# Microsoft Movie Analysis

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# Summary

Exploratory analysis of IMDB data together with data from Box Office Mojo to help Microsoft determine what films to produce based on information such as number of votes, domestic gross, foreign gross and average ratings.

Analysis reveals:

- Movie combinations of **Action,Adventure,Sci-Fi** or **Adventure,Animation,Comedy** achieved high returns at the box office.
- Movies runtime between **70-120** minutes rated highly.
- Movie combinations of **Action,Adventure,Sci-Fi** or **Adventure,Drama,Sci-Fi** received highest number of votes.
- Films that are coupled with **Adventure** rated and grossed high.

## Outline

- Business Problem
- Data
- Methods
- Results
- Conclusions

# Business Problem

Microsoft wants to create movies but they do not have filmmaking experience.

Questions:

- Which movies are performing well at the box office?
- What films do viewers like?

# Data

- IMDB data and Box Office Mojo data.
- Includes columns such as: title, runtime minutes, genres, average rating, number of votes as well as both foreign and domestic gross.

# Methods

Selected 2 tables from IMDB database and joined with the data from Box Office Mojo to form one dataset.

Perform exploratory analysis on different variables.

Group data and get the top 20 movies based on the total domestic gross, total foreign gross, number of votes, average rating and total gross. Compare the variables and visualise the results.
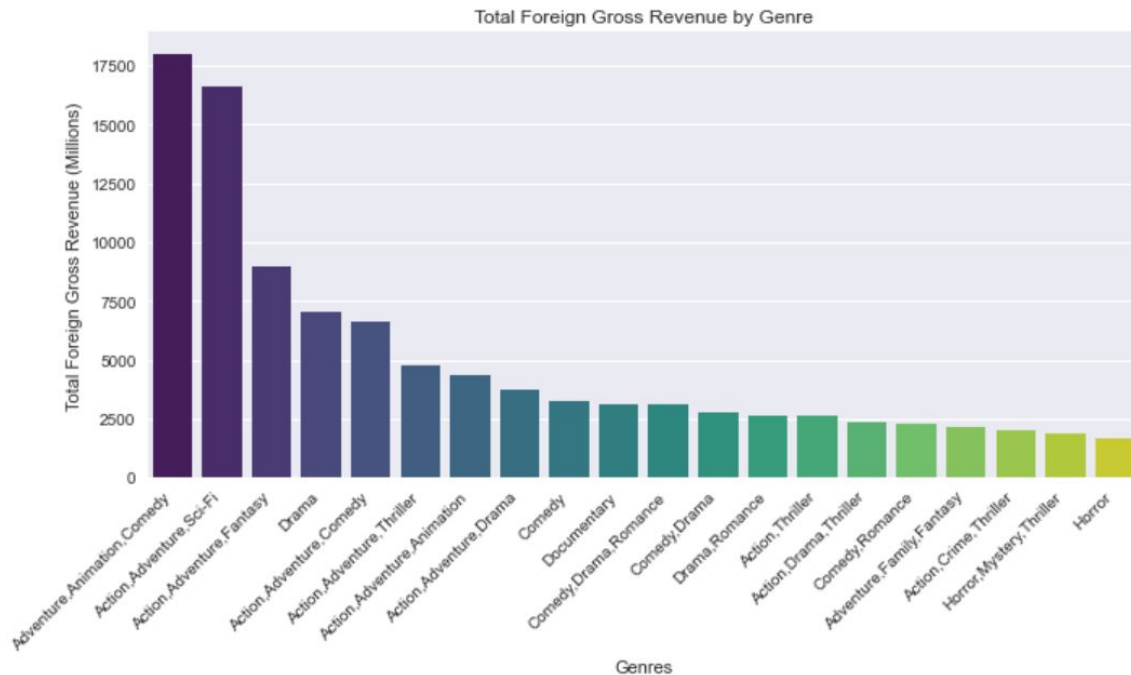
# Results



Total Domestic Gross Revenue by Genre
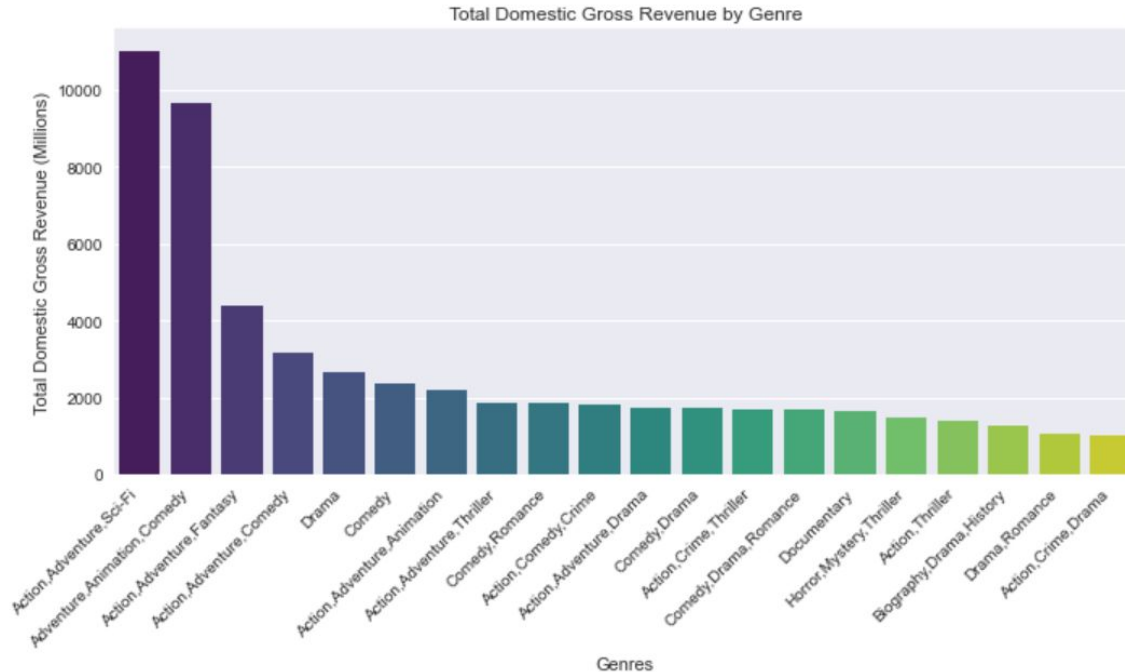
- Action, Adventure, Sci-Fi films with about 11000 million in total gross domestic revenue
- Adventure, Animation, Comedy films about 9000 million in total gross domestic revenue
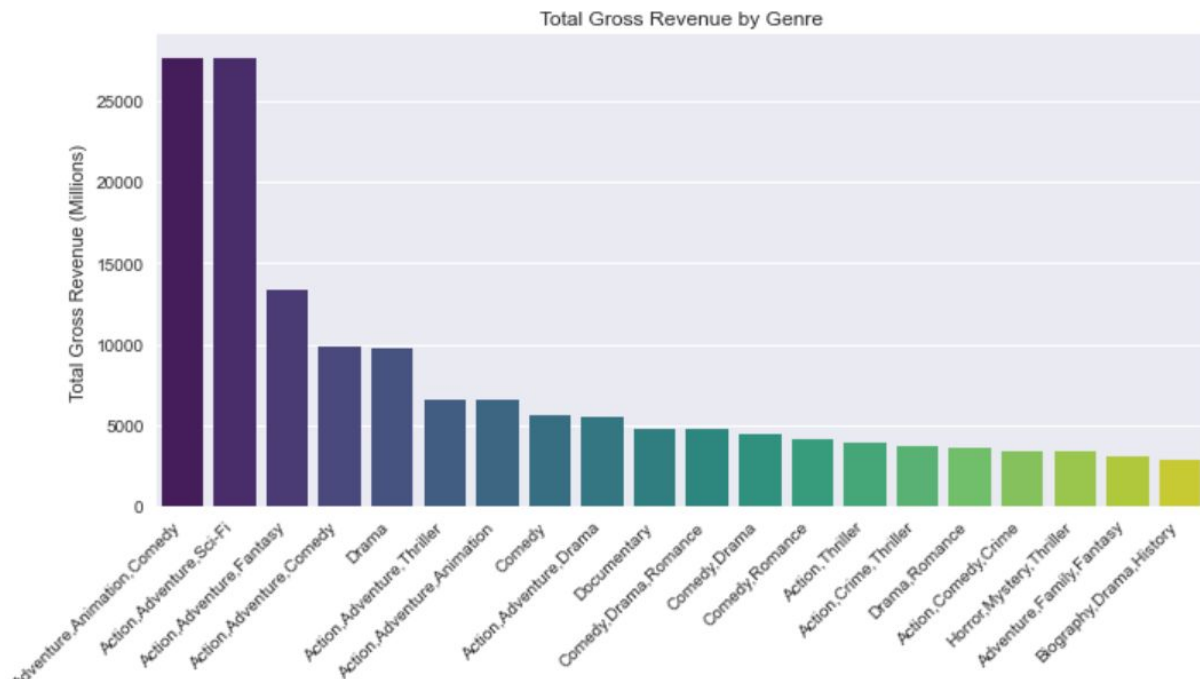
# Results



Total Foreign Gross Revenue by Genre

- Adventure, Animation, Comedy films with about 19000 in total gross foreign revenue
- Action, Adventure, Sci-Fi movies have a total gross of about 16000 in total foreign gross revenue.
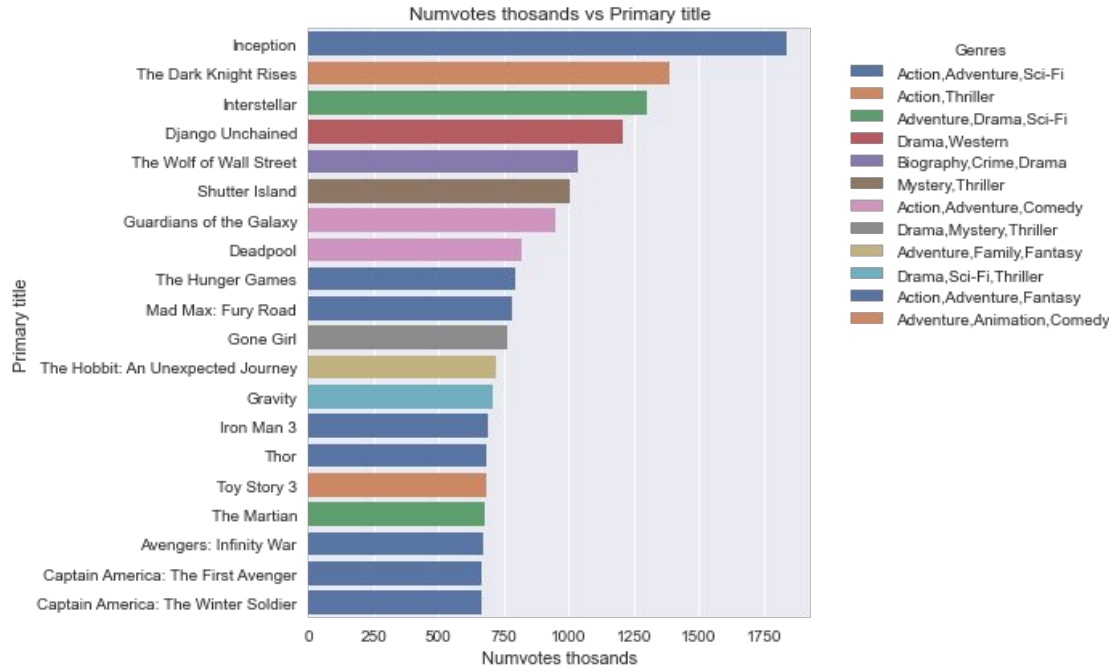
# Results



Total Gross Revenue by Genre

- Adventure, Animation, Comedy as well as Action, Adventure, Sci-Fi have the highest total gross (domestic + foreign) with about 27000 million.

# Results



Numvotes thosands vs Primary title

- The film that has the most number of votes belong to the Action,Adventure,Sci-Fi genre with about 1.8 million votes is Inception, followed by The Dark Knight Rises which belongs to the Action,Thriller genre with about 1.3 million votes and third is Interstellar which belongs to the Adventure,Drama,Sci-Fi genre with about 1.25 million votes.

# Results



Runtime minutes vs Averagerating
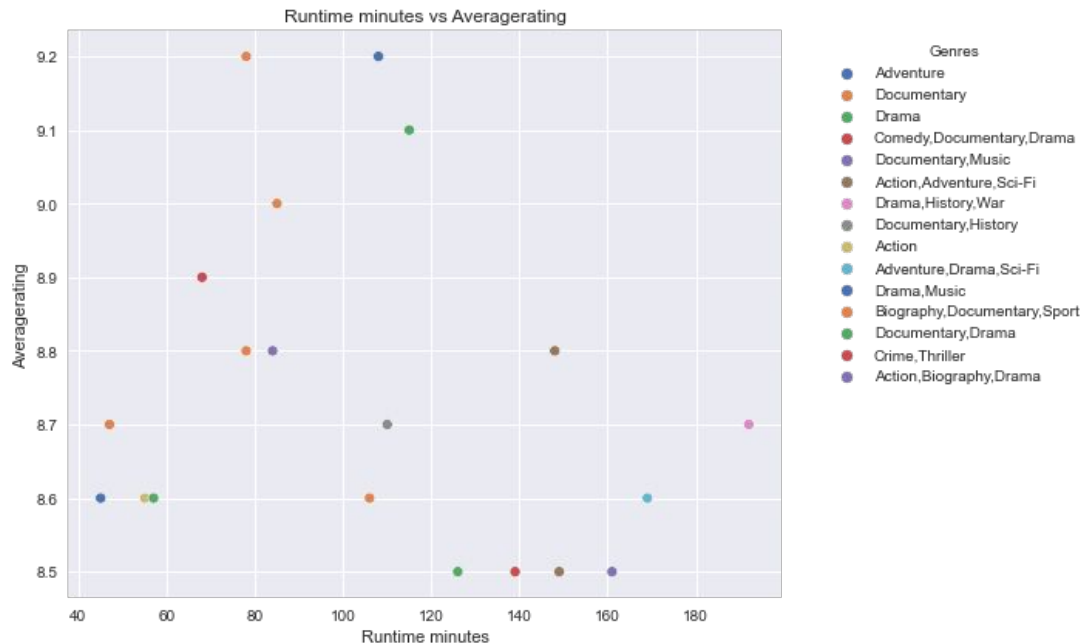
- Films that have runtime minutes of between 70-120 have the highest average rating.
- These high rated films are in the adventure, documentary, drama and comedy,documentary,drama.

# Conclusions

The analysis yields the following recommendations:

- **Action,Adventure,Sci-Fi** and **Adventure,Animation,Comedy** perform well in domestic and foreign markets.
- **Action,Adventure,Sci-Fi** movie combinations along with **Action,Thriller** and **Adventure,Drama,Sci-Fi** movies have the highest number of votes. The films coupled with these genres: Inception, The Dark Knight Rises and Interstellar can serve as good points to borrow ideas on what movies to make. Additionally, Microsoft can consider making sequels to these movies as a start.

# Conclusions contd.

Recommendations:

- Make movies with a runtime of between **70 and 120** minutes as these types of movies received the highest ratings.
- Genres that received the highest rating had a watch time of the above and were the following genres: **Adventure, Documentary, Drama**.
- Any movies incorporated with **Adventure** tend to do well in the box office as well as with viewers.

Next Steps:
- Draw insights about different factors by getting data from more sources, e.g, ratings may be affected by the actors in the film or the director.
- Perform analysis based on the years e.g, what movies performed well in 2010 etc and use predictive modelling to see what movie genres can perform well in following years.

# Thank You!

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