MICROSOFT MOVIE STUDIO

PRESENTED BY; CYNTHIA WANYONYI

CONTENT

PROJECT OVERVIEW

In this project, we'll use exploratory data analysis to analyze box office performance and identify trends in popular movie genres, which will help inform decision-making for Microsoft's new movie studio.

BUSINESS PROBLEM

- Microsoft's new venture into the movie industry however they don't have expertise in the film industry
- Need to know the changes and trends in the evolving movie industry that are driving growth and profitability
- Understanding moviegoer preferences
- Analyzing the top-performing movies and identifying the common themes and characteristics that contribute to their success
- Providing actionable insights to guide Microsoft's decision-making regarding the types of films to create.
- Highlighting the importance of using data-driven insights to inform decision-making in the movie industry
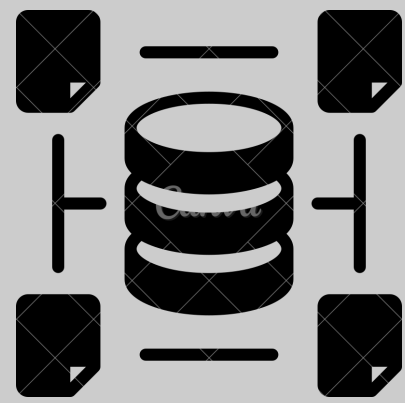
DATA

DATA FORMAT

The data had different formats including;
- SQLite database
- CS V (comma-separated values) files
- TS V (tab-separated values) files

SOURCES OF DATA

IMDB - an invaluable SQL database with information within tables on basic movie information e.g titles, genre, runtime, ratings, movie directors, movie writers among others

Rotten Tomatoes - gives collected reviews from professional film critics and calculates a rating based on the percentage of positive reviews. (we will only be focusing on the ratings)

TheMovieDB - gives us start year, release date, among other things

The Numbers - a database that provides information on the financial performance of movies. It provides data on domestic and worldwide box office gross, as well as other financial metrics such as production budget, marketing costs, and home video sales.

THE PROCESS

01

READING THE DATASETS

Looking at the different datasets and determined which one is most relevant based on the questions we are going to answer

02

DATA CLEANING

Removing any duplicate or incomplete records and filling in Nan values with the mean or median. Correcting any errors or inconsistencies within the columns by removing outliers

03

DATA ANALYSIS

Exploratory data analysis by calculating descriptive statistics such as mean, median, and creating visualizations such as line graphs, scatter plots, and bar charts to identify patterns and trends.
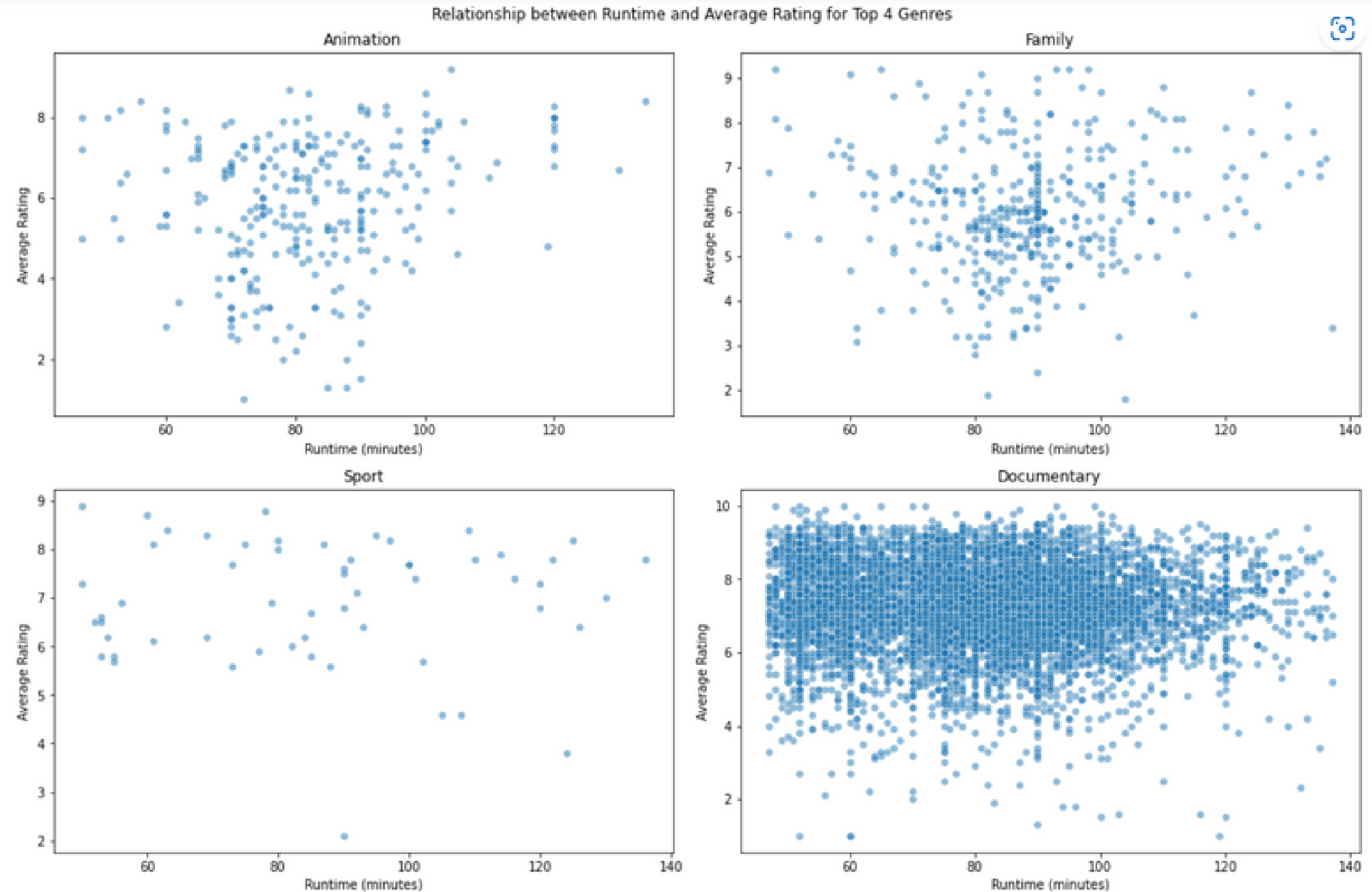
04

INTERPRETING RESULTS

Interpreting the results by identifying the types of films that are currently performing well, as well as the factors that contribute to their success
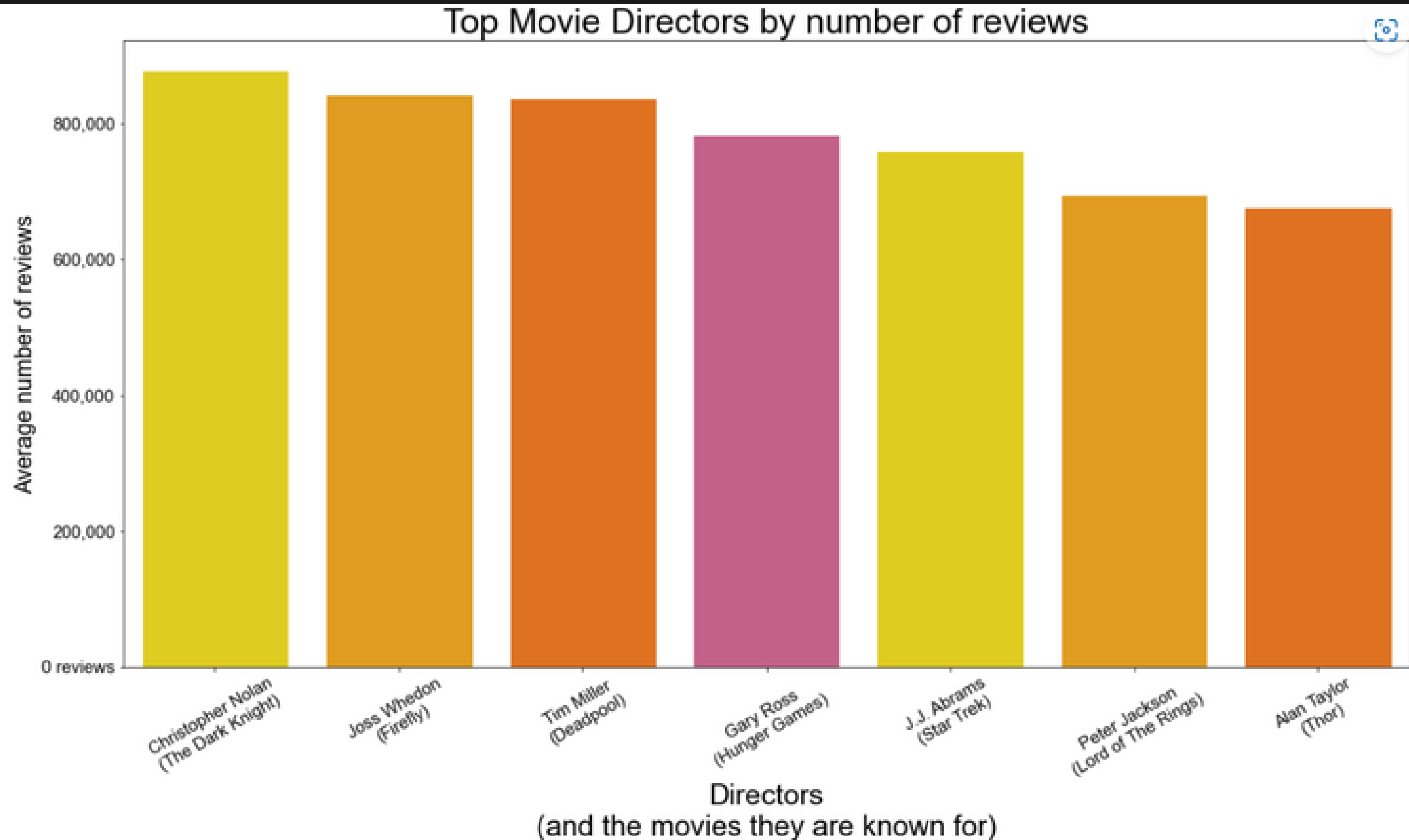
RESULTS

1. The optimal runtime for a film was 70 to 90 minutes for top 4 most popular genres. The scatter plots below show the relationship between runtime and average rating for top 4 genres


Relationship between Runtime and Average Rating for Top 4 Genres

RESULTS

2. The best directors to use when producing a film are shown in the bargraph

Top Movie Directors by number of reviews

Average number of reviews

800,000

600,000

400,000

200,000

0 reviews

Christopher Nolan (The Dark Knight) — Joss Whedon (Firefly) — Tim Miller (Deadpool) — Gary Ross (Hunger Games) — J.J. Abrams (Star Trek) — Peter Jackson (Lord of The Rings) — Alan Taylor (Thor)

Directors
(and the movies they are known for)

RESULTS

3. Finally we sort to find the genres with the highest profit margins both locally and internationally.

Top Ten Genres by Domestic Mean Profit Margin

Top Ten Genres by Worldwide Mean Profit Margin
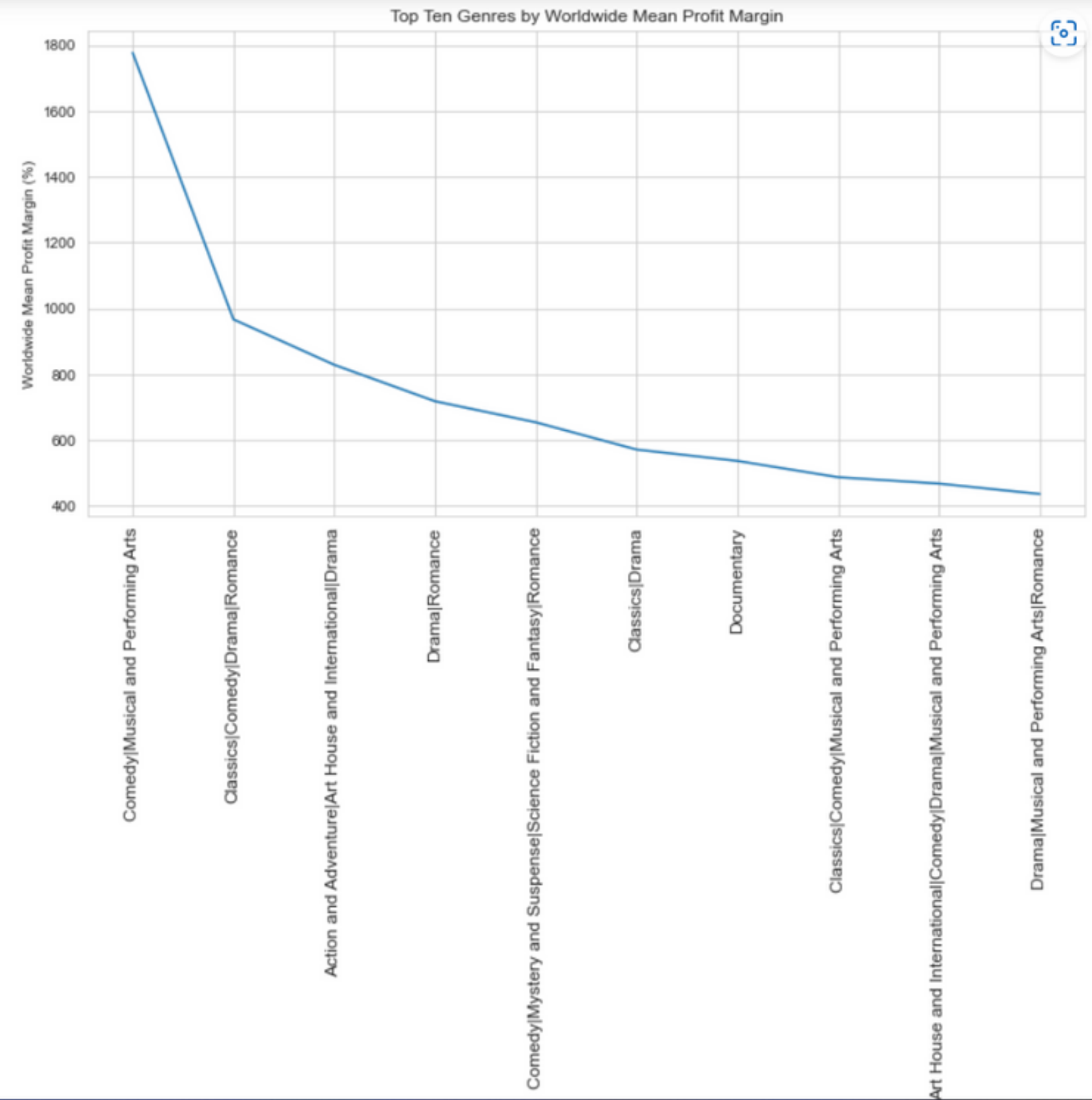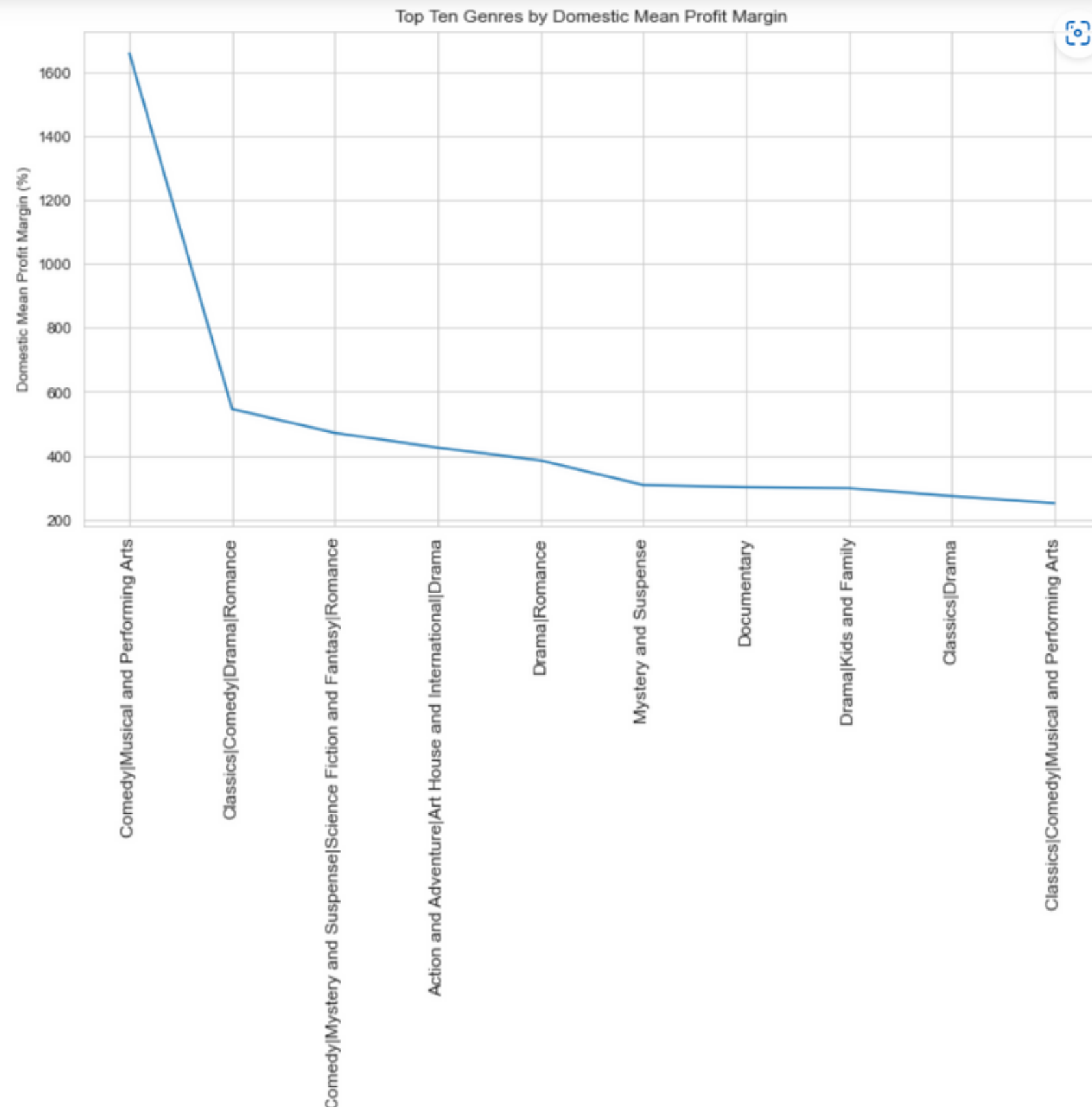
CONCLUSION

- Make an Animation, Family, Documentary or Sport film, rated G between 70 to 90 minutes
- Hire Directors like Christopher Nolan, Joss Whedon, Tim Miller, Gary Ross, J.J. Abrams, Peter Jackson, Alan Taylor that produce movies that get very high ratings
- International markets yield higher profits especially for the Comedy, Musical, Classics, Drama and Romance films however marketing costs are higher. Local markets yield lesser profits however marketing costs are lower

NEXT STEPS

Exploring the data further can definitely help in refining the recommendations for Microsoft by

Using consistent data and increasing the size of the dataset, you can improve the accuracy of the analysis and better understand the trends and patterns in the data.

1

Additionally, examining the background and experience of the directors, writers, editors, and actors can provide insights into the potential success of their future projects.

2

Understanding how marketing budgets affect ROI and gross revenue can also be highly valuable.

3

4

Finally, comparing the performance of films across different venues, such as theaters and streaming platforms, can provide insights into market trends and consumer preferences.

The End

THANKYOU!

"The magic of movies is that they can transport us to new worlds and new experiences. A new movie studio is a chance to create those worlds and experiences for audiences." – Christopher Nolan