



MOVIE MARKET ANALYSIS

BY GROUP 3



GROUP MEMBERS

- Ibrahim Salim
- Abond Mwangi
- Abigail Muthenya
- Nelson Kamau

OUTLINE

- Business Problem
- Data
- Objectives
- Results
- Conclusions
- Limitations

BUSINESS PROBLEM

- In an effort to diversify and remain competitive, the company is planning on launching a new movie production studio to join the growing trend of original content creation.
- The company however currently lacks expertise in the film industry and is uncertain about which types of movies to produce.
- To ensure a successful market entry, the leadership needs data-driven insights to guide investment decisions.

-
- The primary goal of this analysis is to answer key questions such as:
 - Which genres are the most profitable?
 - What release months or seasons yield the best box office results?
 - Does a director play a key role in the success/profitability the films?
 - How does the production studio influence a movie's financial and overall success?
 - Are there trends over time in audience preferences or industry performance?

DATA

- The data that was used to provide insight for the project included:
 - Box Office Mojo.
 - IMDB.
 - Rotten Tomatoes.
 - TheMovieDB.
 - The Numbers.
- The data had various info on movies including: genres, directors, gross income, release dates, and popularity etc.

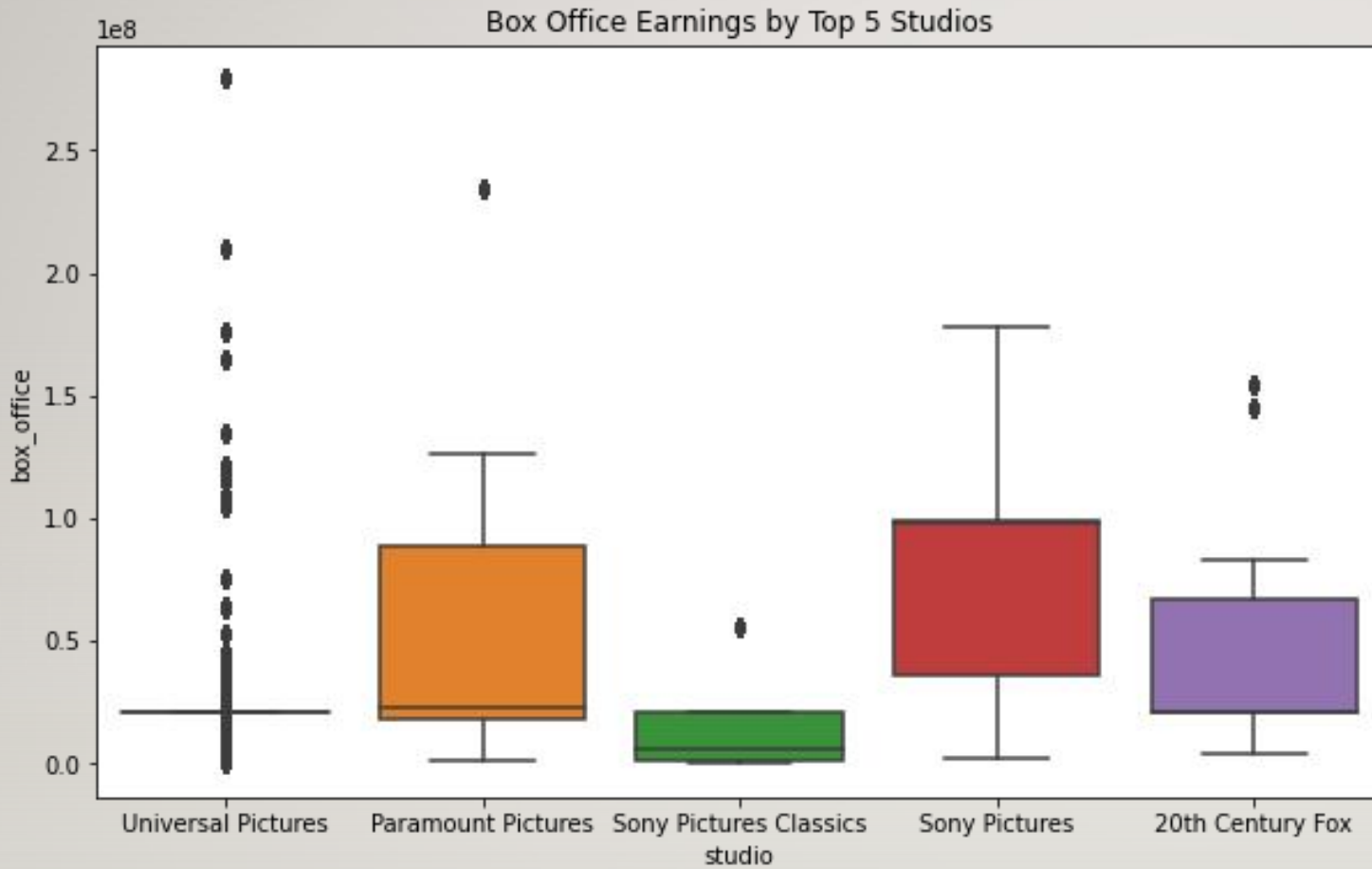
OBJECTIVES

- This project main objectives include:
 - Perform exploratory data analysis (EDA) to identify trends and patterns in the film industry.
 - Visualize the film data .
 - Highlight key factors contributing to the financial and critical success of films.
 - Provide data-driven recommendations to ensure a safe and profitable entry into the industry.

RESULTS

STUDIO VS BOX OFFICE.

- We began first with looking into the studio vs box office grossing incomes.
- This comparison would show us if there is a significant difference in performance of movies according to the studio which produced it showing that there are actual factors that lead to high performance of movies.
- We began first with top 5 studios according to the box office performance



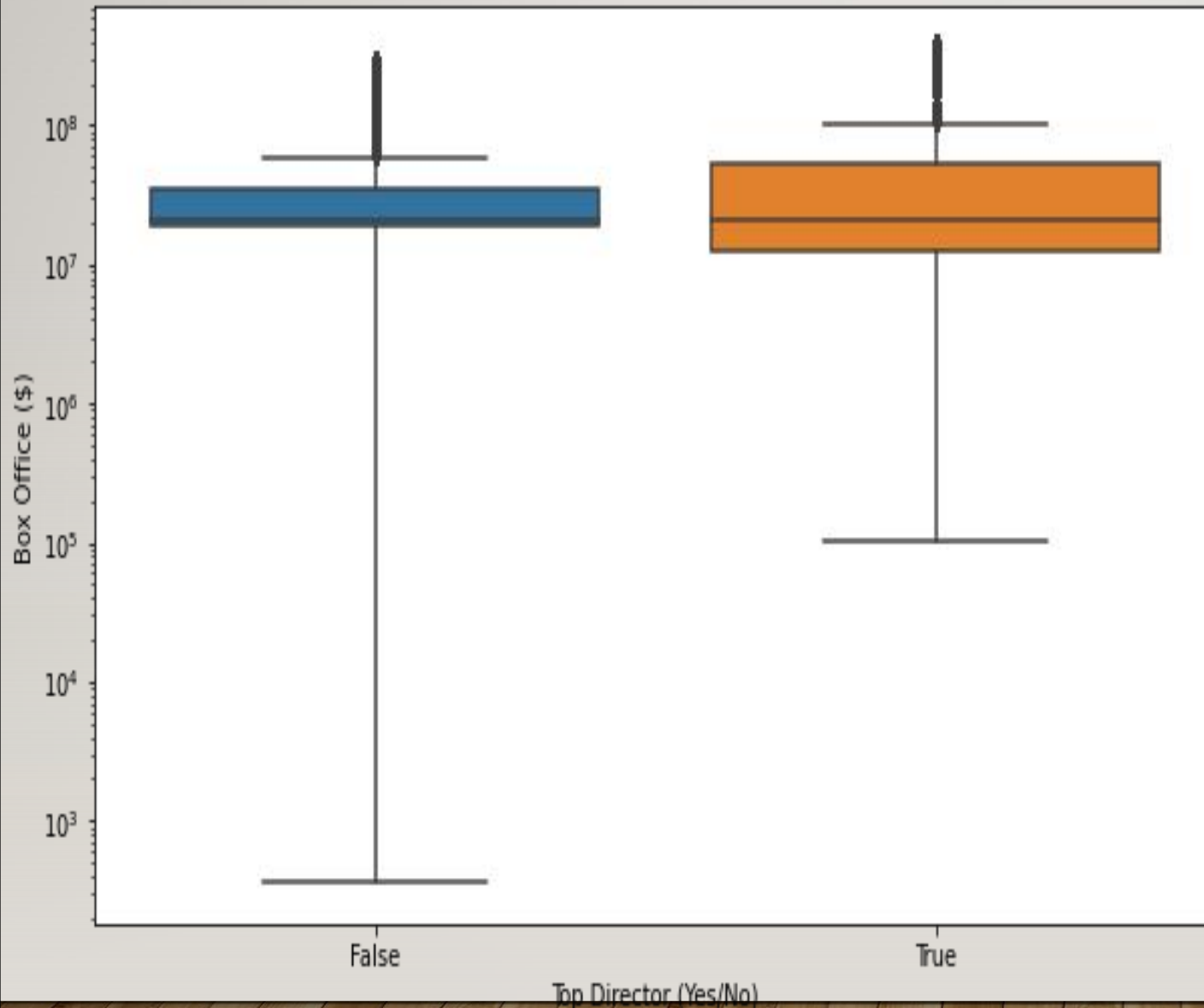
- The top 5 list gave us the following studios as seen on the boxplots shown on the graph on the right.
- We can see that there is a visible difference in the distribution of the box office earnings of each of the top 5 studios according to no of movies produced.

-
- This then led to a test to check if there was a significance in the performance of the studios:
 - The test came back positive which suggests that the studio does play a role in determining box office success, and there is a meaningful difference in how the studios perform.

TOP DIRECTORS VS BOX OFFICE

- For this test we were looking into the various directors for movies.
- First we looked into the top movies according to ratings which was the performance check then we looked into the directors of these movies.
- Comparing this info with box office earnings as the metric and whether a movie had a top director or not to see if there was a correlation.

Box Office Revenue: Top Directors vs Others



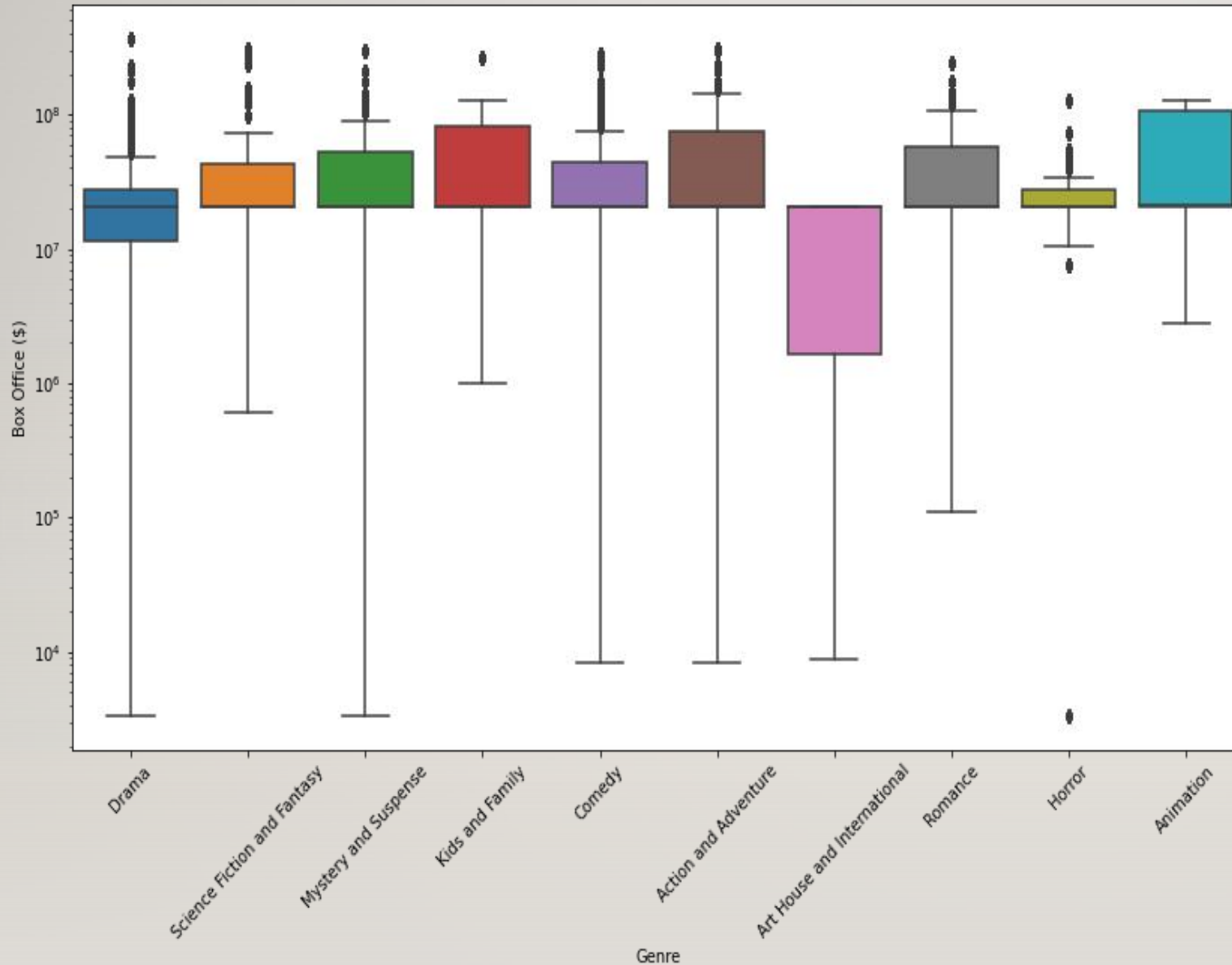
- The graph here was created to check on the box office performance of the top directors in accordance of ratings.
- So the false is movies without top directors and true was movies with top directors.
- Both groups had similar **median earnings**, but top directors showed a **higher and more consistent performance**.
- The top directors group had **fewer low-performing films**, indicated by a smaller lower range.
- Top directors also had **more high-grossing outliers**, suggesting a stronger potential to produce **blockbuster movies**.

-
- We also conducted a **samples t-test**, to check for significance .
 - The null hypothesis for this test was that the mean box office revenue for movies by top directors is the same as that of movies by non-top directors.
 - The test results were positive therefore we can confidently conclude that the box office earnings for movies directed by top directors are significantly higher than those directed by others.

GENRE VS BOX OFFICE

- We analyzed the top 10 most common genres to see if genre influences box office success.
- A box plot showed visible differences in revenue distribution across genres, with some genres displaying higher outliers and wider spreads.
- A one-way ANOVA test was conducted to statistically test the differences.

Box Office Revenue by Genre



- In addition we performed a **one-way ANOVA test** on the **box office revenues across the top 10 genres**:
-

- We did this to check there a statistically significant difference in the mean box office revenue between the top 10 genres.
- This test compares the **means** of all 10 genre groups to determine if **at least one genre** has a significantly different average box office performance.

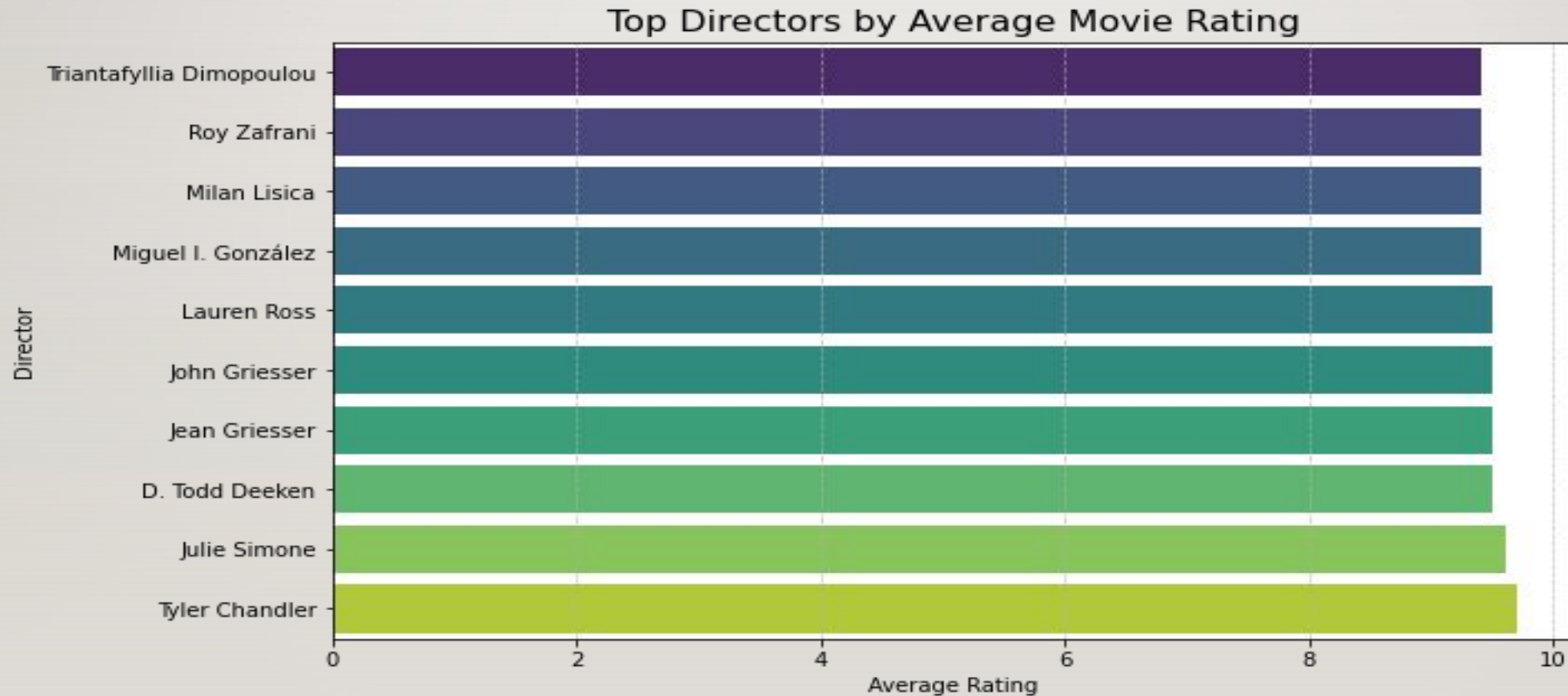
GENRE VS RELEASE DATE

- After getting the top 10 genres according to box office performance we looked into the release date and wanted to analyze our data with the date in mind.
- First we found the mode which is the most common month that our top 10 genres are released.
- This will give some info on the best month to release the specific genre that we have on our top genre list.

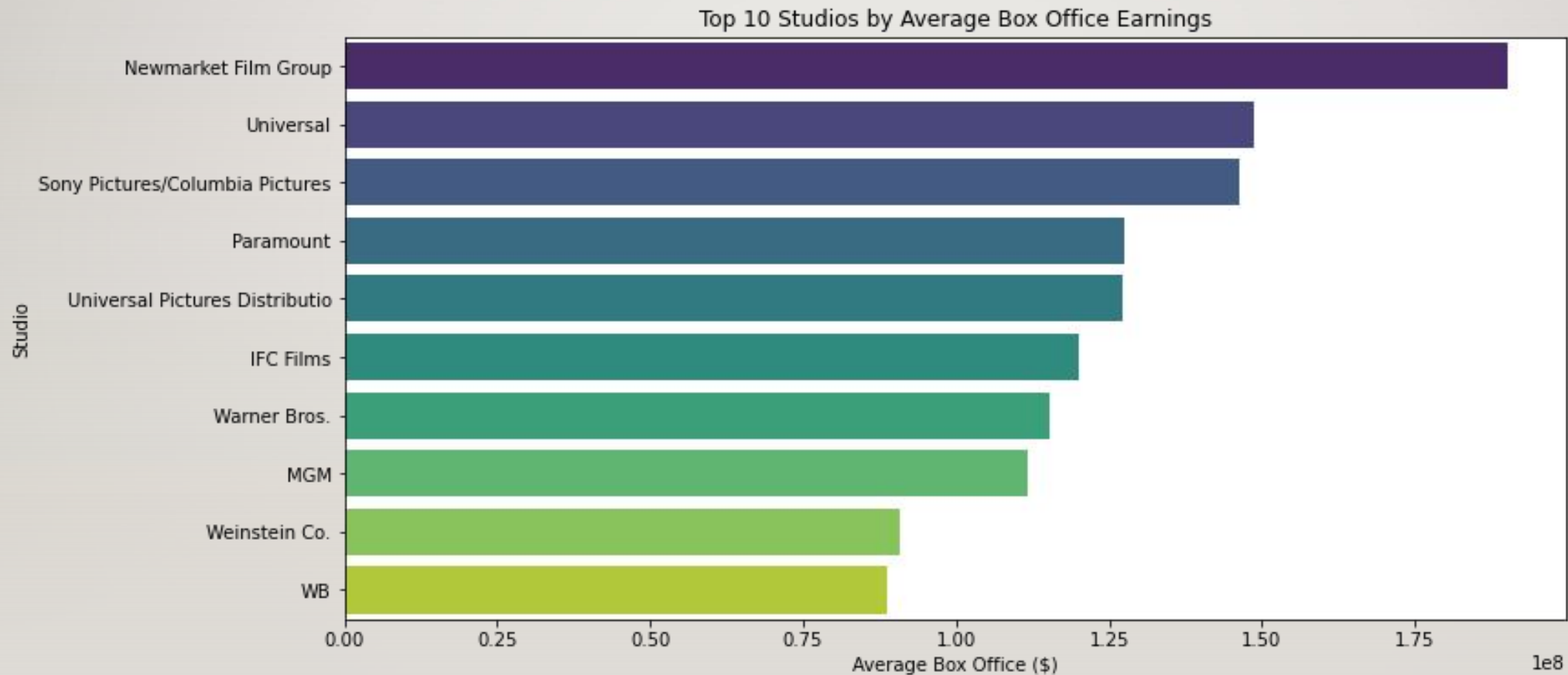
CONCLUSIONS.

- **Invest in Top Directors to Boost Revenue Potential is a conclusion drawn from the directors vs gross income**
- **Model After High-Performing Studios that wer identified in the test above.**
- **Prioritize Animation and Action/Adventure genres when choosing films to produce.**

- For director purposes we compiled a list of top directors according to box office performance that would be favourable to boost performance



- For studios that performed well we compiled a list of the top 10 studios according to international box office gross income to aid in future collaboration.



LIMITATIONS

- **Limited Scope of Variables:** The dataset does not include several critical variables that affect box office success, such as marketing spend, release timing (e.g., holiday vs. off-season), actor popularity, or franchise value.
- **Missing Audience Demographics:** There's no information on who watched the movies—age, gender, region, etc. This limits your ability to analyze trends by target audience or identify underserved markets.

END.

