

Data Science

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The Movie Industry

Bao Tram Duong

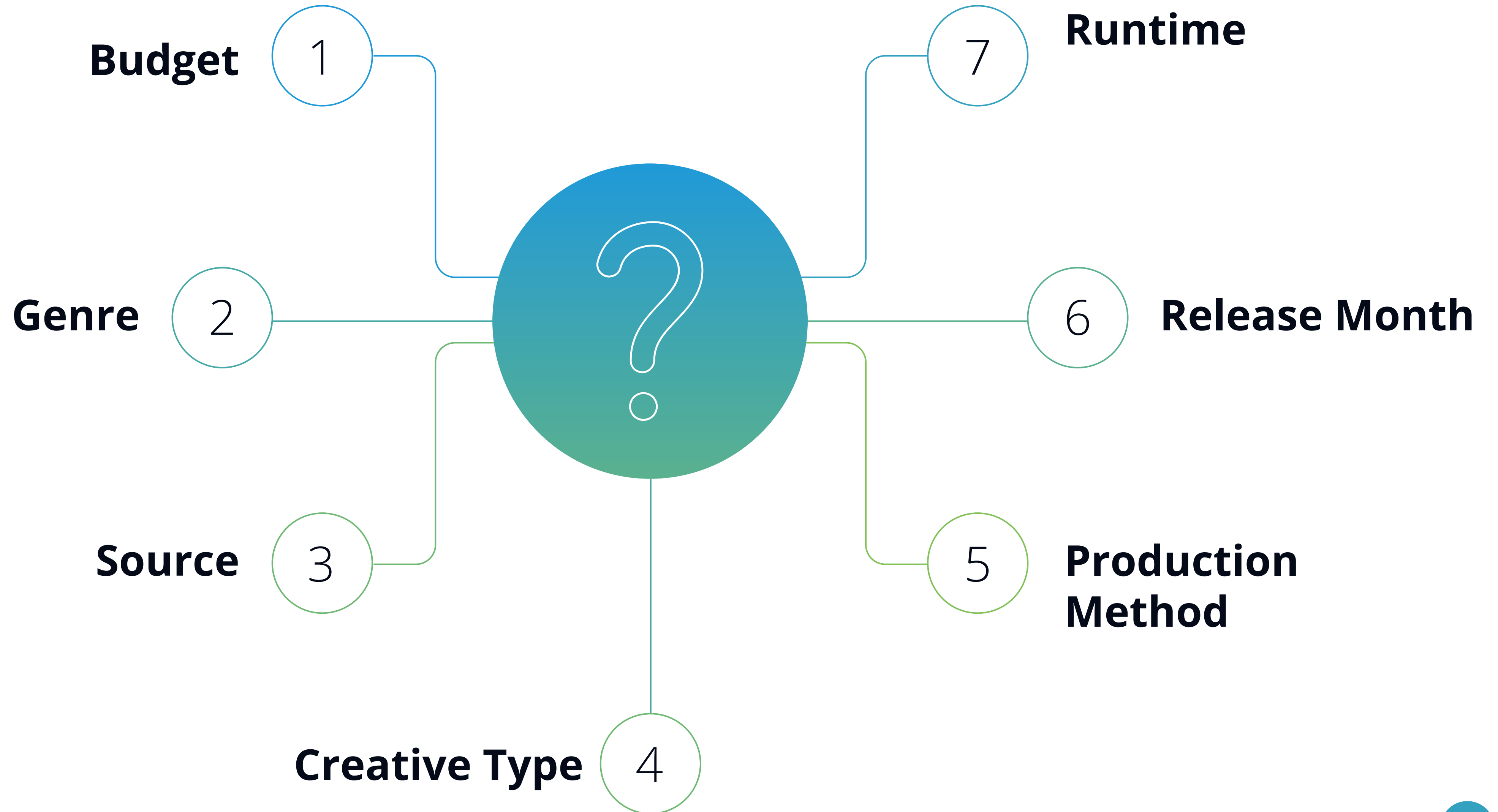


Introduction

- The movie industry generated \$35.3B in revenue in 2019
- The U.S is among the biggest film industries in the world

We are here to help **Microsoft** to become a powerful contributor in this industry.

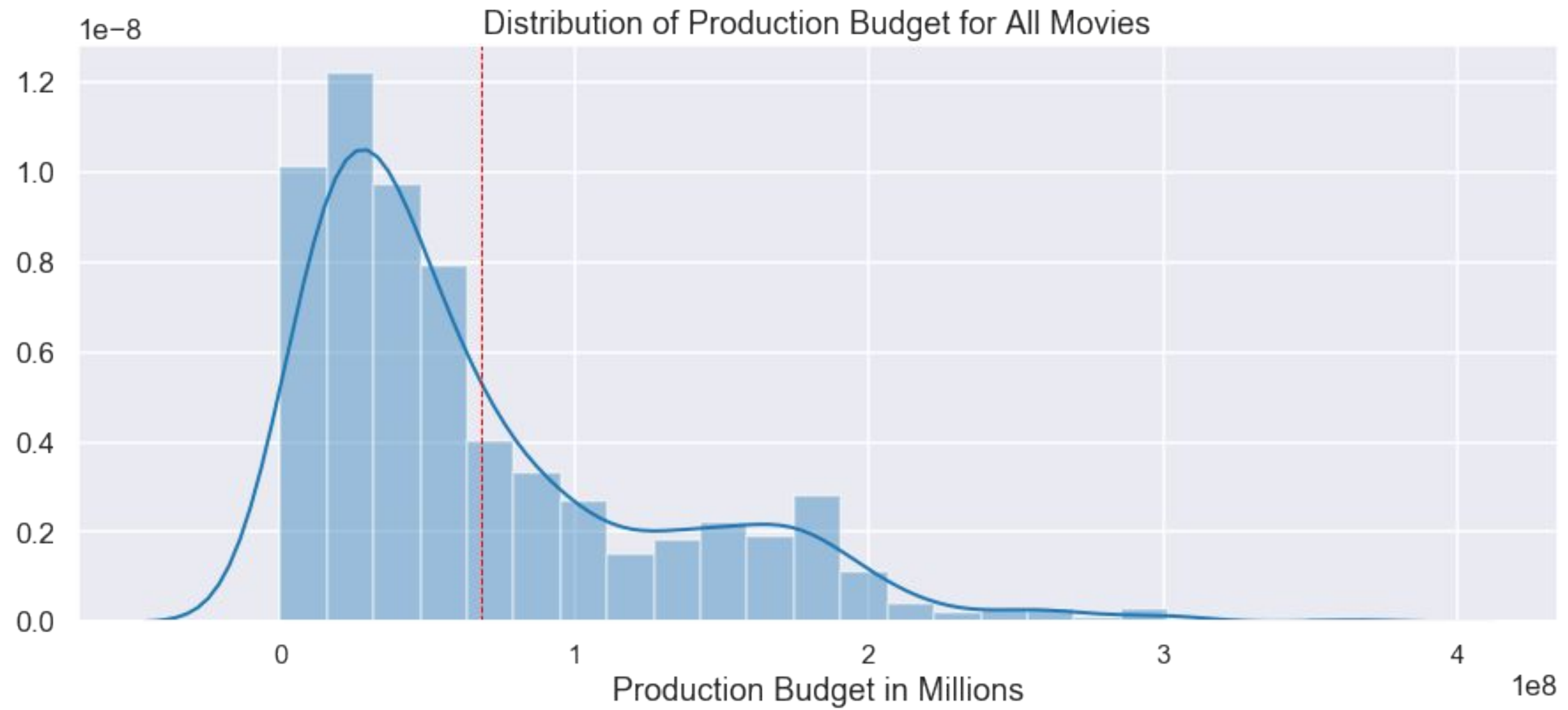
Business Problems





Business Problems

- Q1.** Is there a correlation between production budget and profit? If so, how much should Microsoft invest into production?
- Q2.** What kind of movie contents, in terms of genre, source, creative type, production method, perform the best?
- Q3.** When is the best time of year to release a movie?
- Q4.** Is there a correlation between runtime and profit? What is the best runtime?



- **\$68M** to produce a major studio movie
- **\$35M** for marketing and distributions



Methodology

We split our dataset into 2 groups:

- The **General Movies** group contains all 625 movies in the dataset.
- The **Top 100 Movies** group contains the top 100 movies that generate the highest worldwide profit.

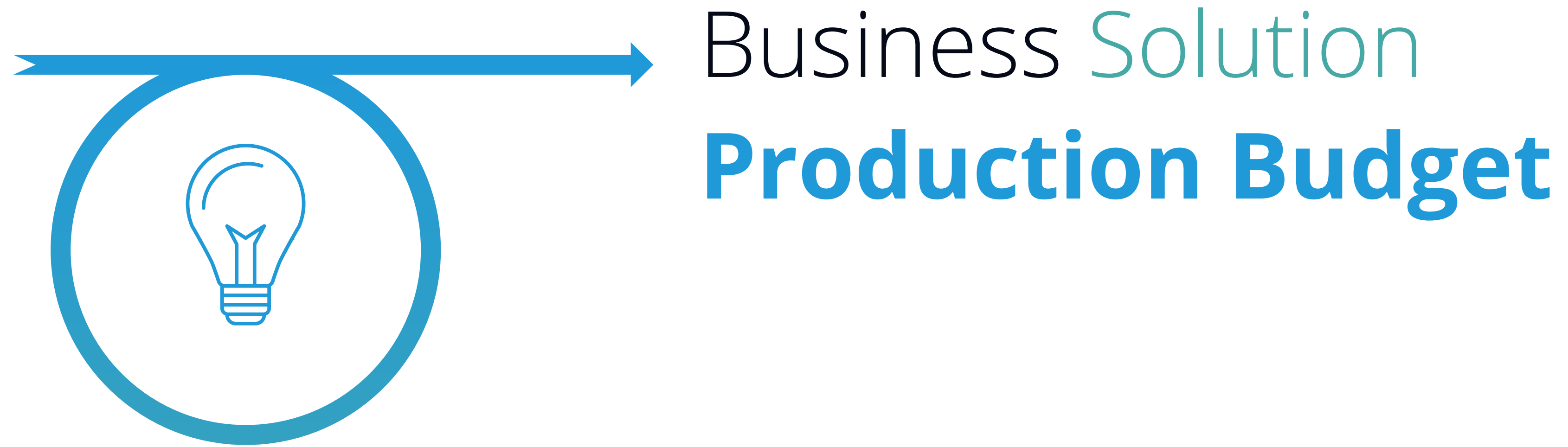
Compare & observe what the Top 100 Movies are doing differently to set themselves apart

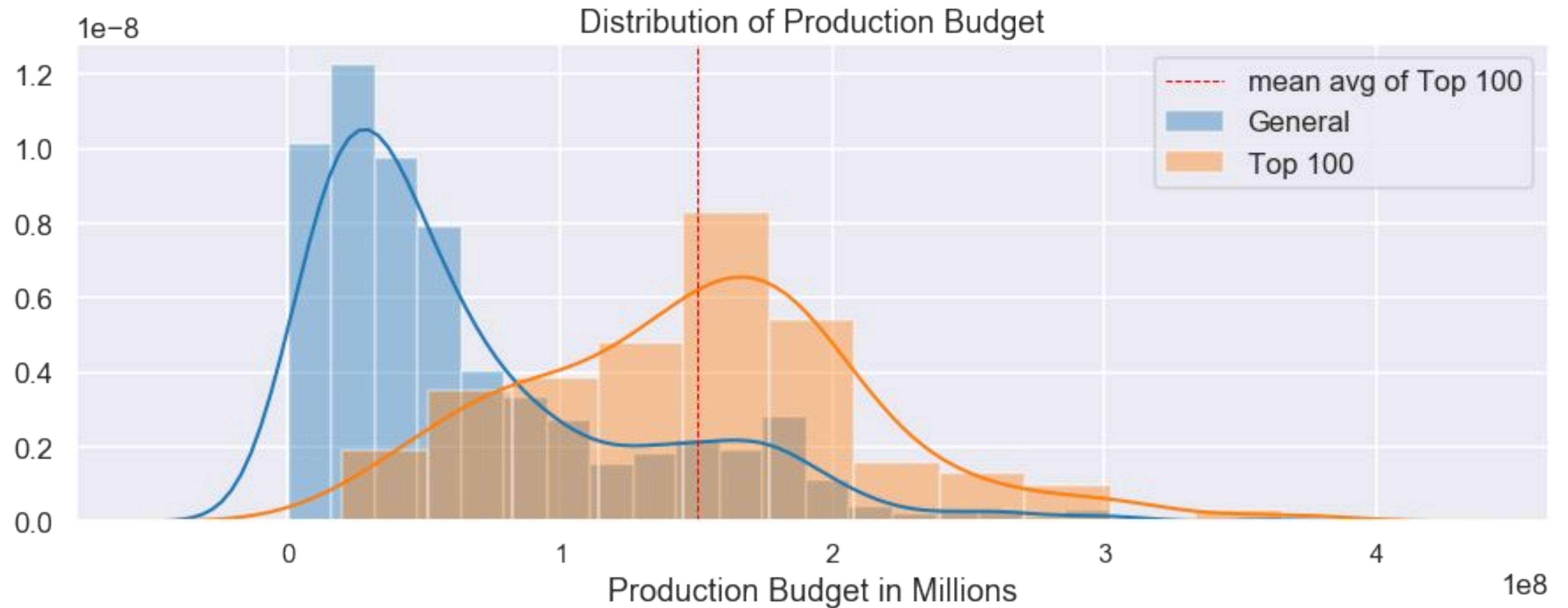


Data Sources

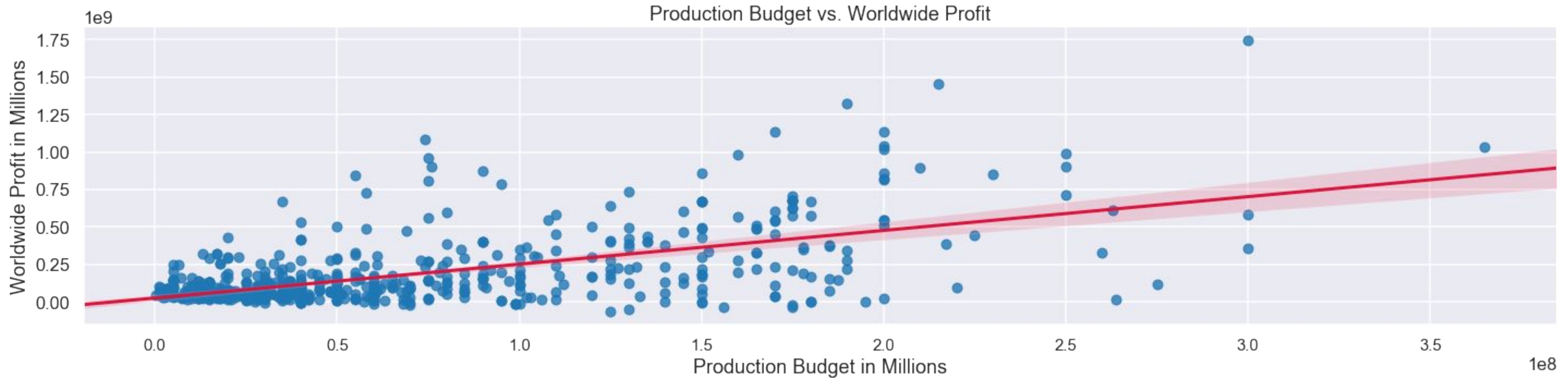
Predict the success of a movie based on its profitability by leveraging historical data from various sources:

1. Box Office Mojo
2. IMDB
3. Rotten Tomatoes
4. TheMovieDB.org
5. The-Numbers.com





- The average production budget in the General Movies group is **\$68M**.
- The average production budget in Top 100 Movies group is **\$150M**.

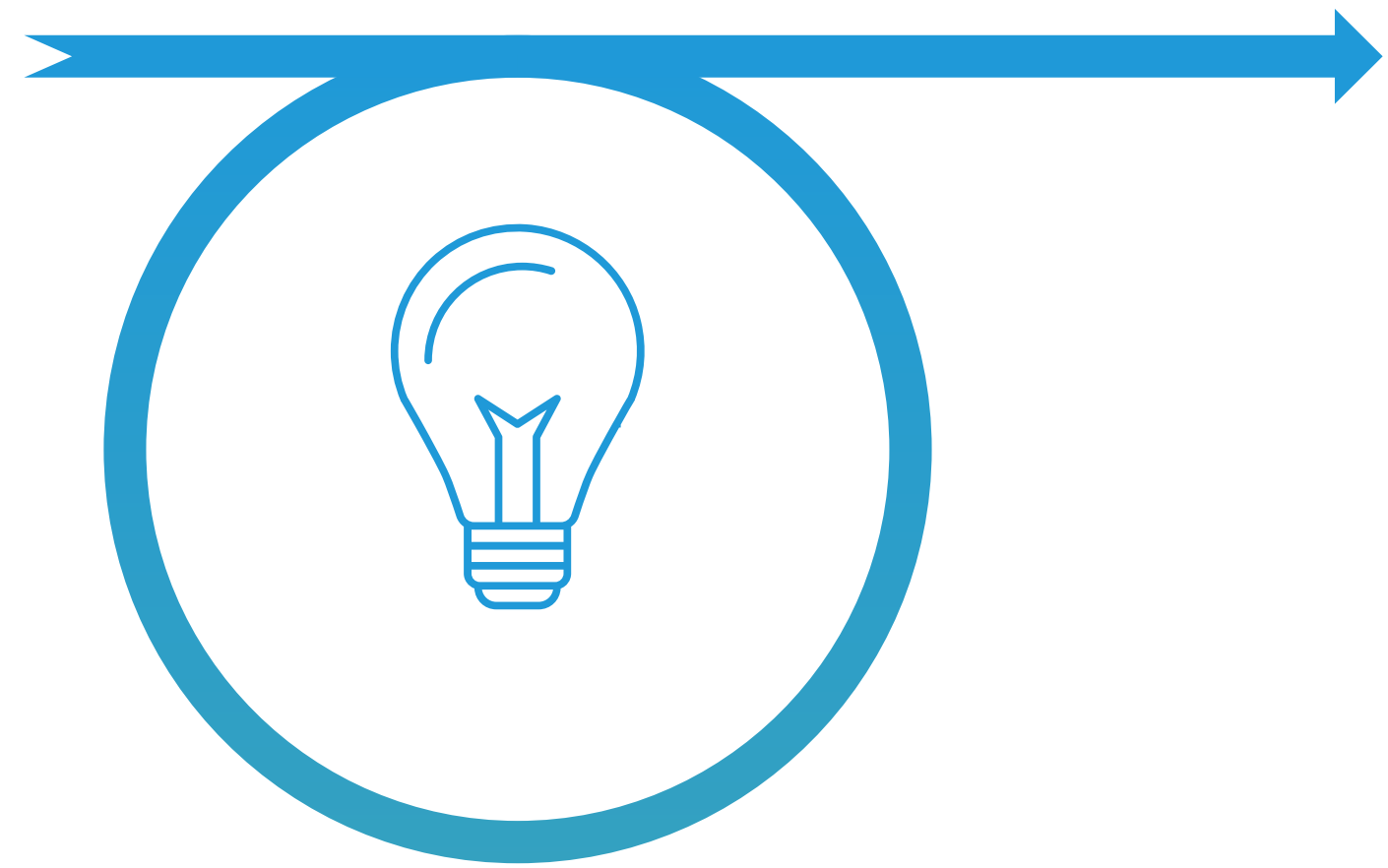


- The average worldwide profit in General Movies group is **\$179M**.
- The average worldwide profit of the Top 100 Movies group is **\$624M**.



Conclusion

\$150+ M



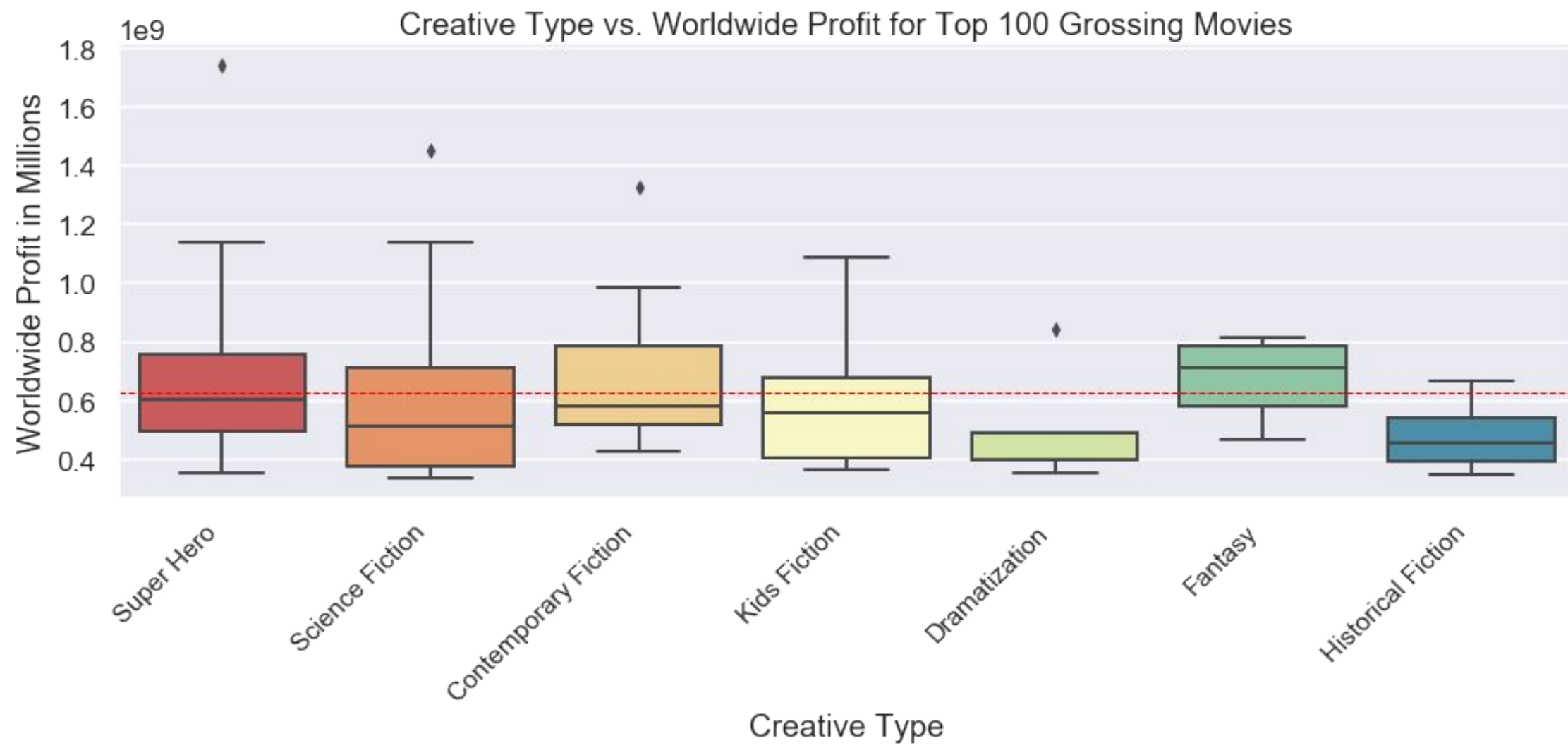
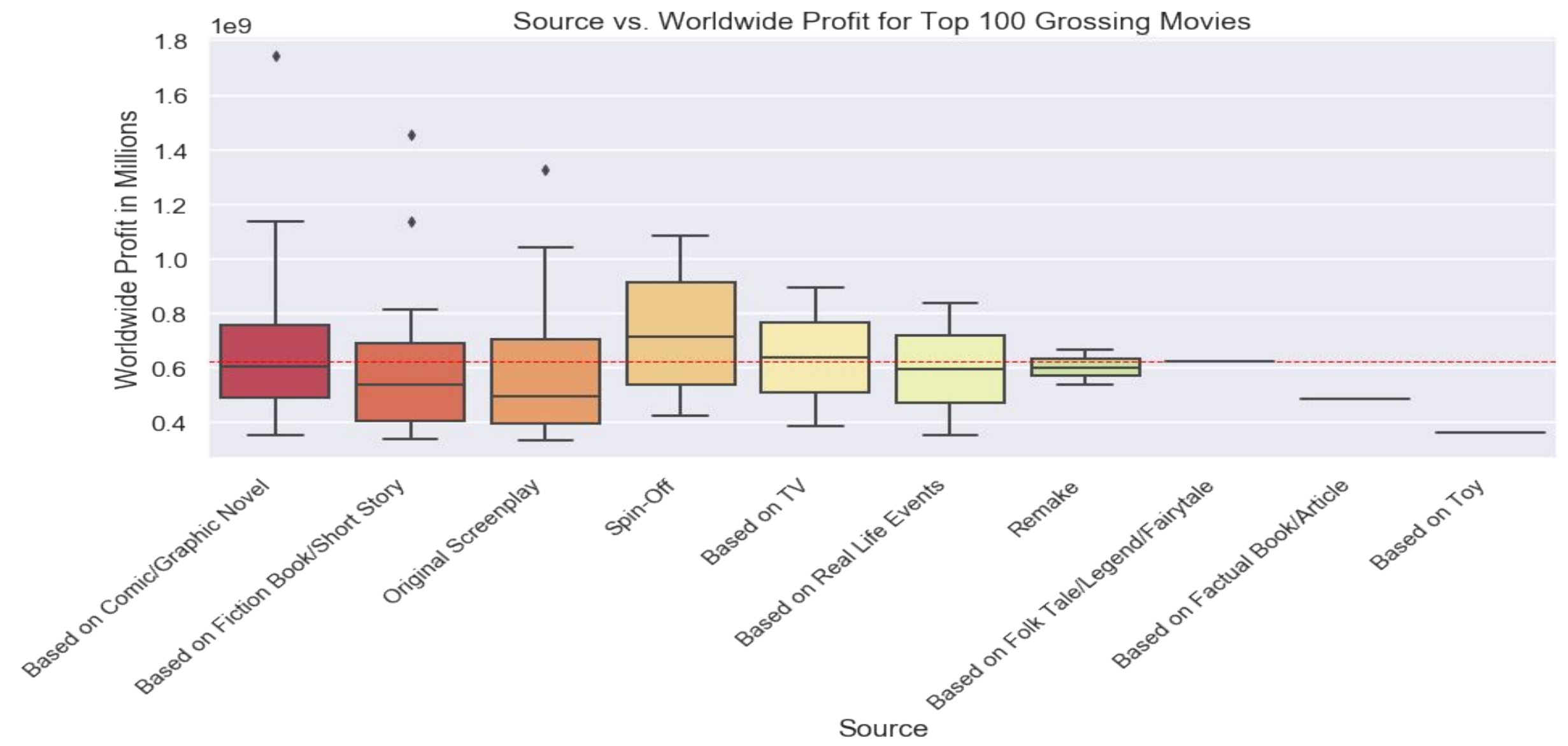
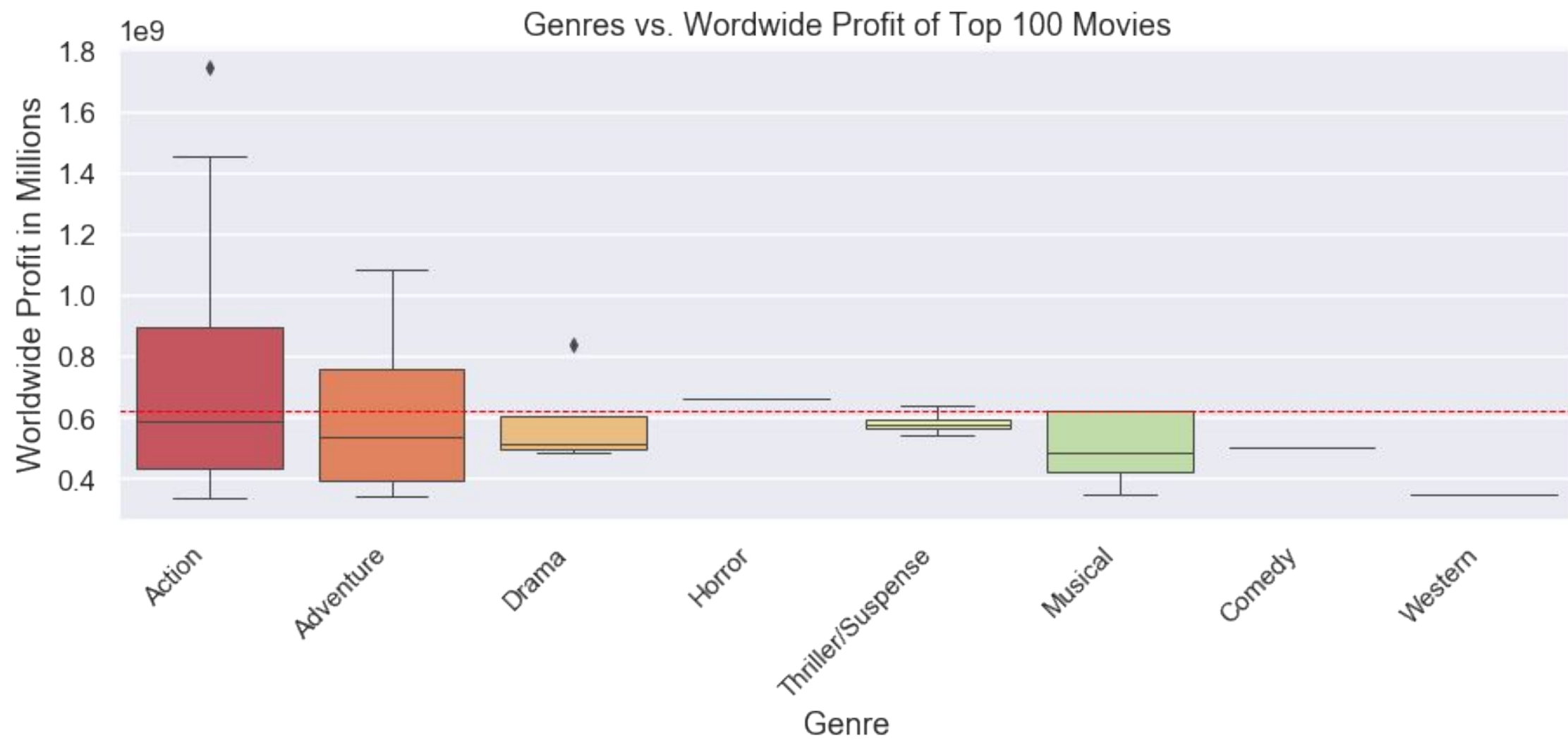
Business **Solution**

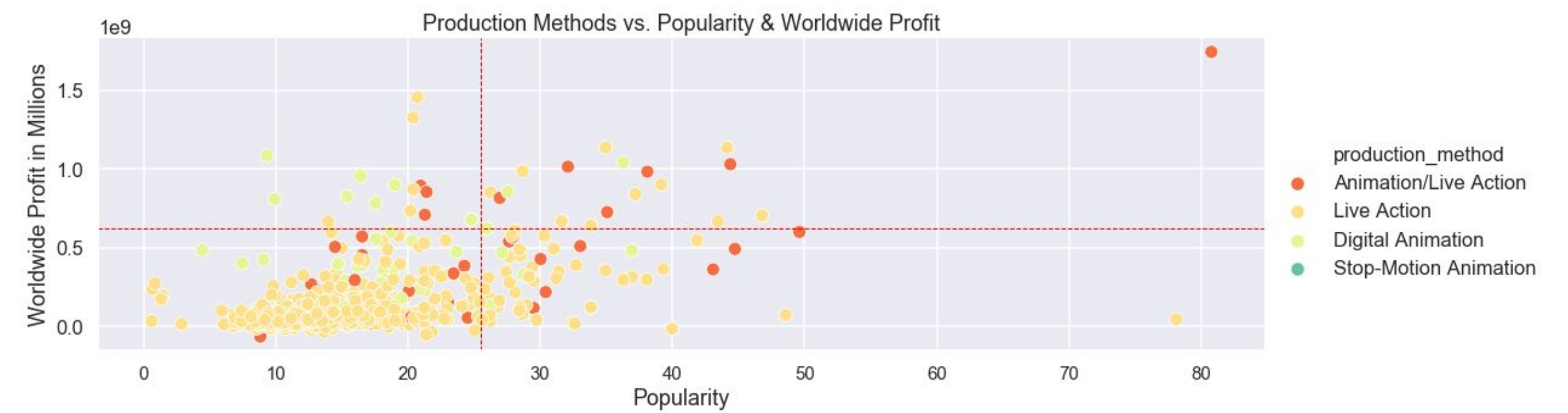
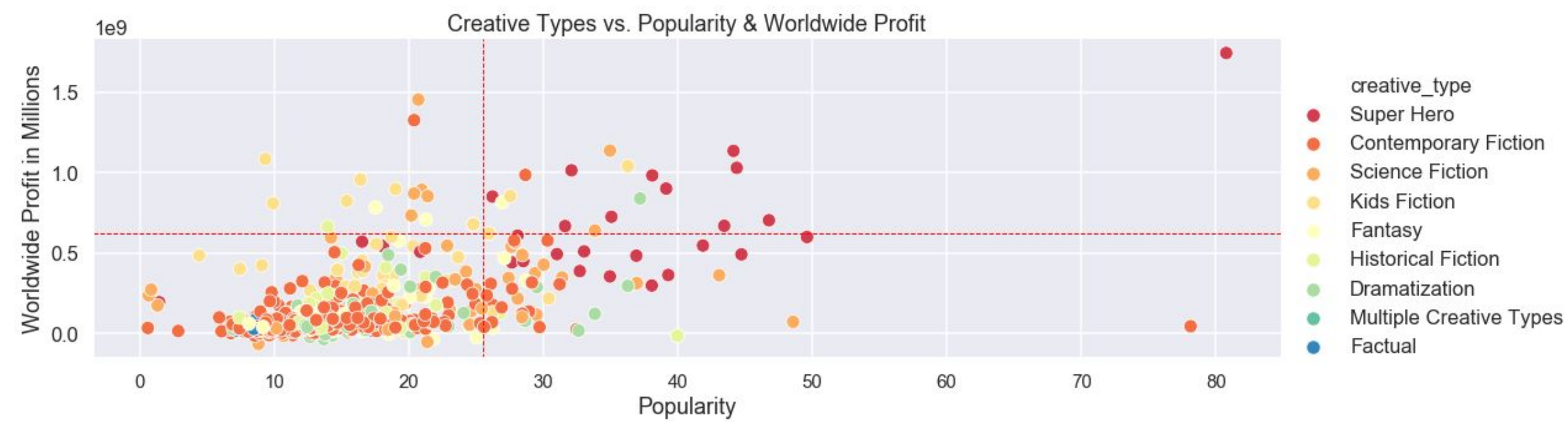
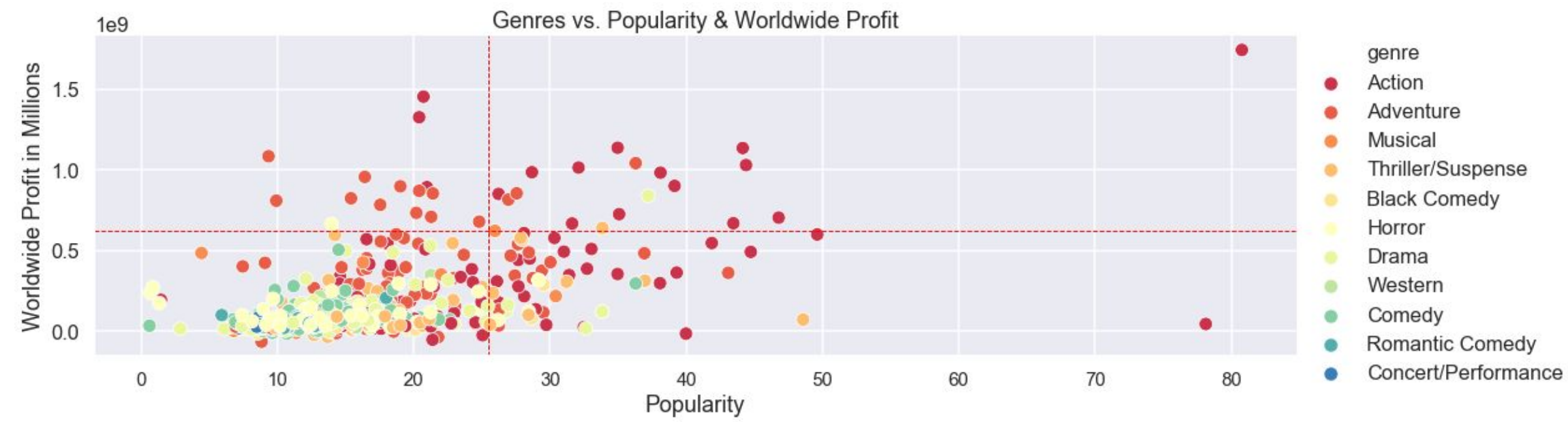
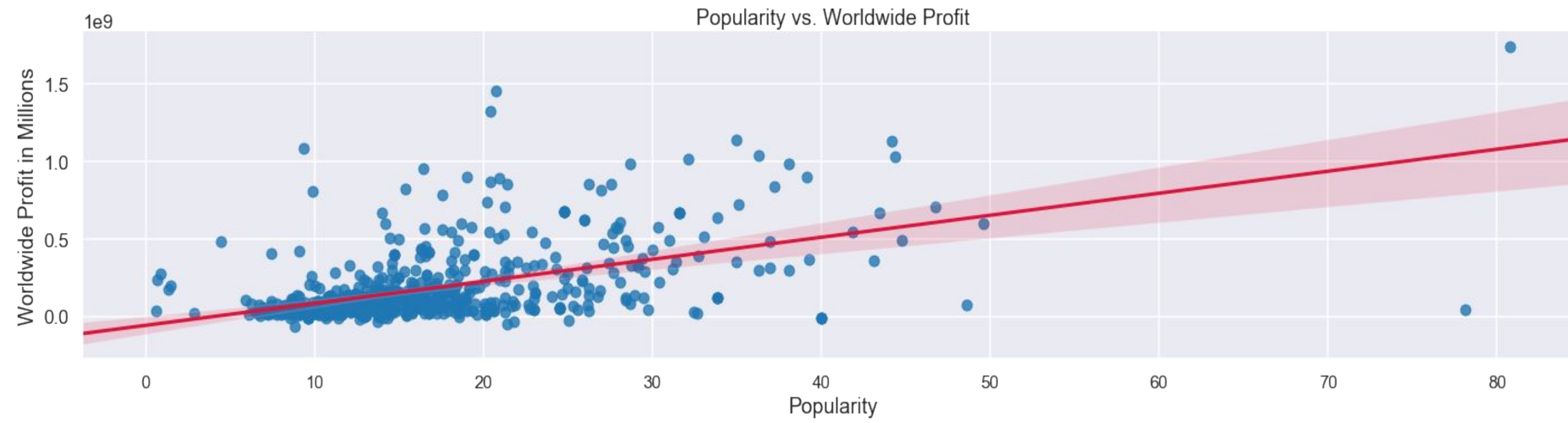
Genre

Source

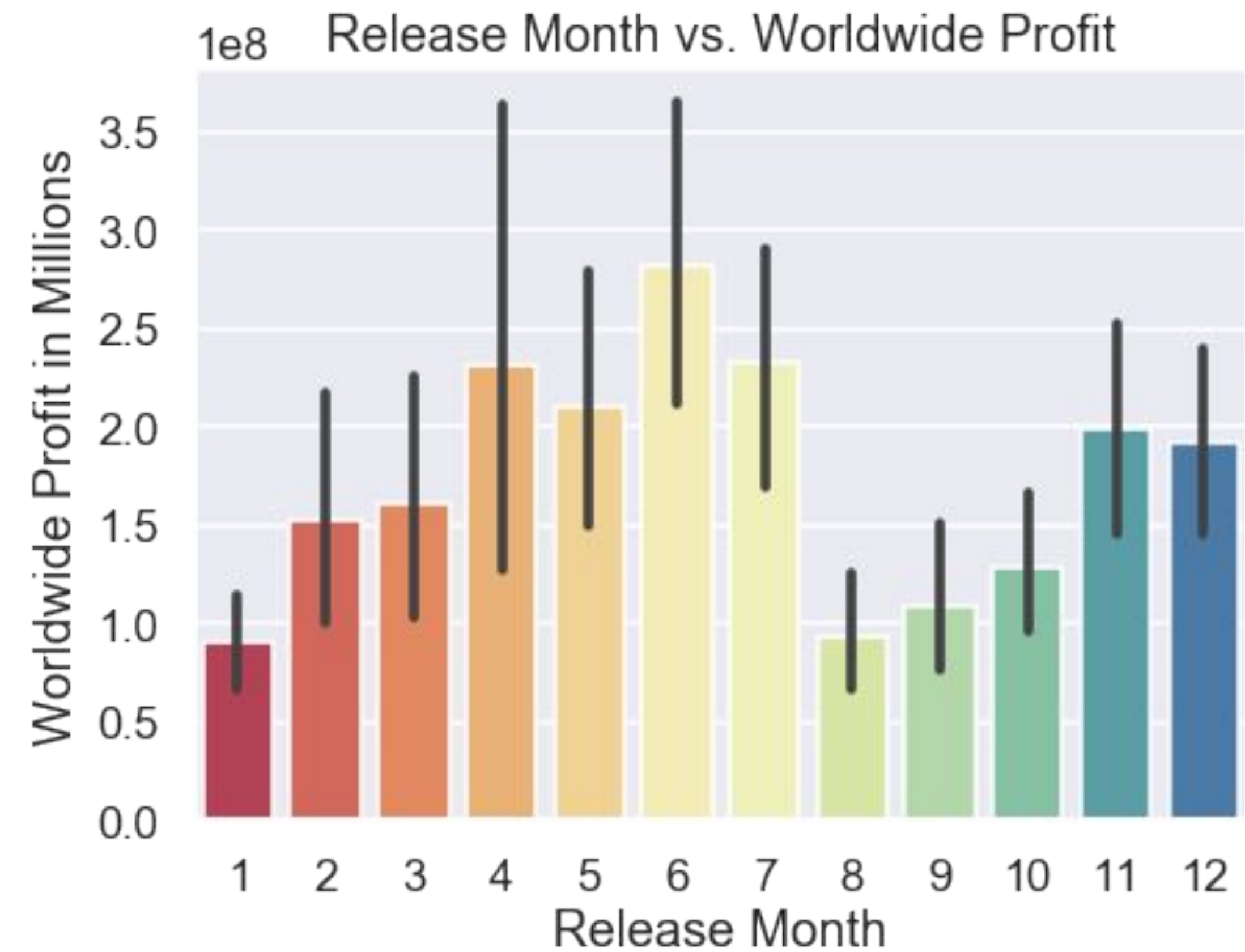
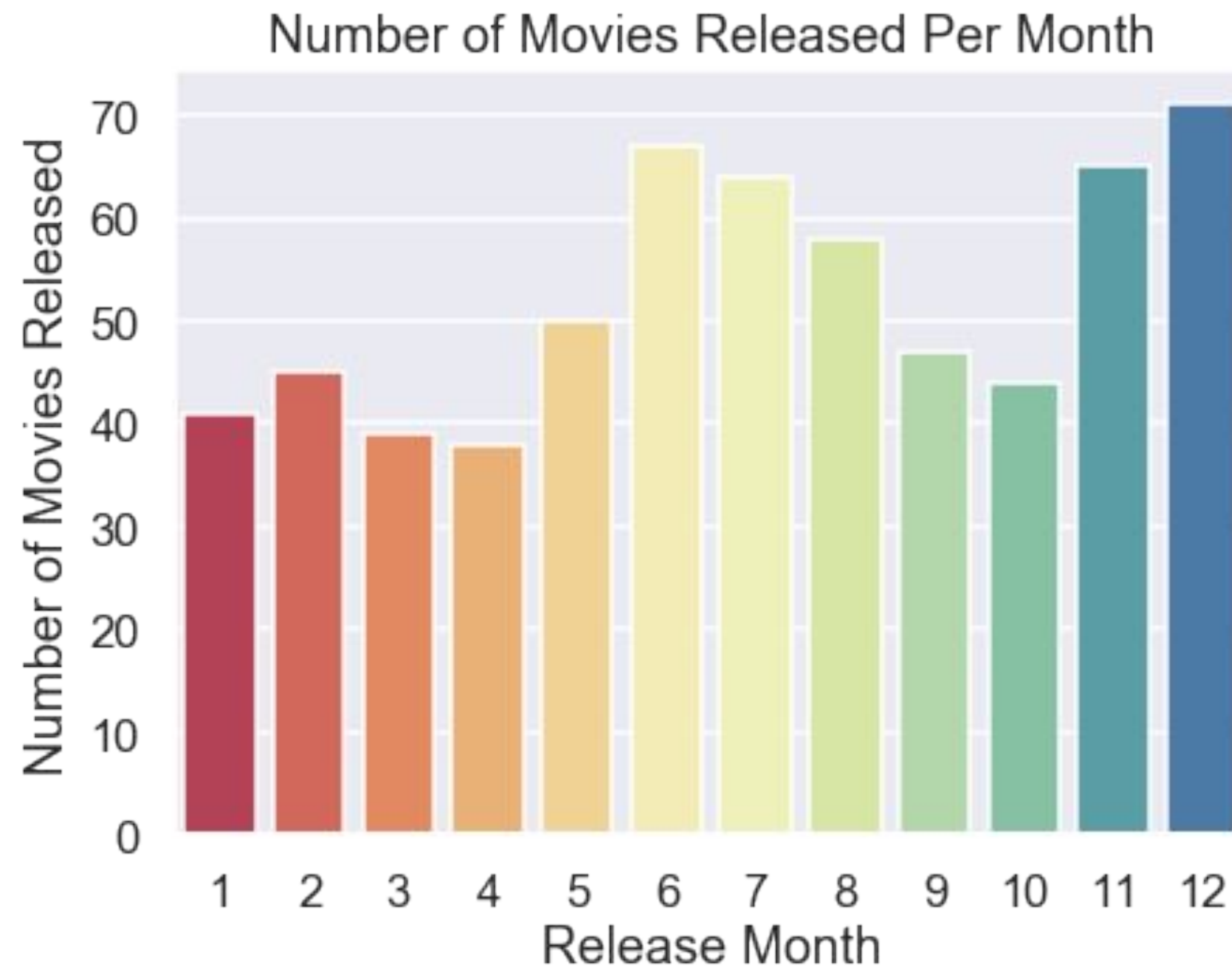
Creative Type

Production Method









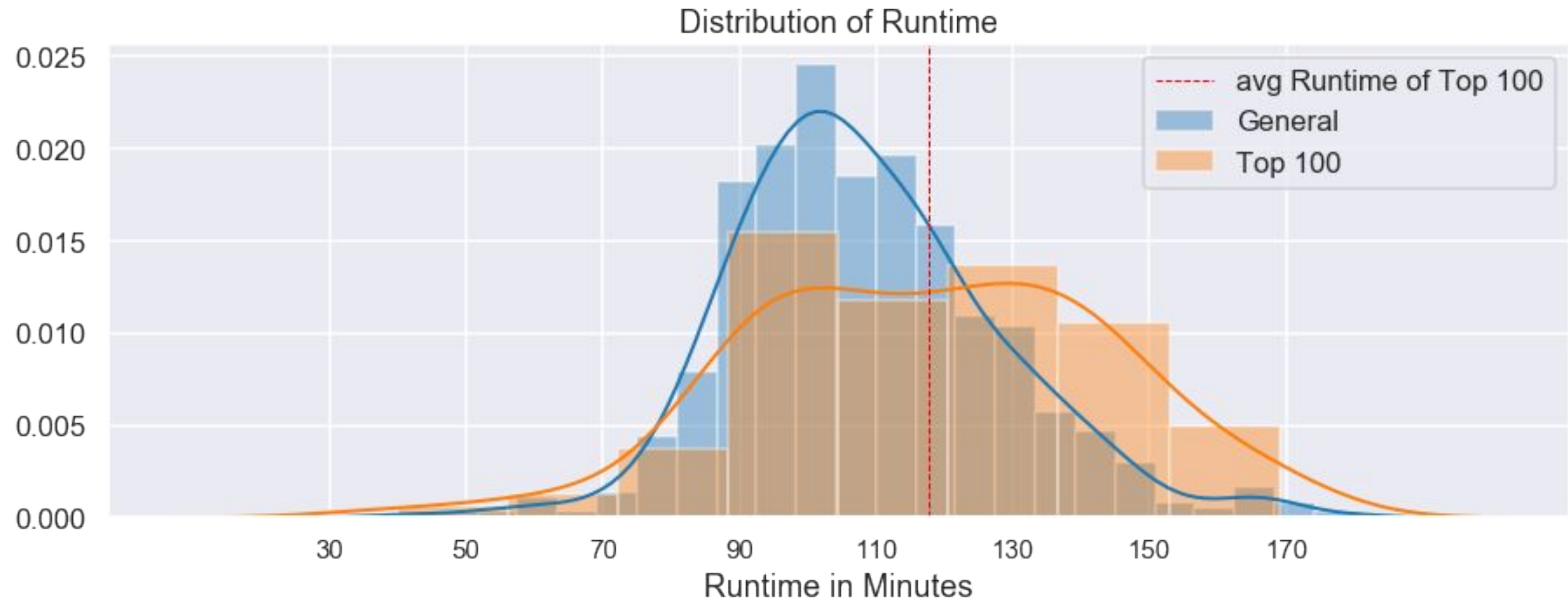
- Most release = June, December
- Most profit = June



Conclusion

June





- The average runtime in General Movies is 108 minutes.
- The average runtime in Top 100 Movies is 118 minutes.

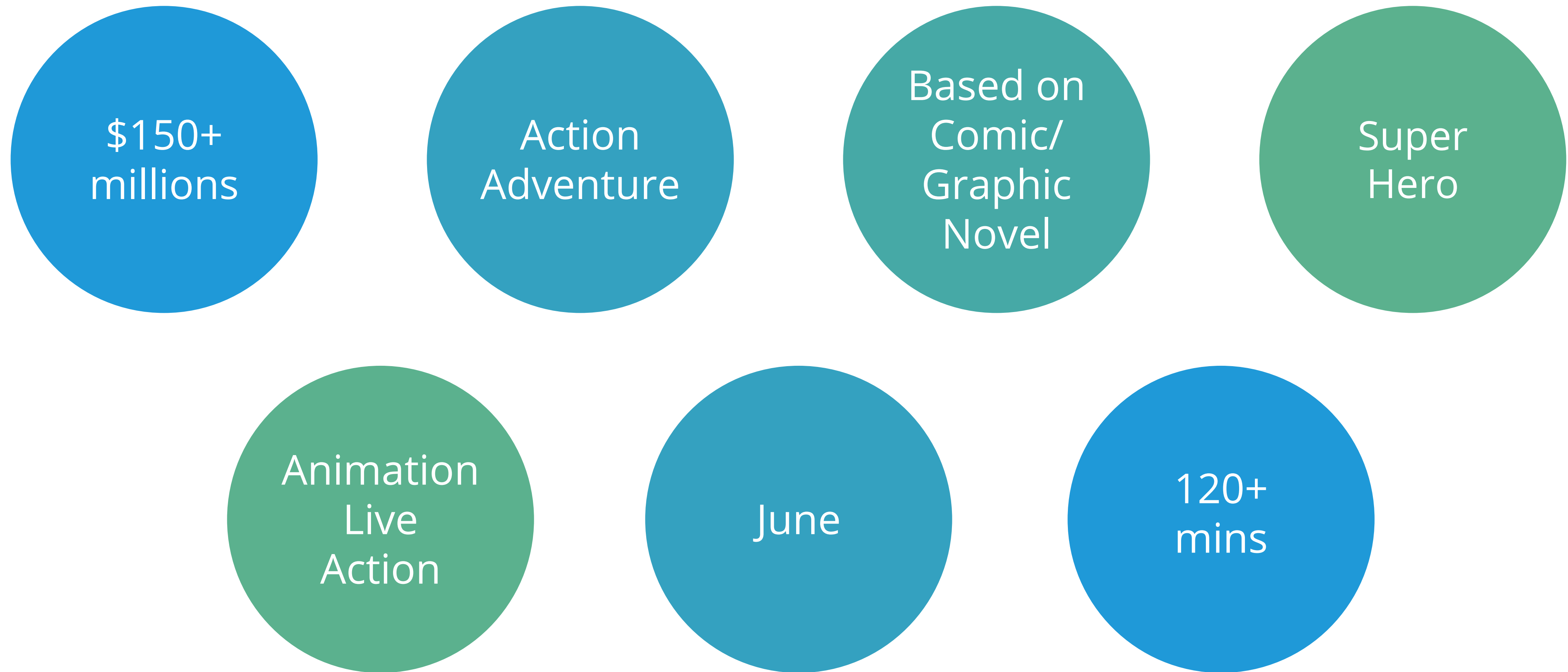


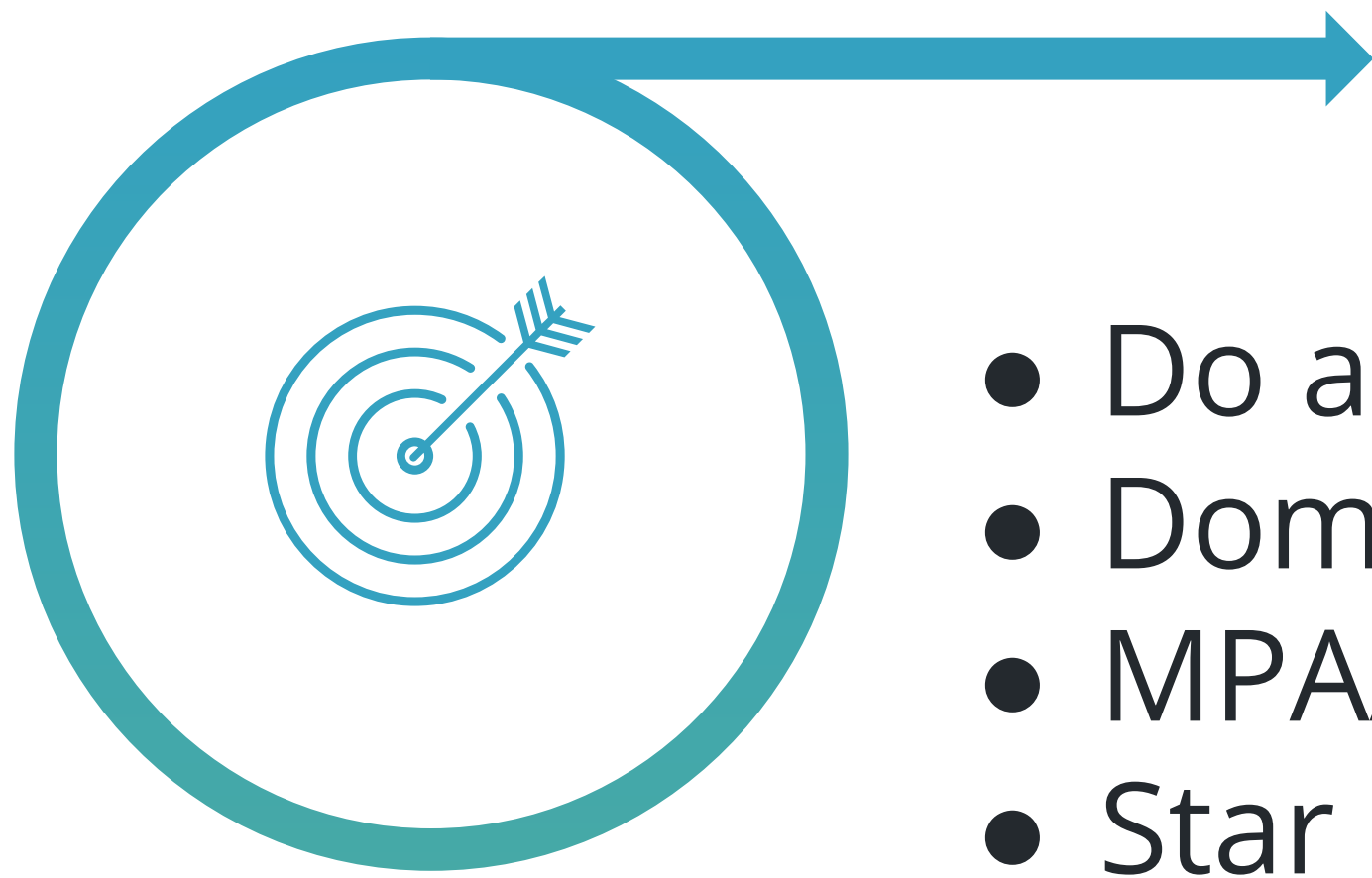
Conclusion

120+ MINS

Our Recommendations

What Makes a Movie Successful





Future Works

- Do analysis in term of ROI
- Domestic market and international market
- MPAA rating
- Star quality
- Script quality
- Special effects, sound design, music
- Marketing campaign
- Popularity of the film preceding it (if it's a sequel)
- Directors
- Writers
- Critics
- Diversity: female directors, women of color, Black Lives Matter movement, LGBTQ+, etc.



Q & A



Thank You





Appendix





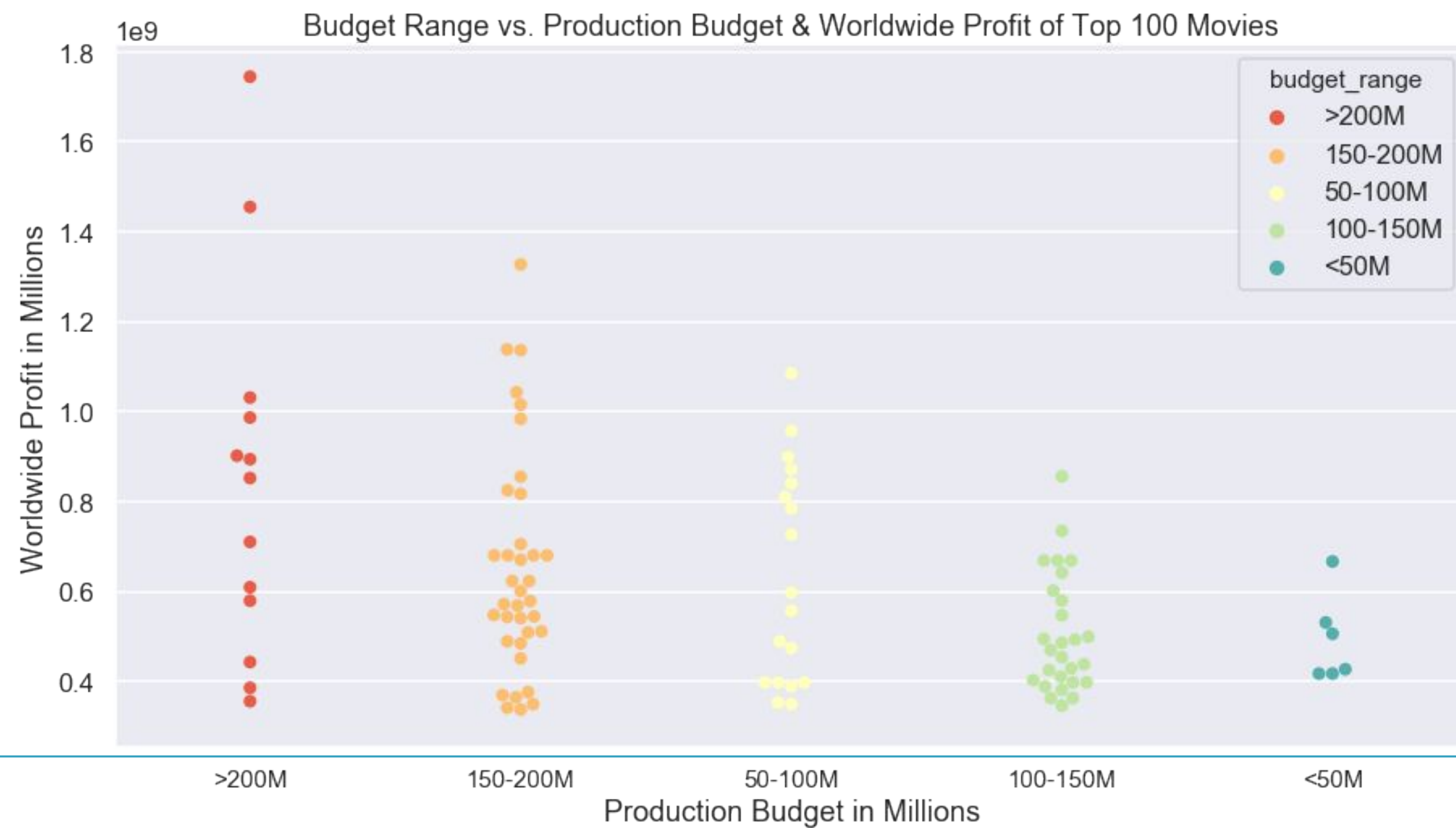
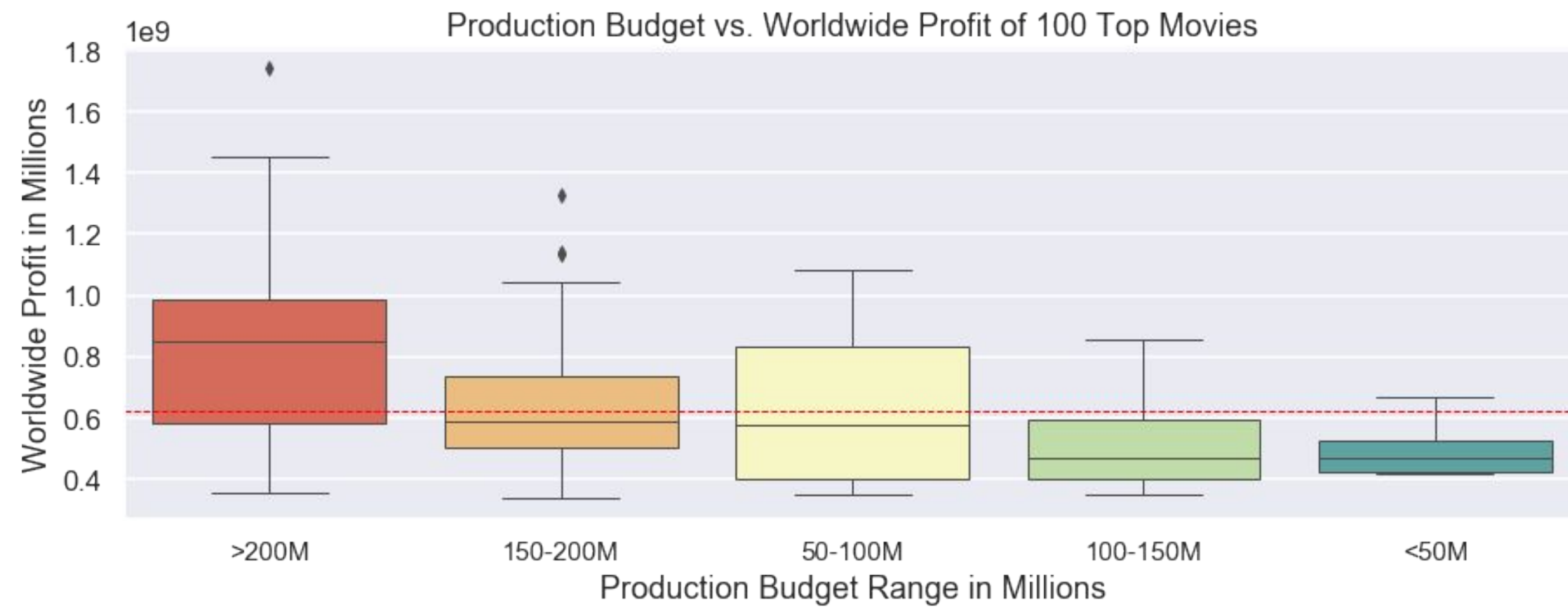
Examples

- ***Pirates of the Caribbean: On Stranger Tides*** (2011) - \$379M budget, \$1 B earned
- ***Avenger: Age of Ultron*** (2015) - \$365M budget, \$1.3B earned
- ***Spectre*** (1997) - \$300M budget, \$879M earned

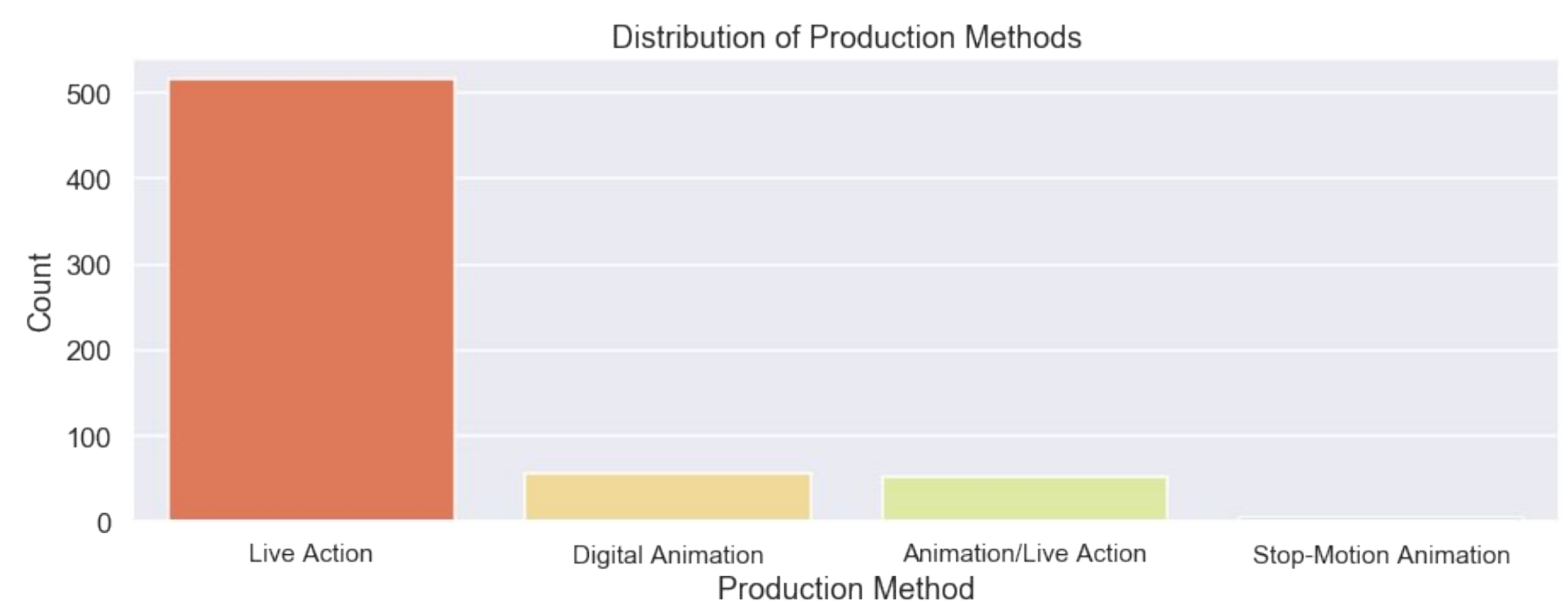
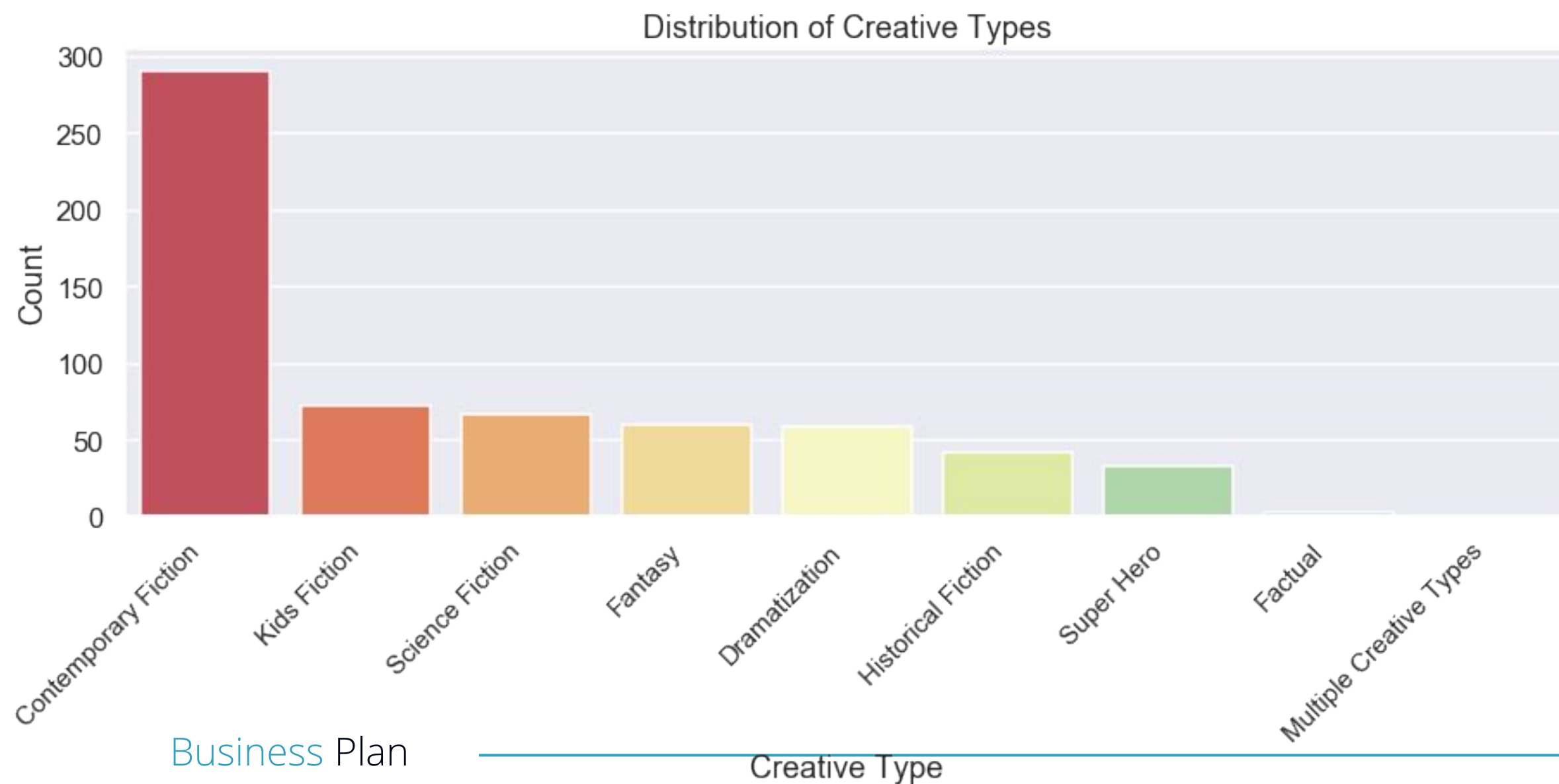
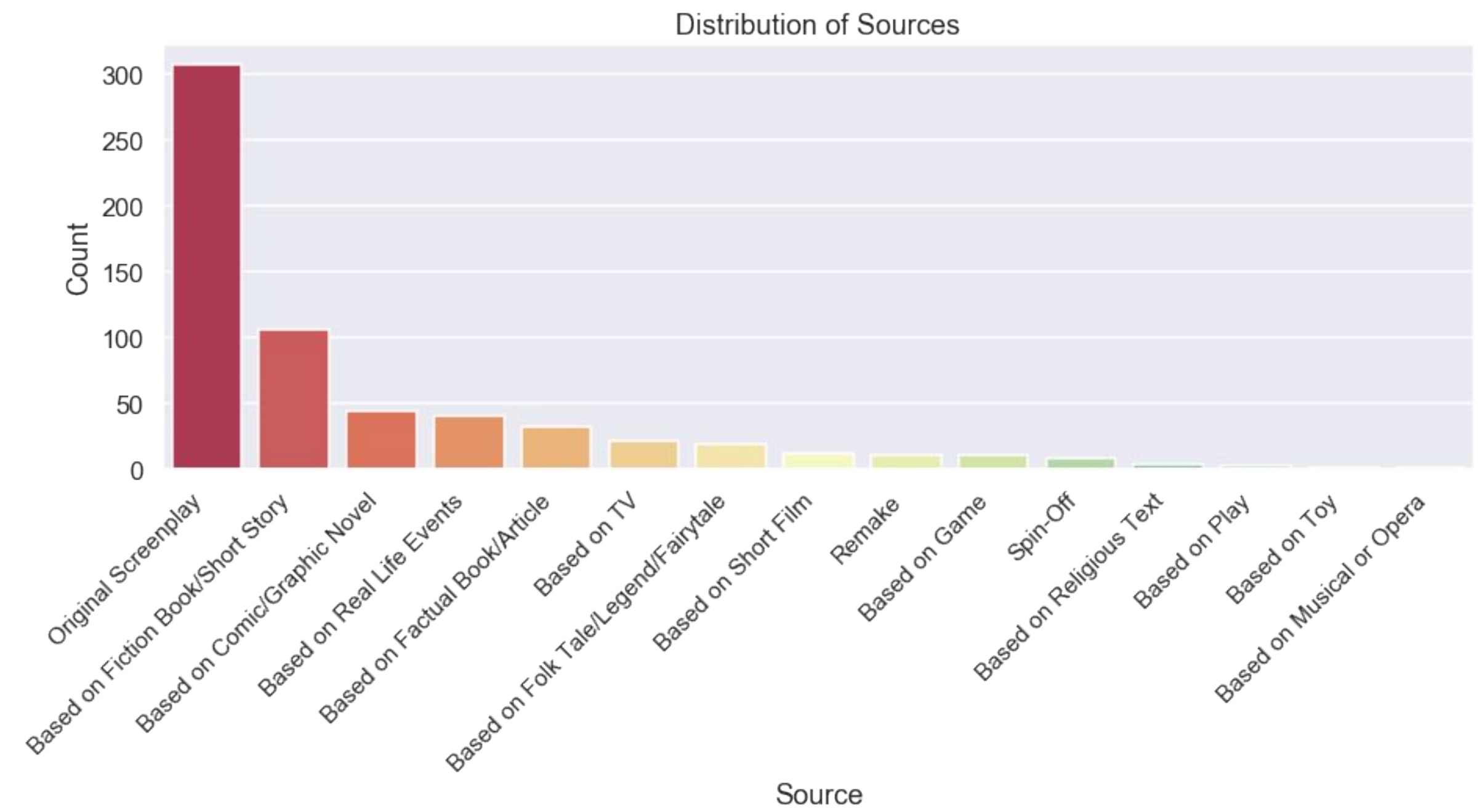
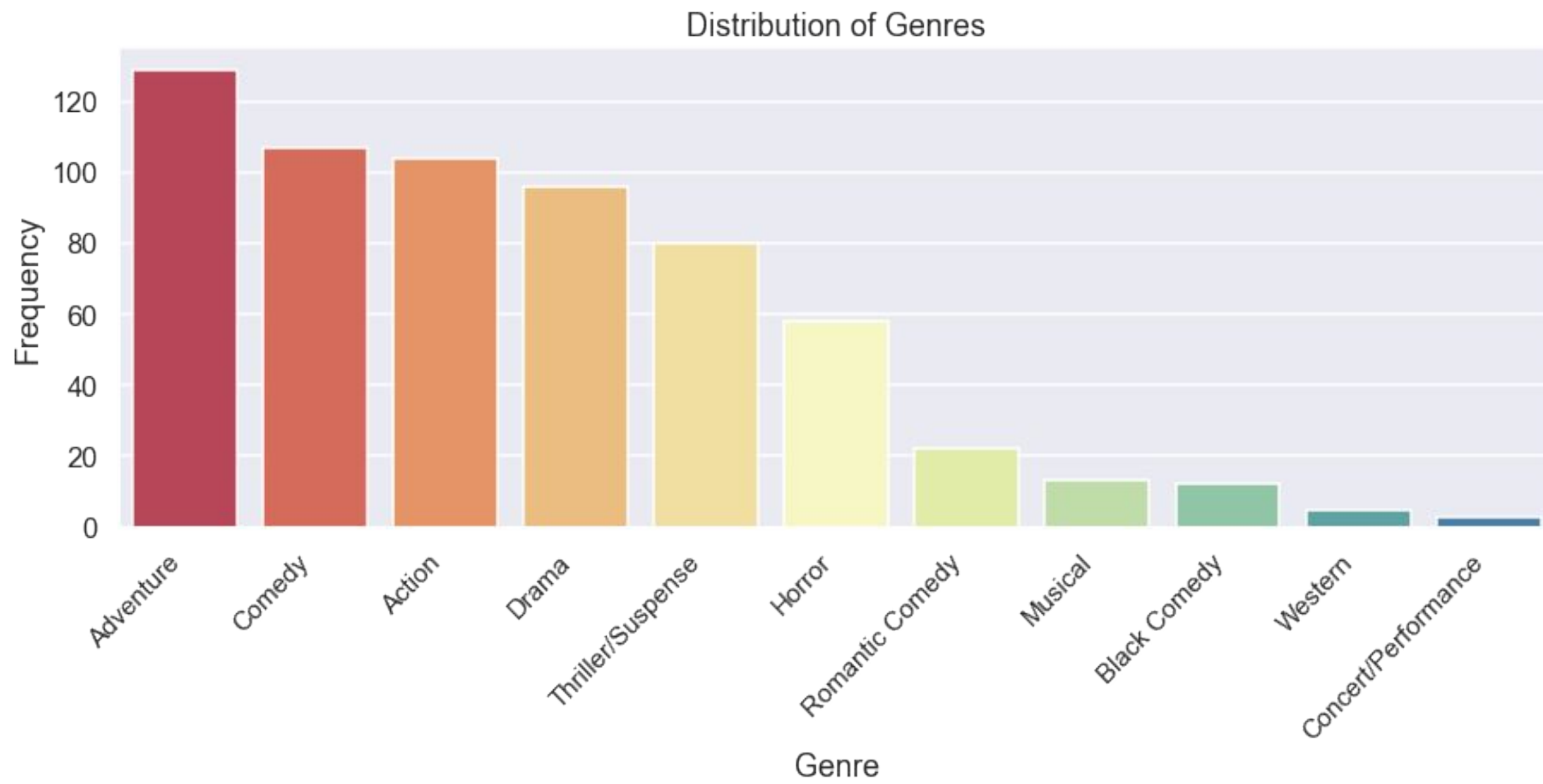


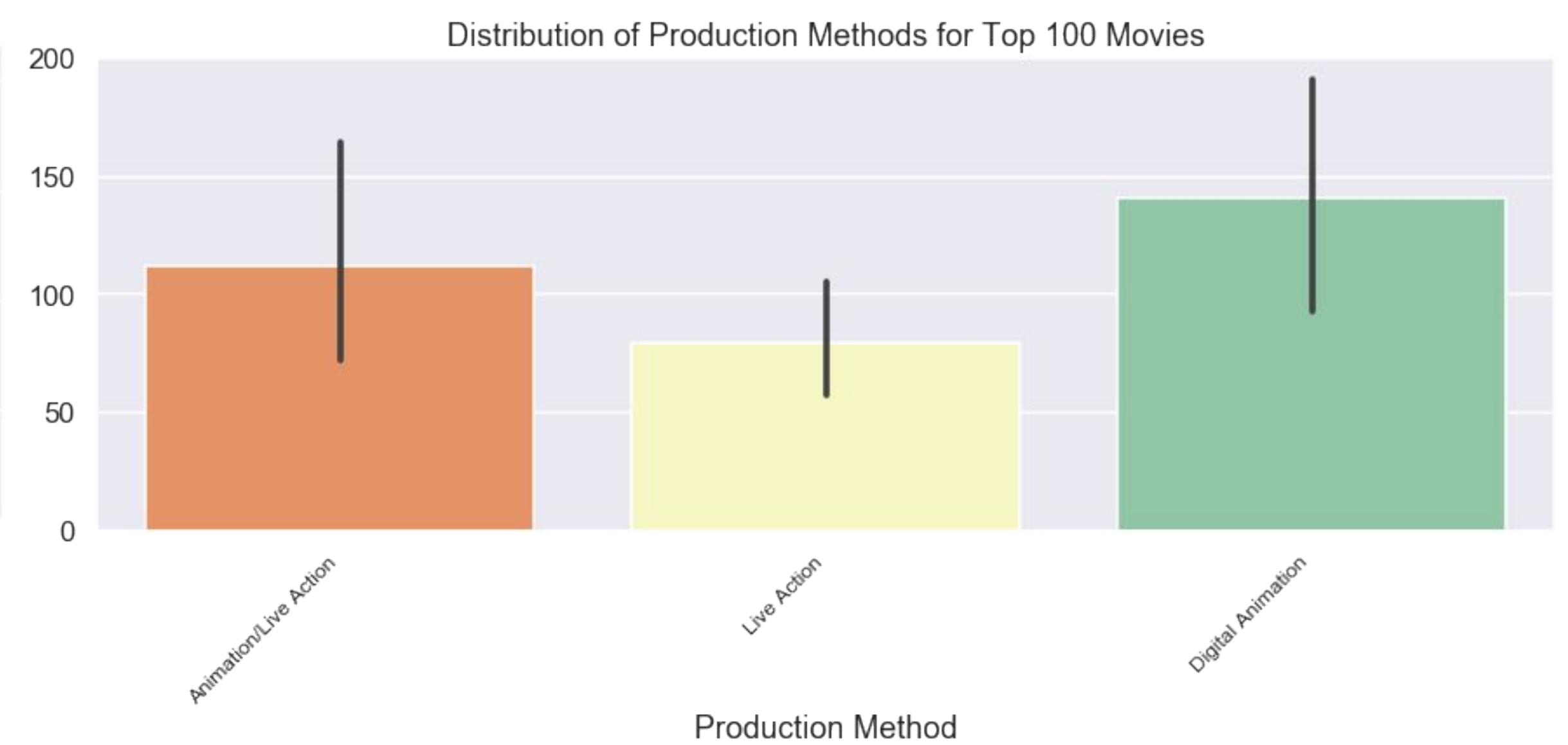
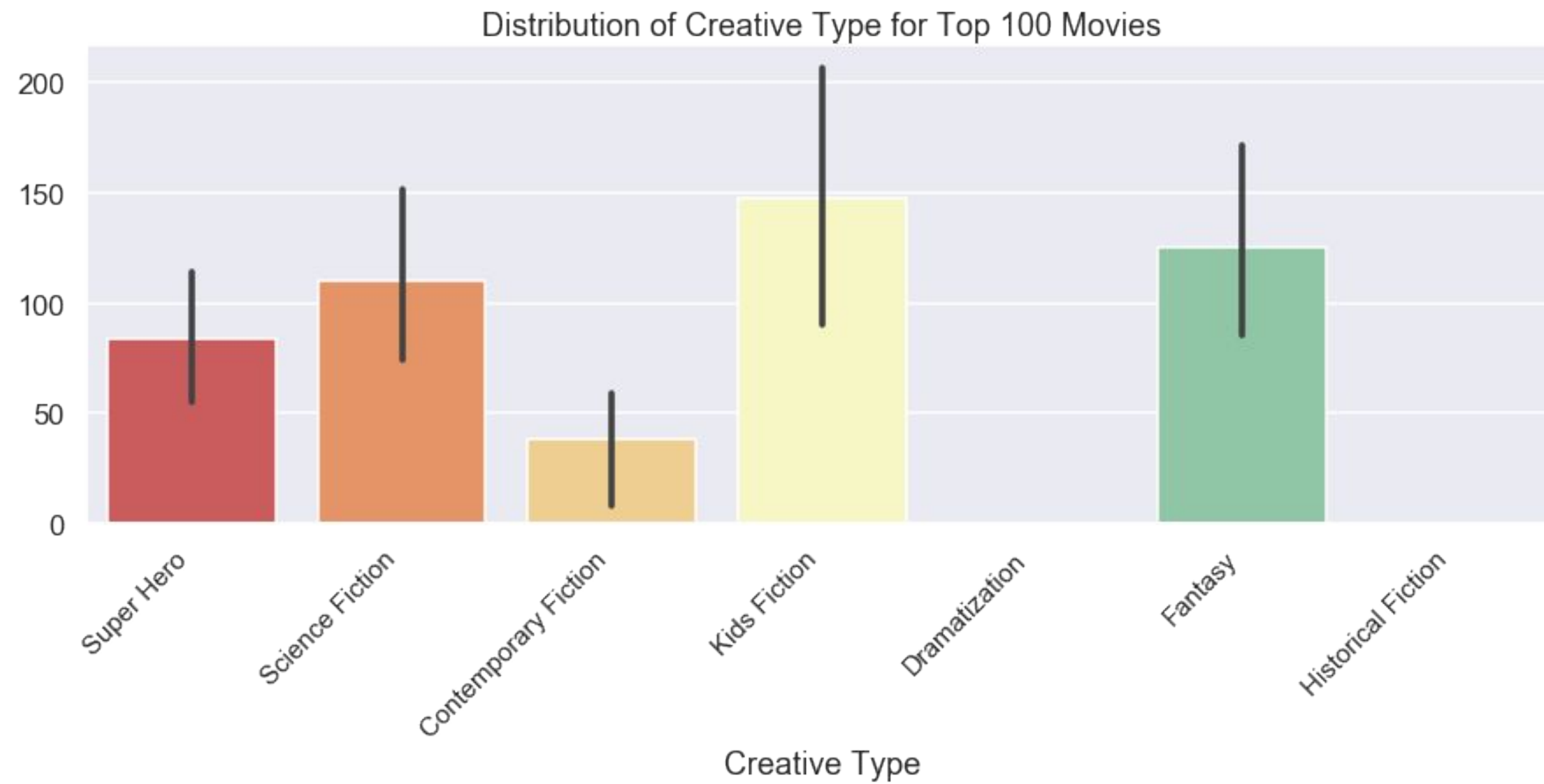
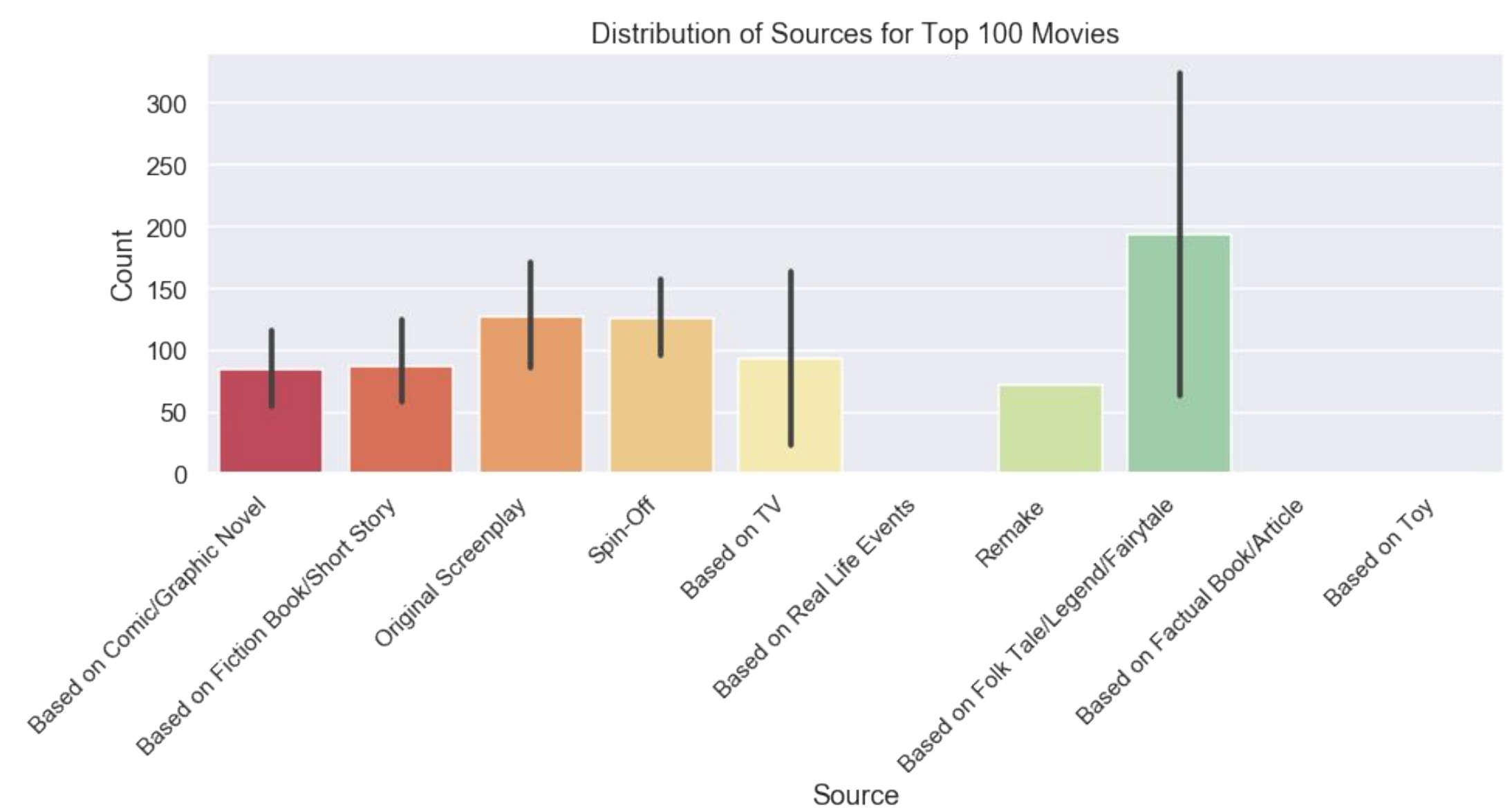
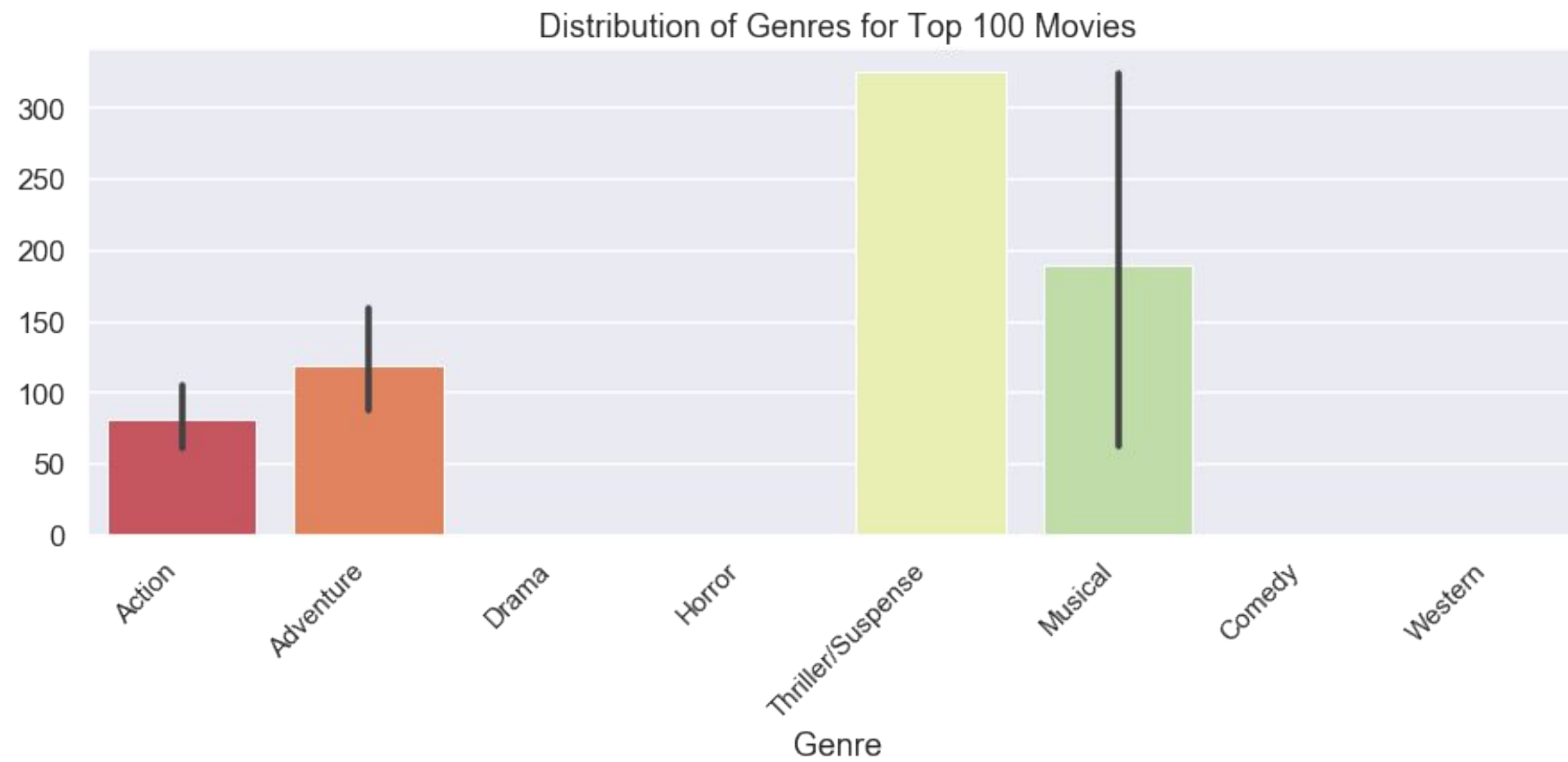
Examples

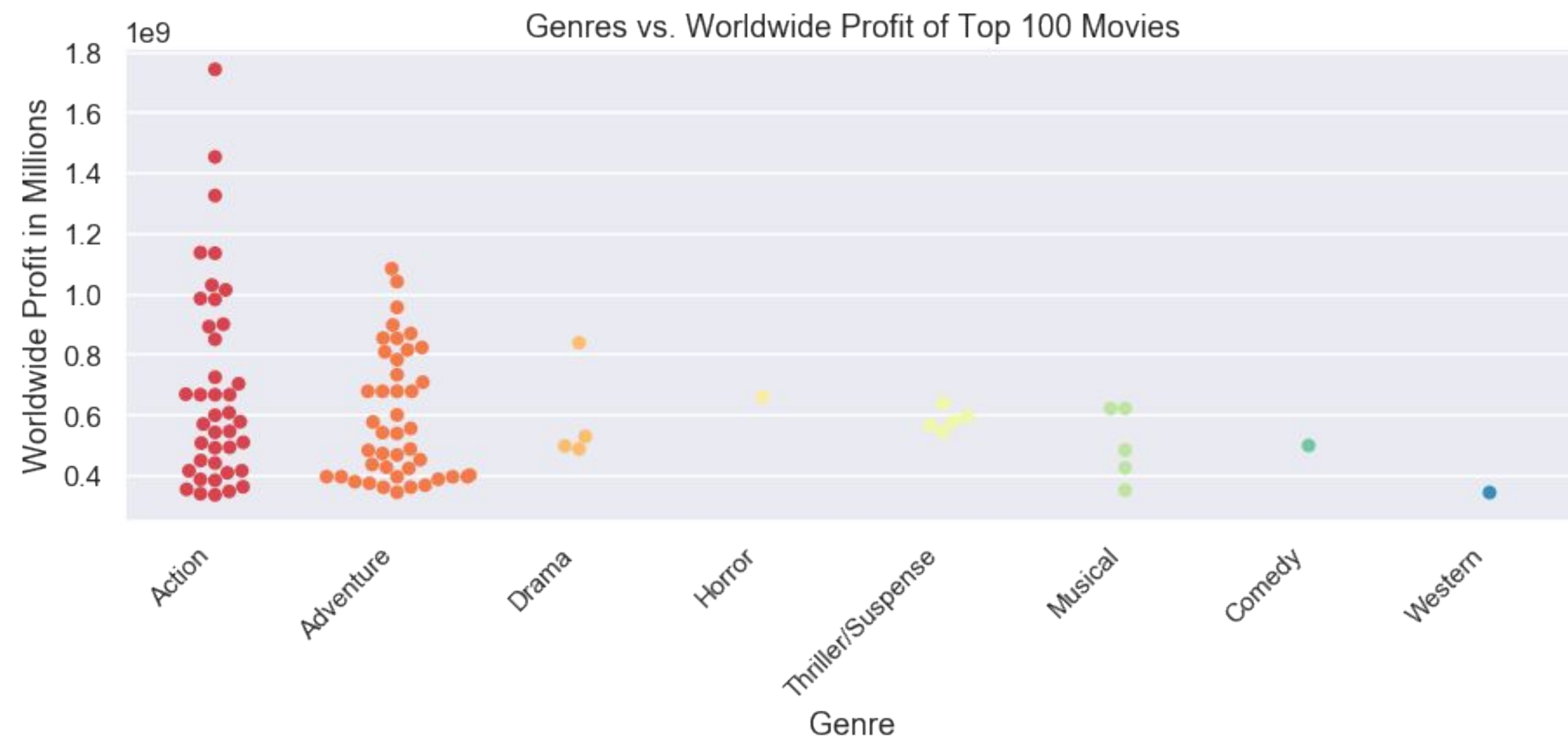
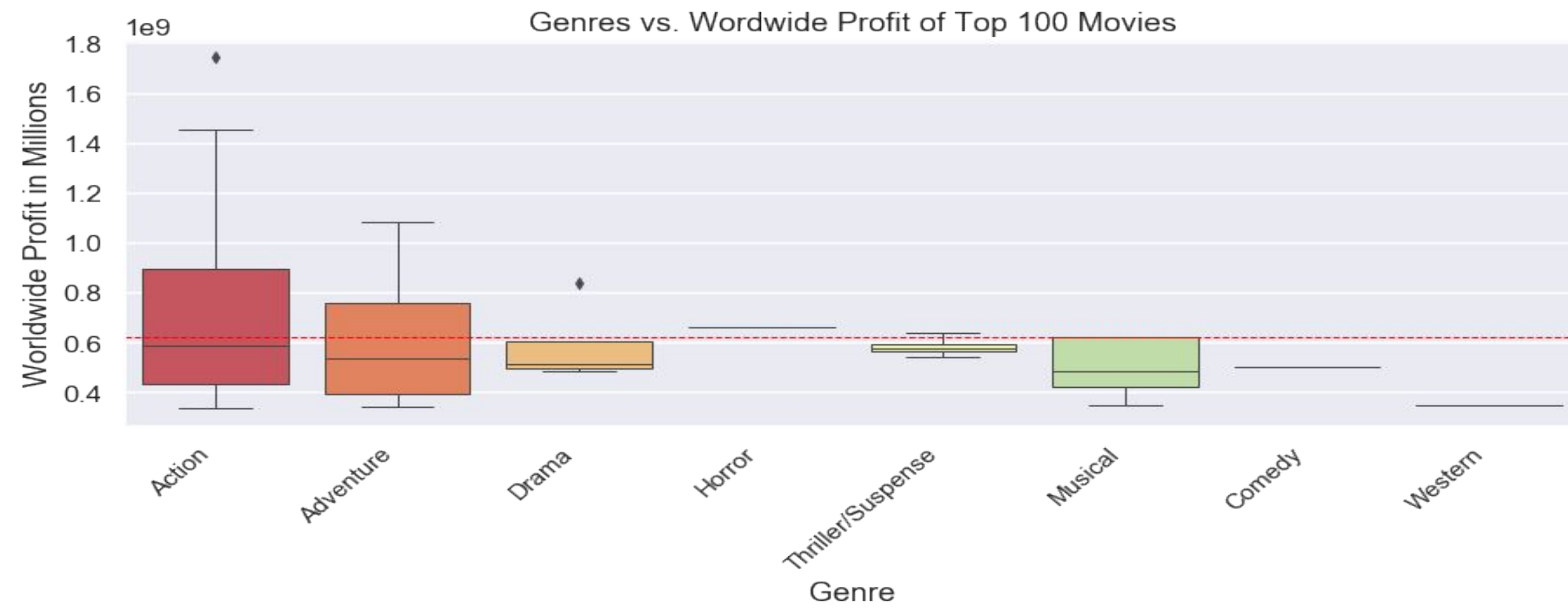
- ***Facing the Giants*** (2006) - \$100,000 budget, \$24.4M earned
- ***Once*** (2007) - \$150,000 budget, Oscar nominations, \$19M earned
- ***Mad Max*** (1980), \$200,000 budget, \$49.6M earned

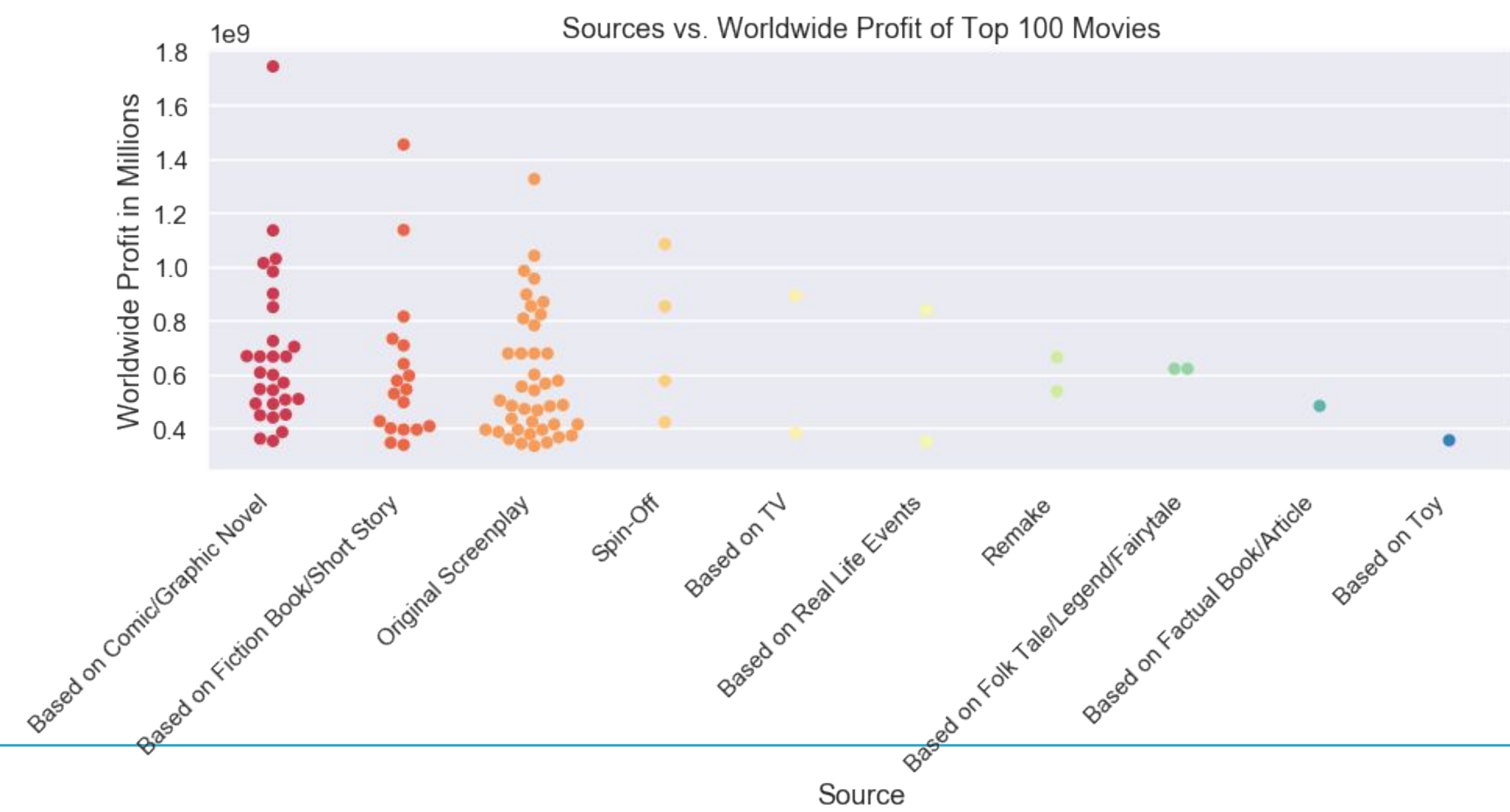
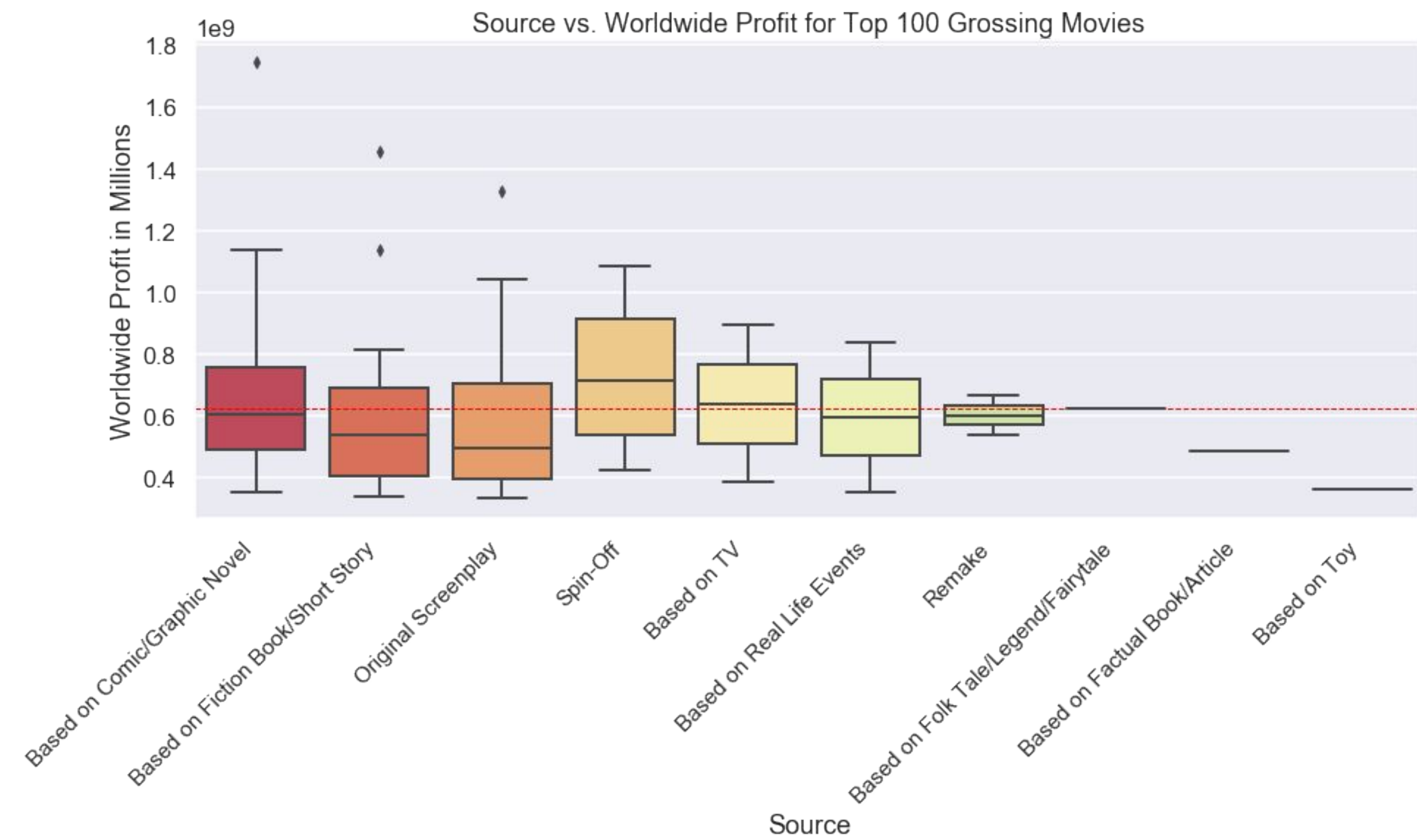


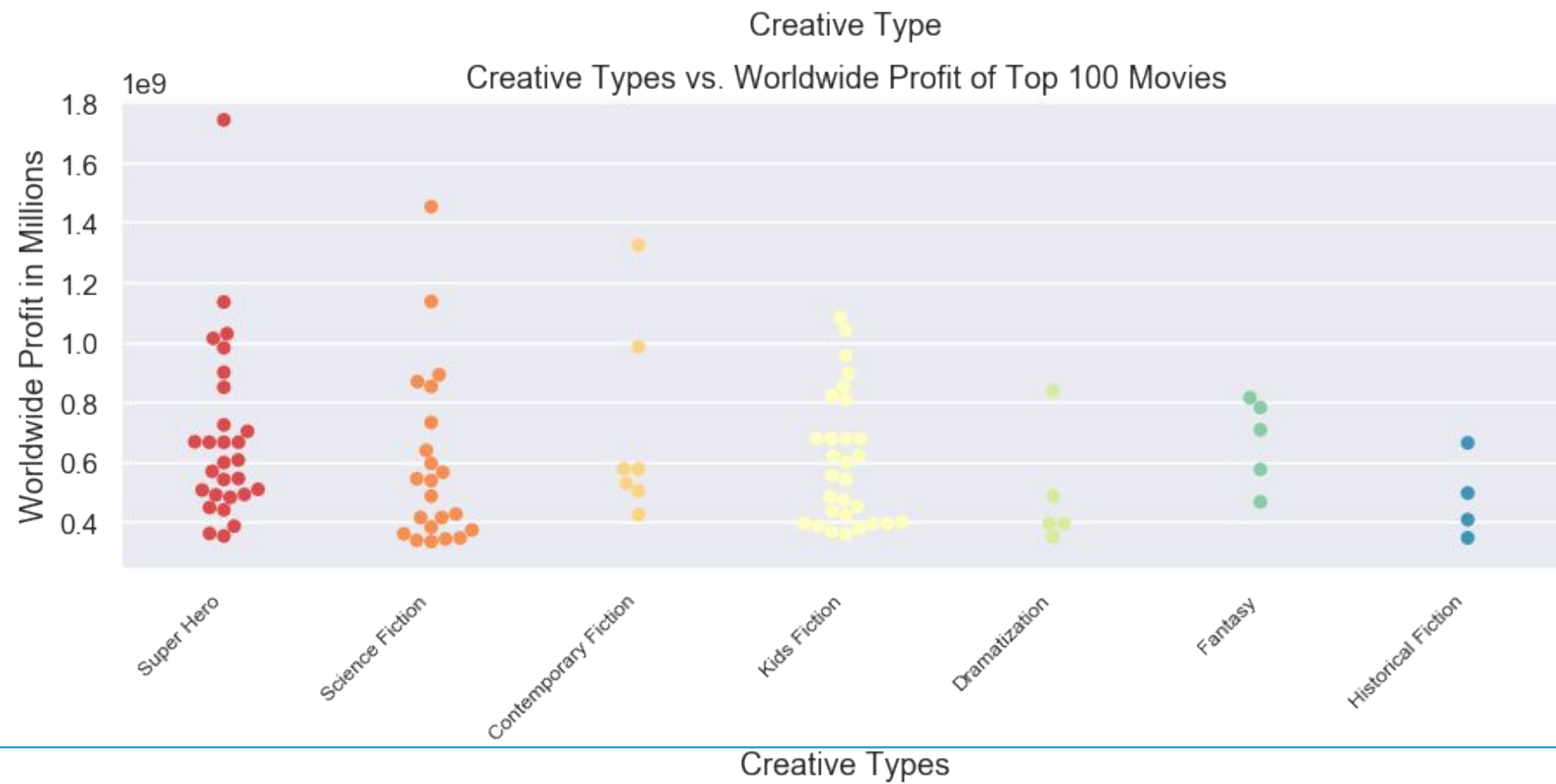
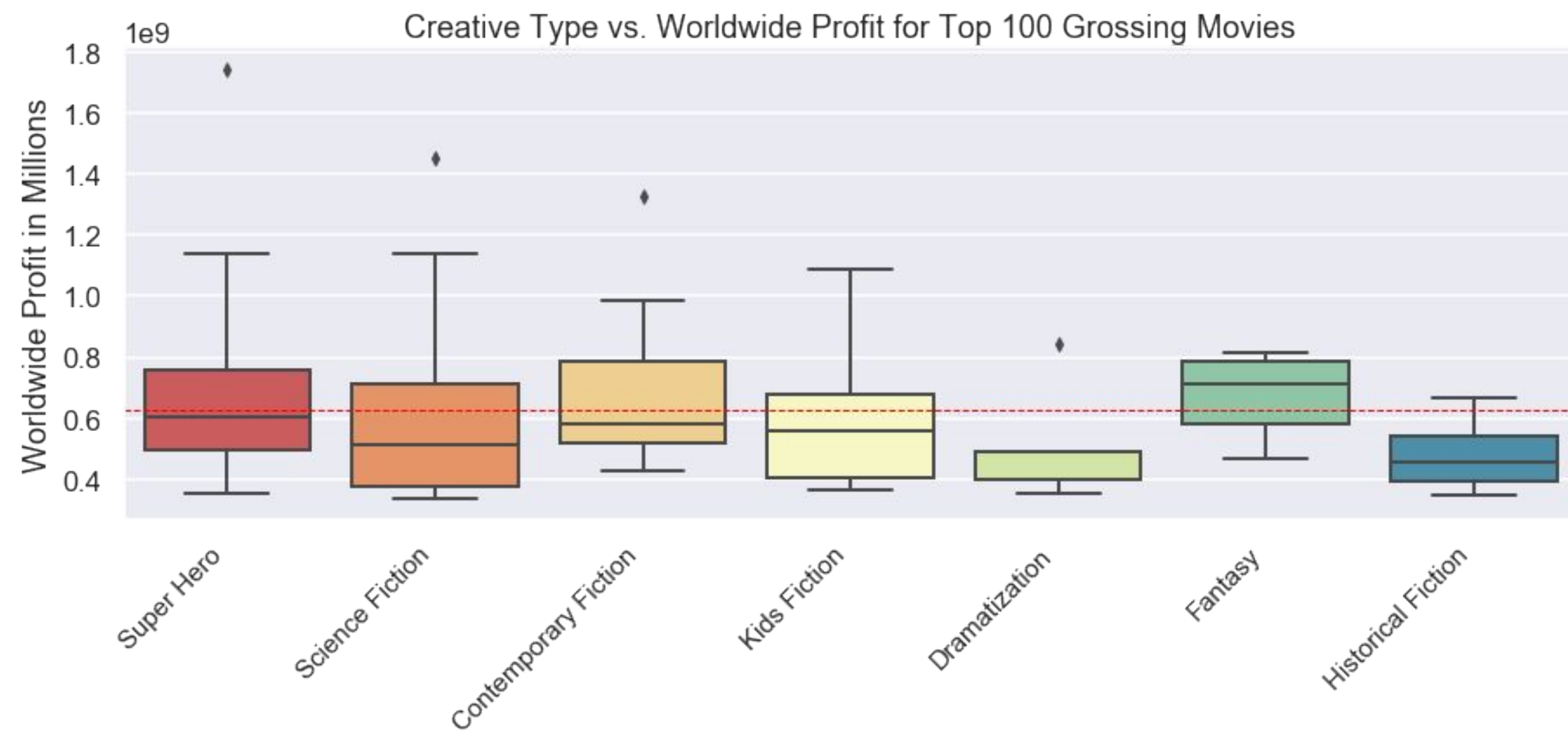


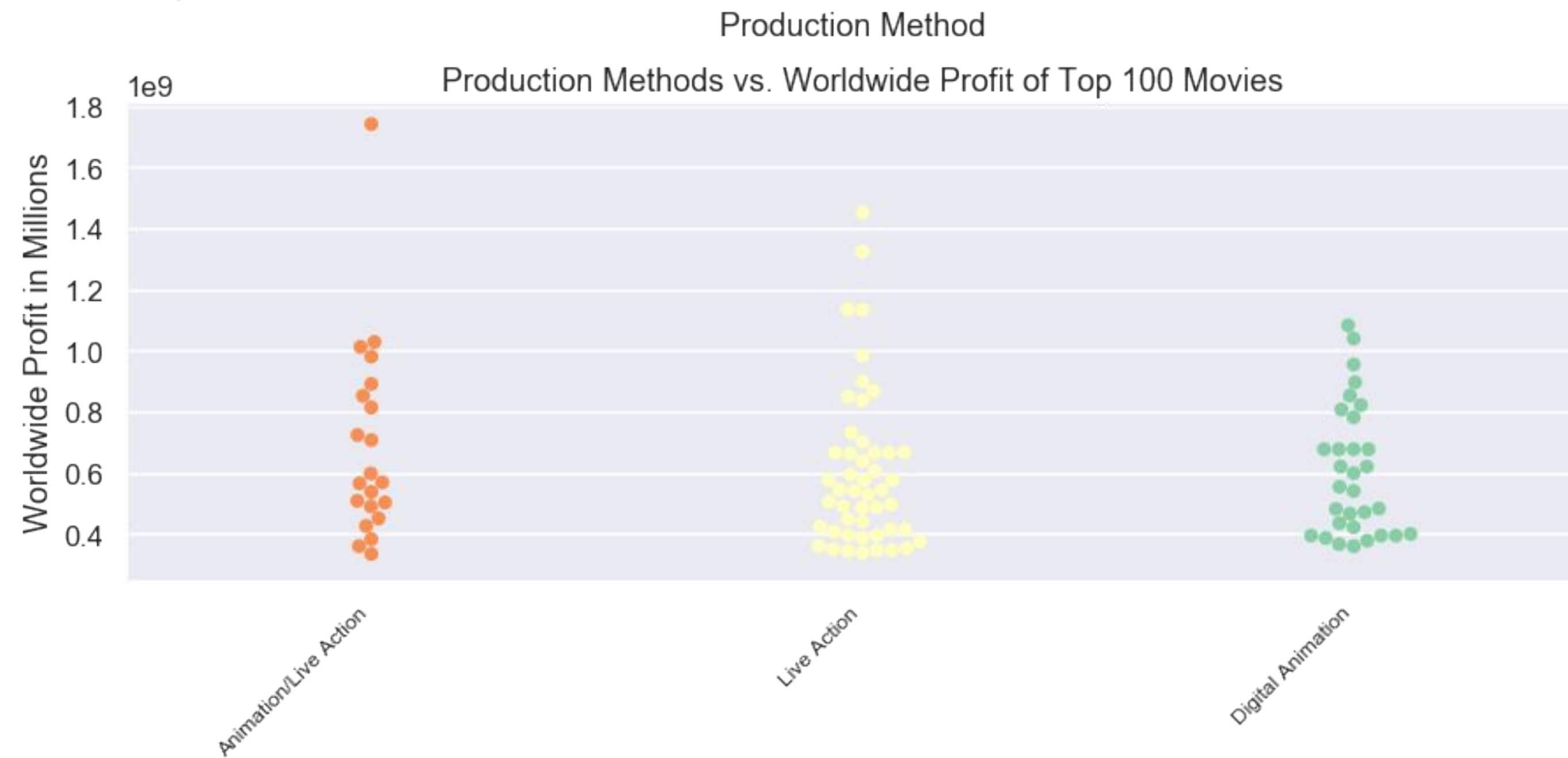
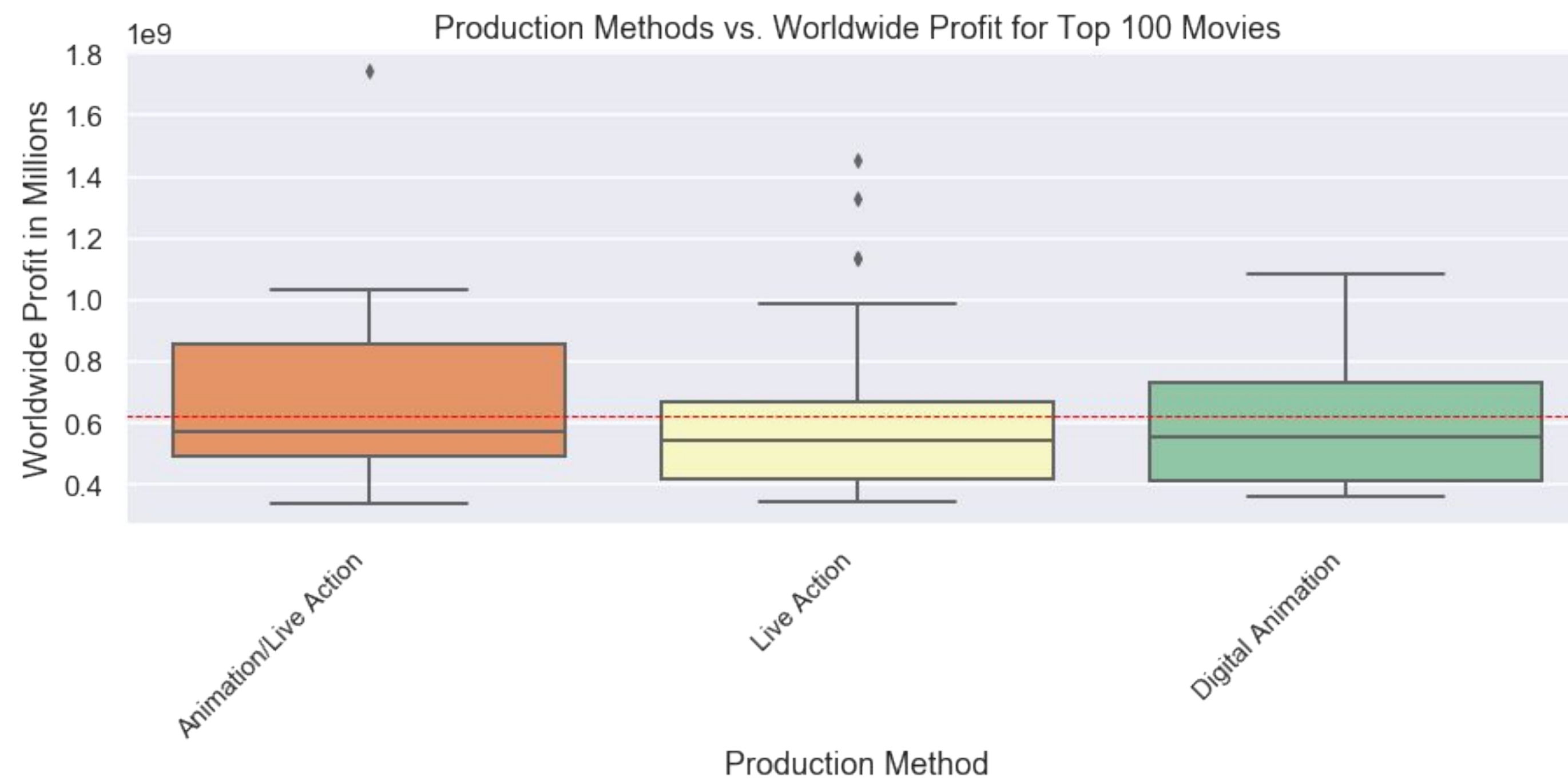


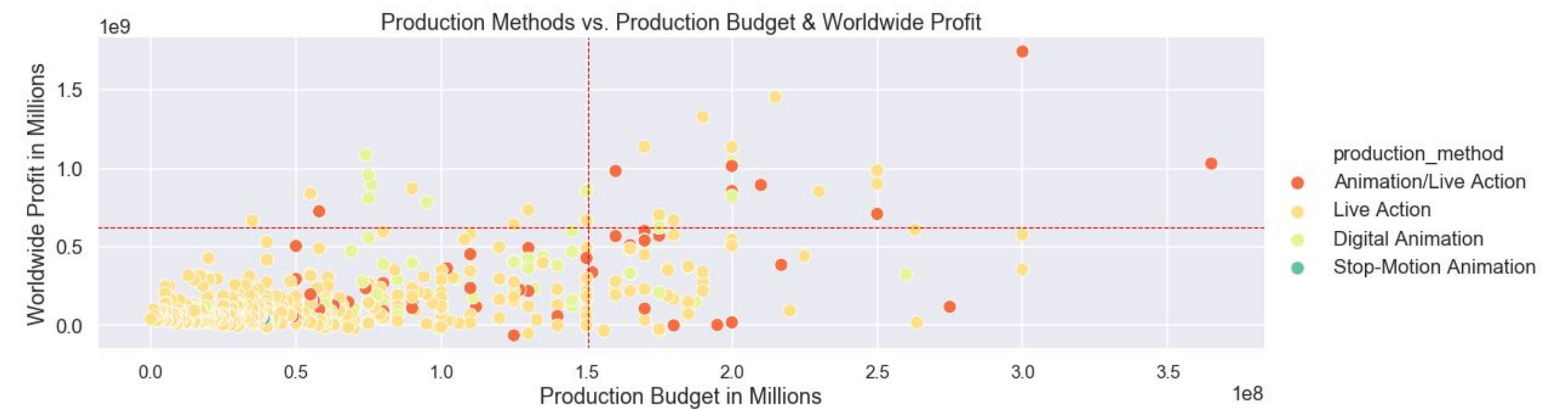
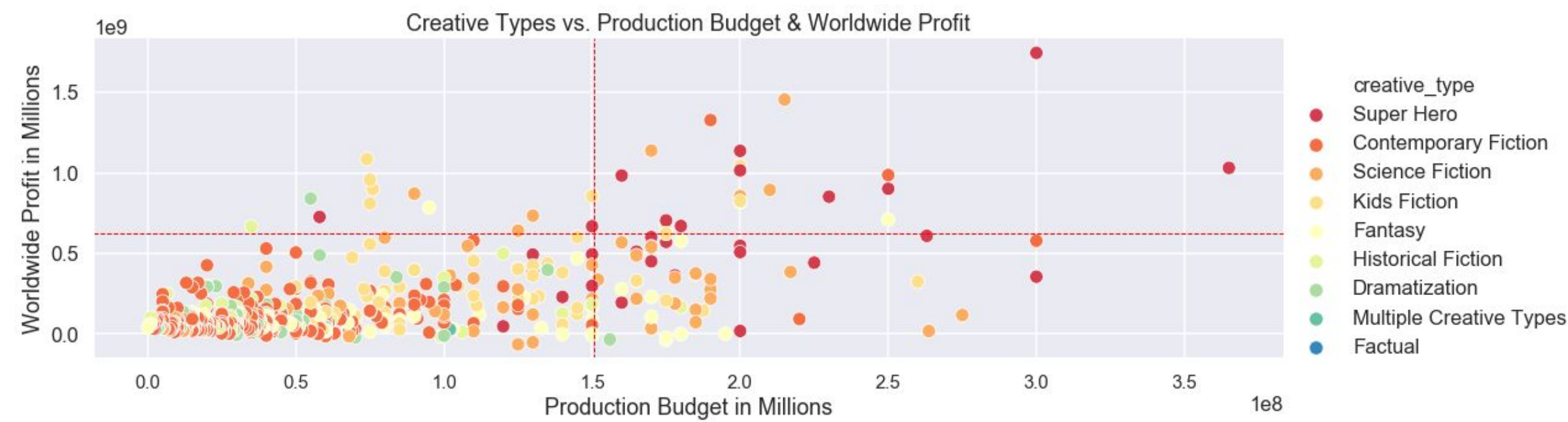
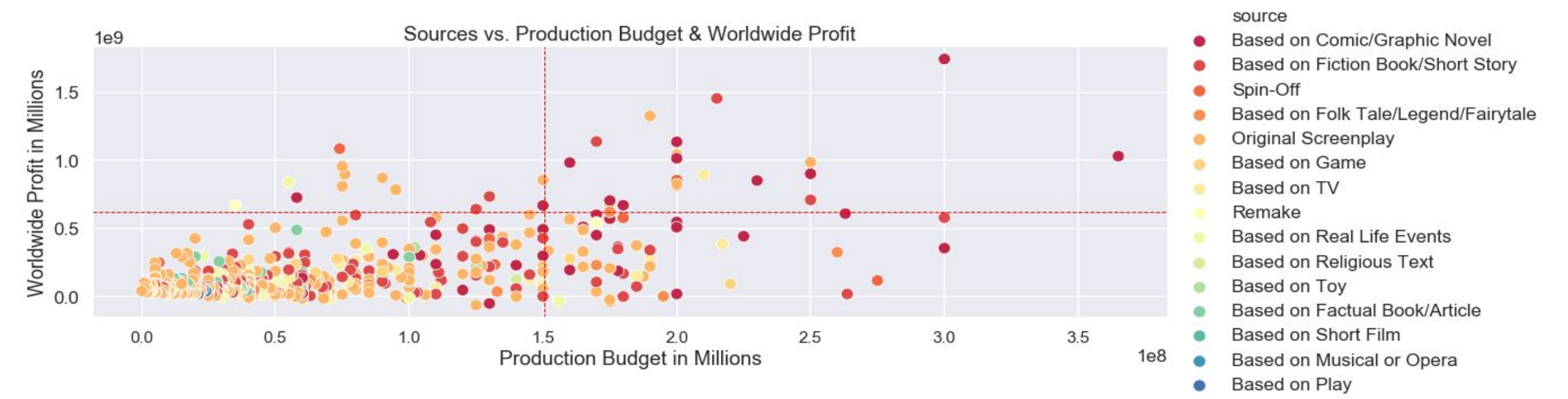
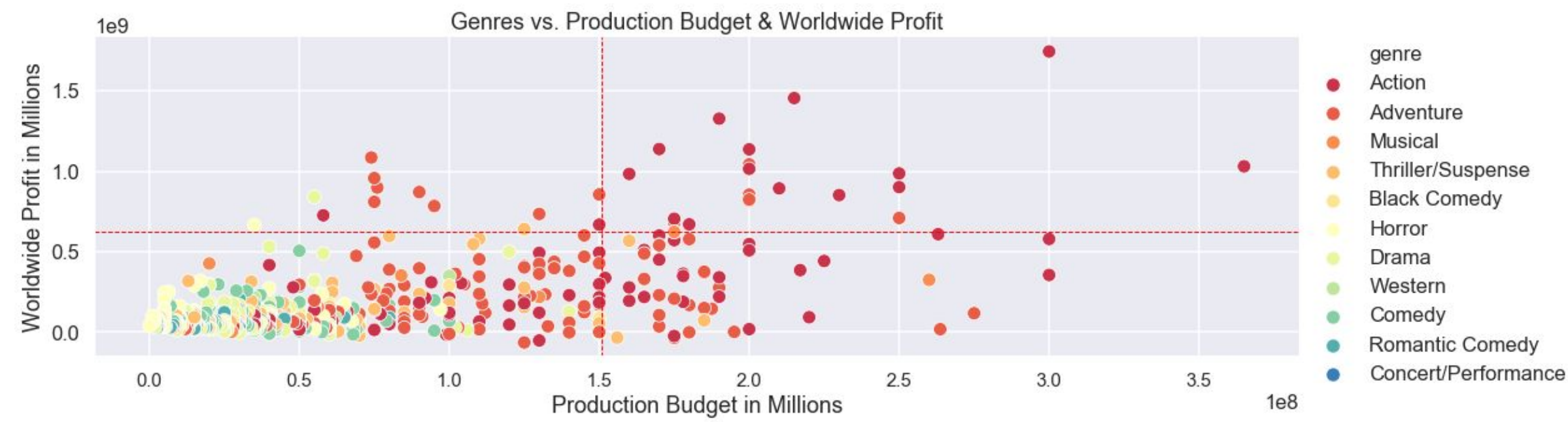


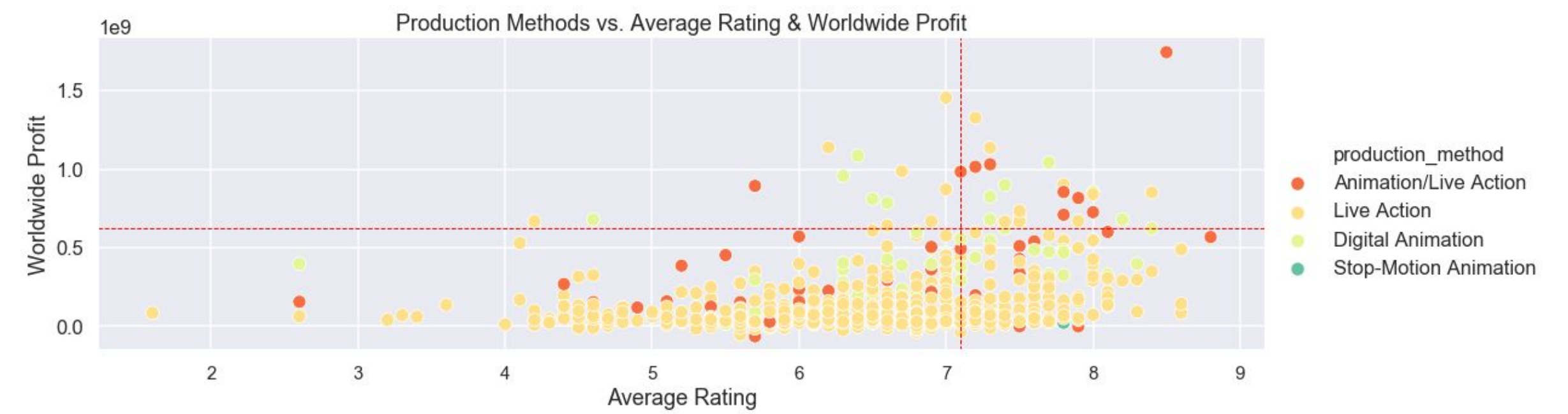
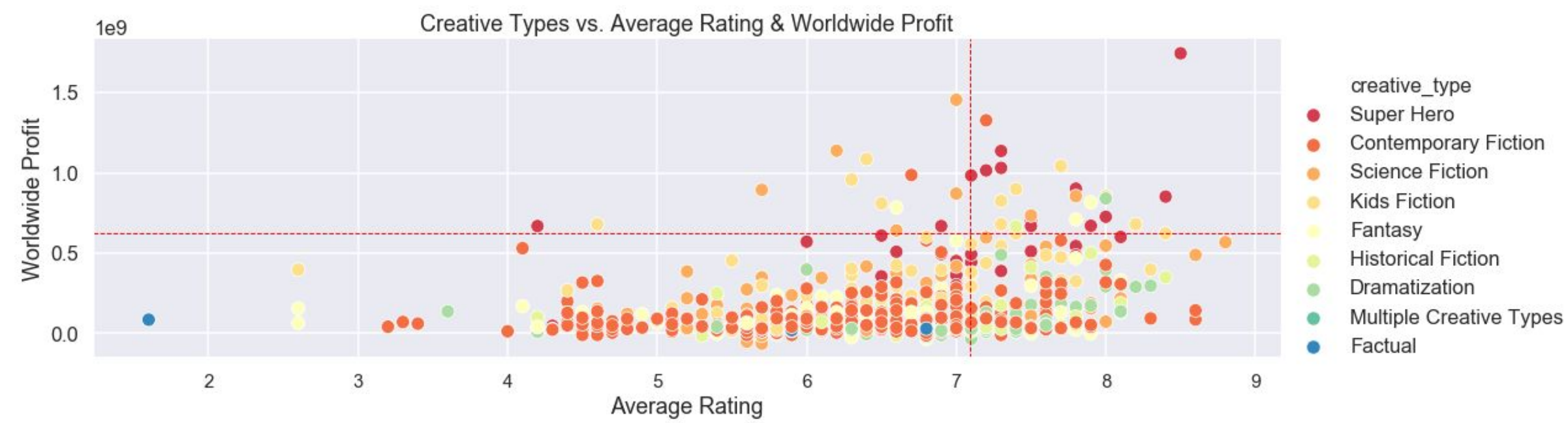
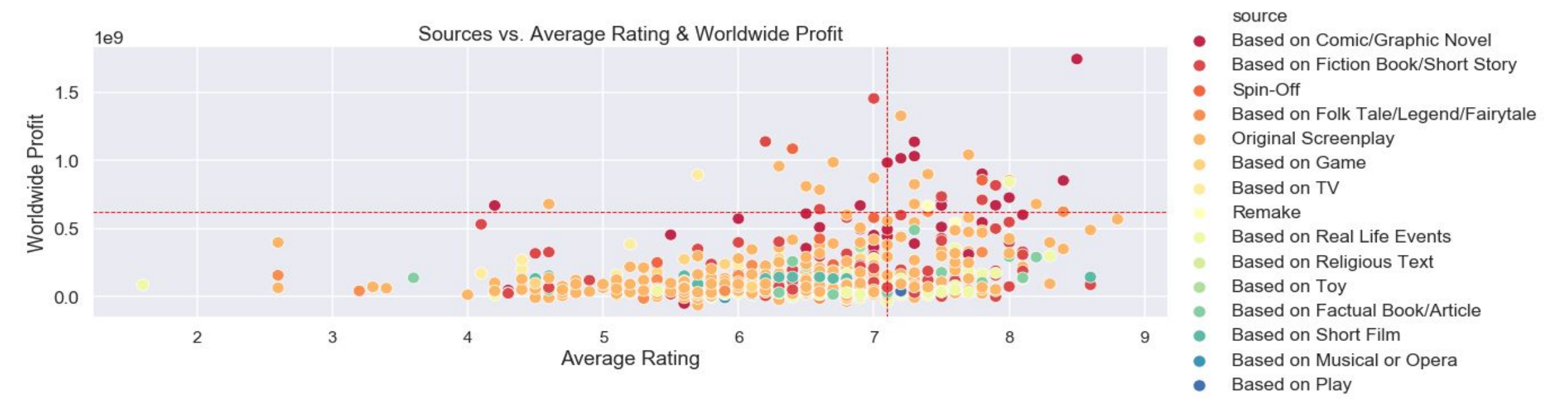
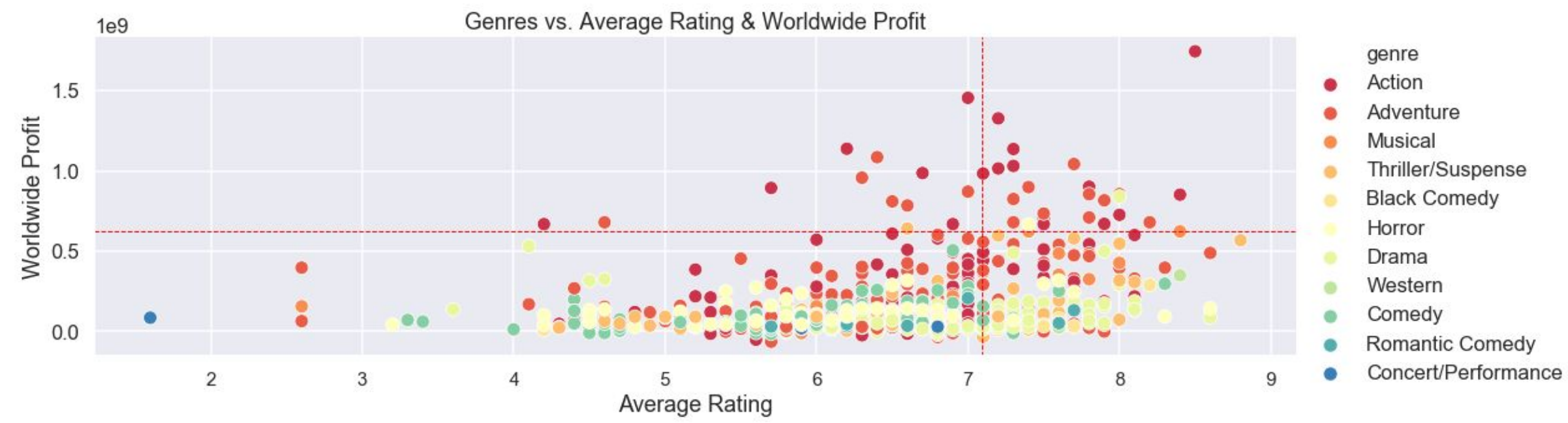


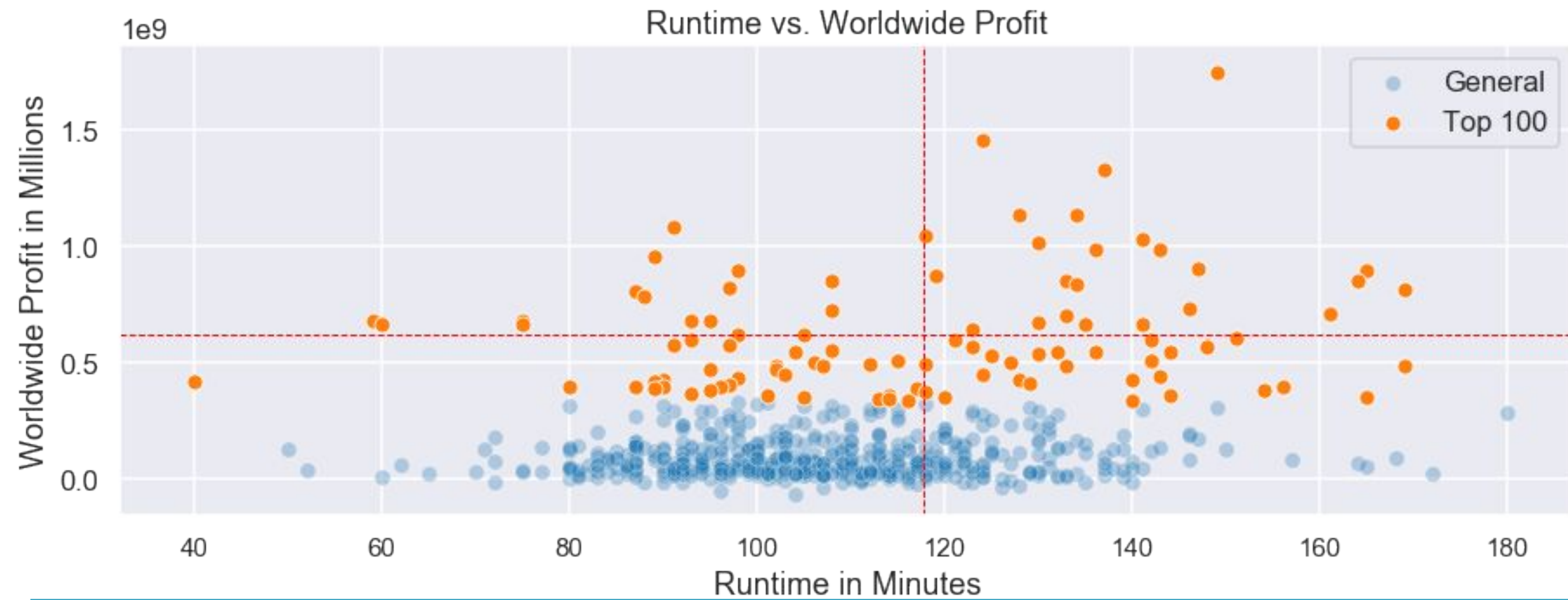
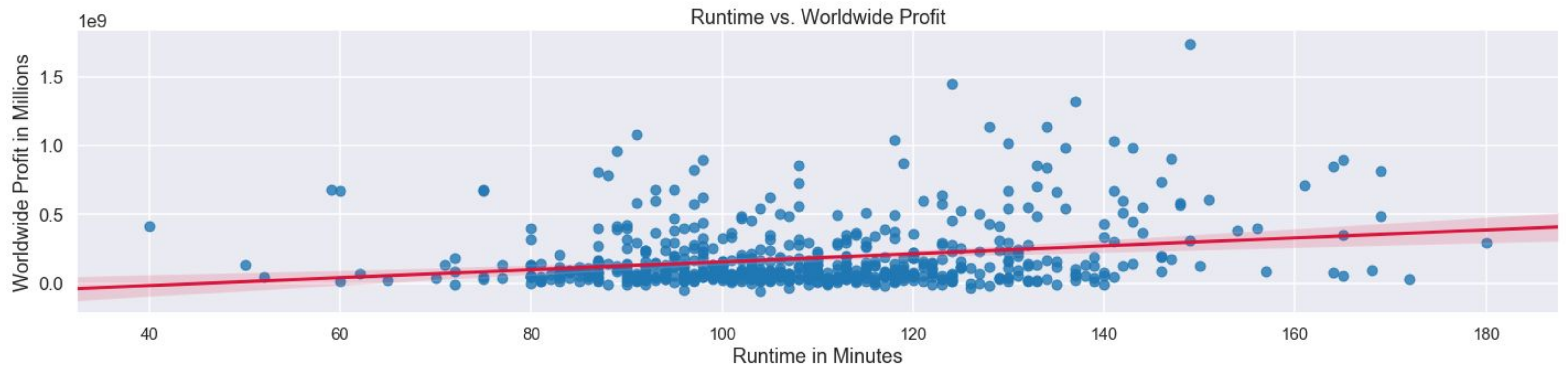


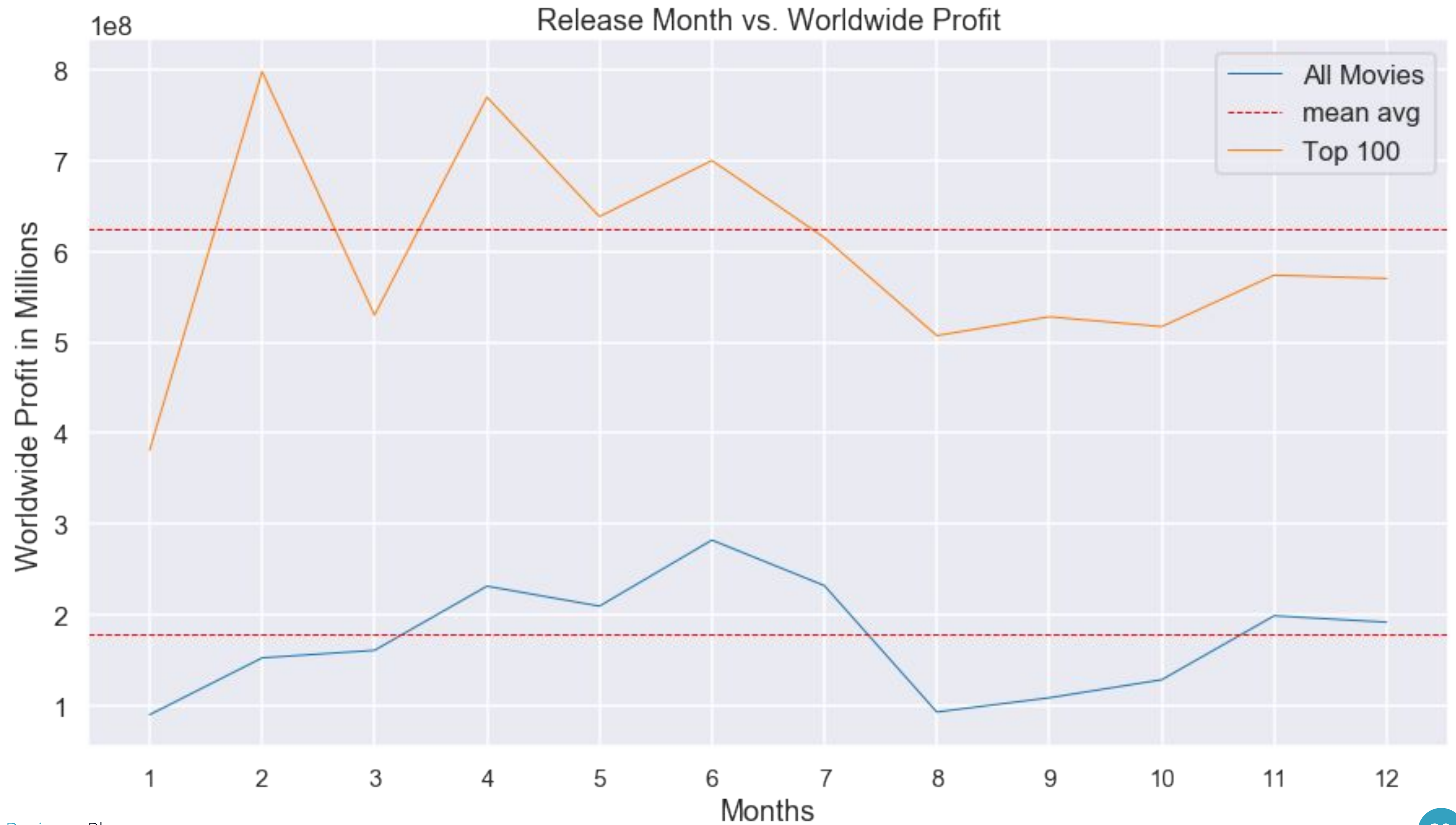


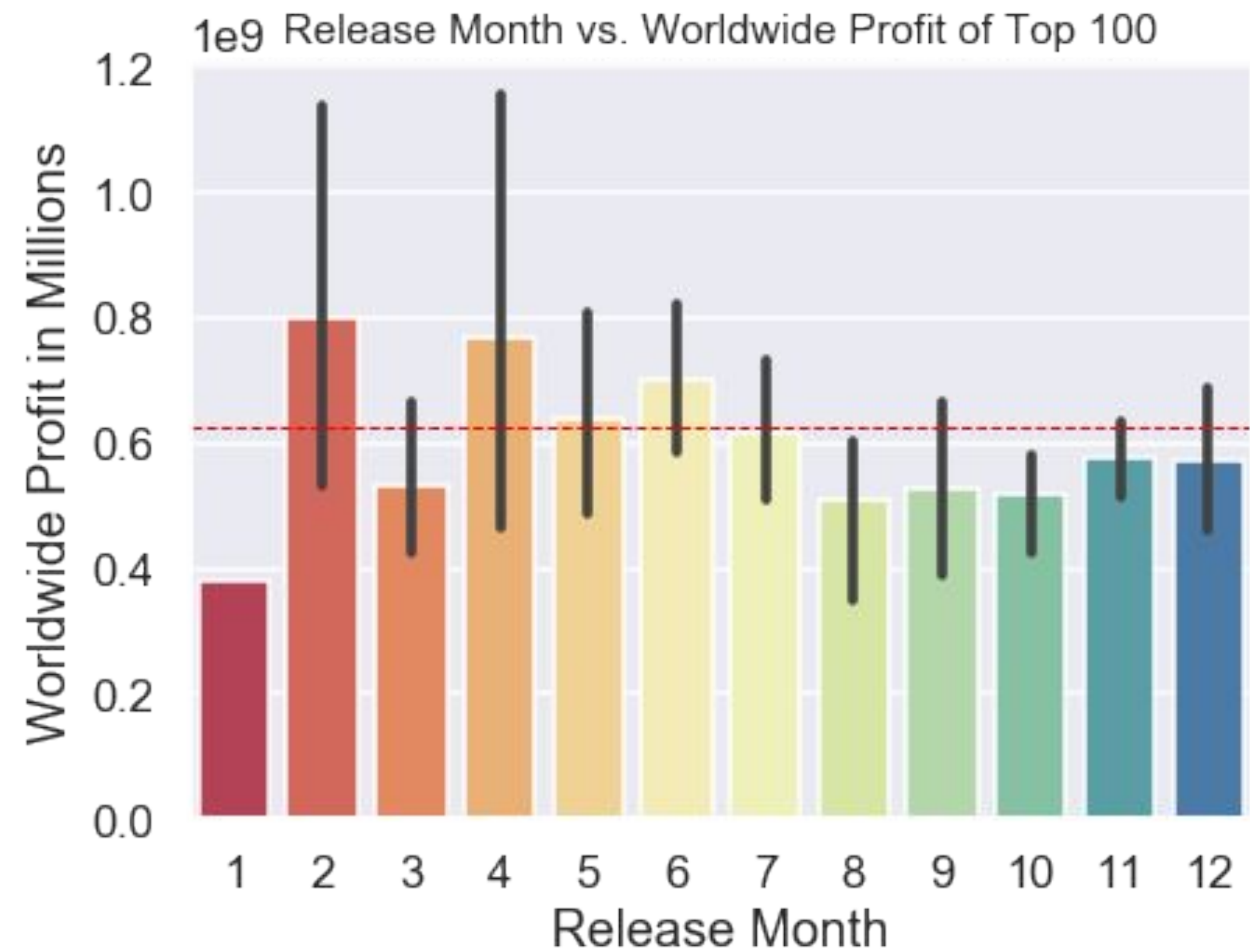
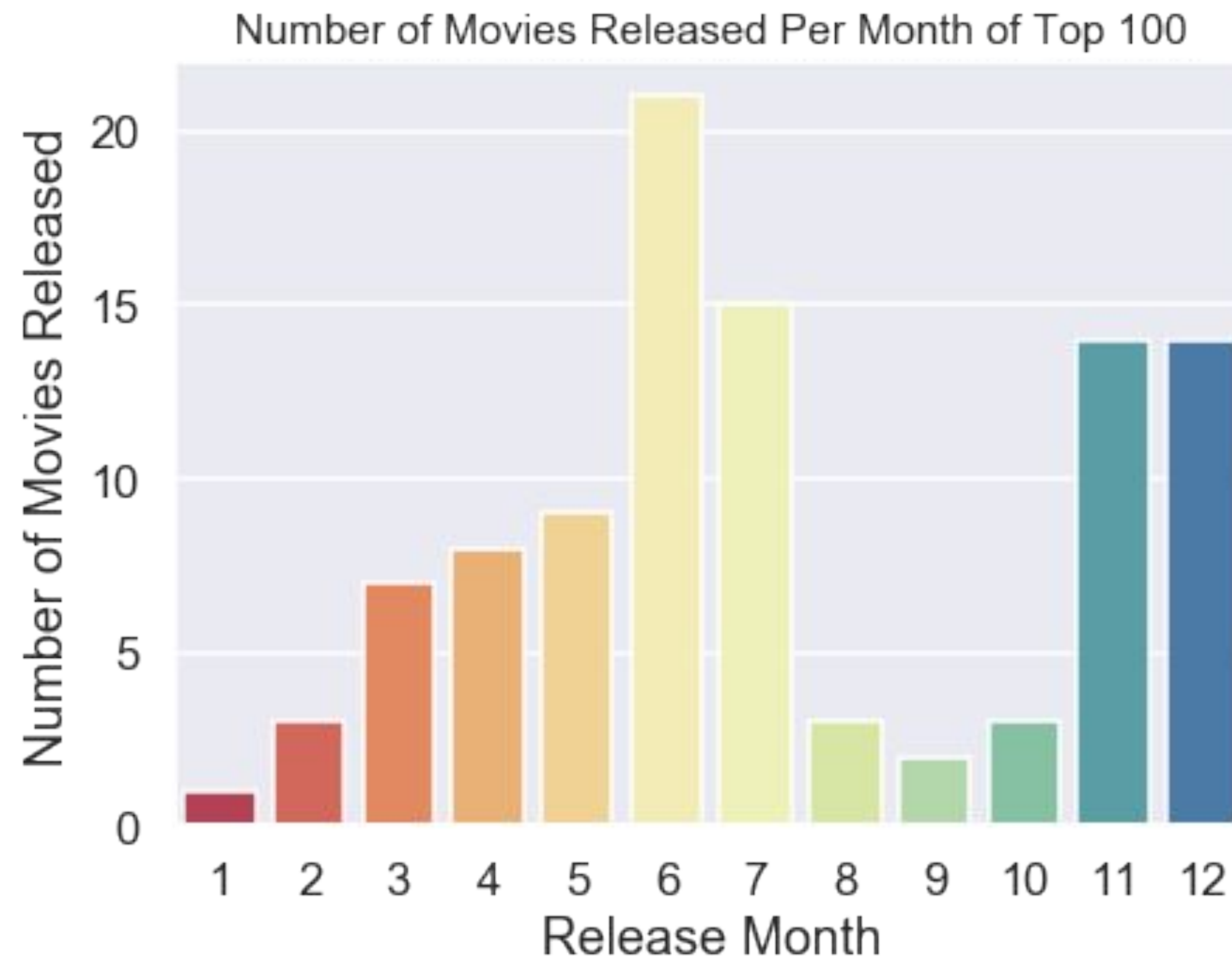




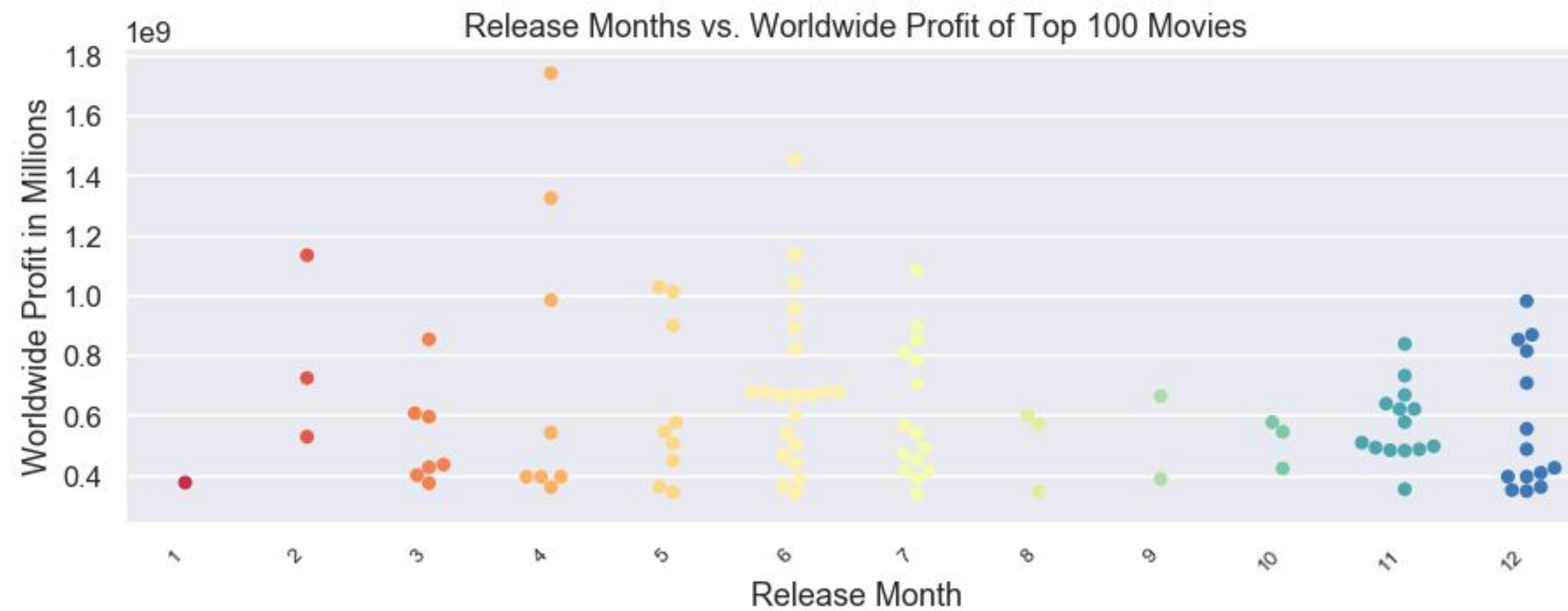
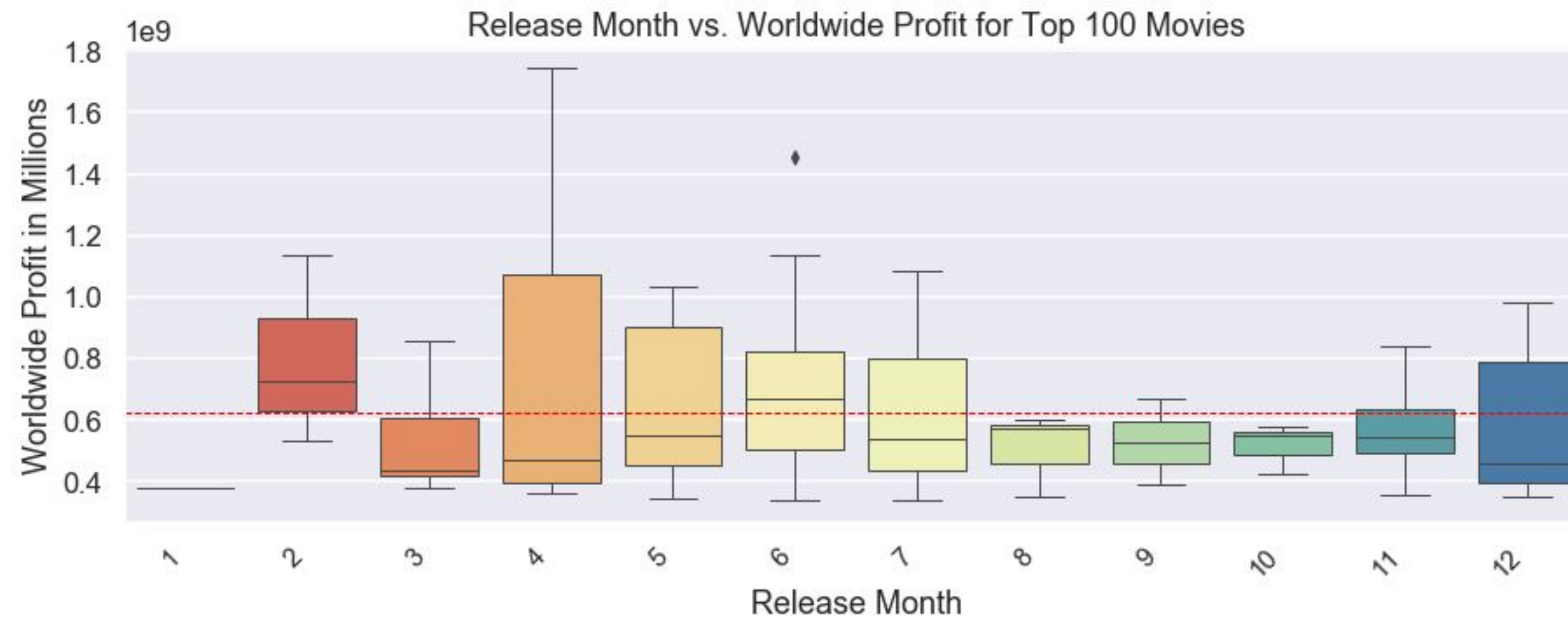


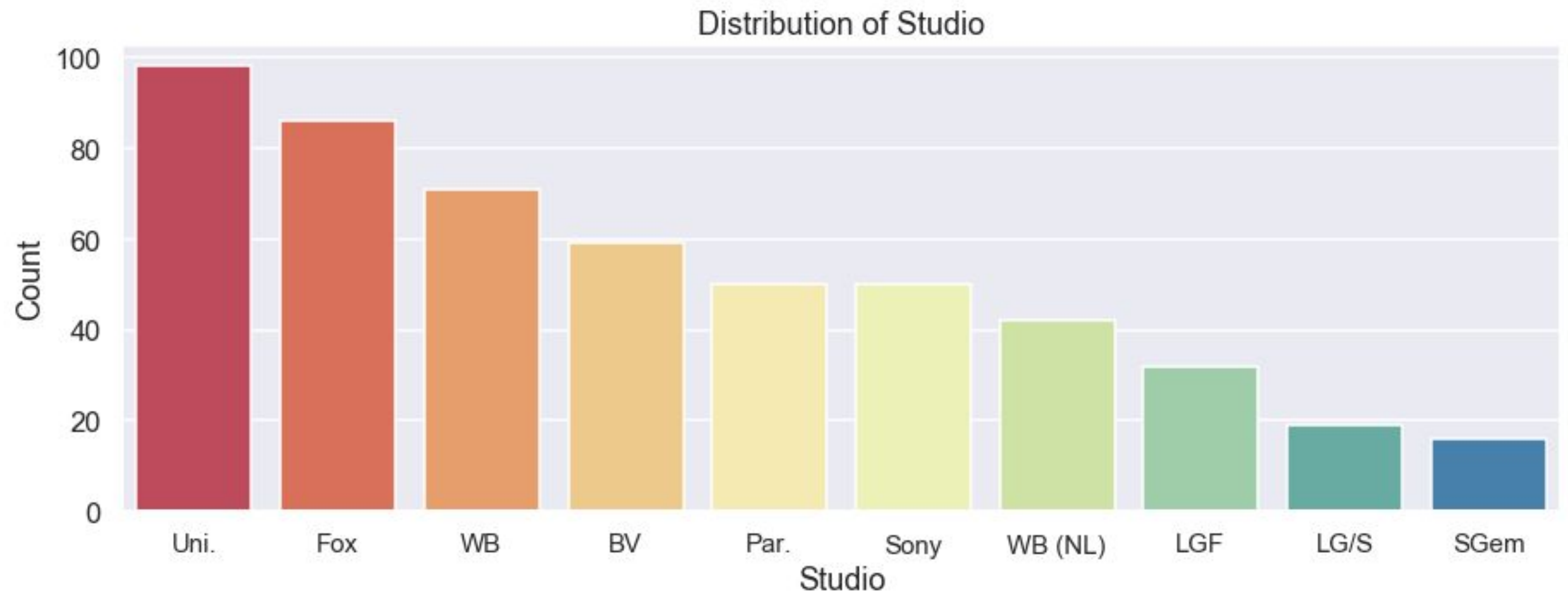


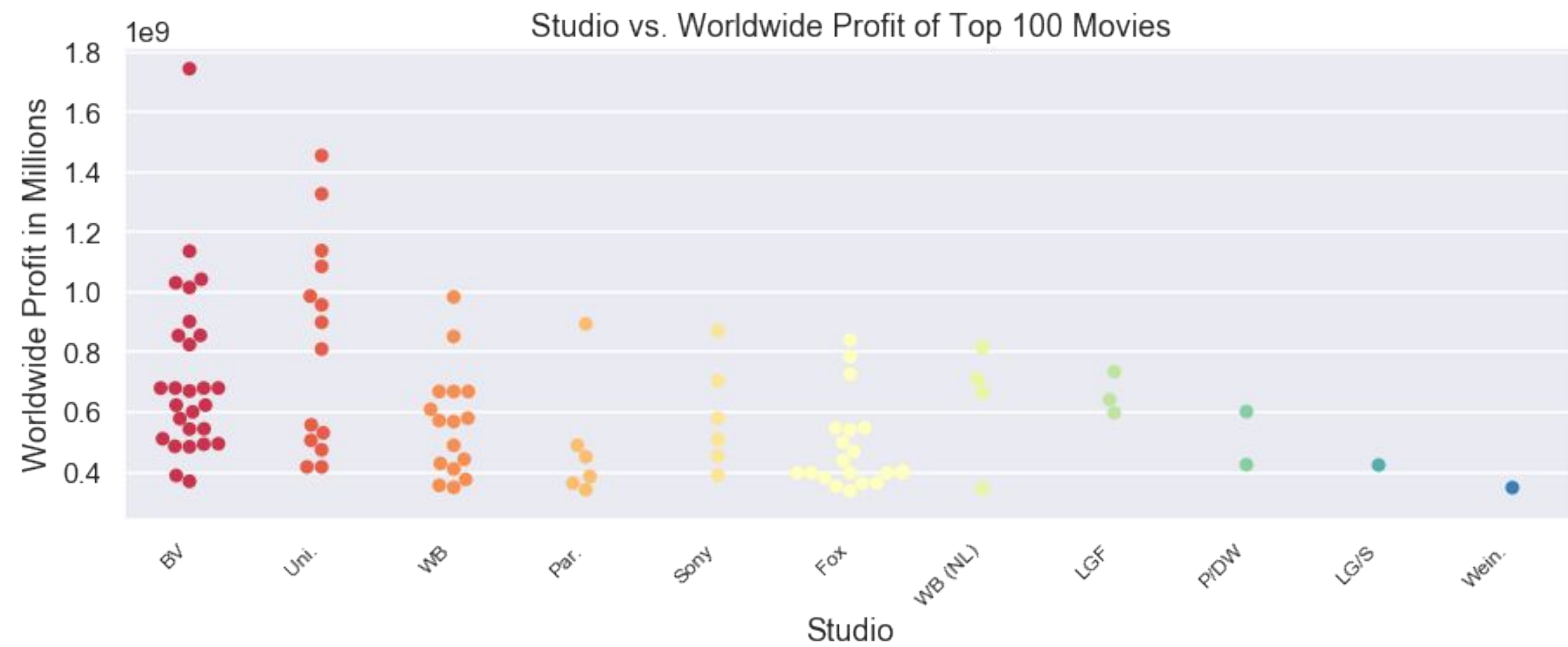
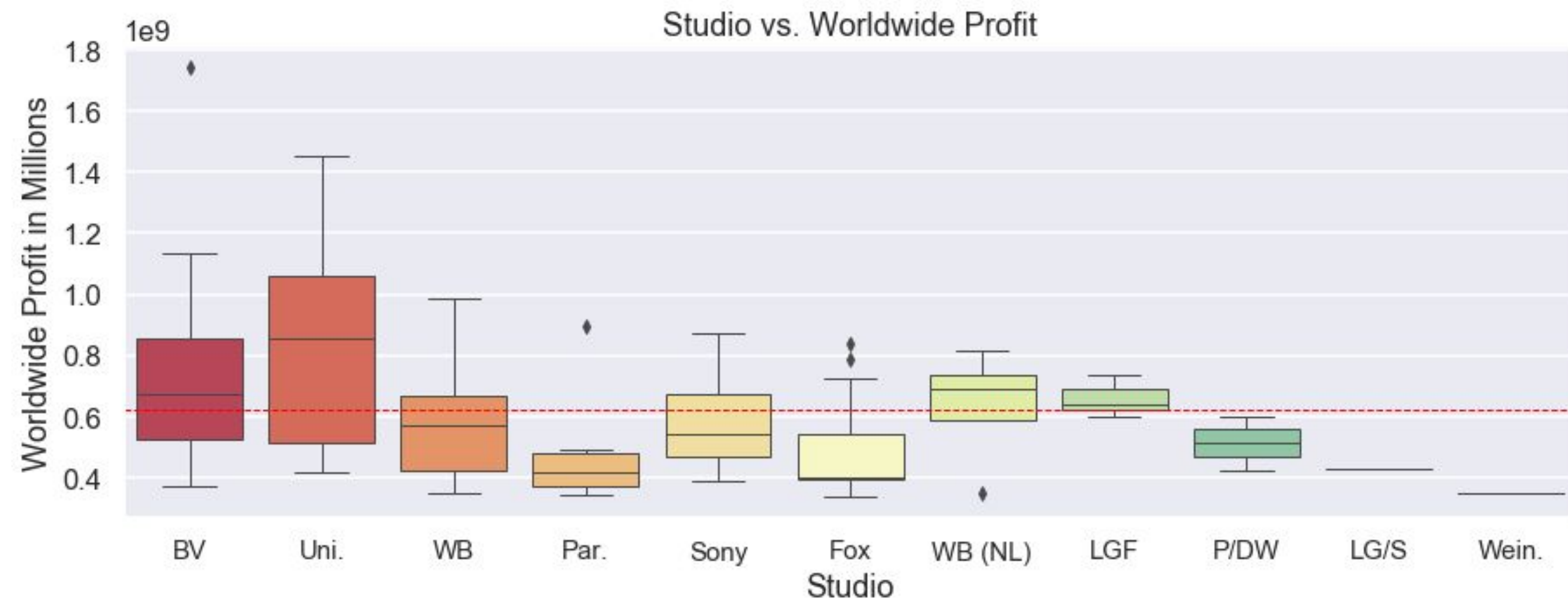


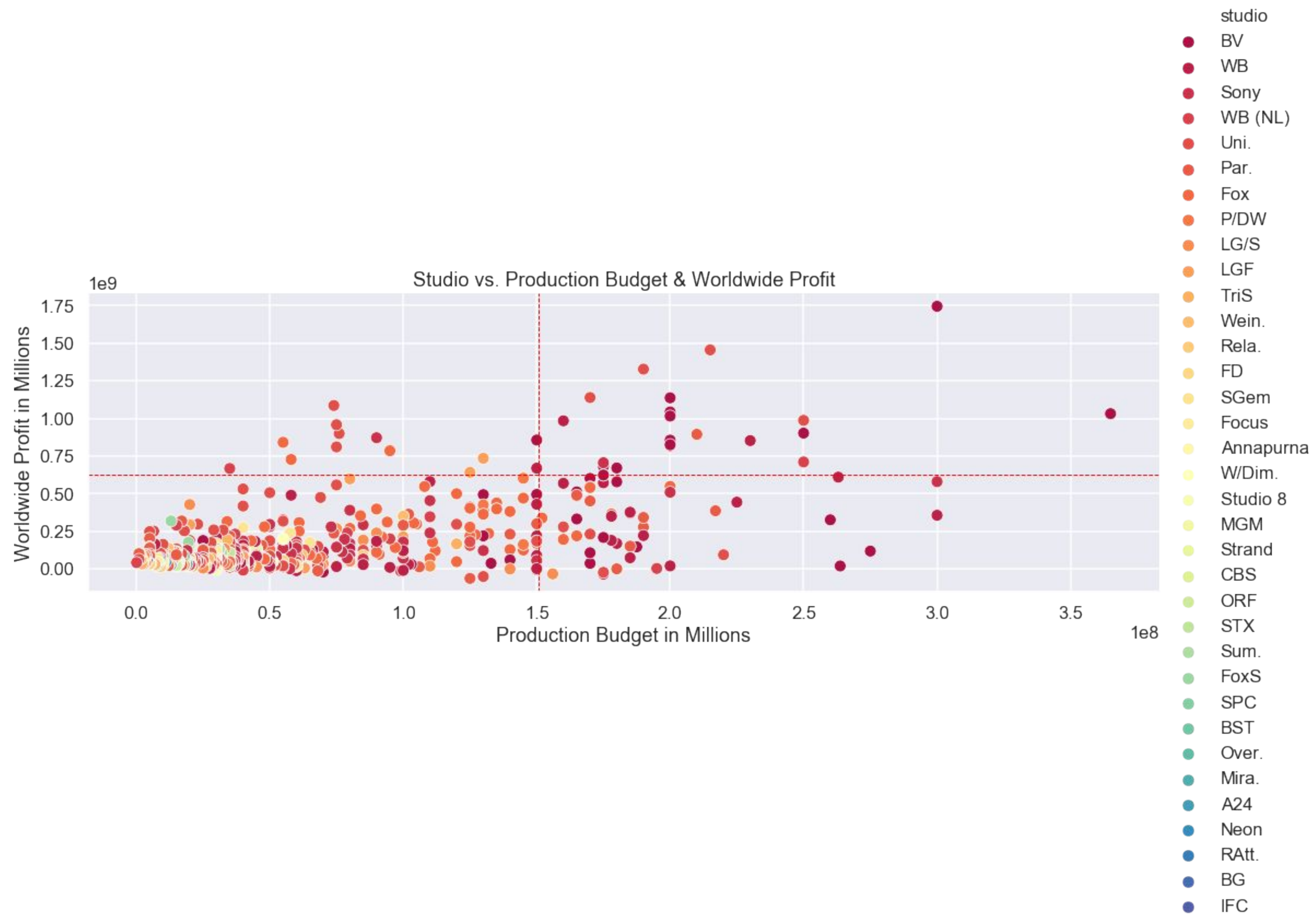


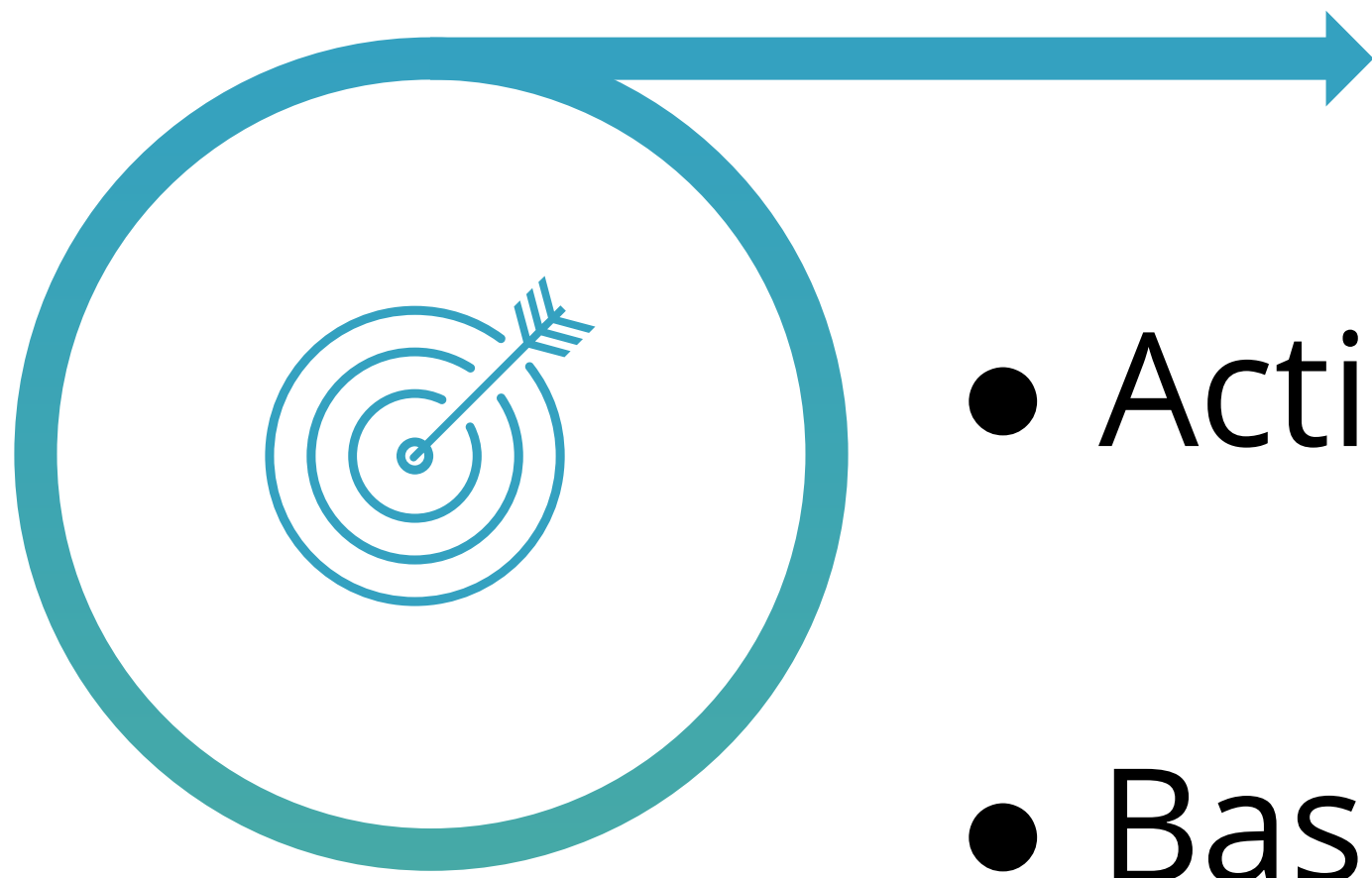
- Most release = June, December
- Most profit = February, April but not by much











Examples

- Action + Science Fiction
- Based on a popular book
- Star power: Jennifer Lawrence
- Underserved need for strong female protagonists

