

Data Analysis on Movie Profitability

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Summary

Microsoft has decided to create a new movie studio. Through the exploratory data analysis of the film industry database, it was showed that:

- The top five genres with high net income are sci-fi, adventure, musical, animation, and action
- Different budgets level they should invest in different genres
- The best month for movie release is July and the worst time is September
- Movie with a running time between 70-90 min create more gross

Microsoft Studios has a great deal of potential to become one of the top production companies in the film industry



Outline

- Business Understanding
- Data
- Methods
- Questions & Visualizations
- Conclusions & Recommendation



Business Understanding

Microsoft has decided to create a new movie studio, but they don't know anything about producing movies.

To run a new business, it is important to have an exploratory data analysis to understand the marketplace, set revenue and profitability goals.

Exploring available database would help them know what types of films are currently doing the best at the box office.

Considering other criteria like release time and running time trend enhances the likelihood of a decent return on their investment.



Data

Data were collected from below websites:

- [Box Office Mojo](#)
- [IMDB](#)
- [Rotten Tomatoes](#)
- [TheMovieDB](#)
- [The Numbers](#)

Most are compressed CSV (comma-separated values) while the data from IMDB is a SQL file.



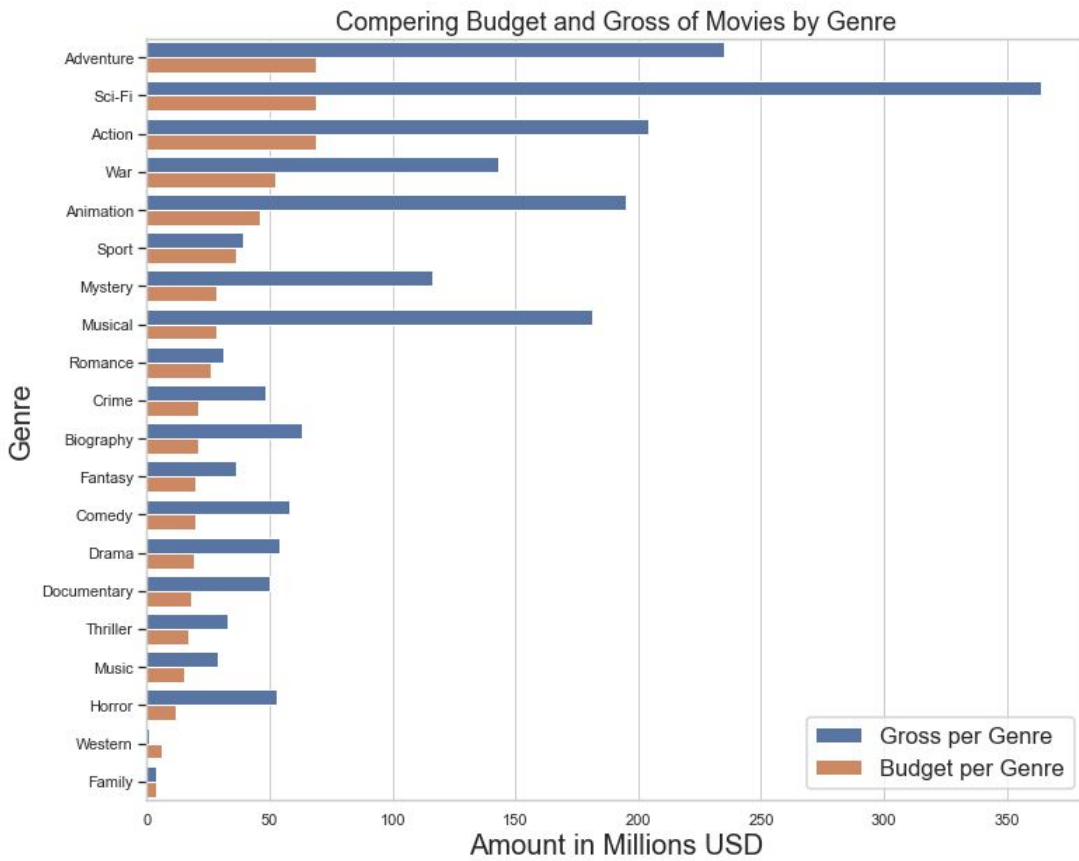
Methods

The general research strategy in this project is to do exploratory data analysis on the present data collection in the film industry. The process includes the below steps:

- Import libraries and load dataset
- Data cleaning
- Asking analytical questions and visualizations
- Conclusion and recommendations

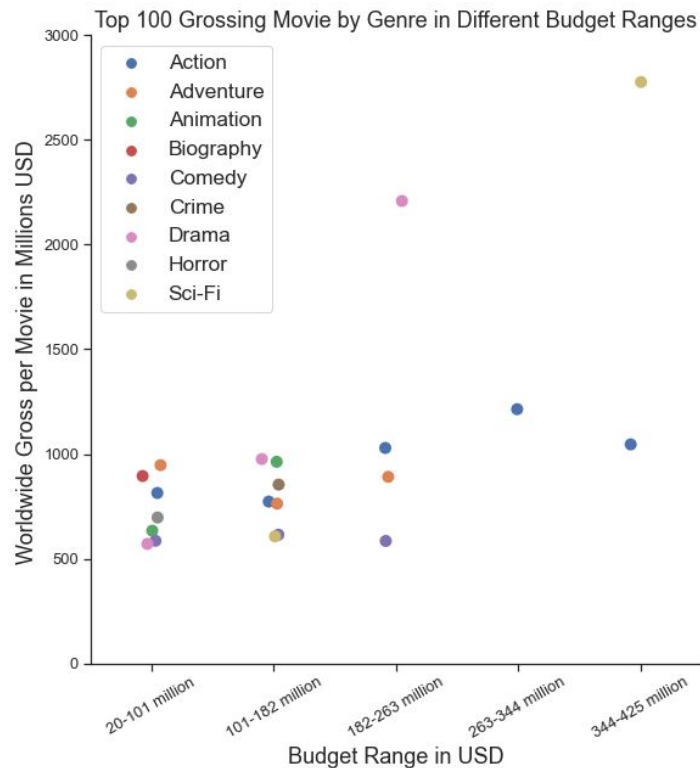
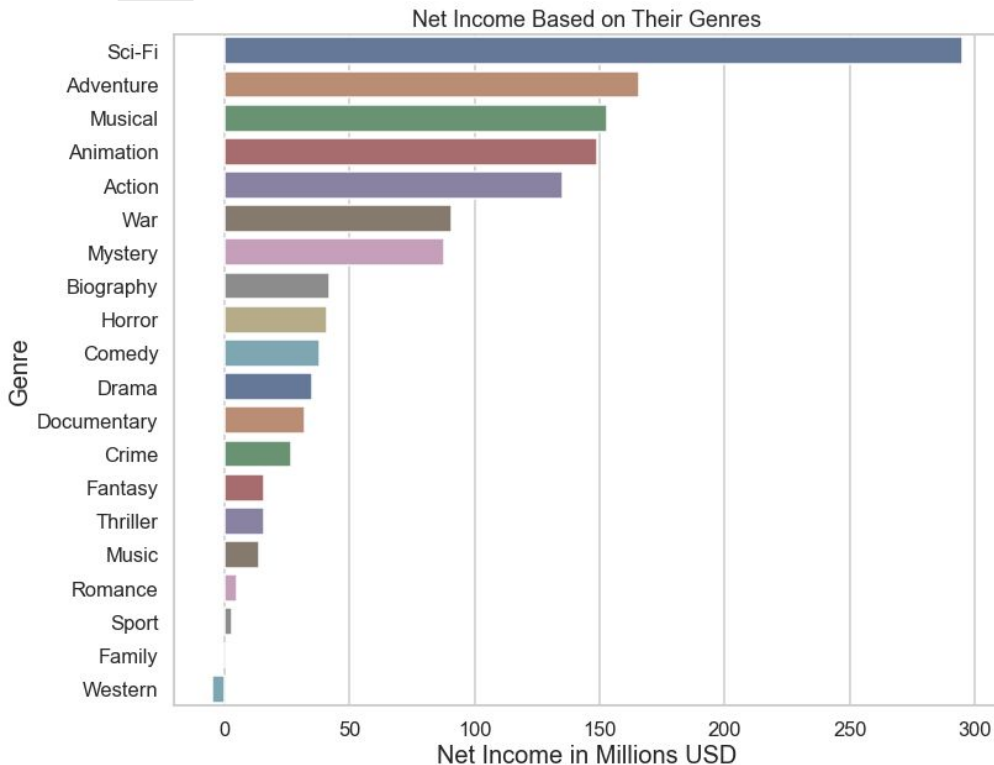
Question 1;

Which Genres need more budget and create more gross?



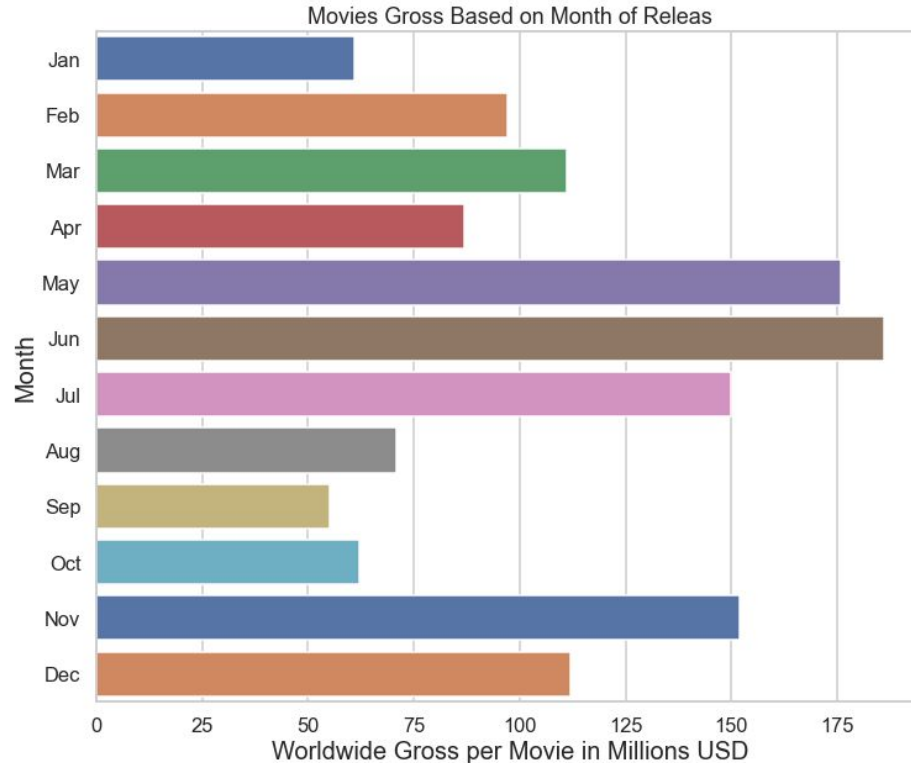
Question 1;

Which Genres need more budget and create more gross?



Question 2;

What are the best months for releasing a movie?

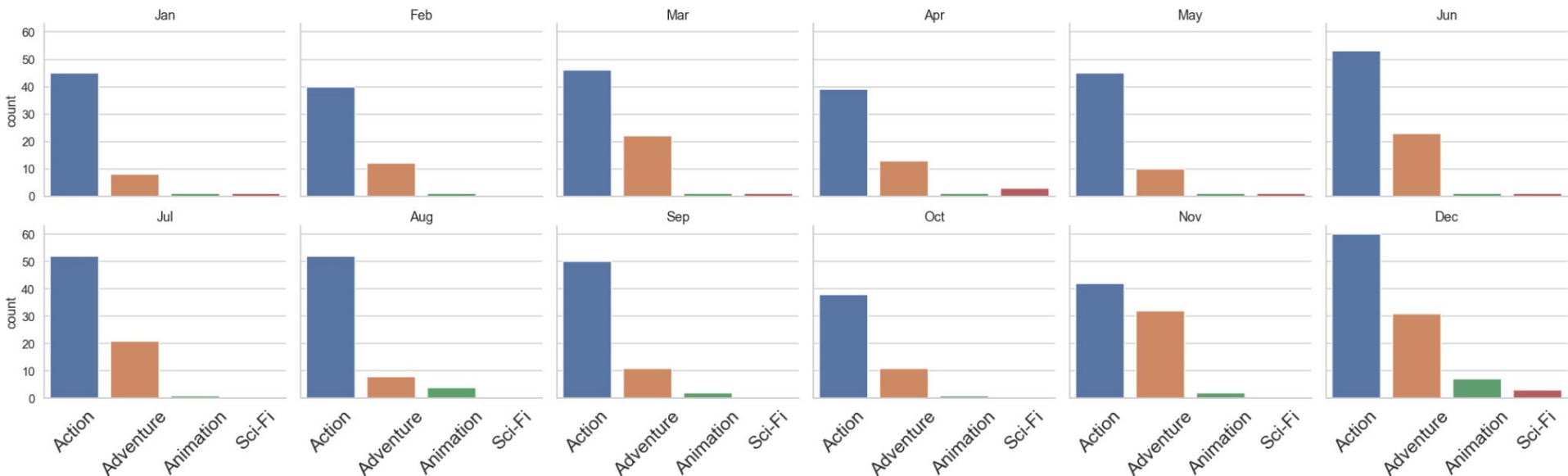


Question 2:

What are the best months for releasing a movie?

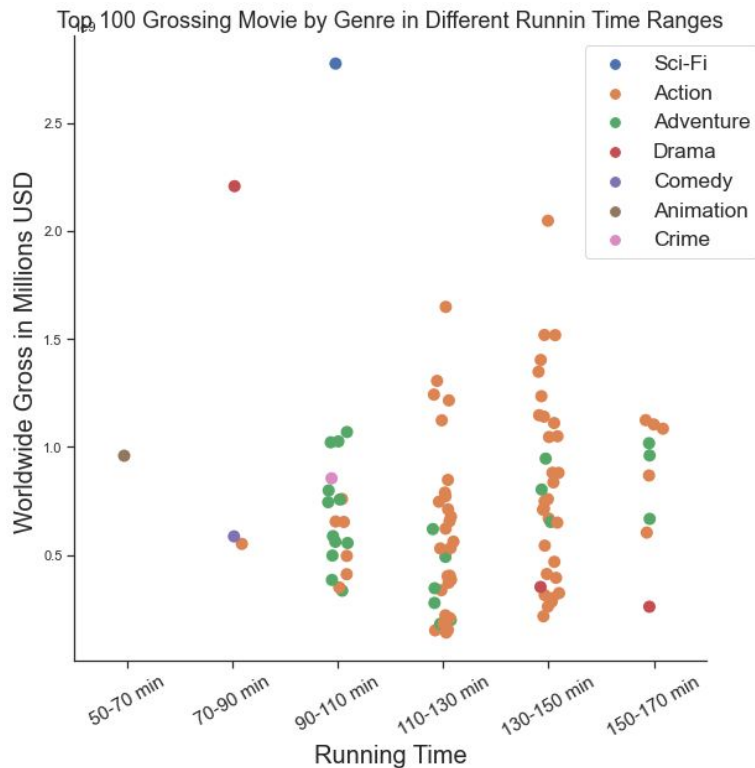
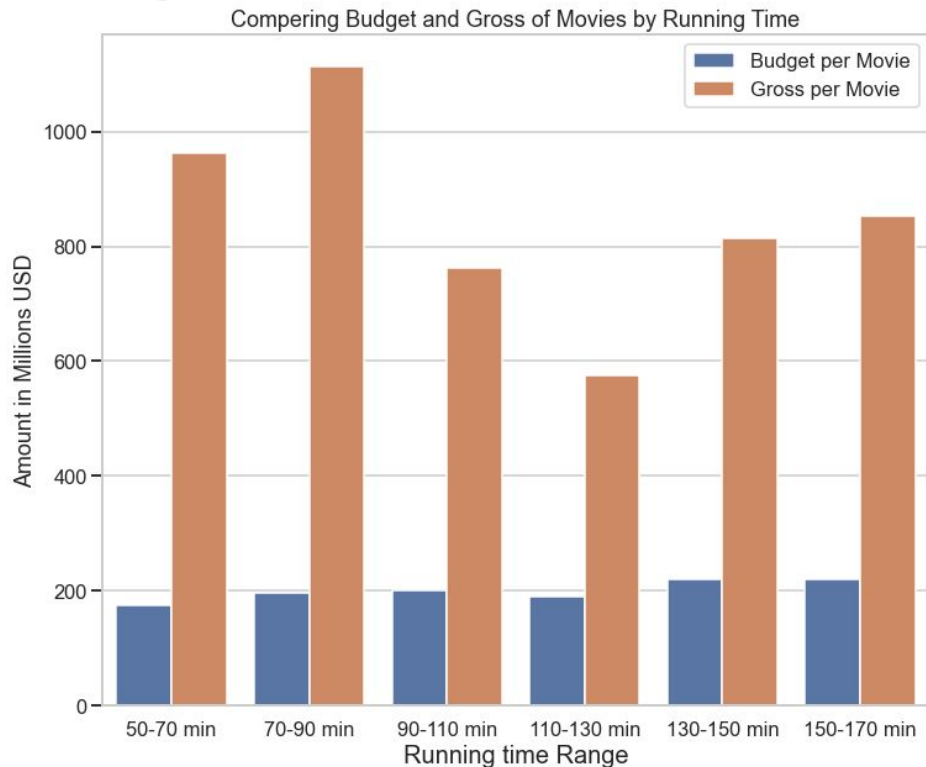


Number of Movie Produced with High Gross Genres in Months of year



Question 3;

What is the perfect running time for a movie?





Conclusions & Recommendations

Through the exploratory data analysis, we realized that there is not a positive correlation between movies produced by the different studios in their domestic gross. we can conclude that the studio does not affect on domestic gross of movies. This finding is a good hint for a new studio and helps them not be afraid to compete with other big and old studios in this business. We have reached some practical recommendations that Microsoft may employ to create a profitable film studio. The recommendations would be as follows:

- With the different budgets level they should invest in different genres
 - Production budget between 344-425 million dollars, make a sci-fi movie
 - Production budget between 182-263 million dollars,, make a drama movie
- The top five genres with high net income are sci-fi, adventure, musical, animation, and action.
- The best month for releasing a movie is the beginning of the summer in July and the worst time is in September.
- Make a movie with a running time between 70-90 minutes.

Thank You!

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GitHub:

<https://github.com/MarGhaf/Data-Analysis-on-Movies-Profitability>