



# Microsoft Movie Start-up Analysis

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# Summary



An analysis of movies that are currently doing the best at the box office reveals which movies Microsoft new studio should produce by answering the following 3 key questions:

1. Which **movie genres** are most popular with viewers?
2. What are the **runtimes** of the most popular movie genres?
3. Which **month of release** of movies yields highest ratings?

## Outline



1. Business Problem
2. Data
3. Methods
4. Results
5. Conclusions
6. Next Steps

## Business Problem

- An investigation of the types of films currently doing the best at the box office;
- And translating the findings into insights on what kind of movies Microsoft's new studio should produce.



# Data

- ❖ Data used: IMDB Basics data; IMDB Ratings data and TMDb movies data.
- ❖ IMDB Basics has data on genres.
- ❖ IMDB Ratings has data on movie ratings and number of votes
- ❖ TMDb database has data on movie release dates, ratings and number of votes.



# Methods



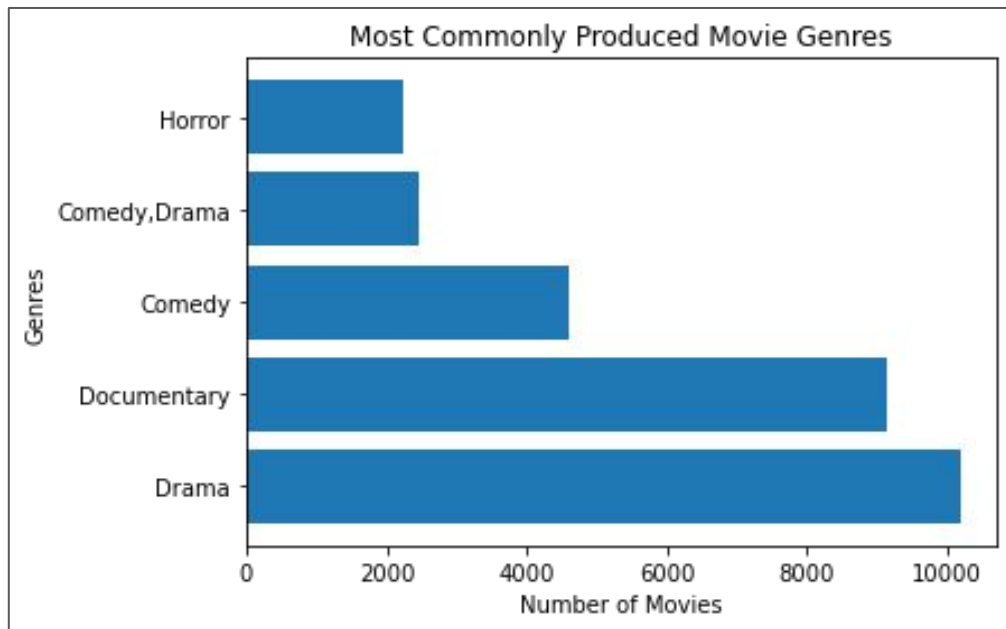
## **Data preparation includes:**

- ❖ Dropping unnecessary columns
- ❖ Merging dataframes
- ❖ Checking for duplicated data
- ❖ Checking for and dealing with missing values

## **Data modeling methods include:**

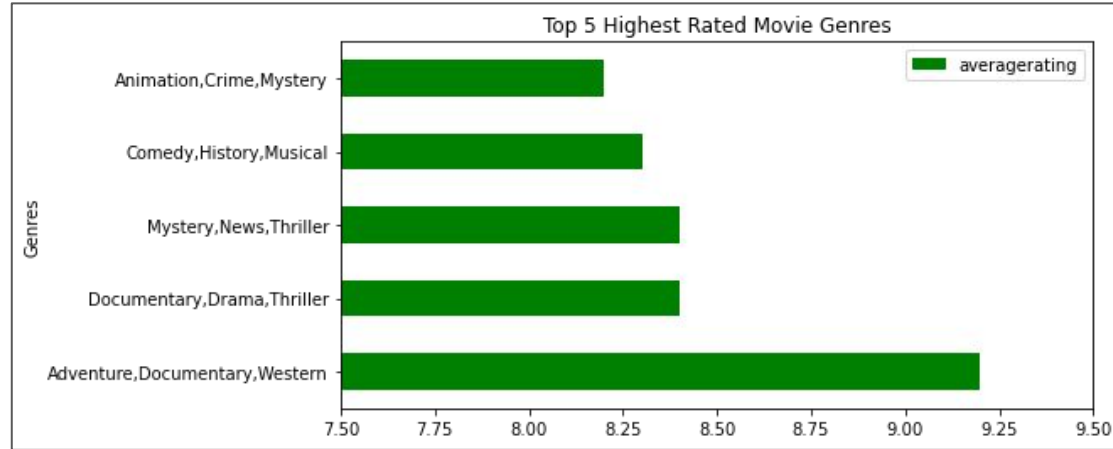
- ❖ Filtering the data by certain parameters
- ❖ Groupby with aggregation
- ❖ Changing datatype
- ❖ Creating new feature (column) to the dataframe
- ❖ Visualizations

# Results



**Dramas** are the most commonly produced movie genre without considering ratings.

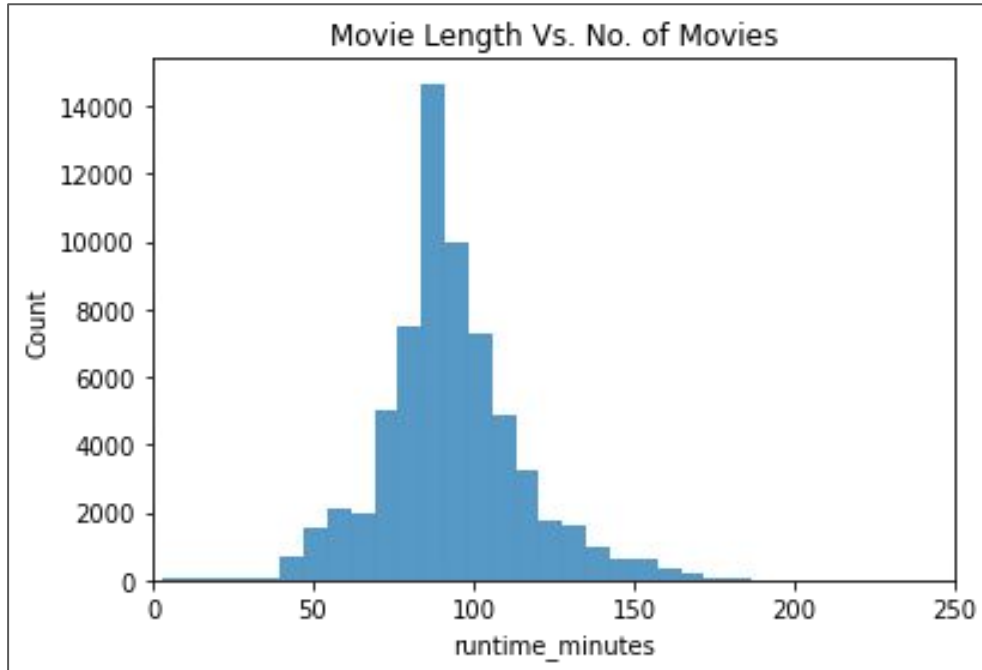
# Results



- **Top 5 highest rated genres** of movies differ from the top 5 most commonly produced genres.
- **Adventure, Documentary & Western** is the most popular genre combination.

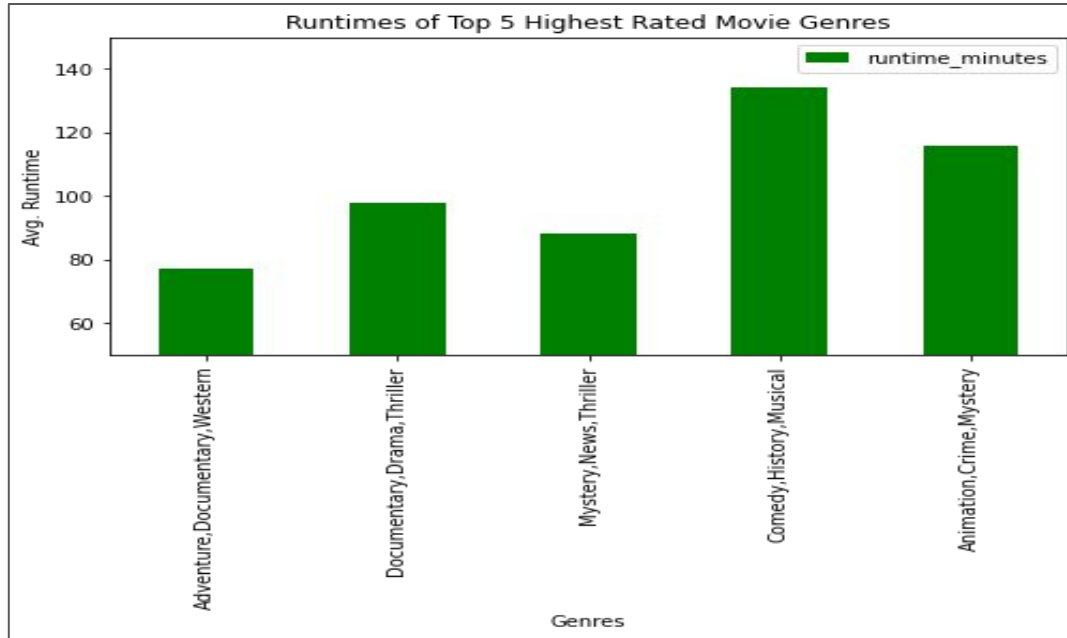


# Results



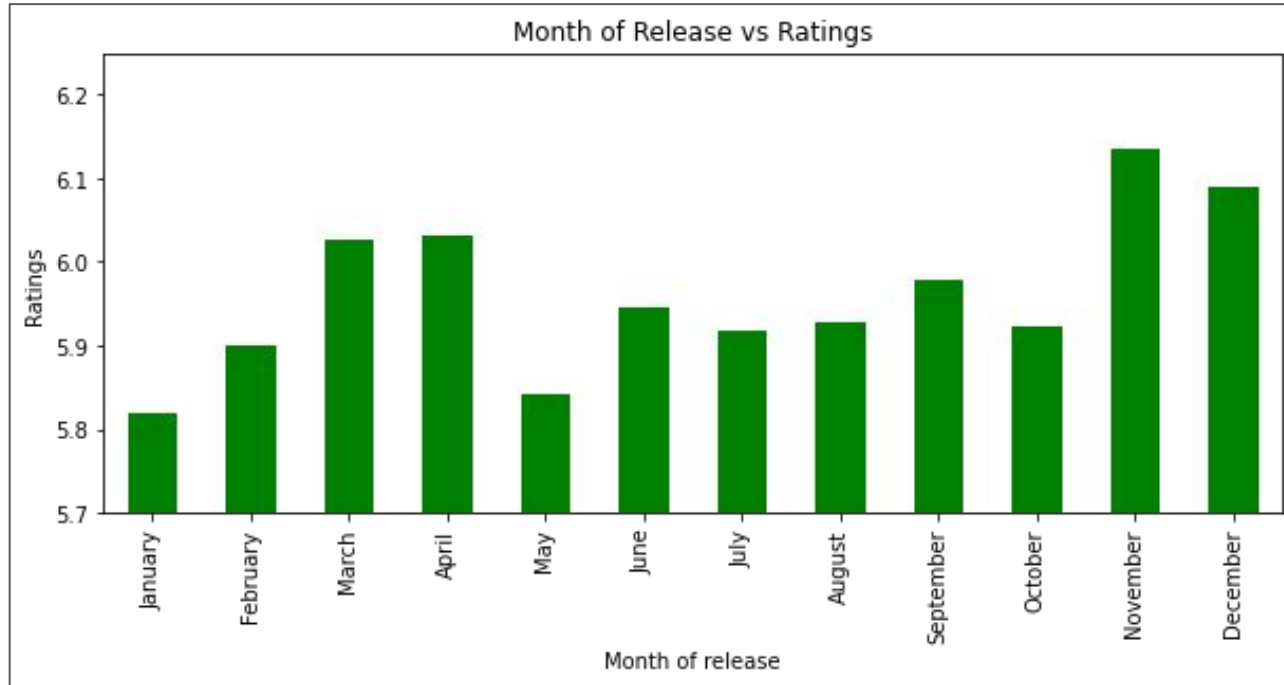
➤ **90 minutes** is the most common movie length.

# Results



**77 to 134 minutes** is the range of length for the top 5 highest rated movie genres

# Results



**November and December** are the best months to release a movie

# Conclusions



An analysis of movies that are currently doing the best at the box office reveals which movies Microsoft new studio should produce:

1. **Genres:** Pursue production of movies of these genres:  
Adventure,Documentary,Western; Documentary,Drama,Thriller;  
Mystery,News,Thriller; Comedy,History,Musical ; Animation,Crime,Mystery.
2. **Runtimes:** Produce movies with these approximate runtimes: 77 minutes  
(Adventure,Documentary,Western); 98 minutes (Documentary,Drama,Thriller); 88  
minutes ( Mystery,News,Thriller); 134 minutes (Comedy,History,Musical); 116  
minutes ( Animation,Crime,Mystery)
3. **Month of release:** Release majority of the movies produced in November and  
December. Avoid releasing films in January and May as they tend to have lower  
ratings.

## Next Steps



Further analysis is recommended in the following areas for additional insights:

- **Gross earnings:** Analysis of box office gross earnings in addition to popularity (ratings), to further refine the kinds of movies to pursue.
- **Production budget:** An examination of production budgets per recommended movie genre, to give the client a feel of the production capital needed.
- **Streaming services:** An investigation into popularity and earnings of films produced for streaming services such as Netflix, as opposed to box office release only, to guide the client on best approaches