

- Our team chose to analyze three independent variables:
  - 1. Which directors generate the highest revenue?
    - Are the top directors consistently profitable?
    - How much revenue do top directors' films earn?
  - 2. When is the best time to release a movie
    - Evaluate which season generates the highest amount of revenue on average.
    - Analyze which month generates the highest revenue per film on average
  - 3. Analyzing how runtime impacts revenue
    - Want want to address if runtime has a positive correlation with worldwide gross revenue.

Analyzing Directors

Top Directors by Average Worldwide Gross

Top Directors by Total Worldwide Gross

-List of top directors grouped by Total Worldwide Revenue and Average Revenue per film
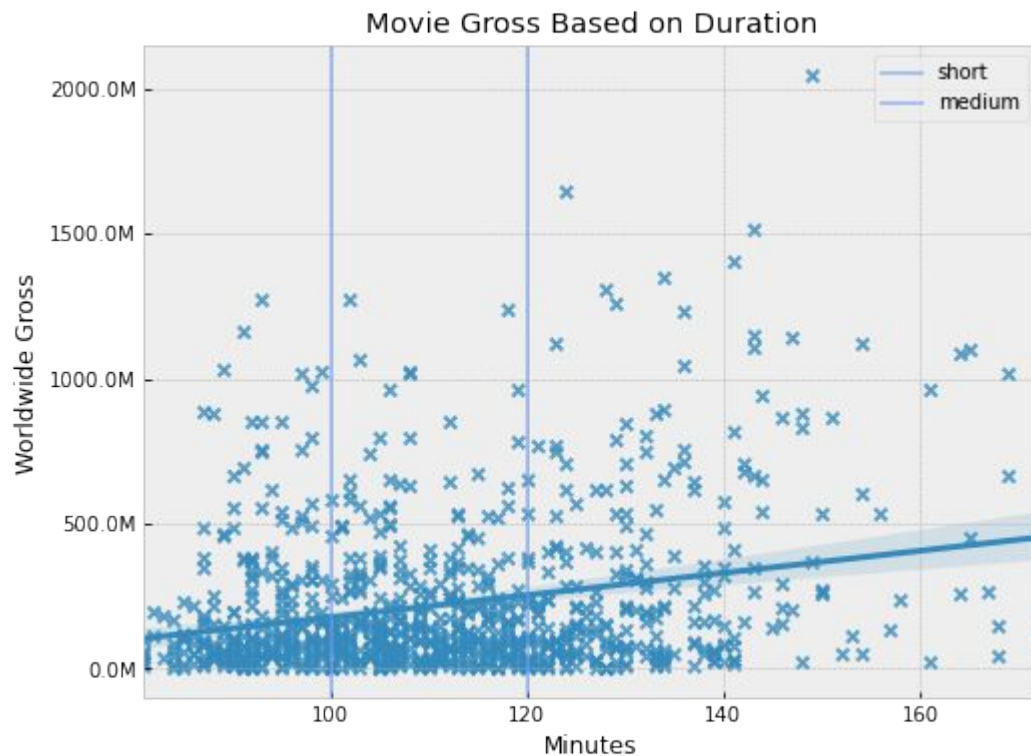- Many of the names on the left also appear on the right

Analyzing Release Dates by Month

Average Movie Gross by Month

-May through July are the highest worldwide grossing months on average
- August through September are three consecutively low grossing months

Analyzing Runtime on Revenue

Movie Gross Based on Duration

- There is a positive relationship between film duration and worldwide gross
- Long movies have more outlier values.
- 43% of films are considered 'medium' duration, 30% 'short' duration, and 27% 'long' duration
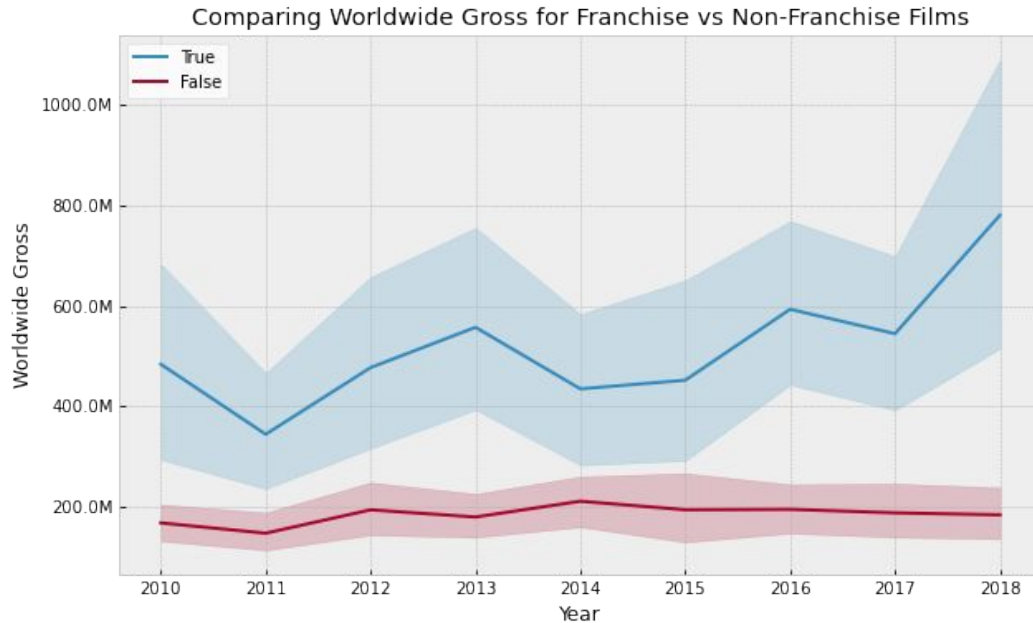
Results

- **Longer films outperform shorter films on average.** Consider releasing a film with a runtime that exceeds 120 minutes. There also tends to be more high outliers in this duration category.
- **Top directors from 2010-2019 have produced profitable films from a worldwide gross perspective 100% of the time.** Consider hiring one of the top 20 directors suggested above.
- **Summer films outperform any other season.** May through July produce the highest worldwide grossing films on average.
- **Long term consideration:** produce a franchise. Franchises earn more revenue than non-franchises. This may be partially due to organic marketing and loyal fanbases.

Conclusions

With the cash that Microsoft has on hand, they should be optimistic about generating profit on an original film. They should take careful considerations towards their chosen director, film length, and release date. These characteristics can make a significant impact on worldwide revenue.

Additional Considerations

Comparing Worldwide Gross for Franchise vs Non-Franchise Films

- Franchise films have outperformed non-franchise films every year
- Franchise films have greater standard deviation
- Possible causes: loyal fanbases, organic marketing from previous films, more box office advertisement

Thank You!

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