



Welcome to Microsoft Films

By Raymond Leong

What was the last film you watched and what do you think of it?



Summary



- ▶ Movies are a great way to generate revenue with a high Return of Investment (ROI), specific genres are known to yield higher ROIs than others
- ▶ Votes from individuals are important in dictating the successfulness of a film.
- ▶ Microsoft should invest in foreign markets when creating film- revenue is not always generated most domestically. Foreign revenues contributes heavily to the successfulness of a film.



Outline



- Business problem
- Methods used for Data selection and Data processing
 - Return of Investment as our “success indicator”
 - Pandas to create tables for data visualization
 - Done by MatPlot library which helps us create our graphs
- Data Visualization
- Results
- Conclusion and next steps



Business problem

- Main Problem: The film and studio industry are undersaturated and there is a lack of understanding on how to enter the market, especially the type of films to produce
- Questions you MUST ask:
 1. How does Microsoft generate revenue from films?
 2. What films could we have produced?
 3. Where does the film make the most money, domestically or internationally?



Database Understanding



- IMDB is a phenomenal database which includes multiple tables on the film based on the film's ID- you can examine multiple attributes such as runtime, rating, etc
- Rotten Tomato's Data base (RT) provides a plethora of information but the tables the contents are not entirely understandable
- TN's database provides the movies production budget, domestic gross and foreign gross along with worldwide gross.
- BOM provides everything TN has except it also has the year involved and studio



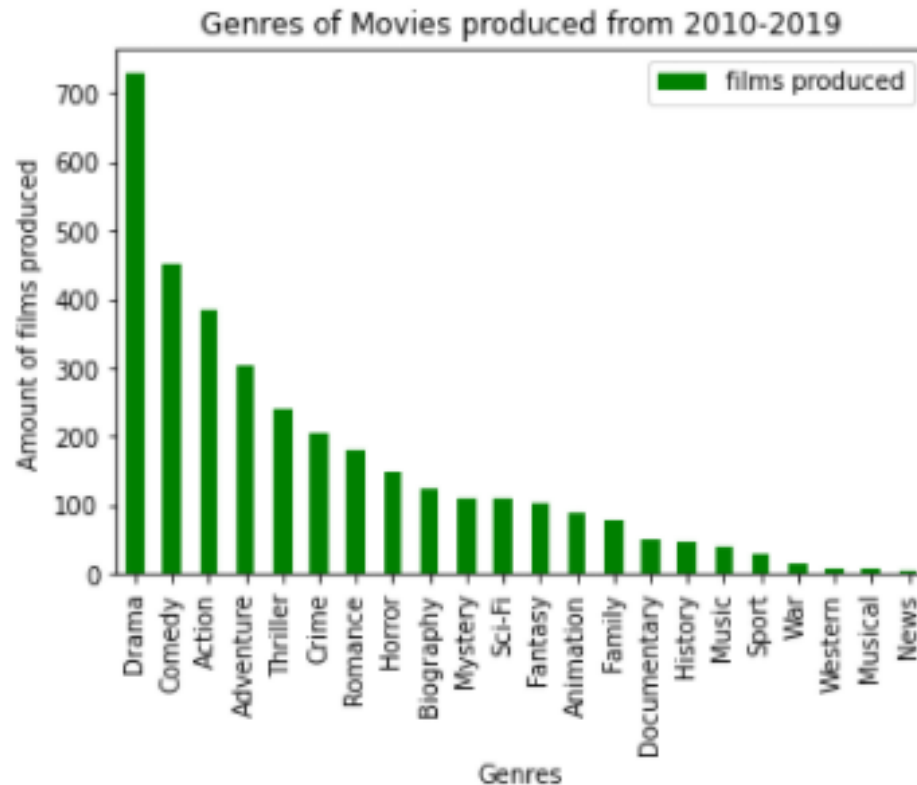
Data Selection and Processing



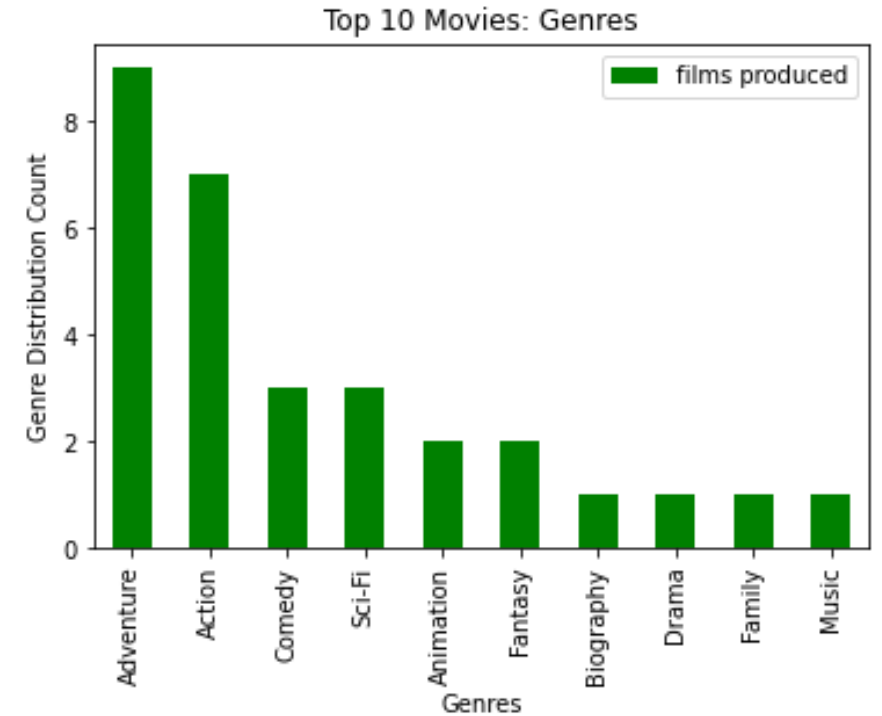
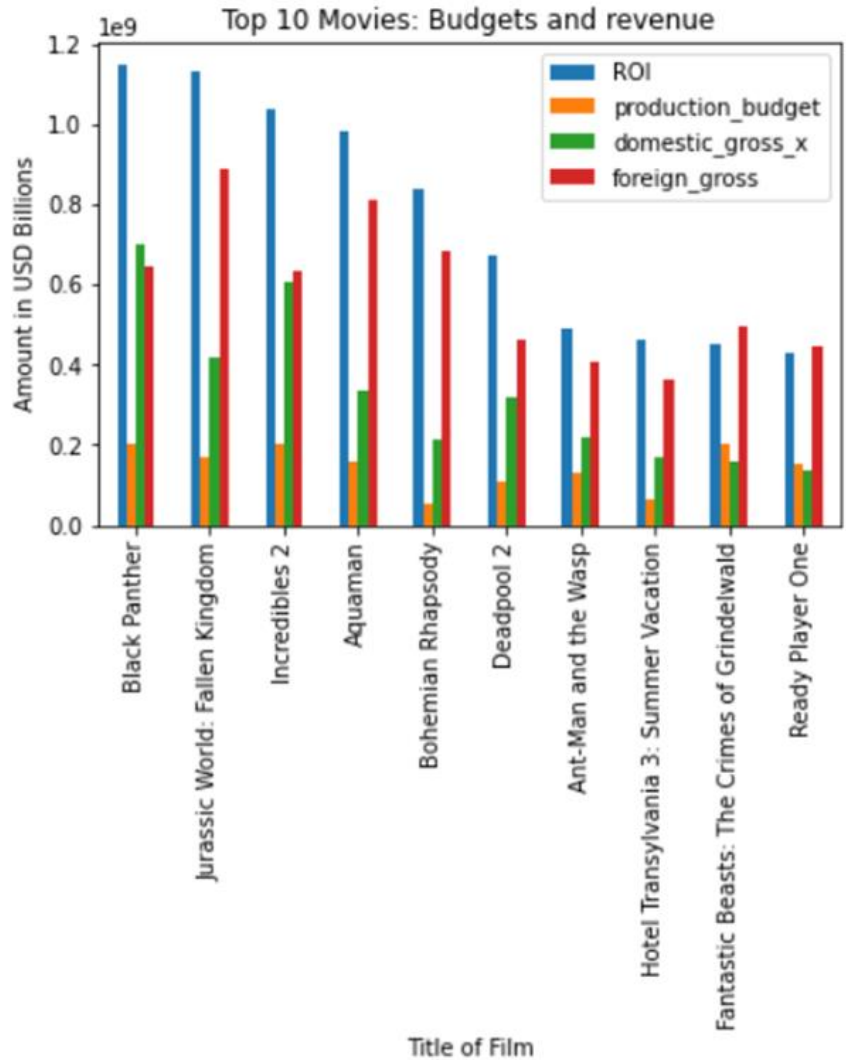
- TMDB supplied information about the amount of votes it had in its database along with the average rating of each movie analyzed.
- TN provided production budgets of films
- BOM provided another analysis into production budgets (which were mostly identical to TN) along with years produced
- IMDB provided the genres of the most successful movies
 - Movie basics and movie ratings were the most important files

Data Visualization: Which genres had the largest amount of production?

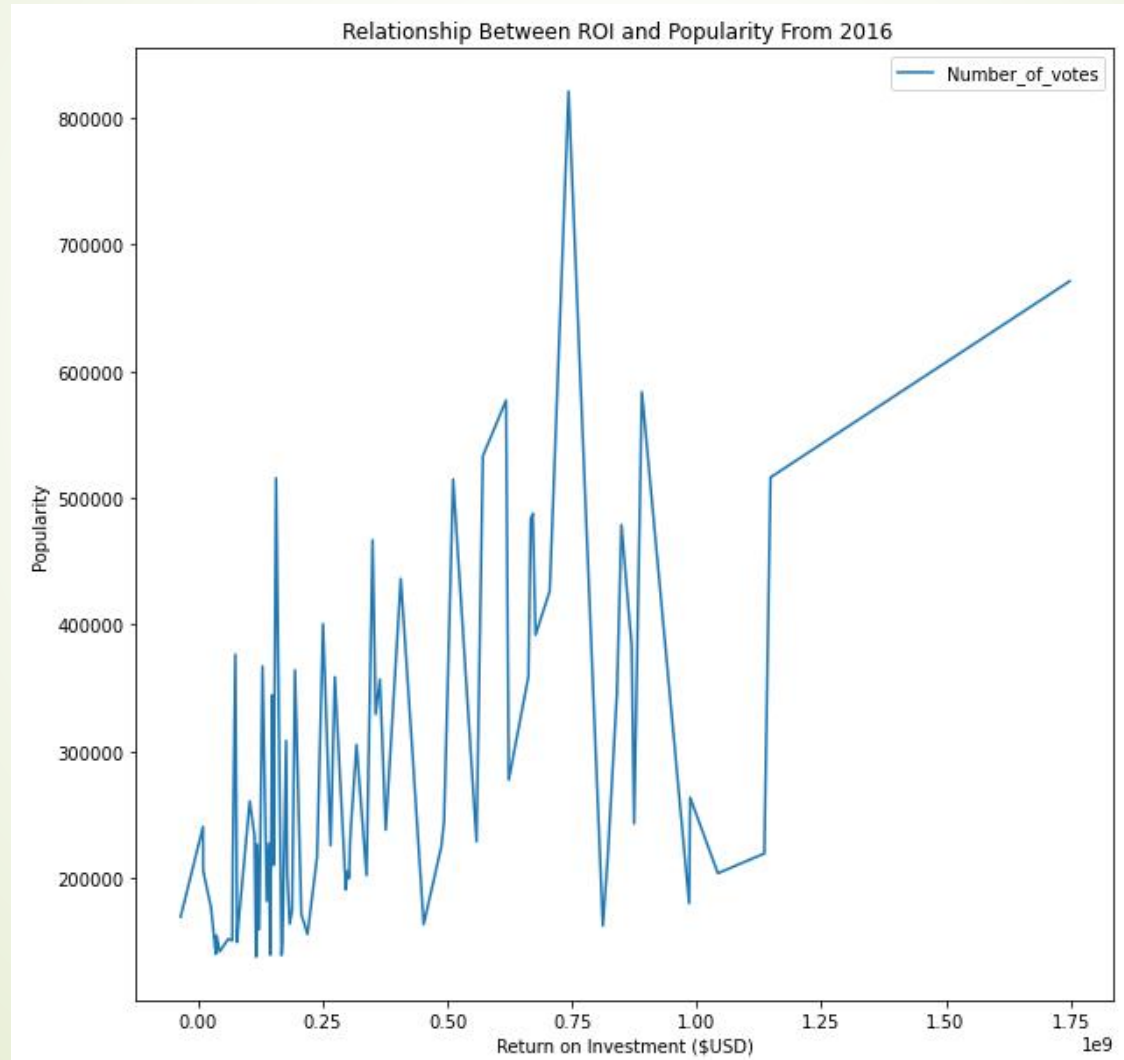
- ▶ Dramas, comedy, action, adventure, thriller are all films that were produced the most and had the highest ROI



Data Visualization: What are my top 10 films and where is the revenue generated?



Data Visualization: How can you tell if a film is successful based on audience reception?



Results

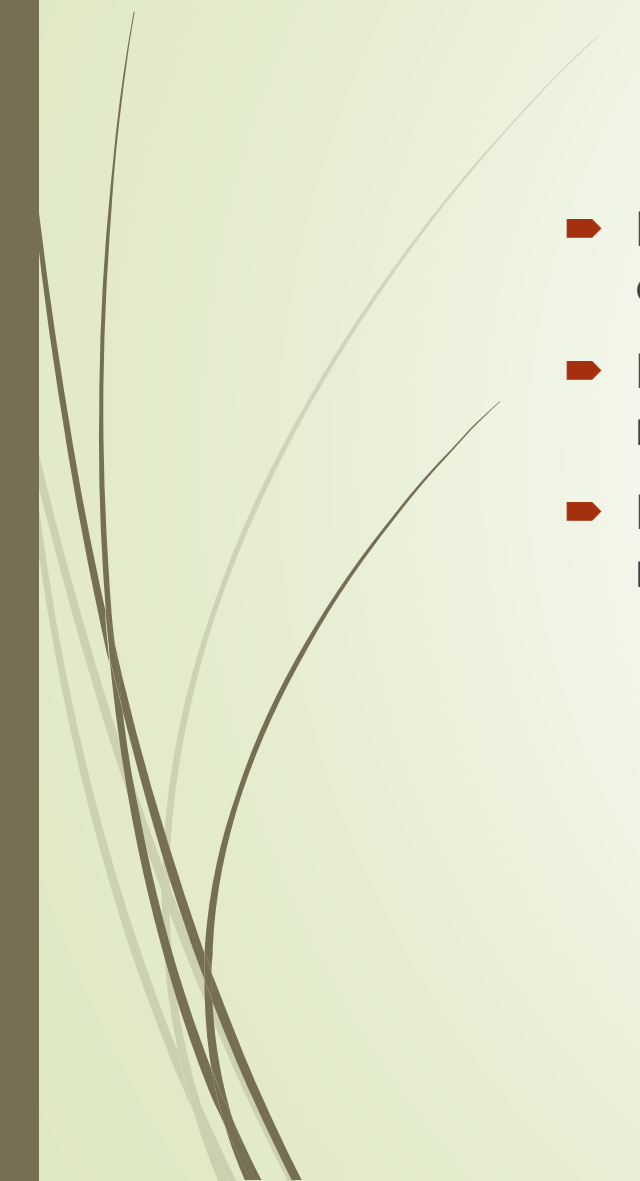
```
In [21]: #Instead Lets Look at the describe function  
TN_moviebudgets.describe()
```

Out[21]:

| | production_budget | domestic_gross | worldwide_gross | ROI |
|-------|-------------------|----------------|-----------------|---------------|
| count | 5782.00 | 5782.00 | 5782.00 | 5782.00 |
| mean | 31587757.10 | 41873326.87 | 91487460.91 | 59899703.81 |
| std | 41812076.83 | 68240597.36 | 174719968.78 | 146088881.08 |
| min | 1100.00 | 0.00 | 0.00 | -200237650.00 |
| 25% | 5000000.00 | 1429534.50 | 4125414.75 | -2189070.75 |
| 50% | 17000000.00 | 17225945.00 | 27984448.50 | 8550285.50 |
| 75% | 40000000.00 | 52348661.50 | 97645836.50 | 60968501.75 |
| max | 425000000.00 | 936662225.00 | 2776345279.00 | 2351345279.00 |



Recommendation (conclusion)

- Look to produce films that are sequels of the most successful box office films and invest in genres: Dramas, Adventure, Action, Comedy
 - Look to invest at around \$14,000,000 - \$17,000,000 in order to generate maximum ROI with minimum risk.
 - Look to invest into the film's contents so that it can appeal to the foreign market.
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Questions you may have

- Are there other variables for ROI, such as royalty, merchandising and other company owned assets? How can films improve other products of Microsoft?
- In a foreign market, are there possible confounding variables for the film's success (cultural norms, political affiliations etc.)
- Are teasers worth predicting the ROI of a film?



Thank you!!!

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