



# 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



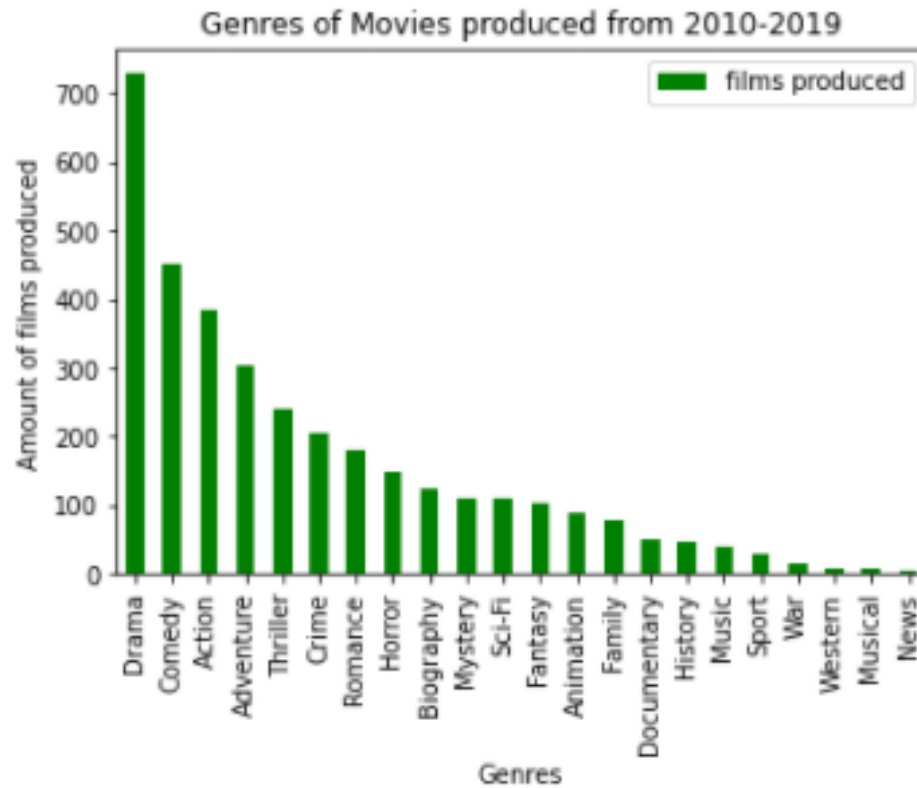
# Data Selection and Processing



- 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

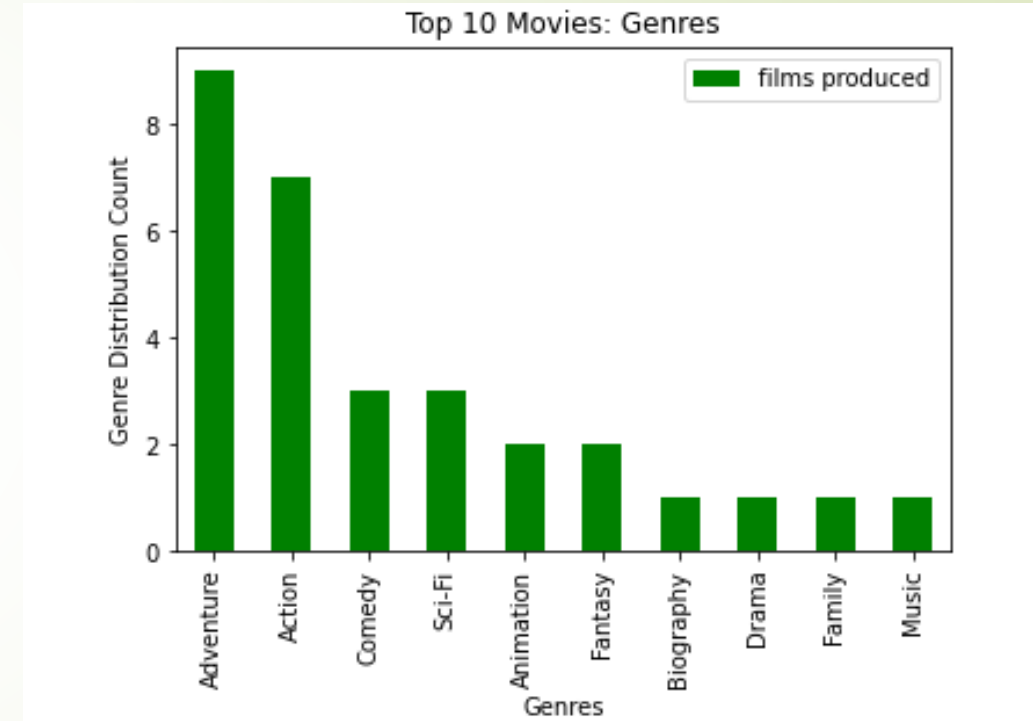
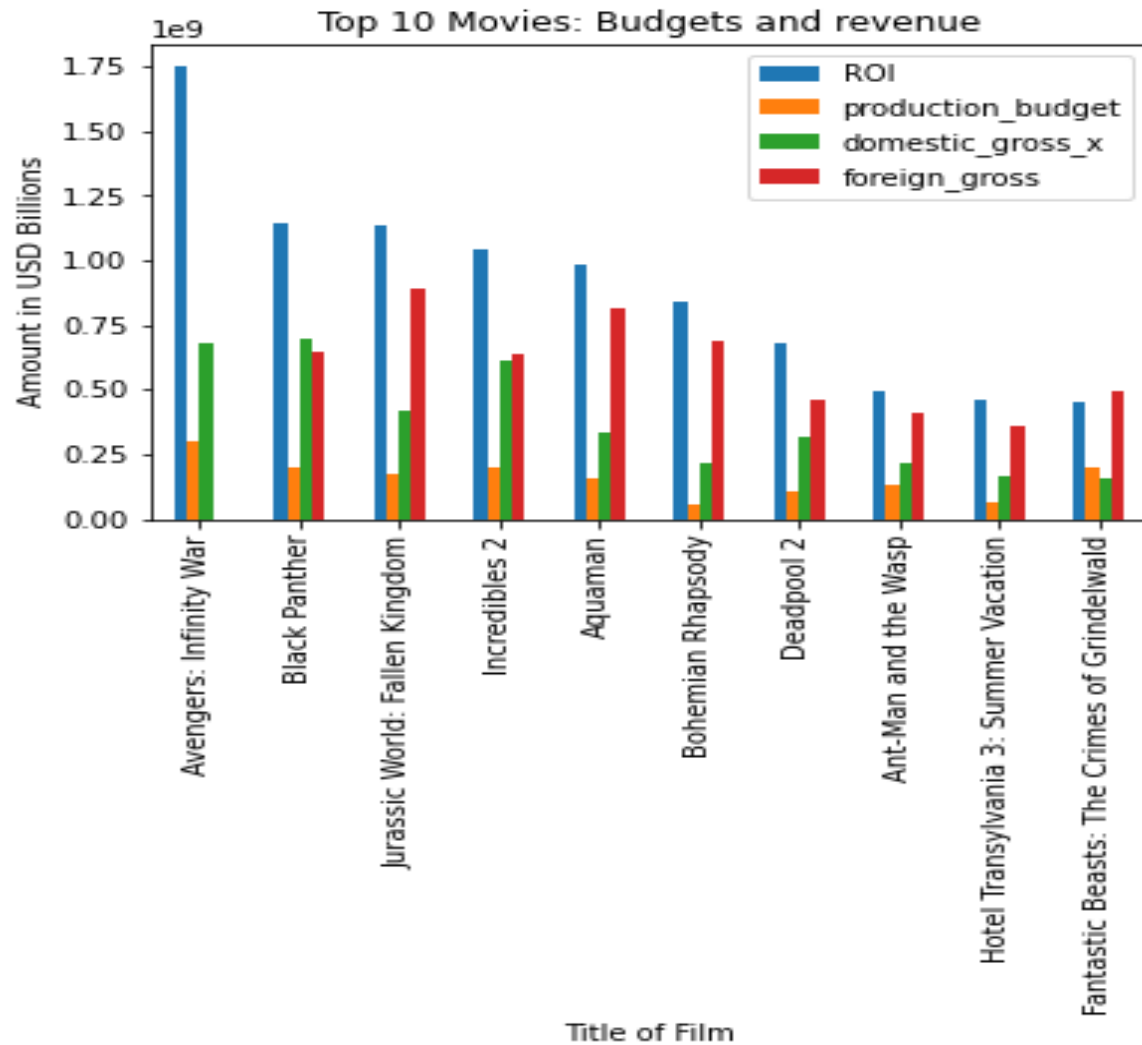
# Data Visualization: Which genres had the largest amount of production?

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



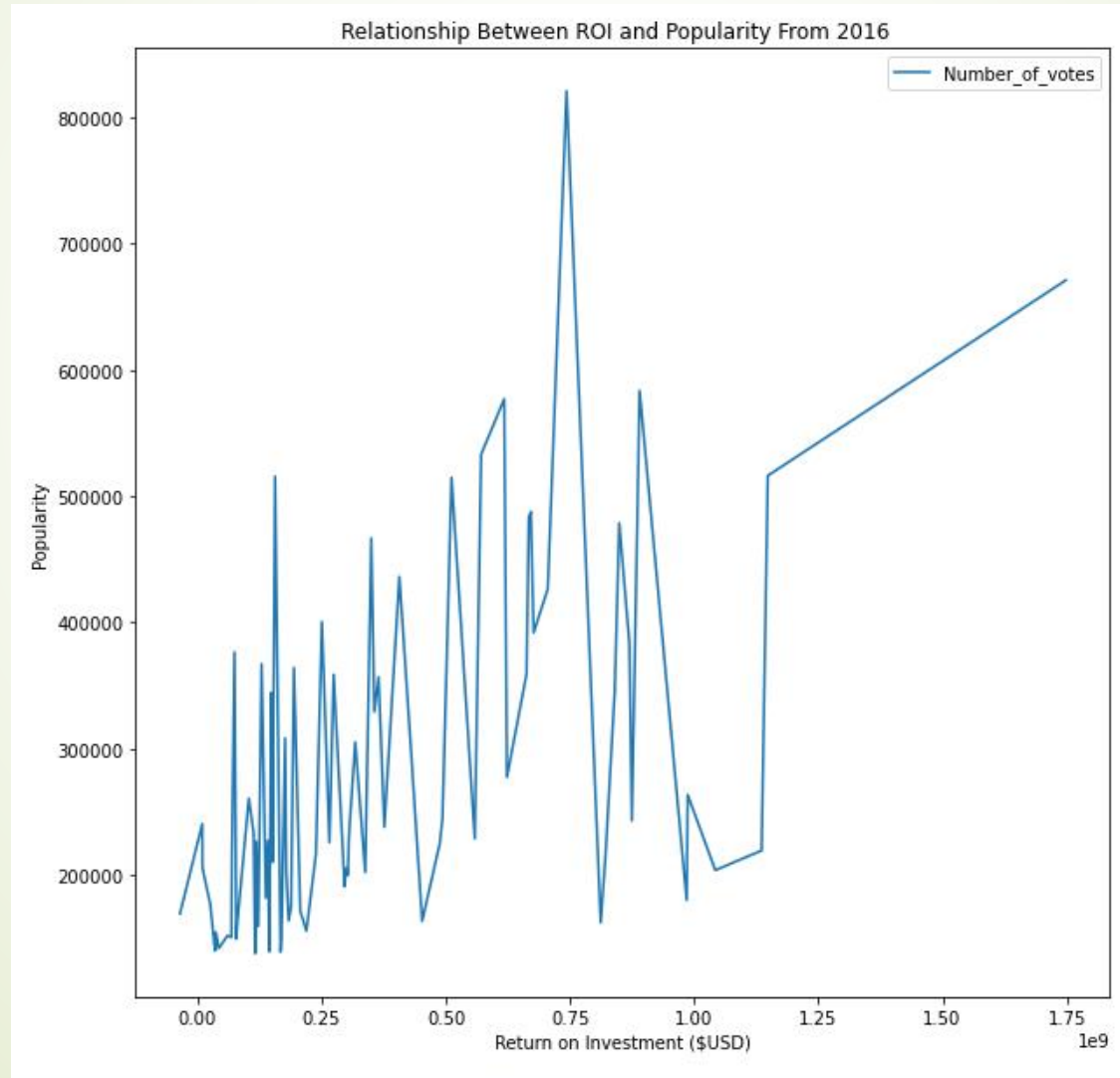


# Data Visualization: What are my top 10 films and where is the revenue generated?





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



# Results

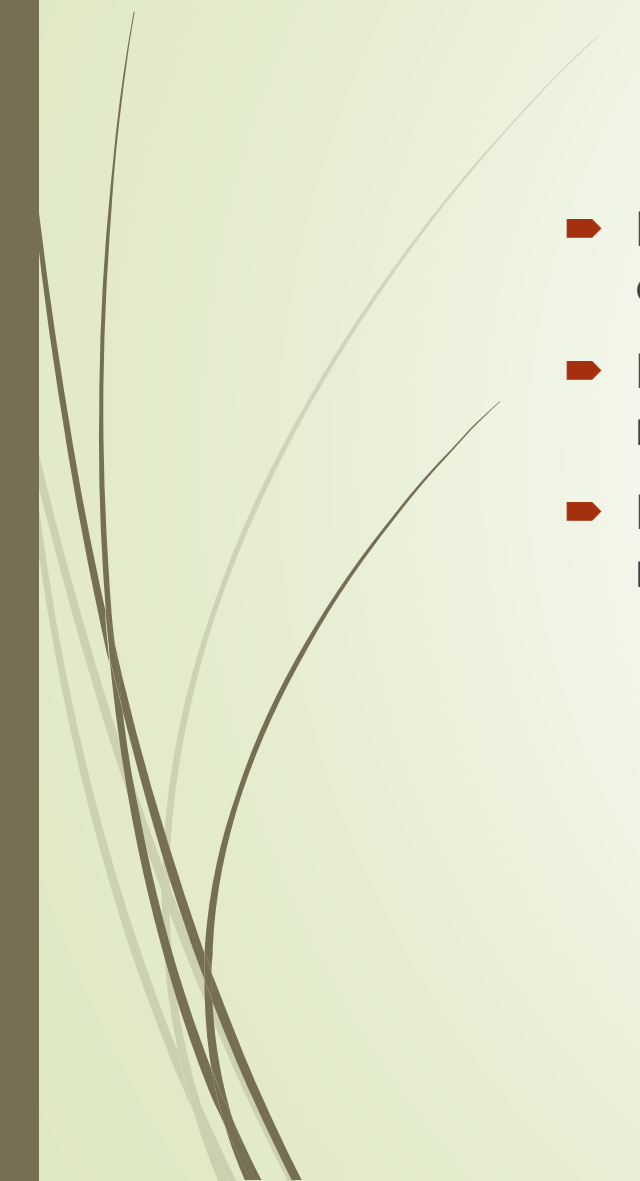
```
In [21]: #Instead Lets Look at the describe function  
TN_moviebudgets.describe()
```

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.
- 



# 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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