



What factors contribute to the financial success of movies?

Agenda

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Overview of Data

Exploratory Data Analysis

Insights and Recommendations

Introduction

Meet the Analysts



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Objective

Movies require substantial financial investments. If they perform poorly in the box office, companies lose a lot of money. In an effort to reduce this potential loss, we explored a box office dataset to answer:

What factors contribute to the financial success of movies?

- Budget
- Genre
- Actors/Actresses
- Directors

Context

Budget

The allocated funds that are used for the production of the movie.

Box Office Revenue

The total box office earnings of a film.

Profit

The financial gain made from the movie.

$\text{Profit} = (\text{Revenue} - \text{Budget})$

Methodology

Data Preprocessing

- Cleaned with Python pandas/numpy libraries
- Removed unnecessary fields
- Added calculated fields for further data analysis
- Created new table views of the data

Exploratory Data Analysis

- The dataset includes 508 movies and details about each film
- Analyzed trends in budget, cast, directors, and genre to see what affects a movie's financial success

Extract Insights

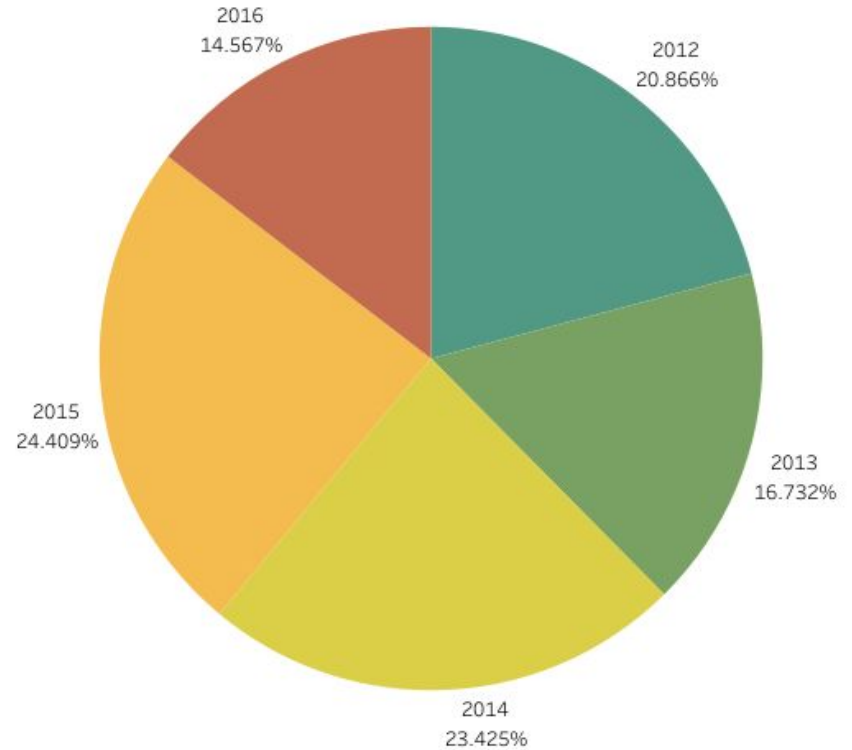
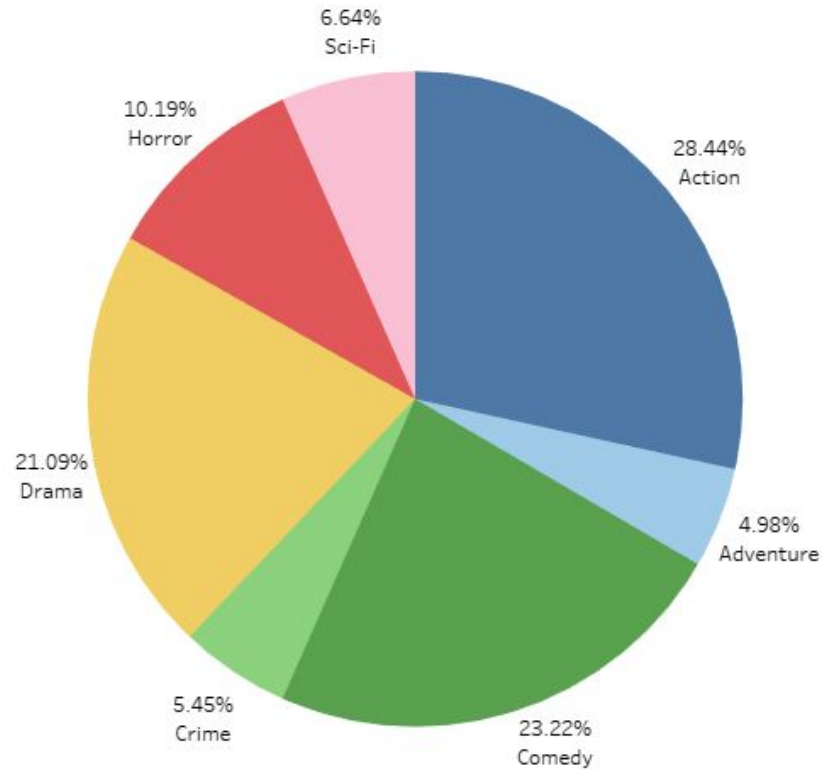
- Studios can use these patterns to make smarter investments
- The most impactful observations are that franchises drive the most profit

Overview of Data

Overview of Data

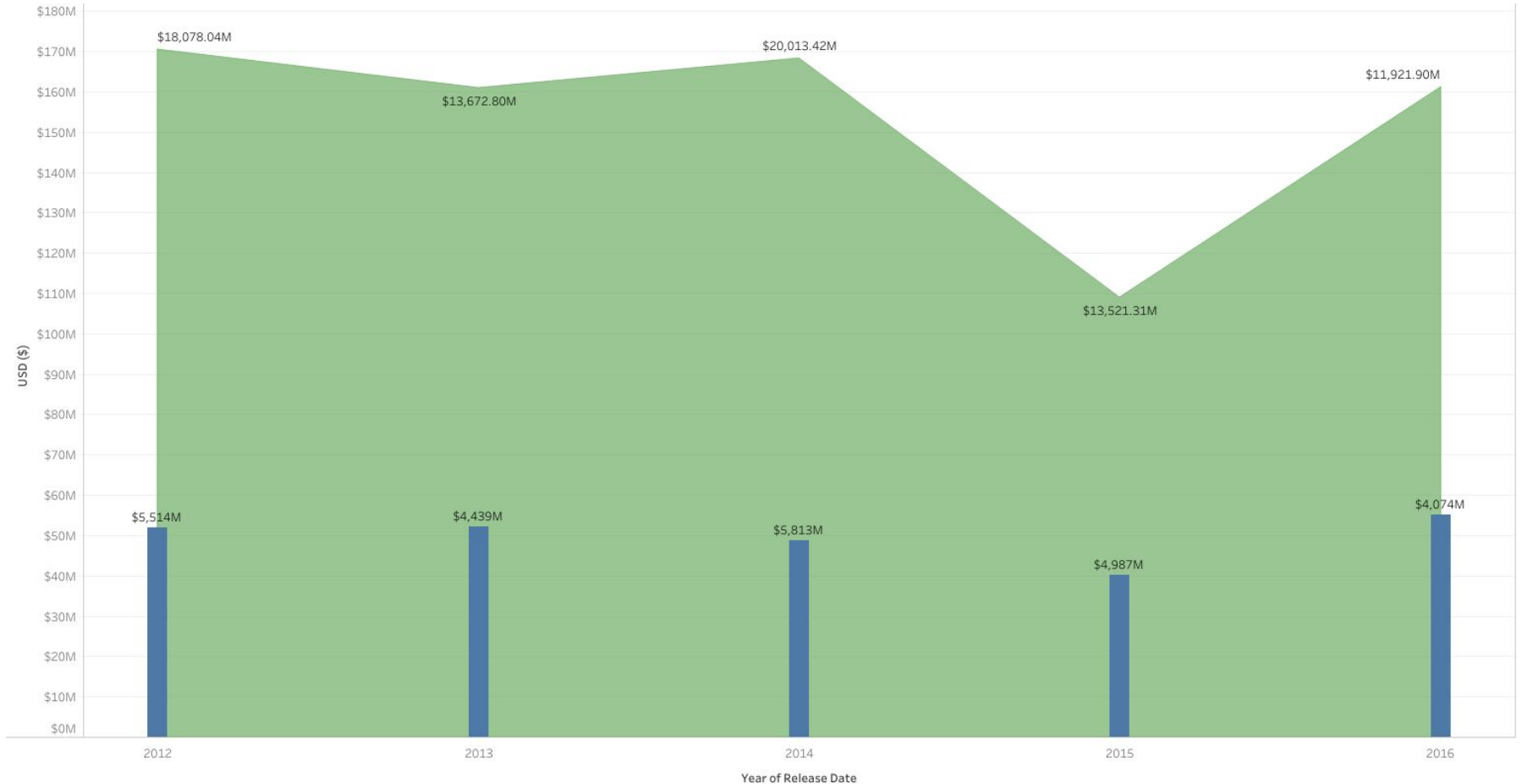
- Our analysis comes from 508 different movies
- Release years range from 2012 - 2016
- Columns include budget, box office revenue, release date, director(s), main cast, and a calculated net profit
- Data was restructured to create new tables based on cast and directors for deeper analysis

Distribution of Data

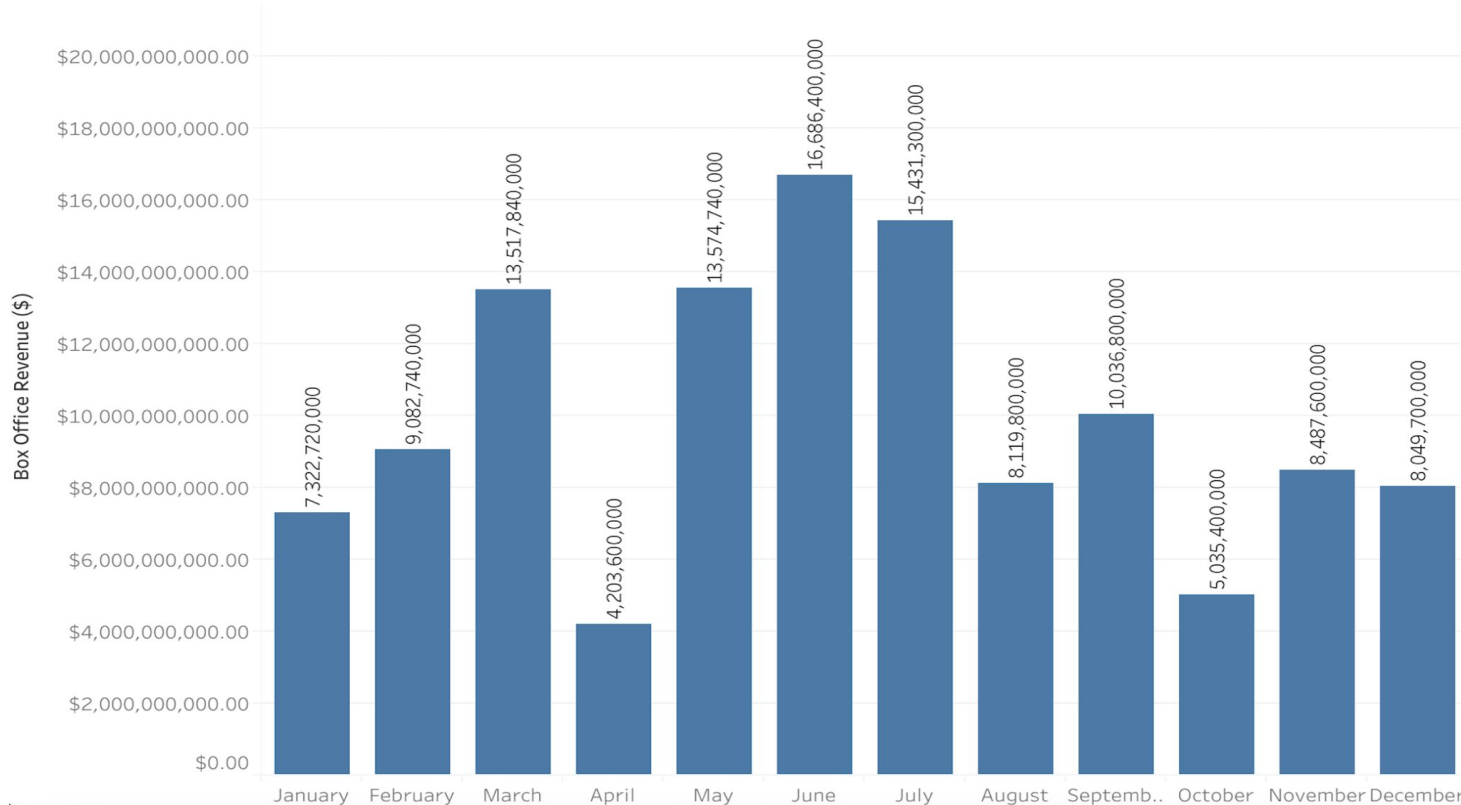


Exploratory Data Analysis

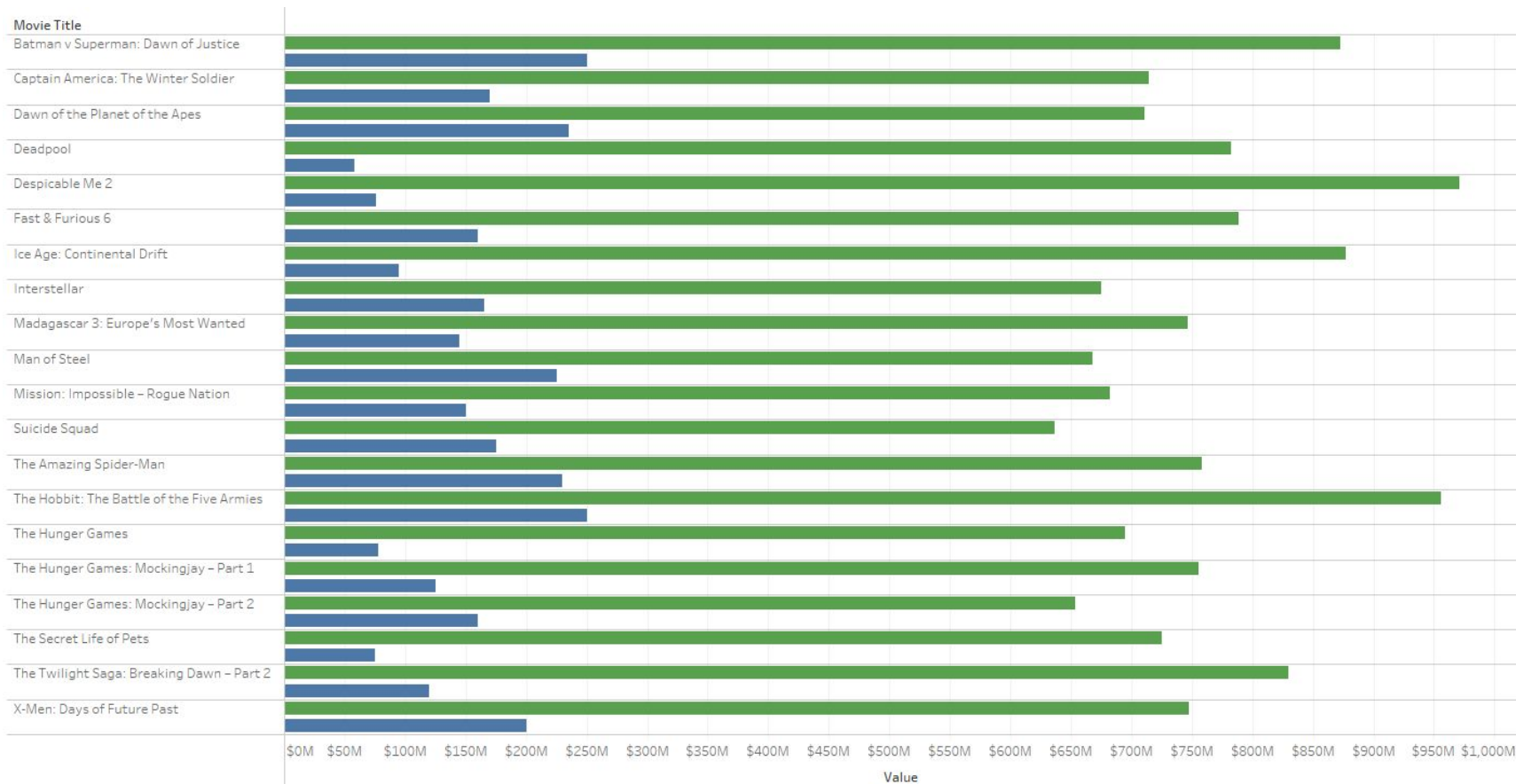
Average Revenue vs. Budget



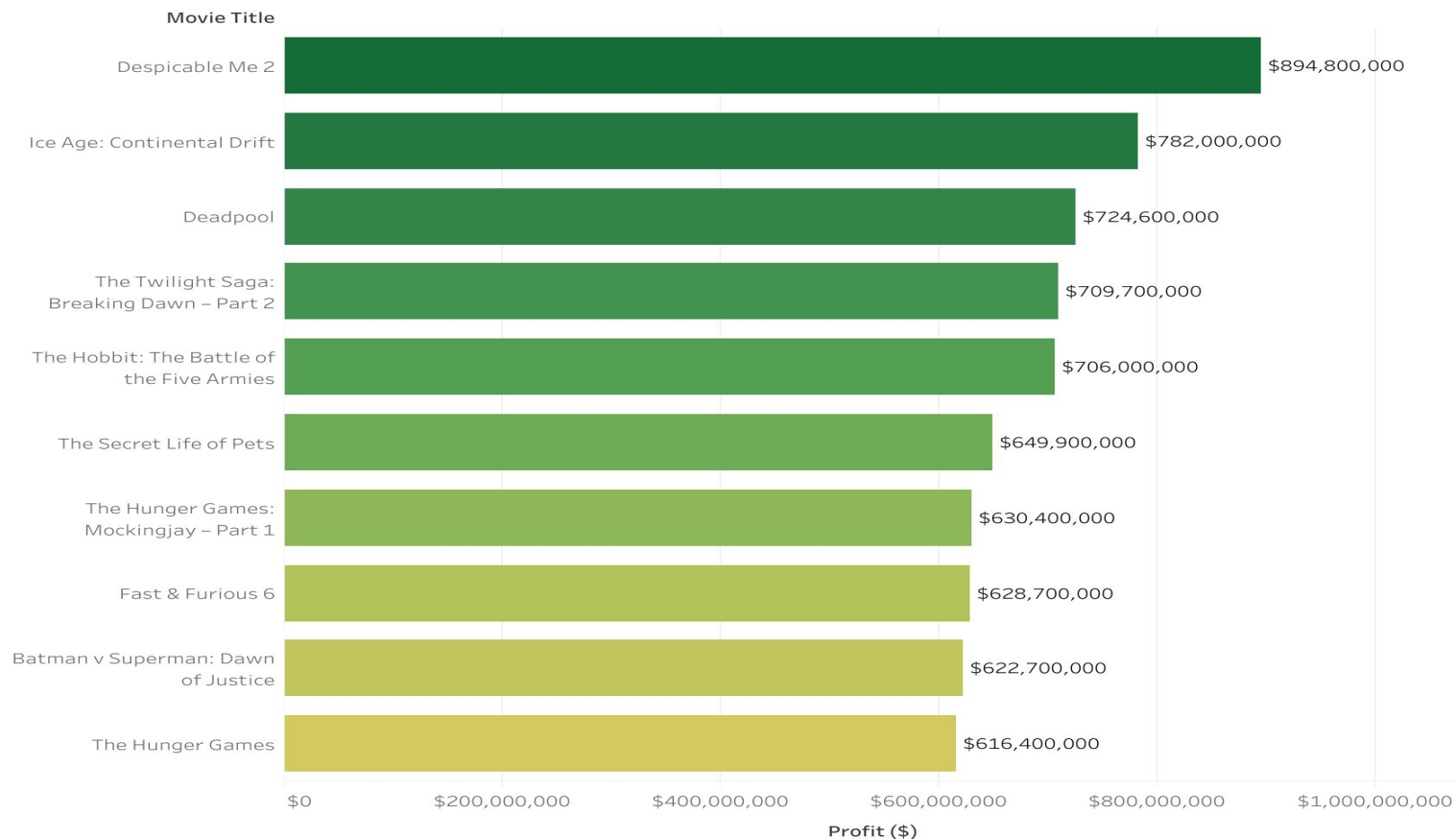
Box Office Revenue by Month



Top 20 Movies (Box Office Revenue)

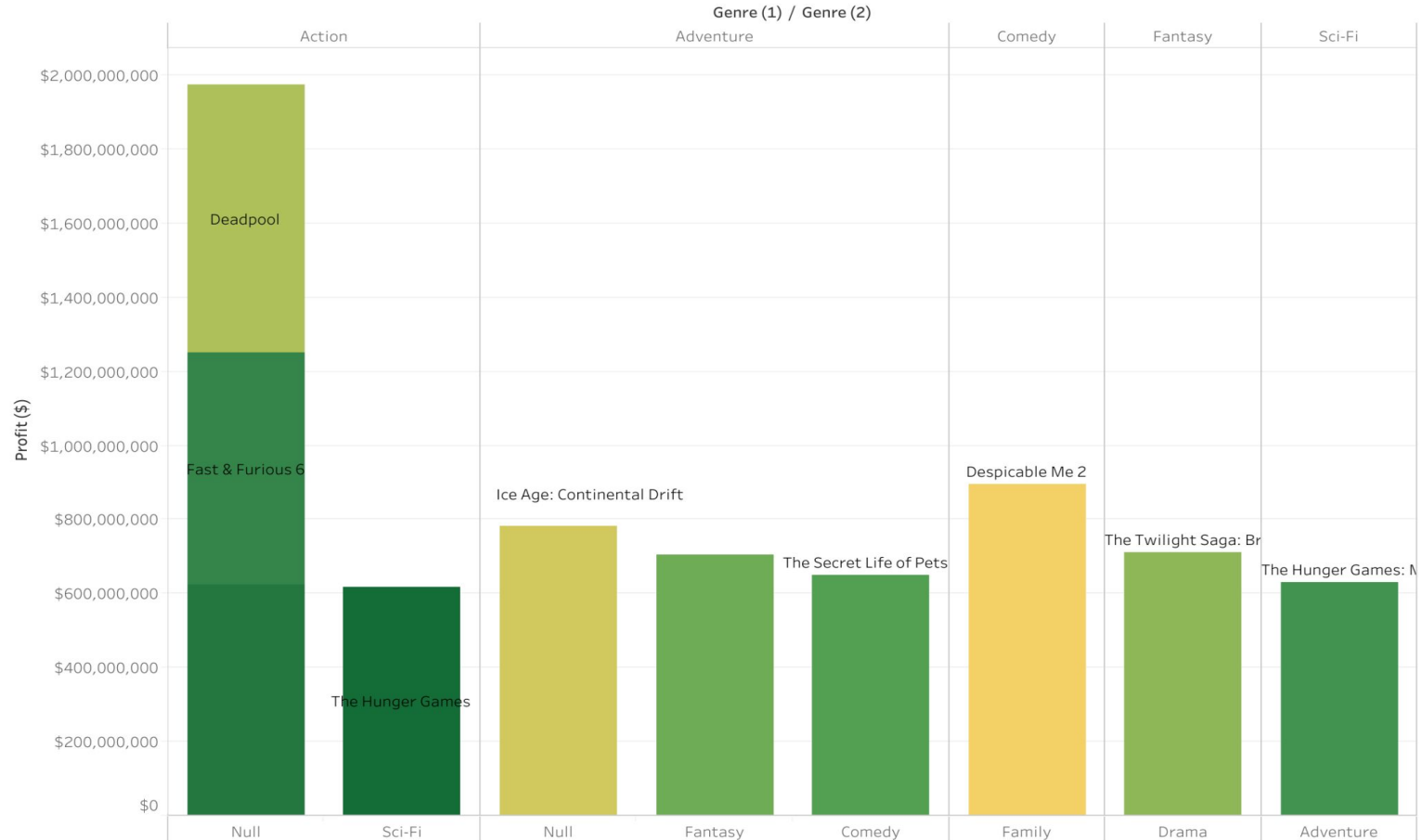


10 Most Profitable Movies

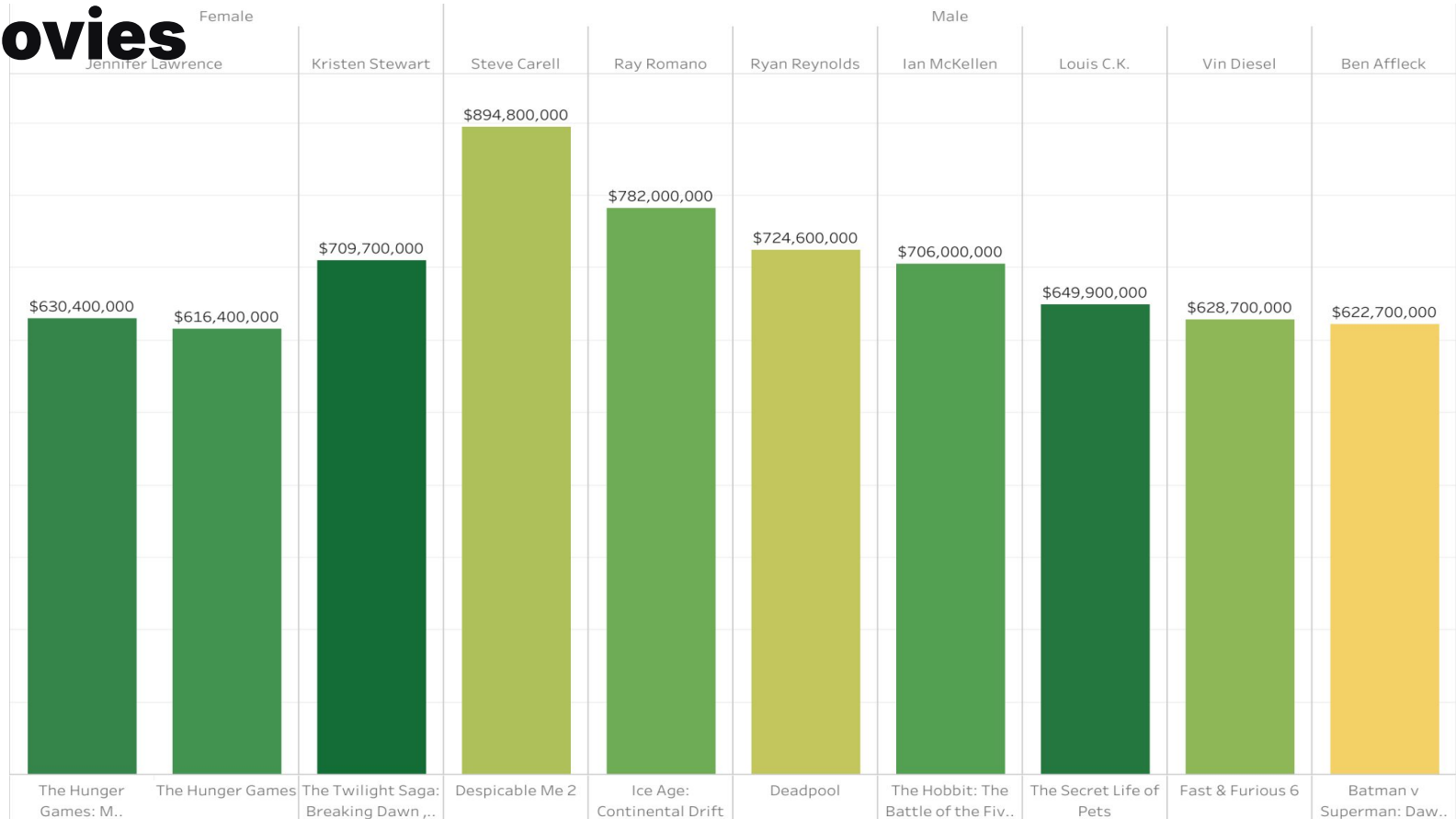


Cast & Crew

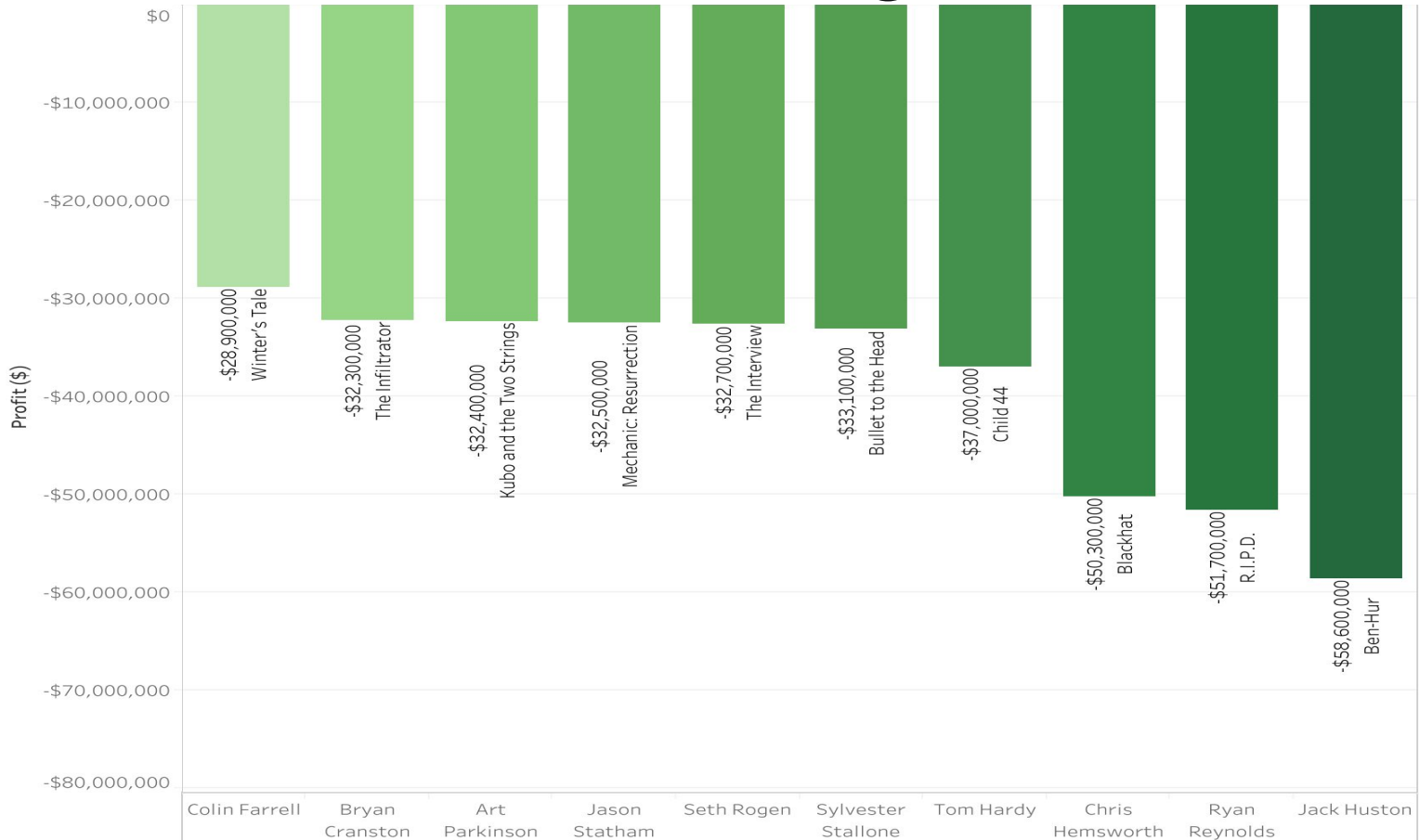
10 Most Profitable Movies



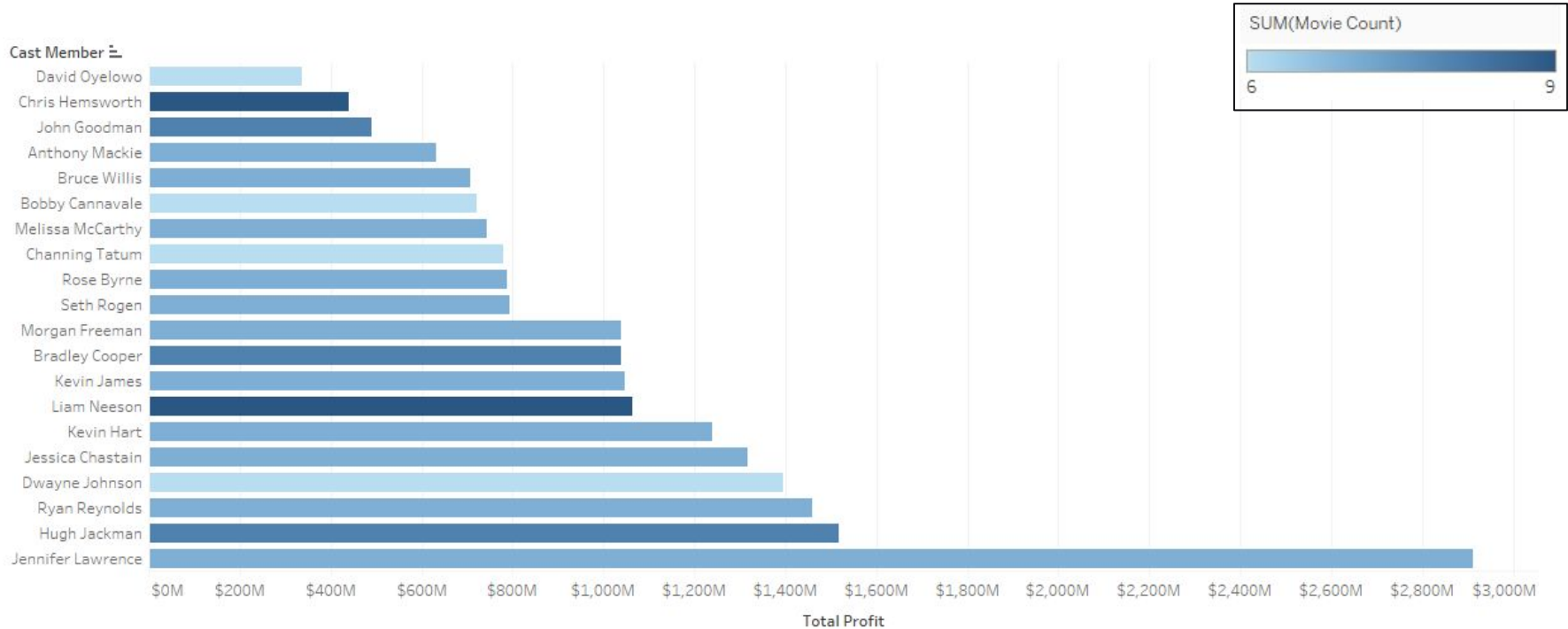
Gender Distribution of Most Profitable Movies



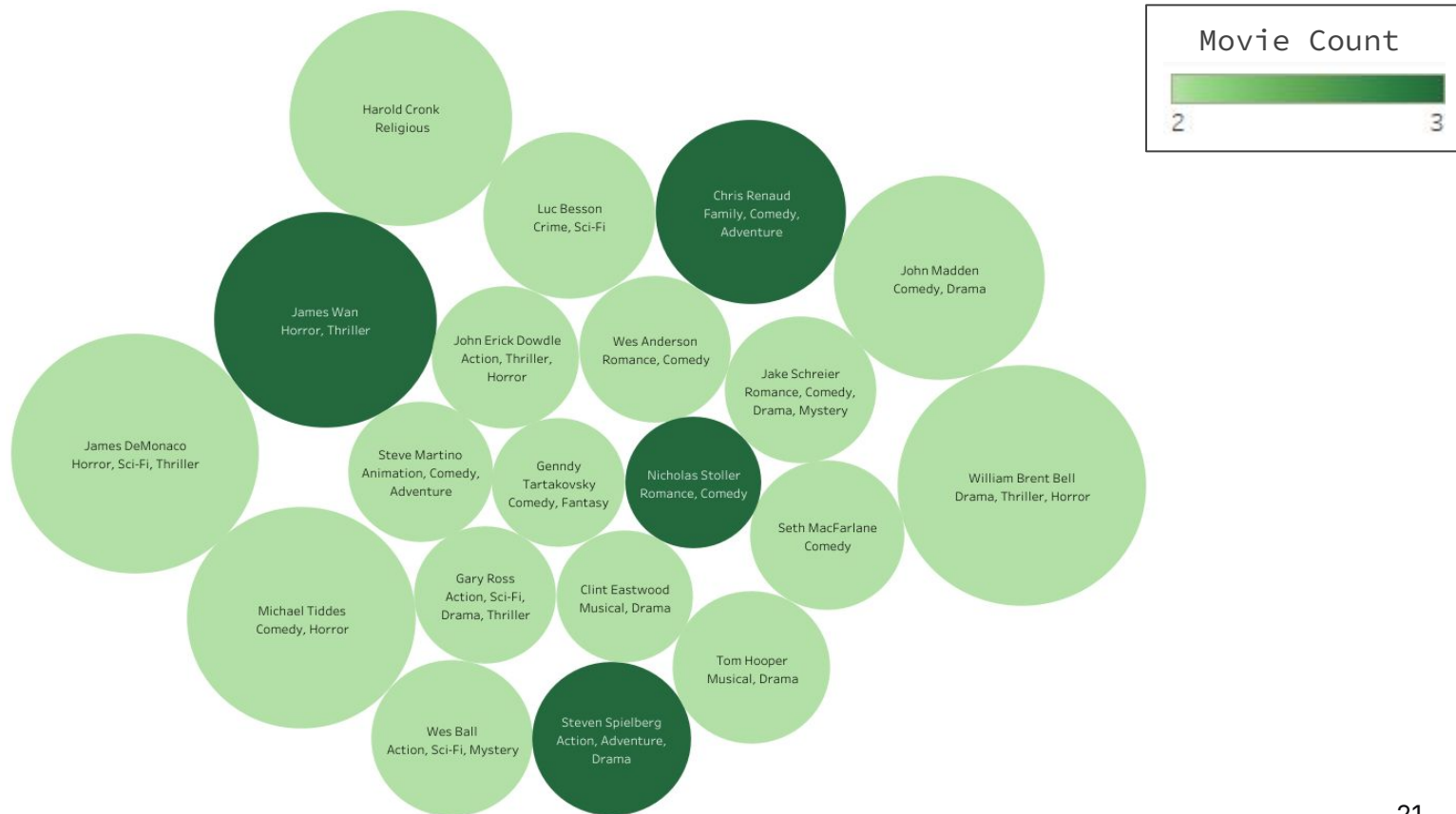
10 Worst Performing Movies



Profit of Top 20 Popular Actors

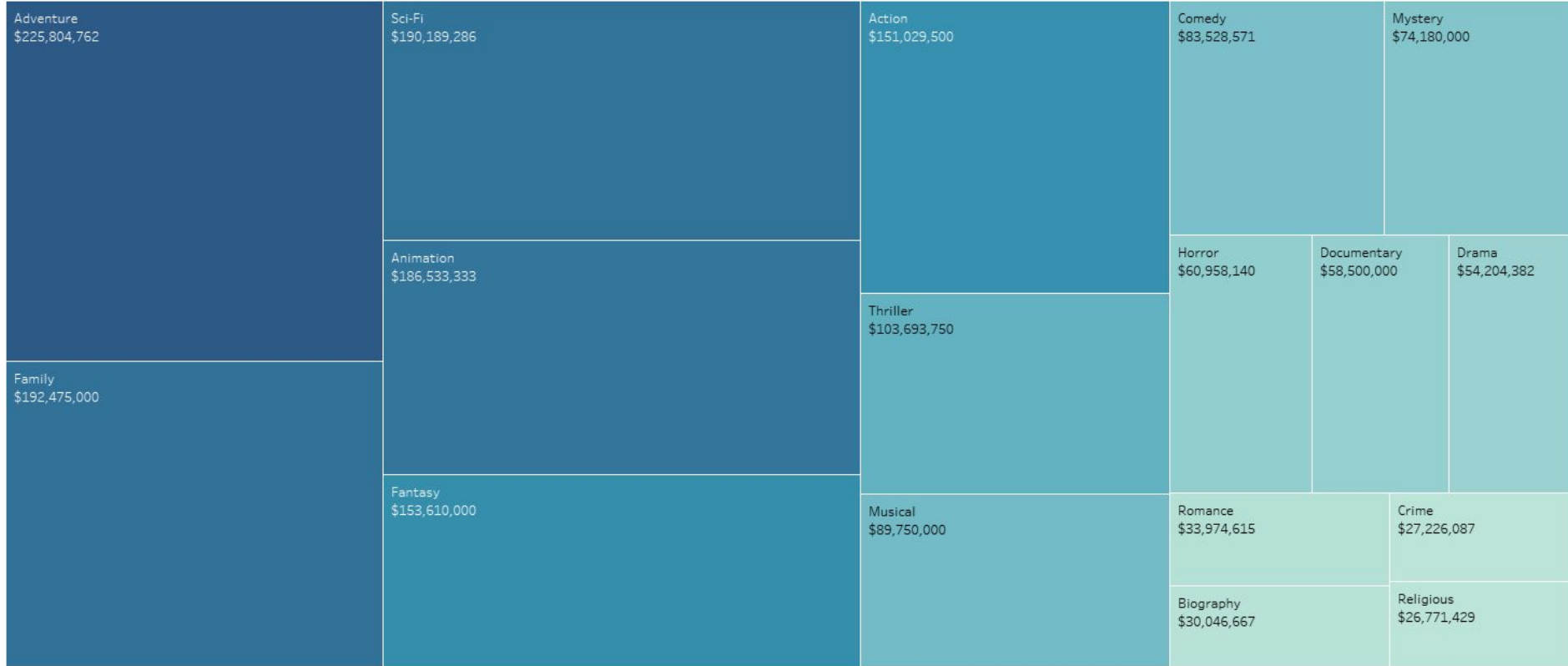


Top 20 Directors by Profit Margin

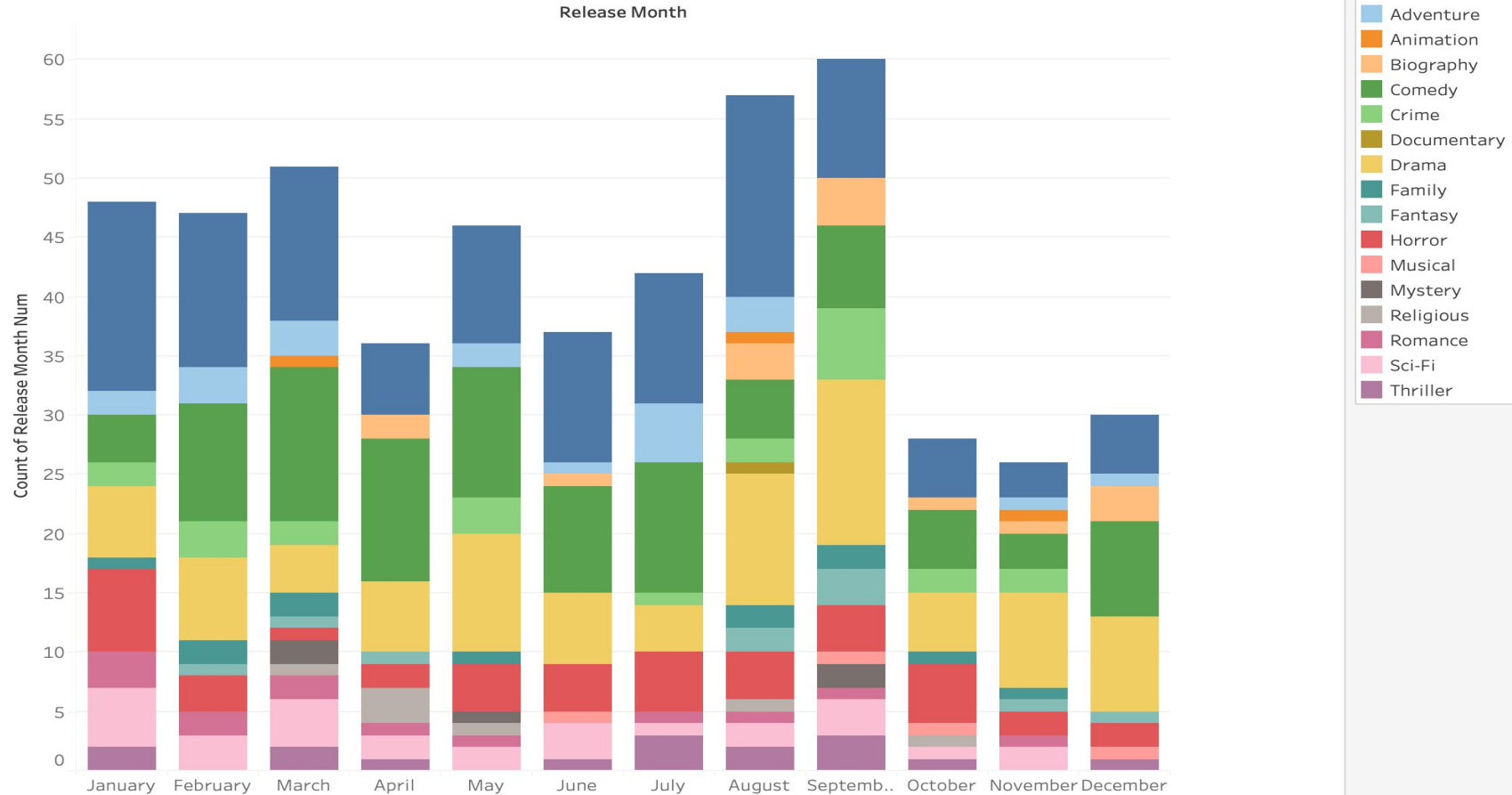


Genres

Genre Profitability

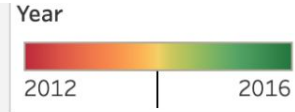
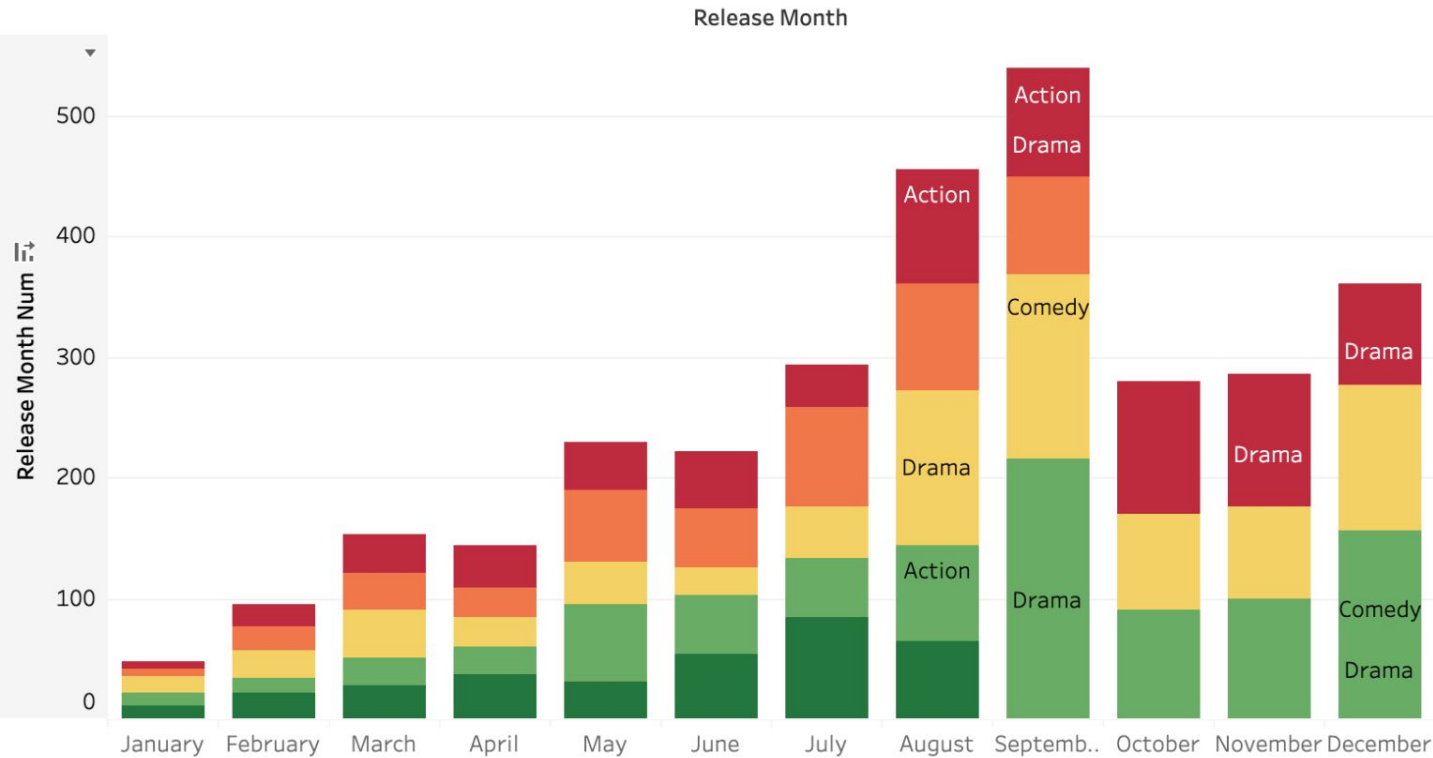


Genre Release Month



Genre Popularity

Sheet 2



Insights & Recommendations

Key Findings & Recommendations

- Franchises and blockbuster movies like DC/Marvel usually do well in box office and are most profitable.
- Top profiting movies are made by directors that made multiple movies within the short time frame. Many of these were franchises with a built in audience.
- Lesser known actors and directors can often outperform more big name actors/directors.

Recommendation: Stakeholders should prioritize projects with franchise potential or established audiences.

Conclusion

- Our analysis reveals that commercial success in film is largely driven by genre, budget, and franchise presence — not star power.
- Adventure, Animation, and Family genres consistently yield high profits, especially when tied to franchise and active directors.
- While big budgets often lead to high returns, strategic investments in efficient, lower-budget genres like Horror and Comedy can also be lucrative.

References

COOP Careers. (2023b, March 9). *Box Office Performance Dataset*. Data Visualization_Movie Data Starter Project.

https://docs.google.com/spreadsheets/d/1UhidABa7_PvoN8e4in5cYAvN20E9WvcIqBtiG2JAhos/edit?gid=0&resourcekey=0-Zx4bw7bxTXUmPIQl4GQEmw#gid=0

Thank You



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