



FORMING RECOMMENDATIONS FOR MICROSOFT'S FILM INDUSTRY INTERESTS

Christine Gitan

Summary

The process of analysis that I adopted is (*in order*):

- Import the files and relevant libraries and make them workable, i.e decompressing them,
- Clean the data,
- Divide the data into foreign and domestic, conducting my analysis from top and bottom to see the best performing movies,
- Carry out a visual analysis of the studios associated with the best performing films with certain factors under considerations such as years released,
- Form my recommendations as I undergo this analysis,
- Provide a summary of all recommendations presented throughout the analysis for easier access as a concise conclusion.

I analysed data from BOM to determine which studios performed well at the box office, the gross earnings of their films (both foreign and domestic), and their best-performing films. Using this data, I calculated the most effective routes for engagement with the film industry and made recommendations accordingly.

Microsoft should prioritize purchasing licensing rights for movies that have a high break-even success rate and a strong potential to perform in the top quartile. Partnering with BV, a studio with a proven track record of releasing Box Office Hits, would also be beneficial. Focusing on the foreign market would further increase the potential for high earnings.

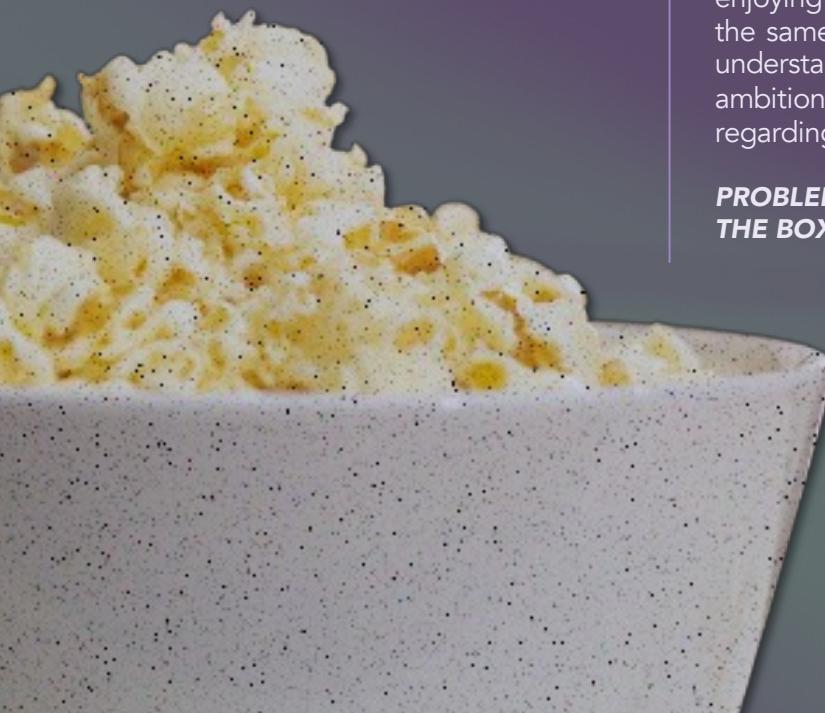
The analysis reveals that animation films like *Minions* and *Toy Story 3* are popular, followed by Adventure/Action films like *Jaws* and *Jurassic World*. Microsoft should invest in these film genres to appeal to the market's interests, as they are the most in demand and highest grossing genres.

Outline

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- 1. Business Problem
 - 2. Data
 - 3. Methods
 - 4. Results
 - 5. Conclusions



Business Problem



Microsoft has noted that there is opportunity that its industry neighbours have been enjoying in through unique film creation. Because of this, it is interested in unlocking the same opportunities. As part of my task, I am researching the leading studios to understand which industry leaders are present that can help manifest Microsoft's ambitions. The purpose of this research is to provide recommendations to Microsoft regarding the types of movies they can produce with their new production studio.

PROBLEM: EXPLORING THE TYPES OF FILMS AND STUDIOS DOING THE BEST AT THE BOX OFFICE TO BUILD SUGGESTIONS FOR MICROSOFTS ENTRY INTO FILM.



Data Characteristics

- Prior to cleaning, there were dramatic outliers in the data,
- The top film as visually presented above is 'Star Wars: The Force Awakens', followed by 'Black Panther' and 'Avengers: Infinity War'.
- BV has been responsible for two of the lowest performing films domestically in more recent times. Compared to its highest performing representation (seen under Visualization 1), this dip isn't significant enough to be a cause of concern regarding the potential outcomes of a partnership with BV. This is because, comparatively, the dips in performance are blindingly outshined by their consistency throughout the years in outranking the performance of their competitors on a domestic scale.
- The top three grossing films on an international scale are 'Iron Man 3', followed by 'Aquaman', then the 'Minions'.
- Animation and Adventure/Action film genres yield the most gross profits.

Methods

For this project, I will be using the following data from [BOM.csv](#):

- Studio
- Title
- Domestic Gross
- Foreign Gross

The data set is very large with outliers, empty values, and so forth. My task is to clean and organize broad data sets with incomplete information, to gain insights into the movie industry. The goal is to provide Microsoft with informed recommendations that can shape their strategy and decision-making.

I worked to enrich my exploration through engaging in web scrapping with the [BOM site](#) to gather data on:

- Genre
- Total Gross
- Titles
- 1# Title of Films

For this project, I will engage with the following libraries to empower the process of not only analysis but accessing extra features and methods that let me unlock the recommendations that will be listed towards the end of this PowerPoint:

1. **API:** import requests
2. **Web scrapping HTML:** from bs4 import BeautifulSoup
3. **Numerical arrays:** import numpy as np
4. **Using data frames:** import pandas as pd
5. **Graphs:** import matplotlib.pyplot as plt
6. **Accessing CSV files:** import csv
7. **Unzipping files:** import gzip
8. **Plotting bubble graphs:** import plotly.express as px

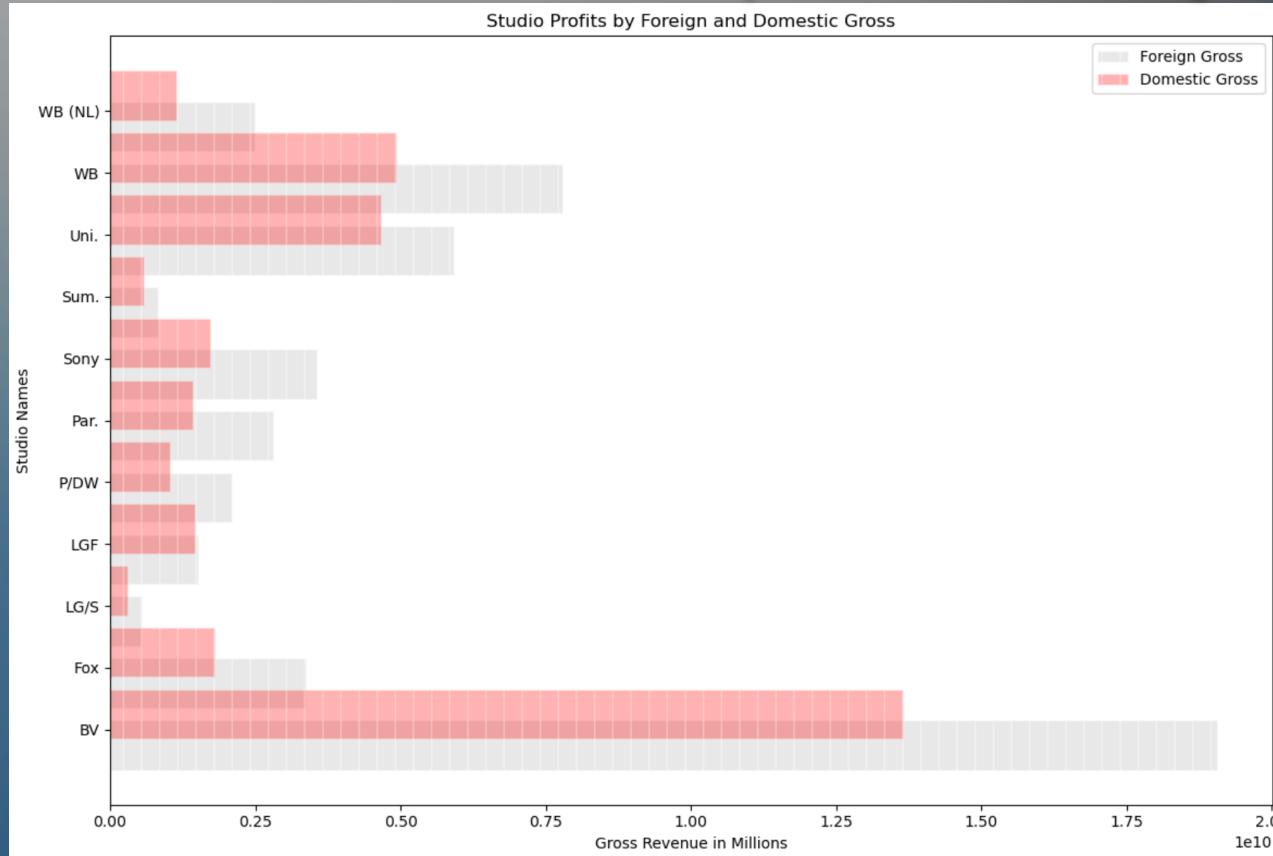


Results

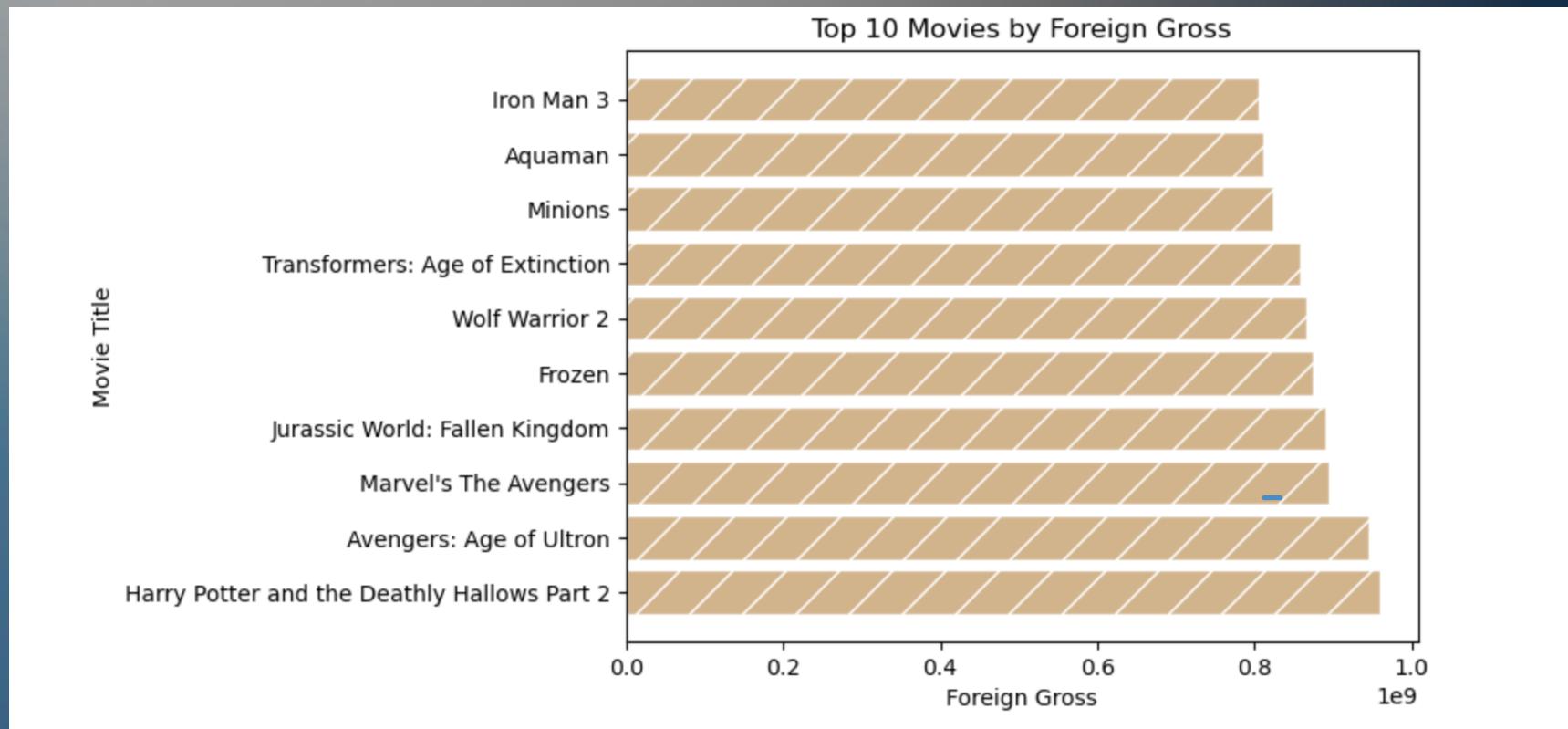
My results solve the business problem to an extent, however, due to time constraints, I was unable to do an in-depth examination. What would've enriched the data would've been to find the why and not the how behind why the data exists and the intricate factors outside of the studio like consumer and critic comments that can help us identify looming potential that may not be so visible in the numerical data I engaged with. This is because, just as it is important to pay keen attention to the numbers, it is the consumers that inform them and so their voice should be reflected when it comes to analysing these numbers.

Even so, through engagement with the data, I was able to identify the best performing genres for Microsoft. Additionally, I identified a cost cutting avenue since new ventures can be financially demanding and as it isn't the original business model. Cost-cutting through engagement with relevant and experienced partners can help Microsoft seamlessly move into the film space as it will have access to technical resources and access to personnel that can help them to do so. Finally, films that are targeted towards international audiences were observed to have performed much better than those that were targeted towards the domestic audience as seen in the tables in the following slides.

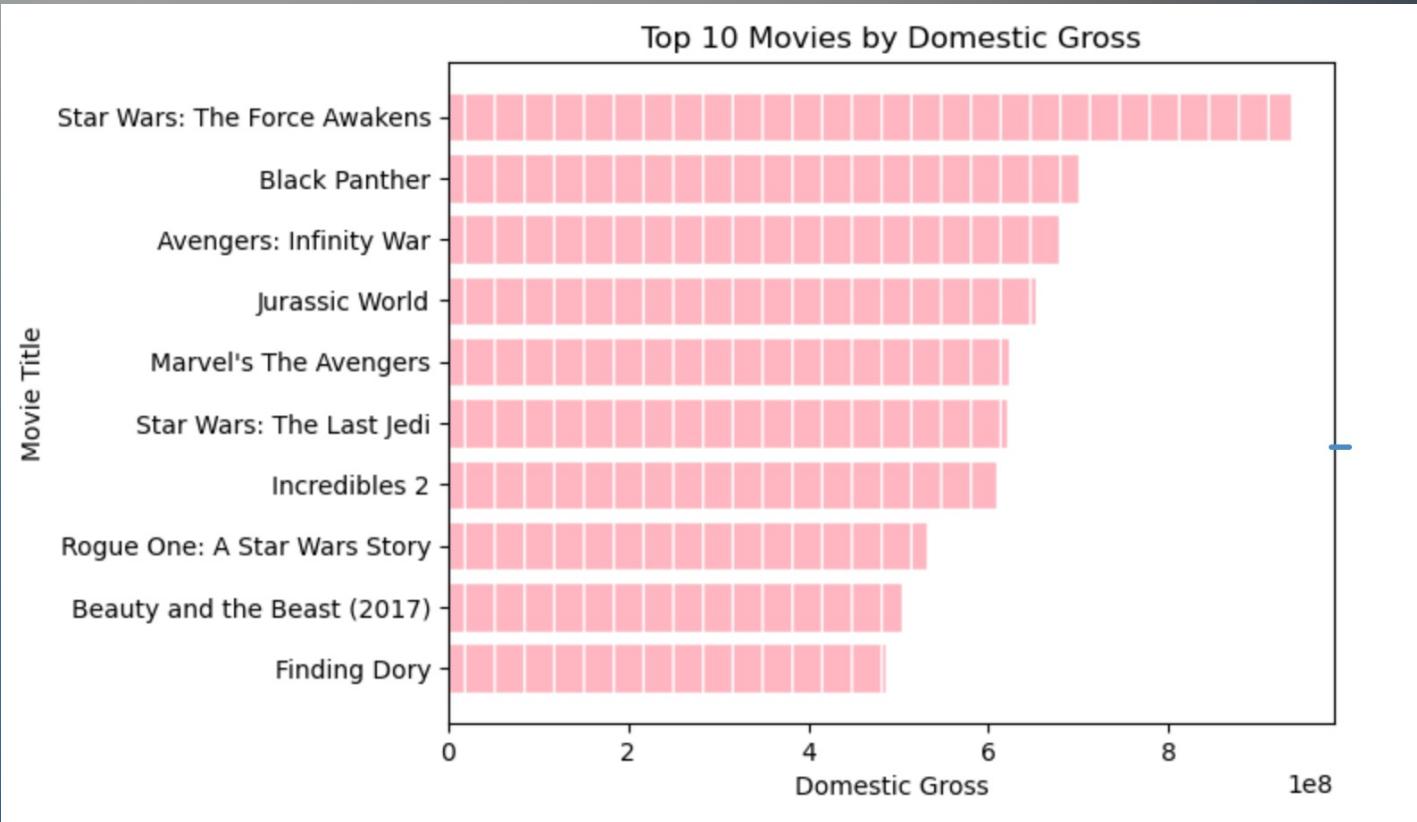
RESULTS: Findings On The Top Earning Studios For Partnership (Cost Cutting)



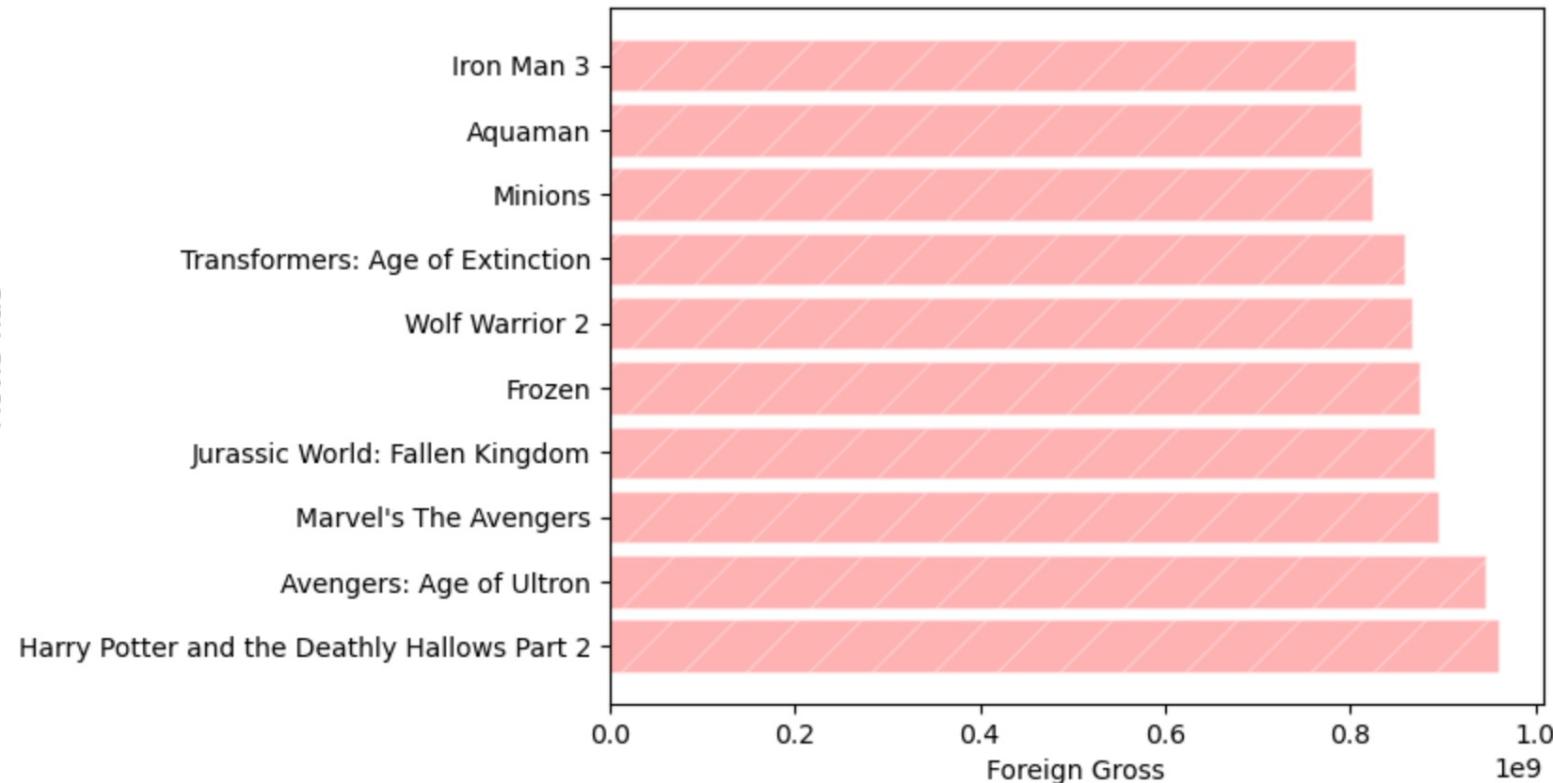
RESULTS: Findings On The Top Earning Movies Internationally (To Support Genre Findings)



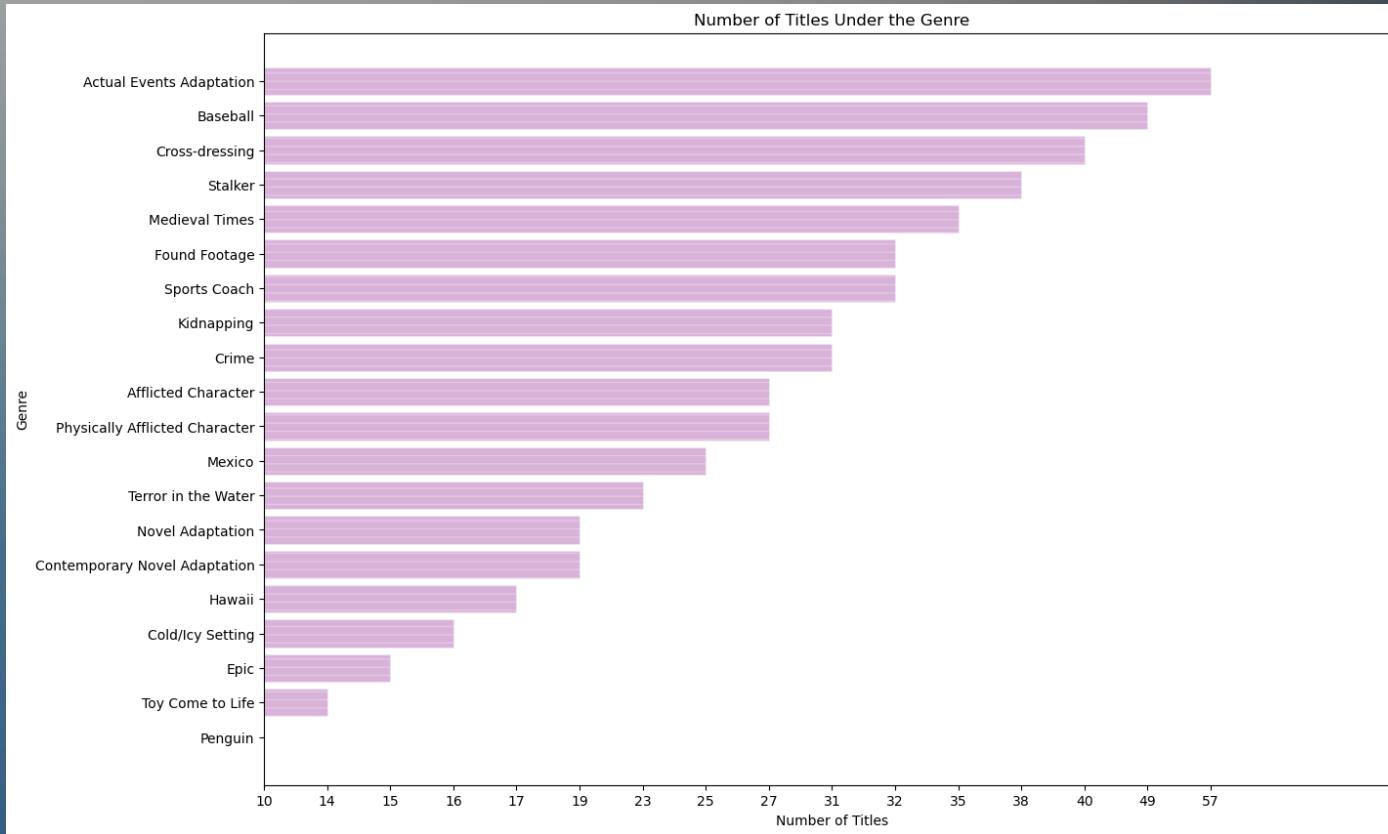
RESULTS: Findings On The Top Earning Movies Domestically (To Support Genre Findings)



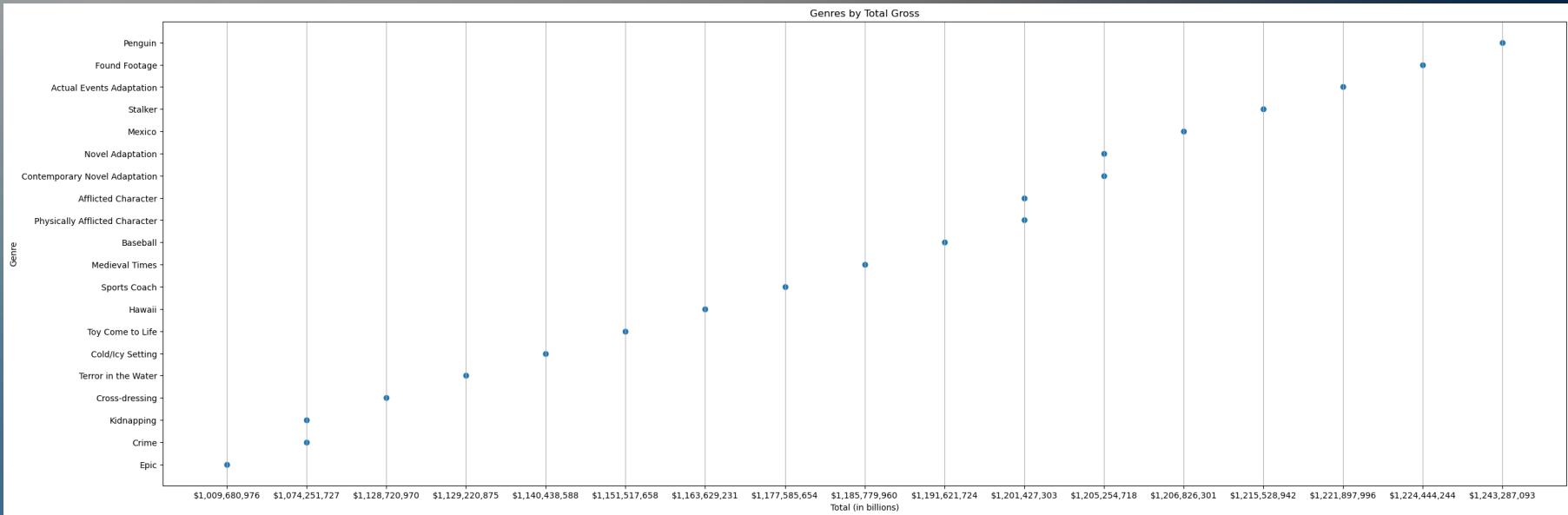
Top 10 Movies by Foreign Gross



RESULTS: Findings On The Top Earning Genres



RESULTS: Findings On The Total Earnings for the Genres



A black and white photograph of a man with dark skin and long, textured hair (dreadlocks) sitting in a movie theater seat. He is wearing white 3D glasses and has his mouth open as if he's eating popcorn. He is holding a large, striped bucket of popcorn in his left hand. The background is dark, suggesting a movie screen or a theater interior.

Recommendations

- Partner with BV on domestic film releases,
- Partner with BV on international film releases,
- Avoid partnerships with: LG/S, Sum, WB (NL), WGUSA to reduce profit associated risks,
- Prioritize building an international film portfolio as they international/foreign films perform better at the box office than domestic films,
- Invest in producing Animation, Action, and Adventure films as they're the most profitable in the market overall.



Conclusions

There is a promising future in unique film creation. In reflection of the recommendations, Microsoft has multiple avenues to engage with the film industry in ways that reduce the risk of failure or minimal returns.

Future improvements and/or ideas:

- Improve the quality and axis of the graphs that I am using and engage more with python libraries as to enrich my project.
- Attempt to diversify the websites that I am collecting data from and explore web scrapping a bit more as it is fun and offers more opportunities to enrich data collected.
- Time was a real limitation considering the pace at which I was learning and doing the project at the same time, though, I am optimistic that this will change as I continue with DSC.



Microsoft

Thank You

Email: christine.wammy@gmail.com

GitHub: @chrissii.e1

LinkedIn: www.linkedin.com/in/christine-gitau-bb1a9b218