Movie Industry Analysis for Microsoft

Fred Mutuma

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SUMMARY

This project was about coming up with insights for Microsoft's new upcoming project (entry into the movie production industry). In general this project is geared towards achieving:

- Statistical analysis of the whole movie industry based on world gross, release time and top genres.
- Visualizations interpreting the analysis done.
- Conclusions and takes from the gathered analysis.

DATA &
METHODS
CONCLUSIONS
STEP 1
STEP 2
STEP 3
STEP 4
BUSINESS
PROBLEM
RESULTS

01 BUSINESS PROBLEM

I have been informed that Microsoft want to dip their toes in the movie-making industry, and have tasked me with providing an analysis to be used for this business. They need the necessary knowledge to move forward. I will base my analysis on four main factors:

- Movie Genre: What types of movie content are currently most successful?
- Time of Release: When is the most profitable time of year to release a movie?
- Production Budget: What budget amount tends to achieve the highest box office gross?
- Additional Recommendations: What else do top-grossing movies have in common from the analysed data?

02 THE DATA

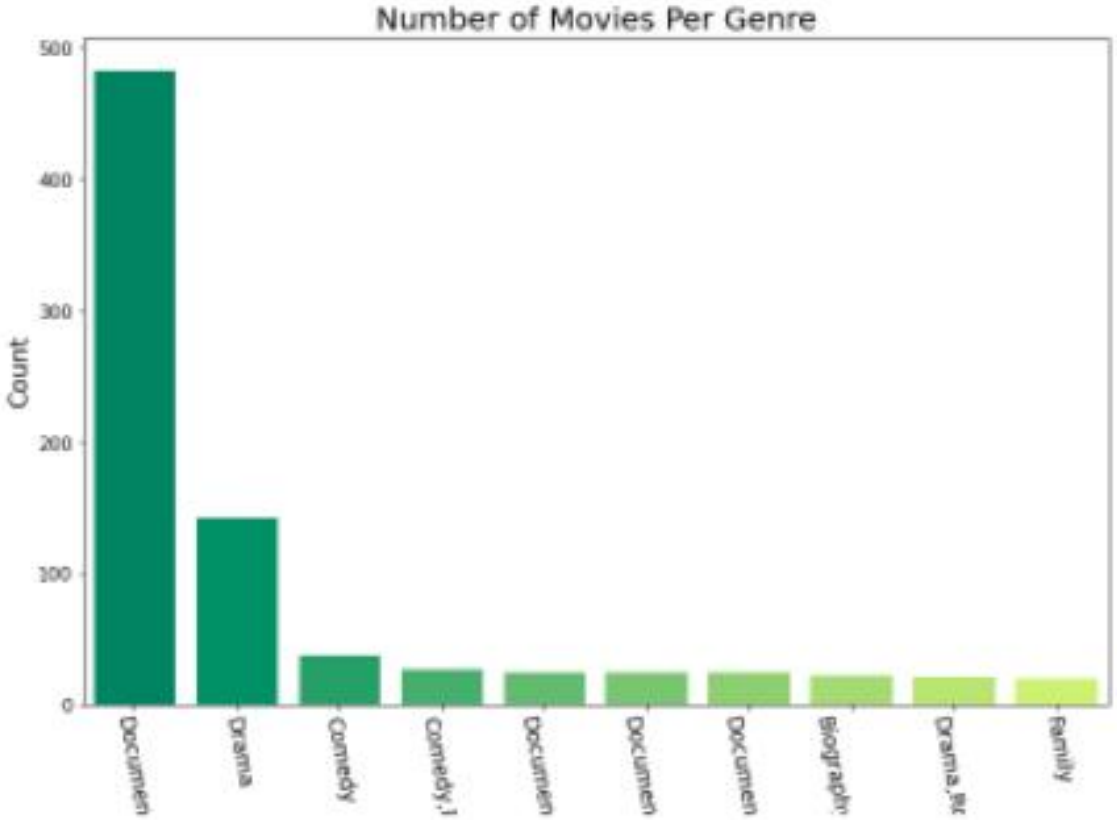
- imdb.title.basics.csv.gz: cotainsbasic information of top movies with their runtimes, genre and year of release.
- title.ratings.csv: This dataset contains ratings from the movies mentioned in the basics dataset above.
- tn.movie_budgets.csv: This dataset contains the production budgets for top grossing movies of all time.
- bom.movie_gross.csv : This dataset contains domestic and worldwide gross of movies from 2010 onwards to 2019.

03 THE METHOD

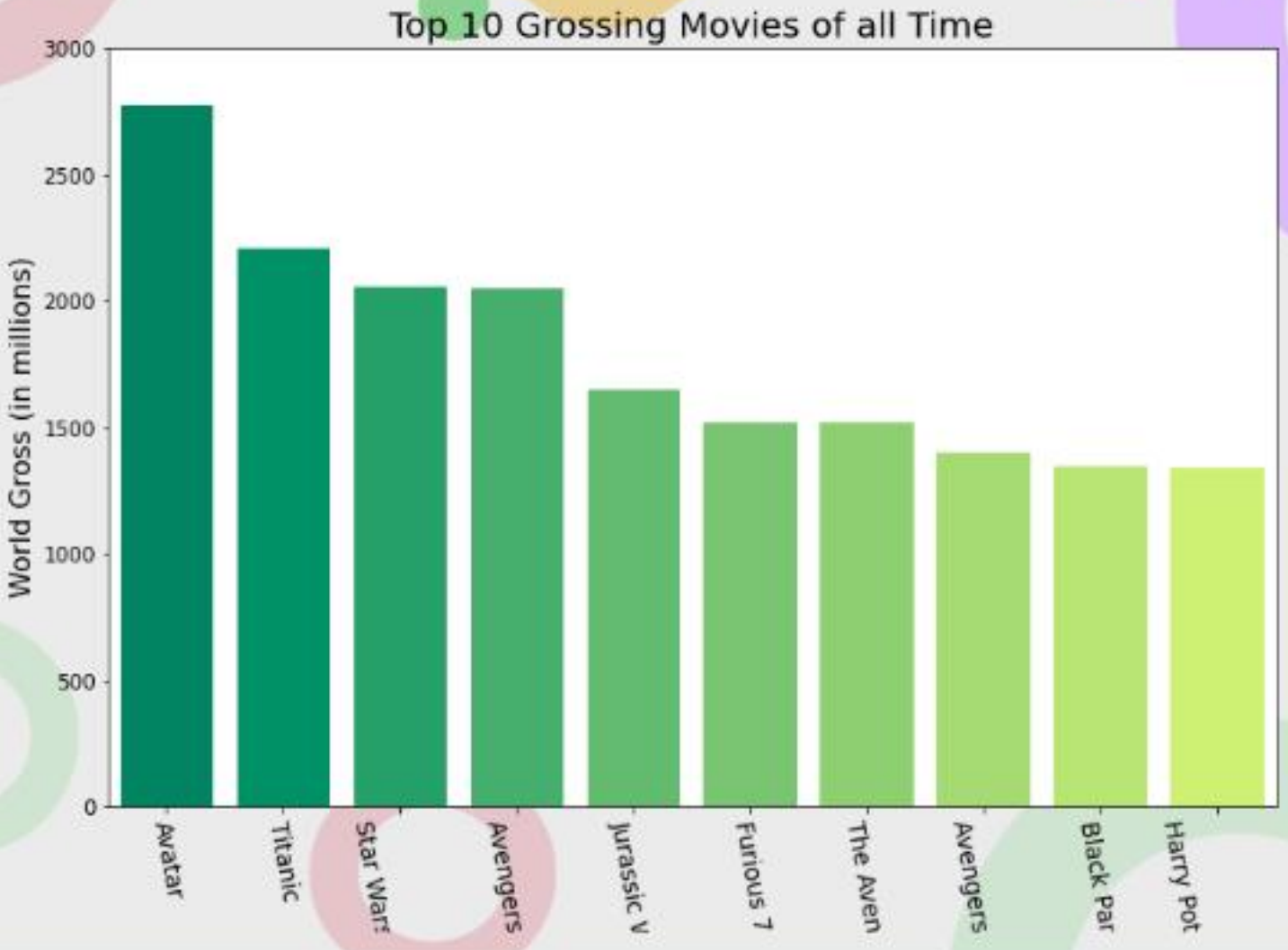
I utilized descriptive statis[illegible] as well as visualizations to illuminate trends in the data and isolate key factors for making a successful movie.

What types of movies receive top ratings?

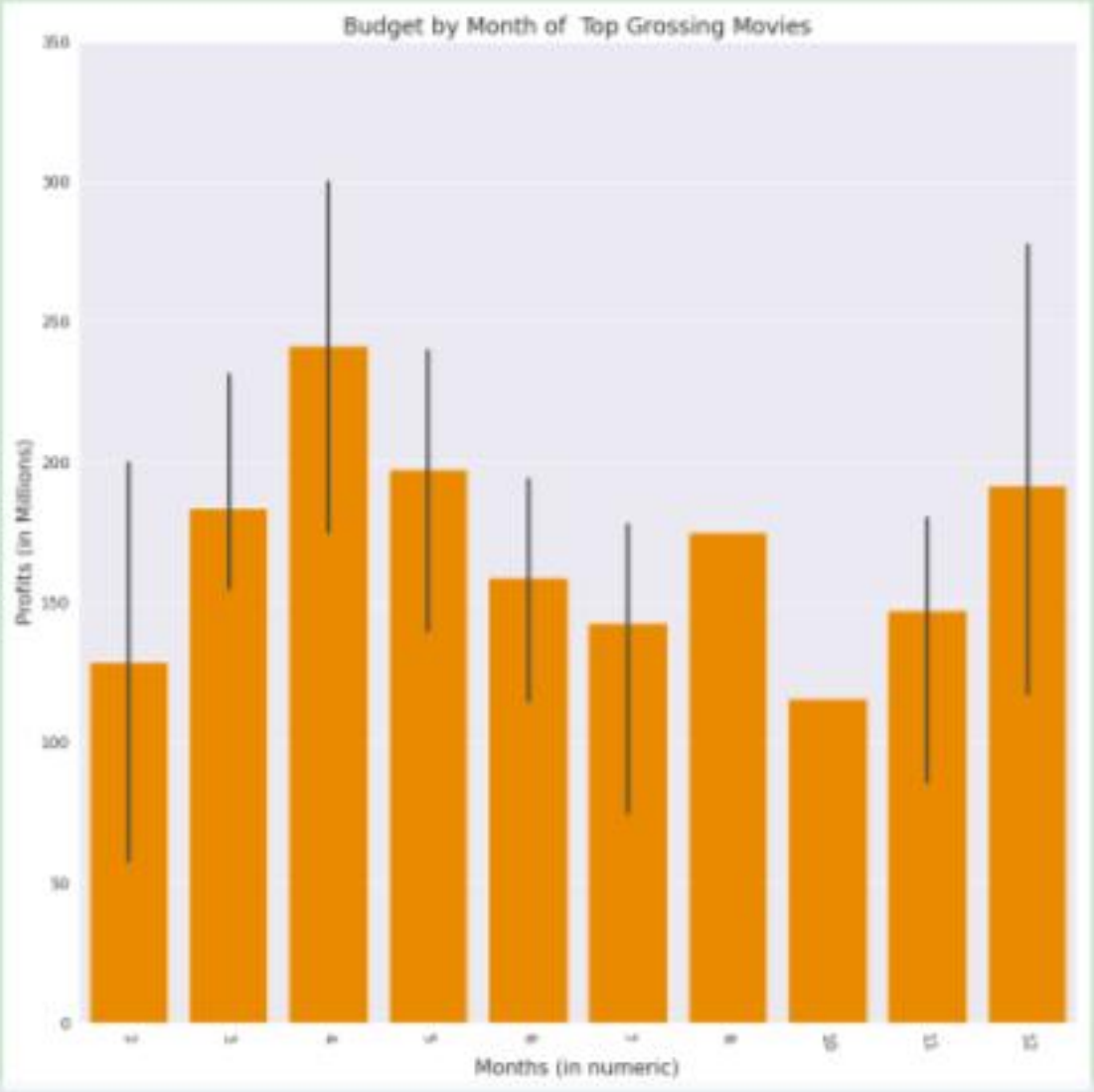
For the past 5 years the most top rated movies falls under the Documentary, Drama and Comedy genre respectively. Other top genres in this category include Romance, Family, Biography, Music and Sport.


Number of Movies Per Genre
Count
500
400
300
200
100
0
Documen
Drama
Comedy
Comedy,I
Documen
Documen
Documen
Biograph
Drama,Ro
Family

TOP 10 GROSSING MOVIES OF ALL TIME



MOVIE BUDGET VISUALIZATIONS

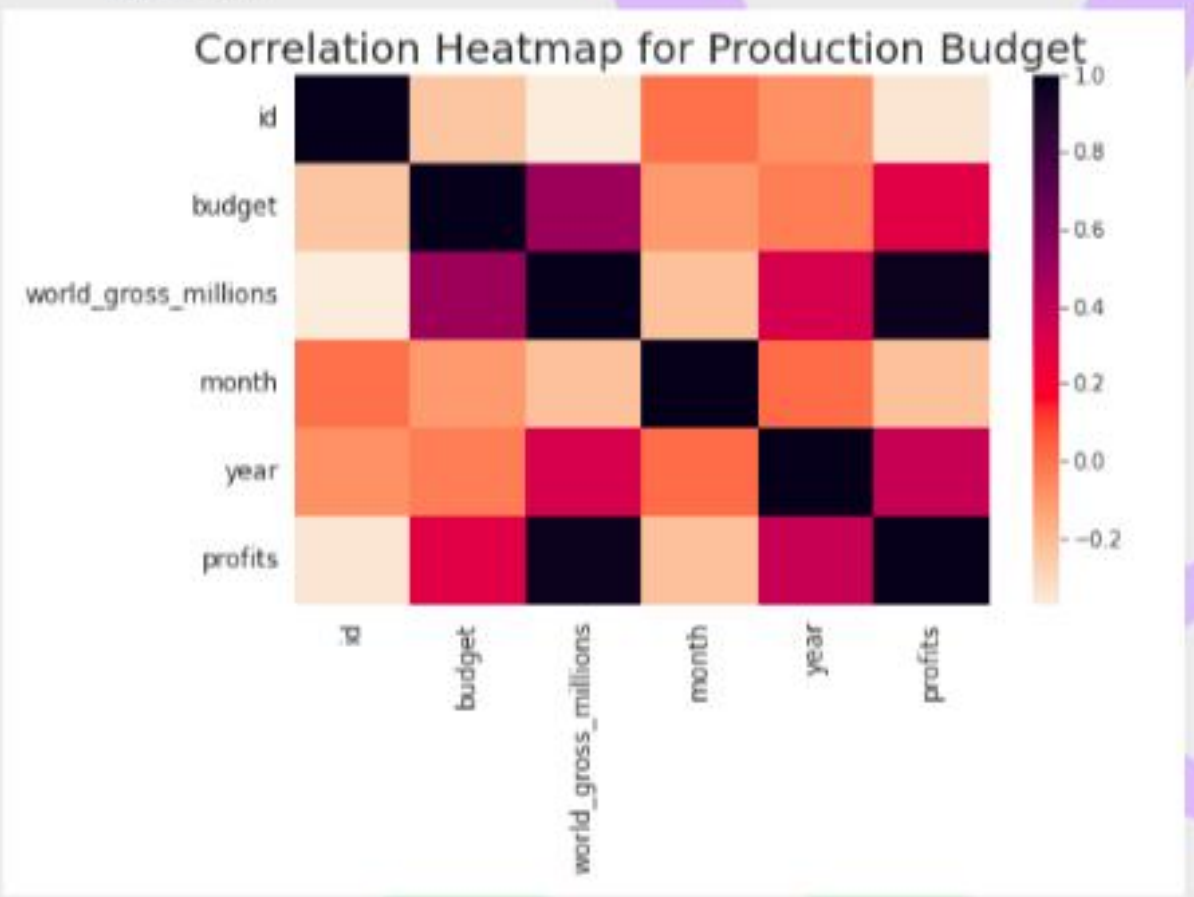


TOP MONTHS:
APRIL
DECEMBER
MAY

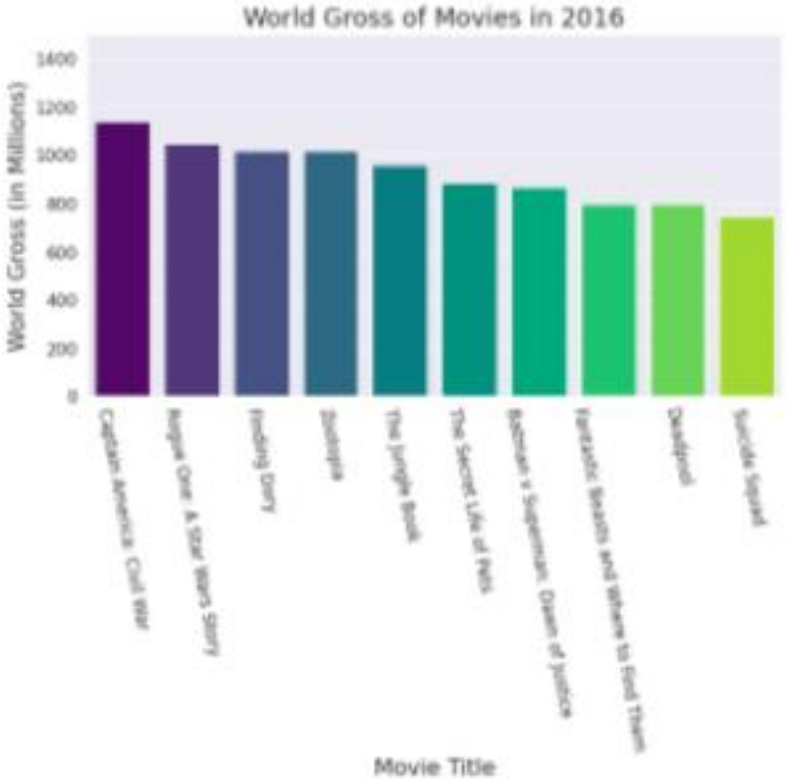
Production Budget: What budget amount tends to achieve the highest box office gross?

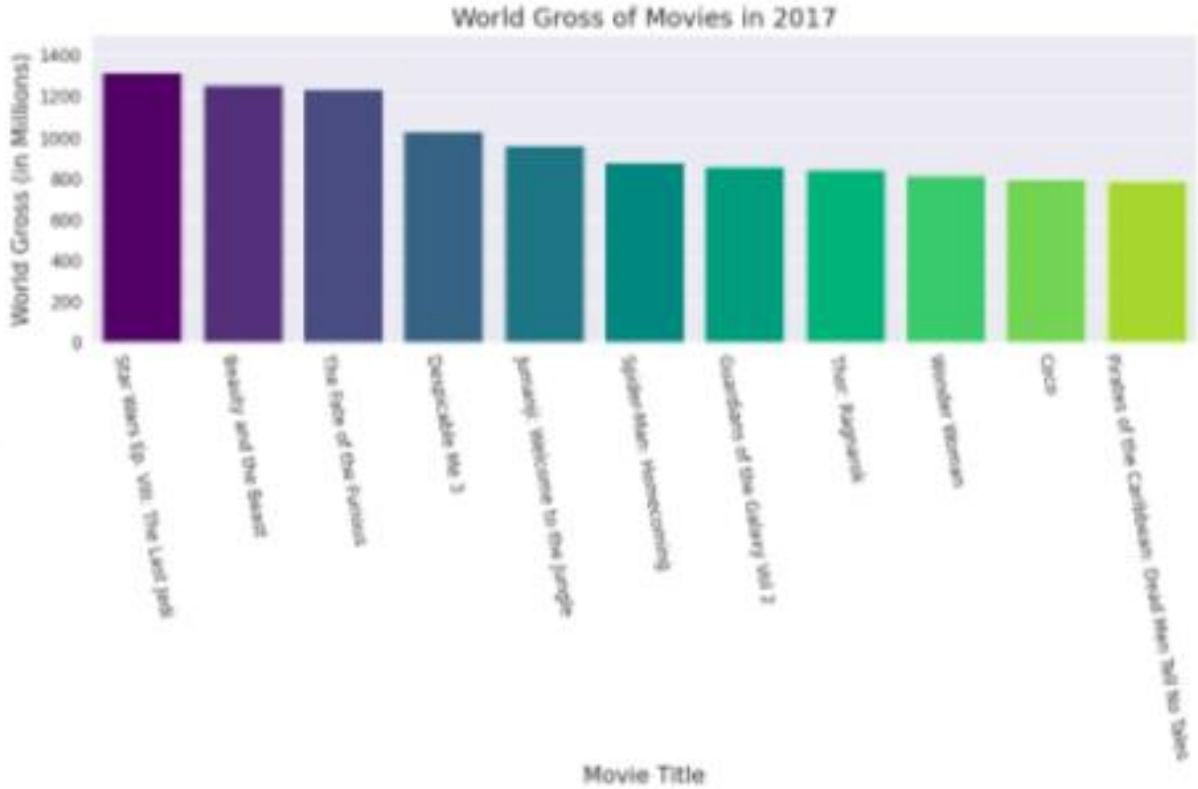
The heat map shows darker colors where two values are highly correlated and lighter colors where there is less of a correlation. From both the correlation method and the heat map, there was a strong correlation between budget and world gross, as well as a fair correlation between budget and profits.

While the correlation between month and anything different was negative which I ignored. The months values are stored as integers. From this visualization, I could conclude that, generally speaking, the more money you put into a movie, the more money you are likely to make from it.



Top Grossing Movies Analysis by Year from 2016 - 2019?





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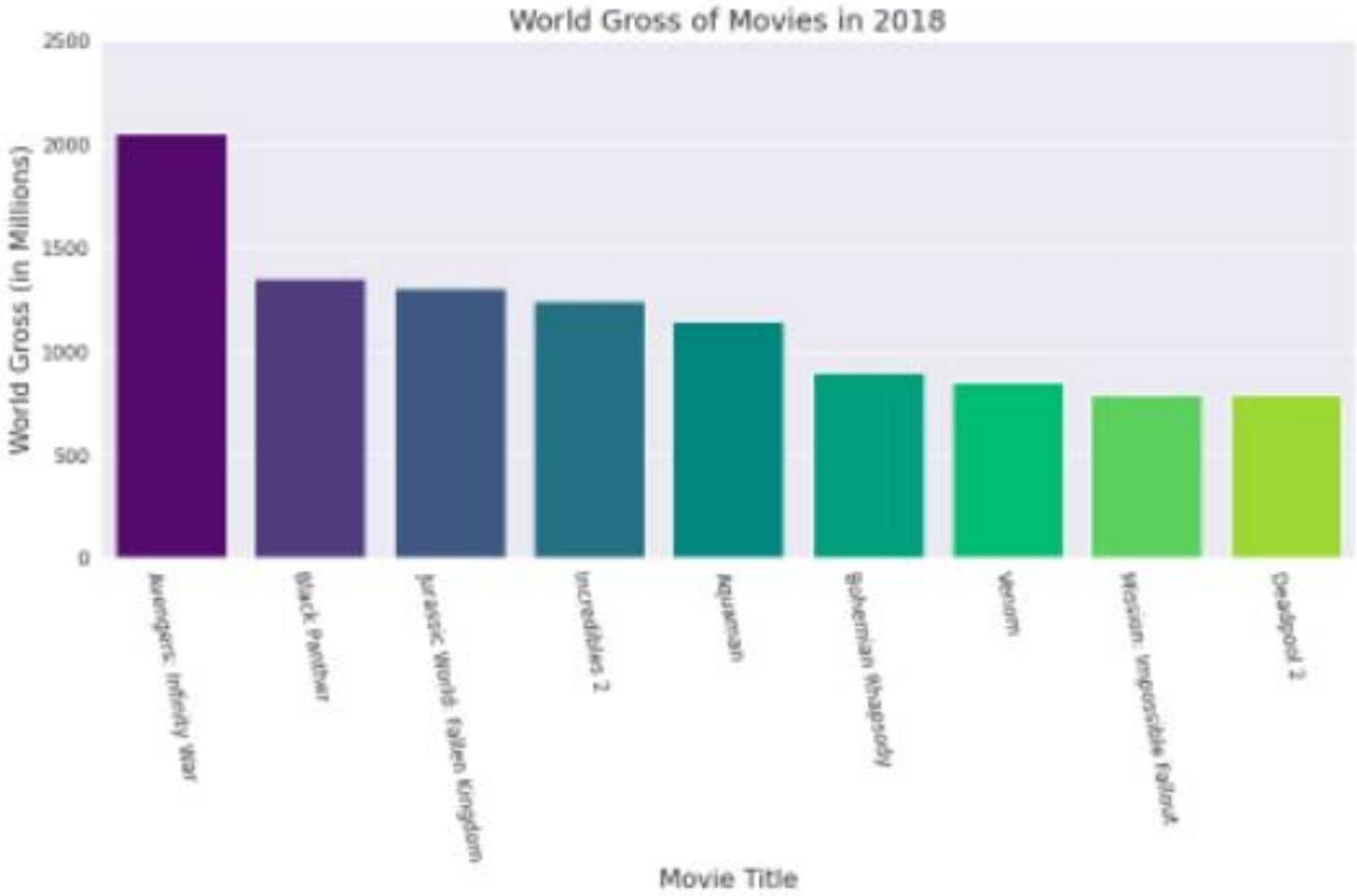
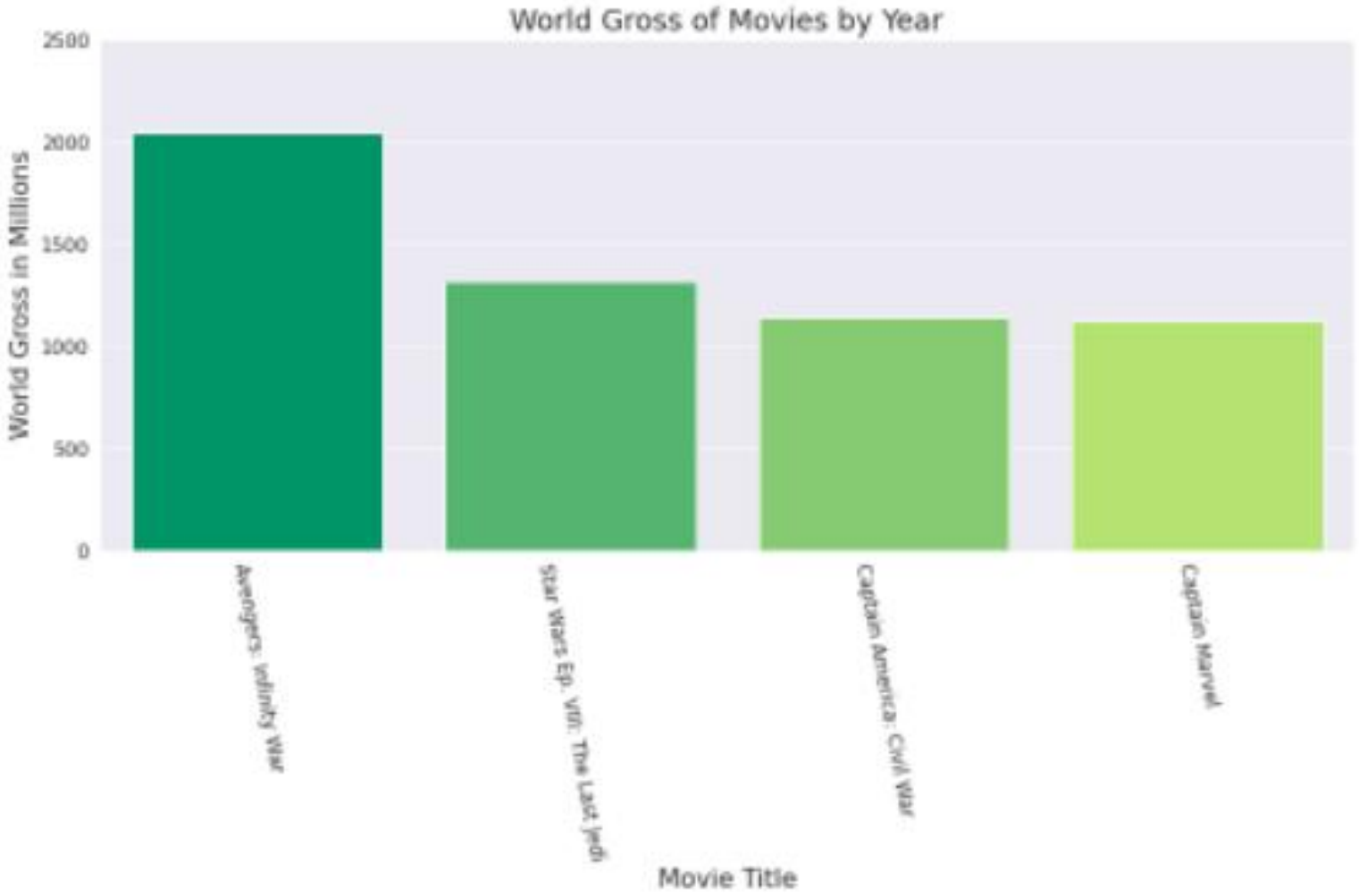
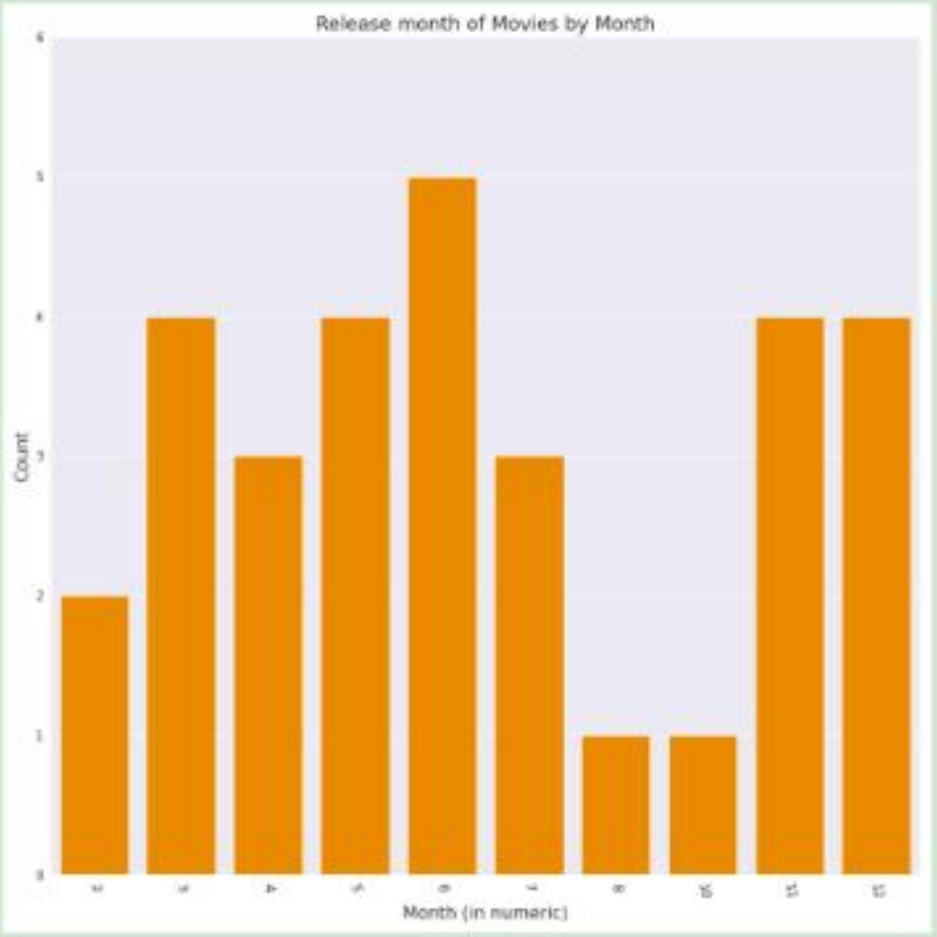
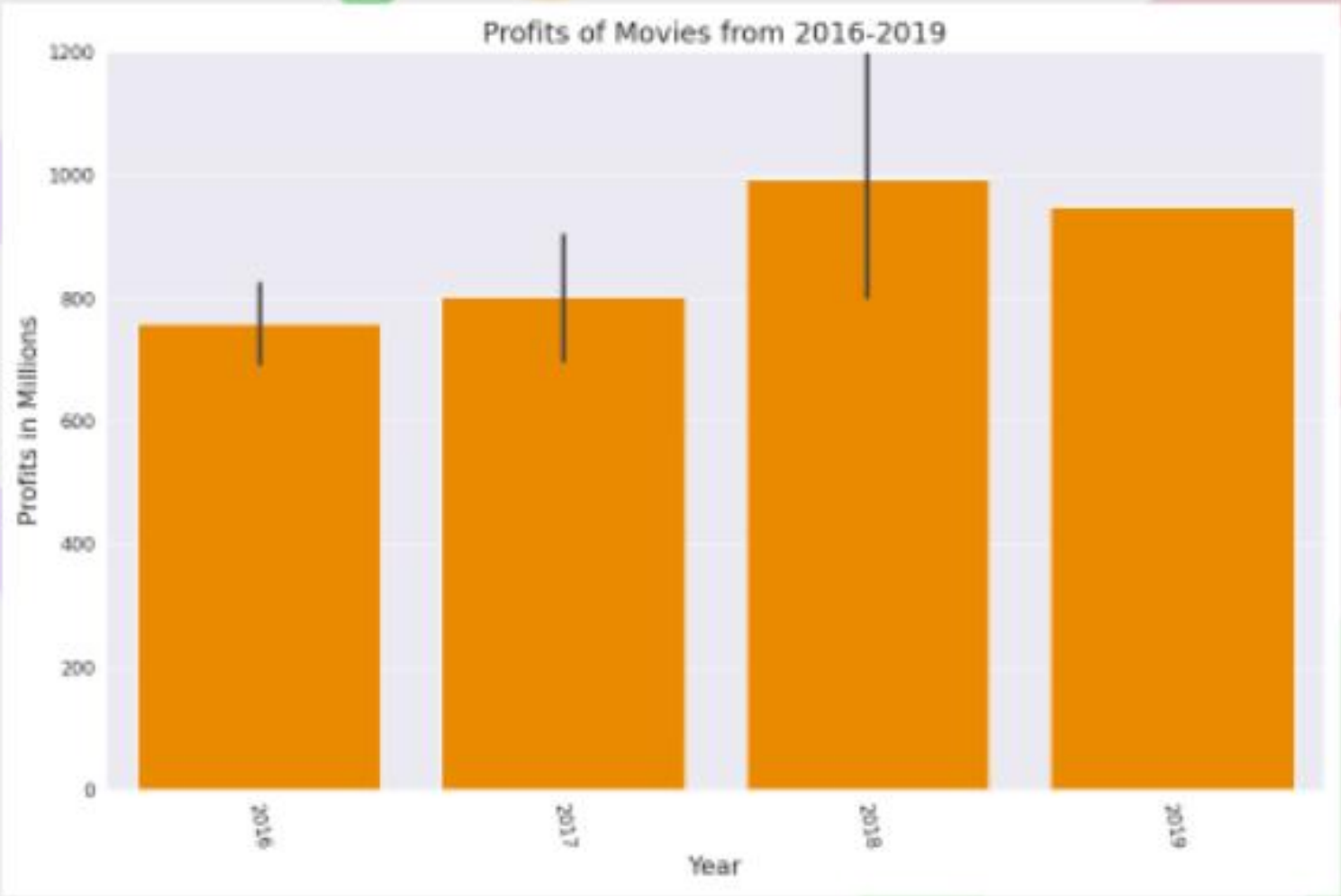



World Gross of Movies by Year
World Gross in Millions
2500
2000
1500
1000
500
0
Avengers: Infinity War
Star Wars Ep. VIII: The Last Jedi
Captain America: Civil War
Captain Marvel
Movie Title

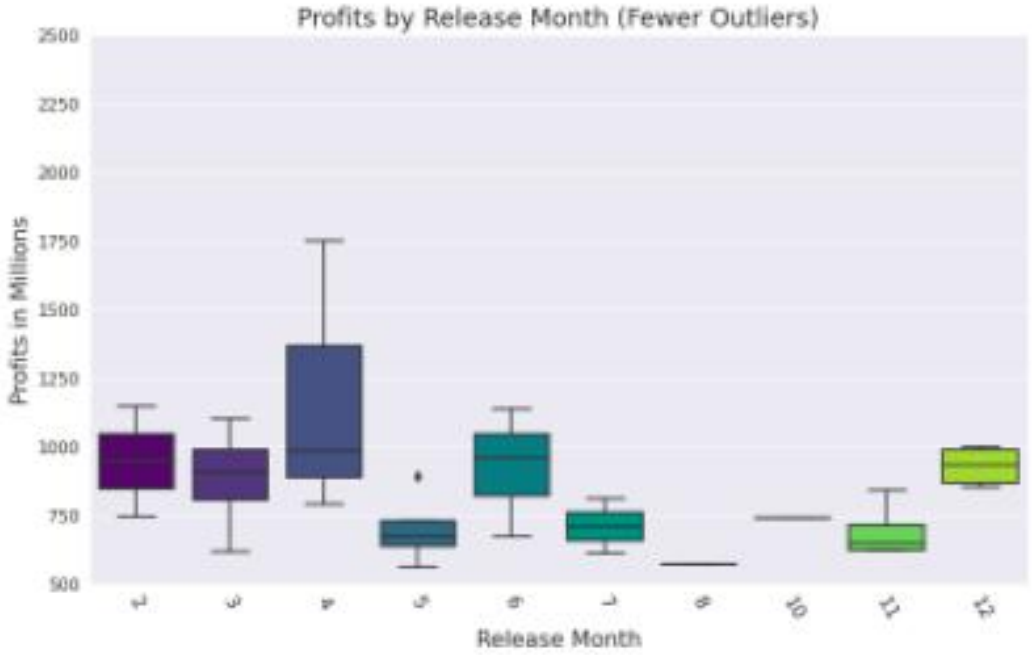
A visualiszation of release time in months of the top grossing movies.



Profits visualisation by year of release for years 2016-2019.

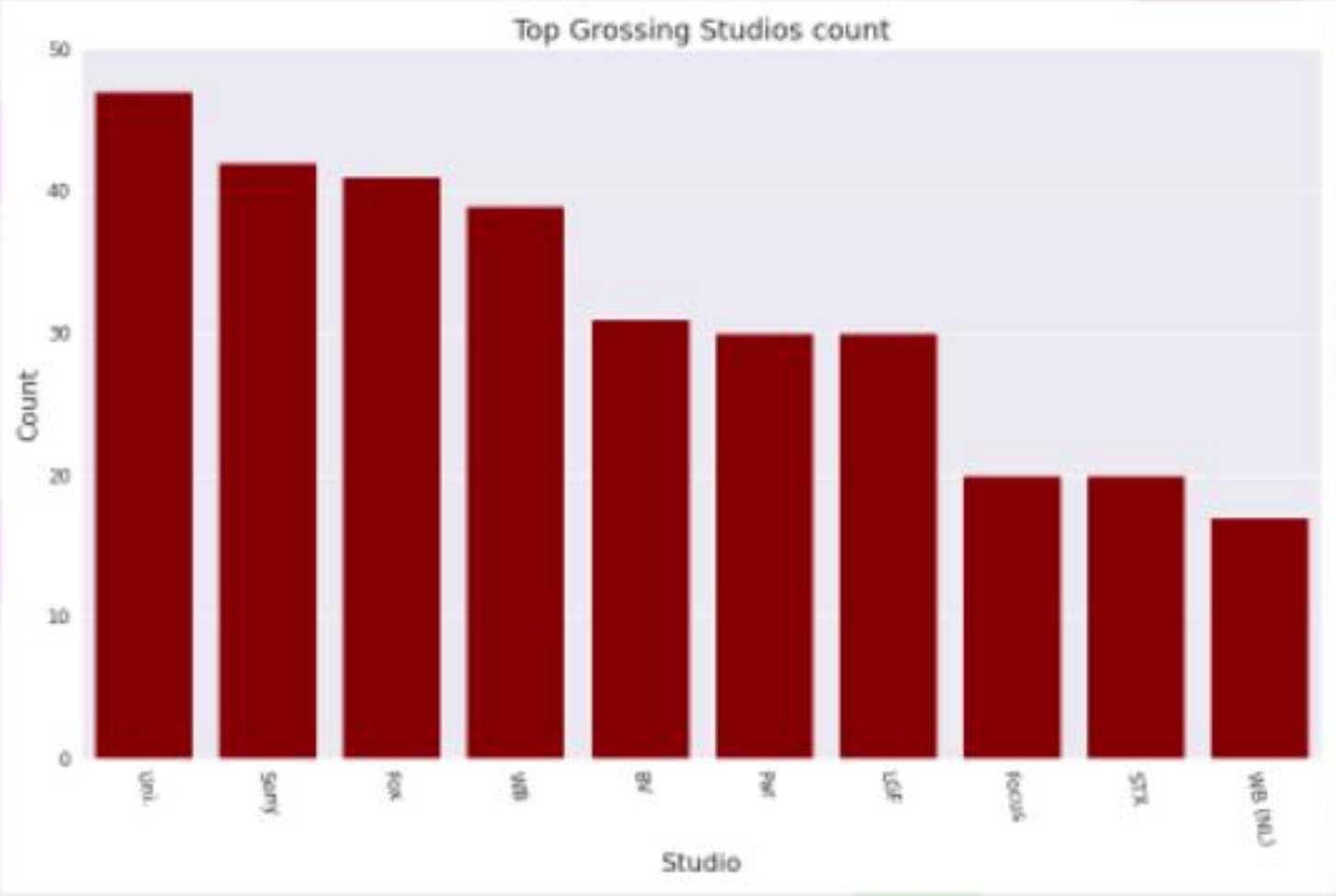


Profits by the month of release



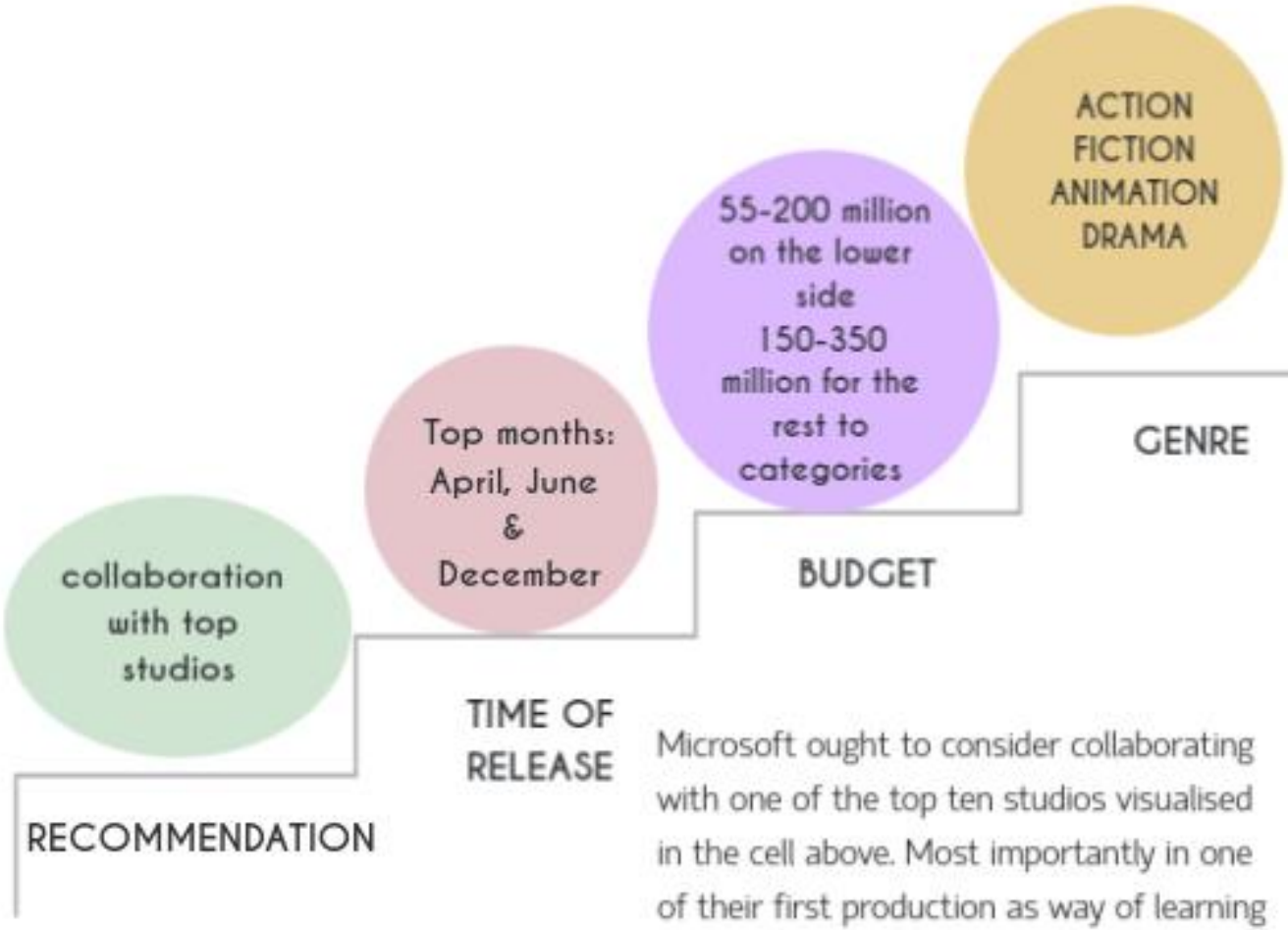
The best profits were recognized in the months on the first half of the year. The top months were April, February, June and December.This visualisation changes the dynamic of my previous analysis. April being the most profitable month to release a movie makes it more preferable than June.
December becomes easily a third choice by being the best month to release on the second half of the year and its profit margins too.

STUDIOS WITH THE TOP GROSSING MOVIES.



RESULTS & CONCLUSION

My analysis and findings have shown that the more a studio invests in the production of a movies the higher the gross revenue they acquire easily getting bigger profits. Though there are some outliers, the majority of high-grossing movies for these particular types of movies are ones with higher budgets. For Adventure, Drama or an Animated movie, the budget is best at between 55 and 200 million dollars. For a Action or Fiction movie, that amount is between 150 and 350 million dollars. From my analysis, the best months to release a movie depends on the statistics collected on profits acquired. April came top followed by June and December. Moreover, I noted that the Action and Fiction movies were released mostly on April and June making them the top priority when considering release dates of these movies.



Microsoft ought to consider collaborating with one of the top ten studios visualised in the cell above. Most importantly in one of their first production as way of learning the ropes. This serves as a benchmark on the big dogs in the movie production industry.

FUTURE CONSIDERATIONS

STREAMING SERVICES

In the future analysis it would be better to also do an analysis of streaming services and get more insights. This project can be as wide as one wants it to be but the objectives I set earlier have helped me come up with a short, thorough and insigtful analysis and visualisation.

MORE DATA

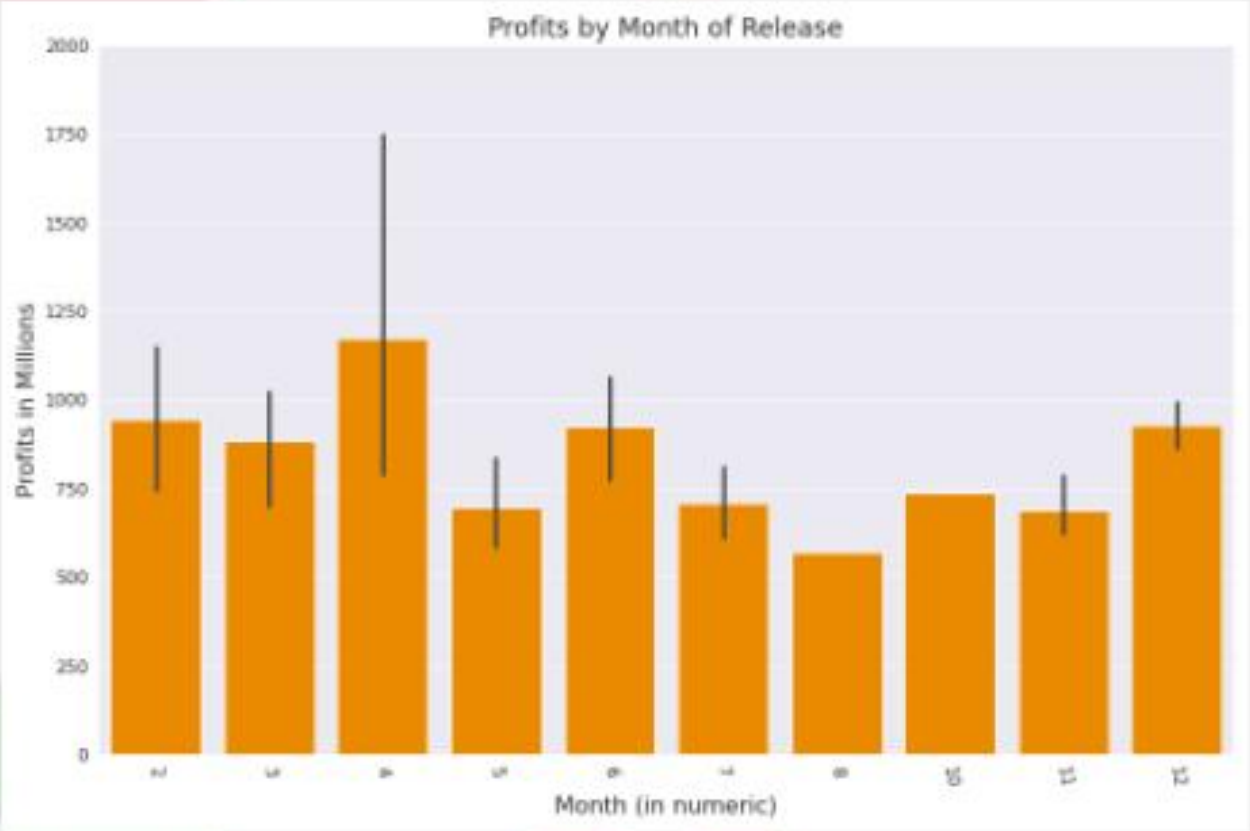
Use a much updated dataset with additional elements that may be used for business analysis in a similar project.
For example, award winning movies tend to do well in revenue.

THANK YOU!

For any questions or comments,
please feel free to reach out!

fred.mutuma@student.moringaschool.com
makuyumutuma@gmail.com

APPENDIX



Was not used due to the outliers.

Statistics don't lie.

Unknown