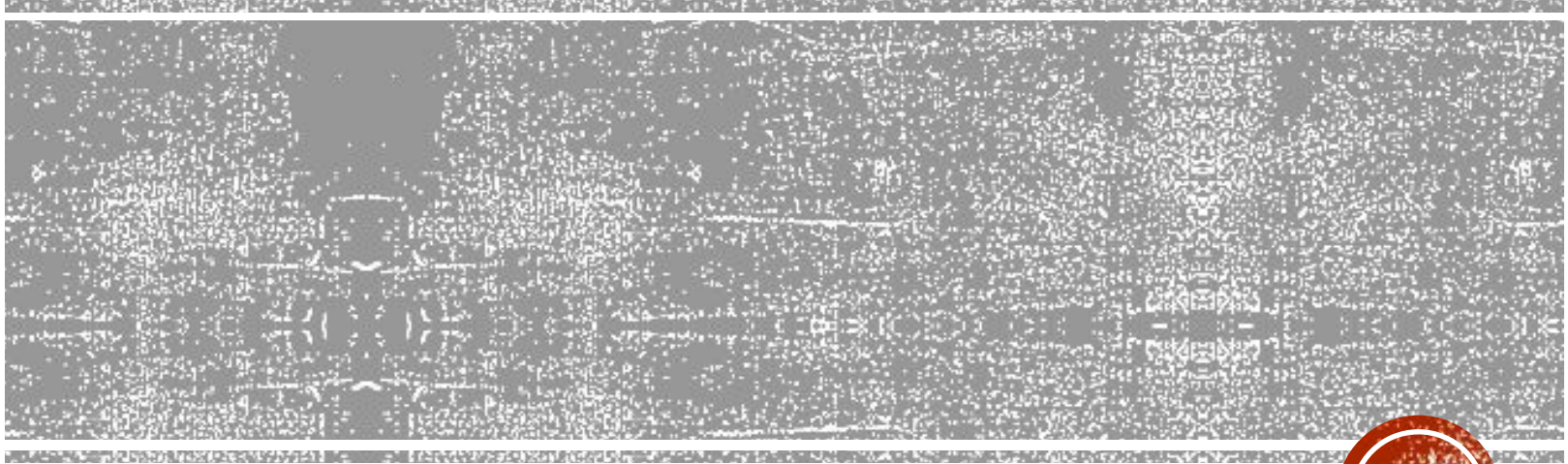# LEVERAGING DATA ANALYTICS TO POWER A SUCCESSFUL MOVIE STUDIO LAUNCH

Group 6;
Maureen Kitonyi, Sharon Gichira, Charity Kanyua, Jose' Barasa, Victor Kipkemboi, Beauttah Akello.

BUSINESS PROBLEM

Our company now sees all the big companies creating original video content and they want to get in on the fun. They have decided to create a new movie studio, but they don't know anything about creating movies. We are charged with exploring what types of films are currently doing the best at the box office. We must then translate those findings into actionable insights that the head of our company's new movie studio can use to help decide what type of films to create.

OBJECTIVES

1. To find the genres that generates high income.
2. To find which movies performs best.
3. To determine whether movies highly rated generated higher revenue.
4. To find the effect of production budget on profits.
5. To find if the release month affects the rating.

DATASET AND METHODOLOGY

Dataset Used:

tn.movie_budgets.csv(Contained movie released dates,production budgets,domestic and worldwide gross revenues

im.db(Contained,Primary title,Original Title, Numvotes, Start Year averagerating and genres

Methodology;

Conducted Exploratory Data Analysis (EDA), statistical analysis, and visualizations so that to gain proper insights.

DATA OVERVIEW

1.Budget Dataset

Contains 5782 movies with columns including ;

Production Budget: Ranging up to $425 million. Domestic Gross: Highest being $936 million.

Worldwide Gross: Maximum reached $2.77 billion

2.im.db Dataset

65720 entries including genres,averagerating,popularityvotes just for assesment

METHODS FOR DATA EXPLORATION

1. **DATA CLEANING** - removed duplicates, missing values handled to maintain data integrity

2. **DATA TRANSFORMATION** - converted revenue columns to integers

3. **DATA MERGING** - Merged the csv and the imdb using pandasql
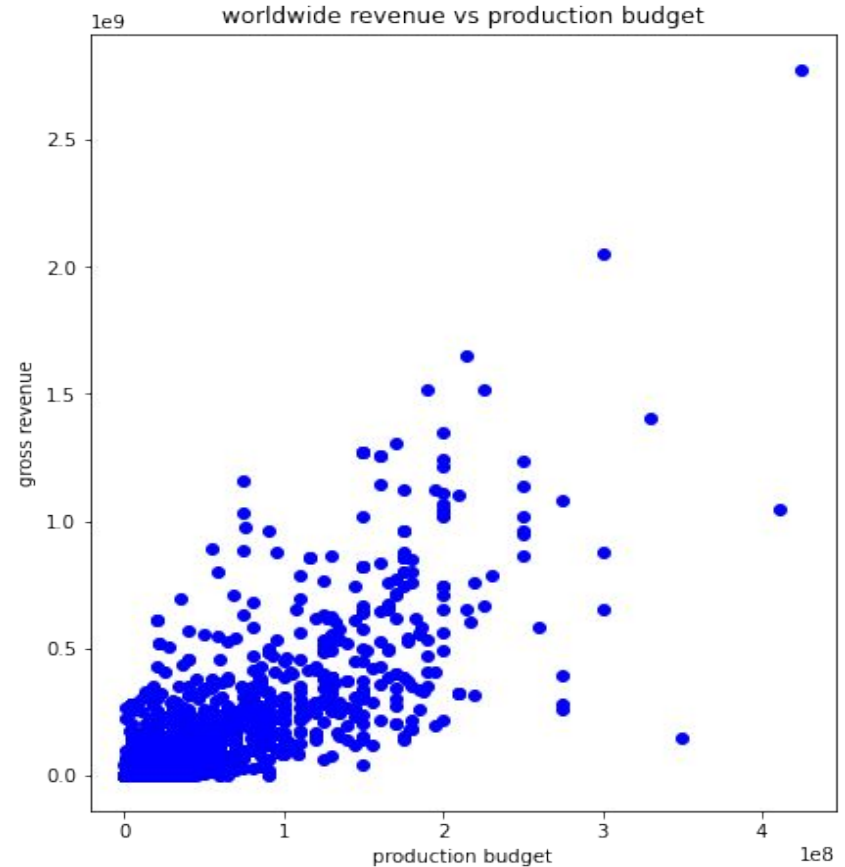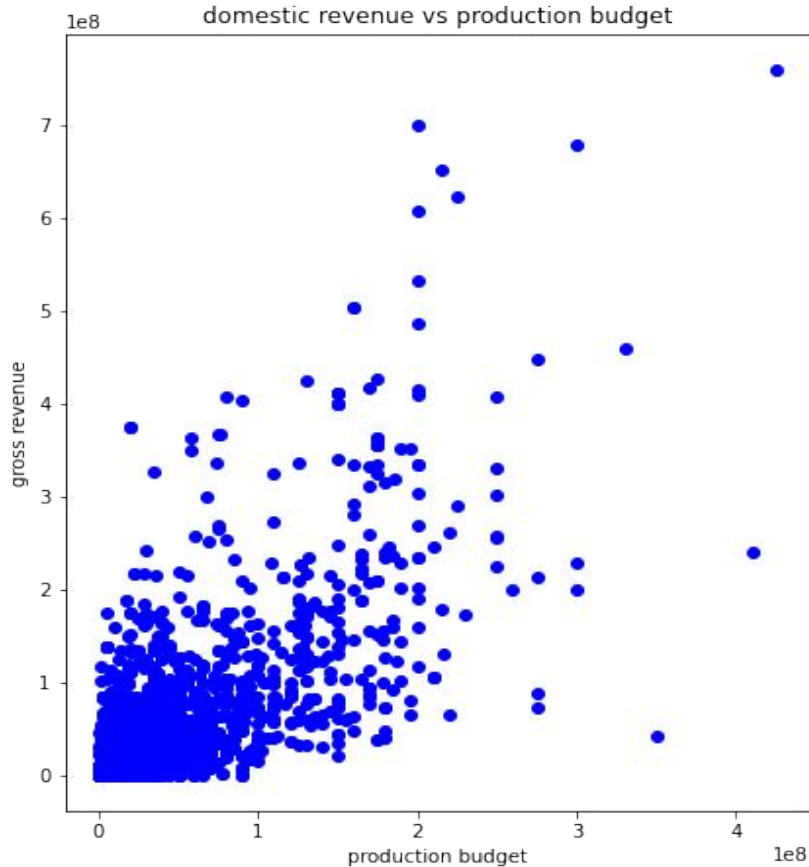
VISUALIZATIONS

1. Scatterplot showing the relationship between production budget and Box Office Revenue

2. Bar graph showing the top 10 genres with the highest revenue

3. Line graph showing the effect of release month on movie rating

4. A bar plot showing the top 10 movies with the highest profit

RELATIONSHIP BETWEEN PRODUCTION BUDGET AND BOX OFFICE REVENUE

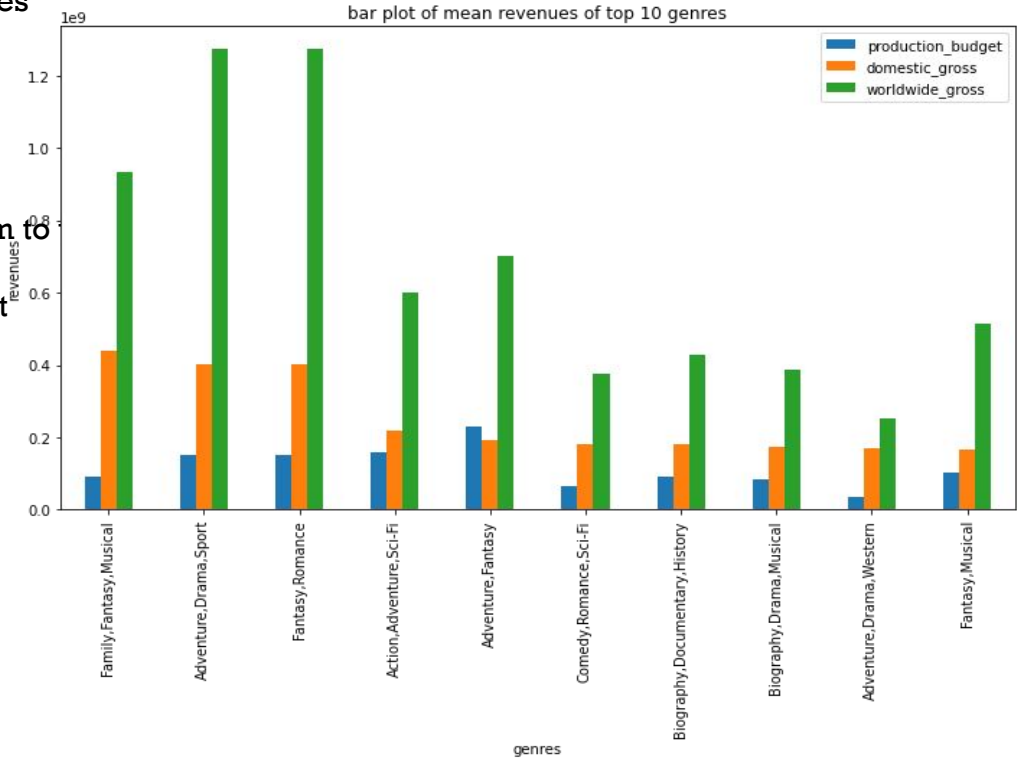# RELATIONSHIP BETWEEN PRODUCTION BUDGET AND BOX OFFICE REVENUE

- Positive linear relationship between production budget and box office revenue (domestic & worldwide).

- Higher budgets generally lead to higher earnings, due to better production quality, cast, and marketing.

- Not perfectly proportional – some high-budget films underperform, while some low-budget films excel.

- Budget alone doesn't guarantee success; other strategic factors matter.

- Storyline quality, release timing, target audience, and marketing strongly influence performance.

- Success requires a balance between creative value and budget allocation
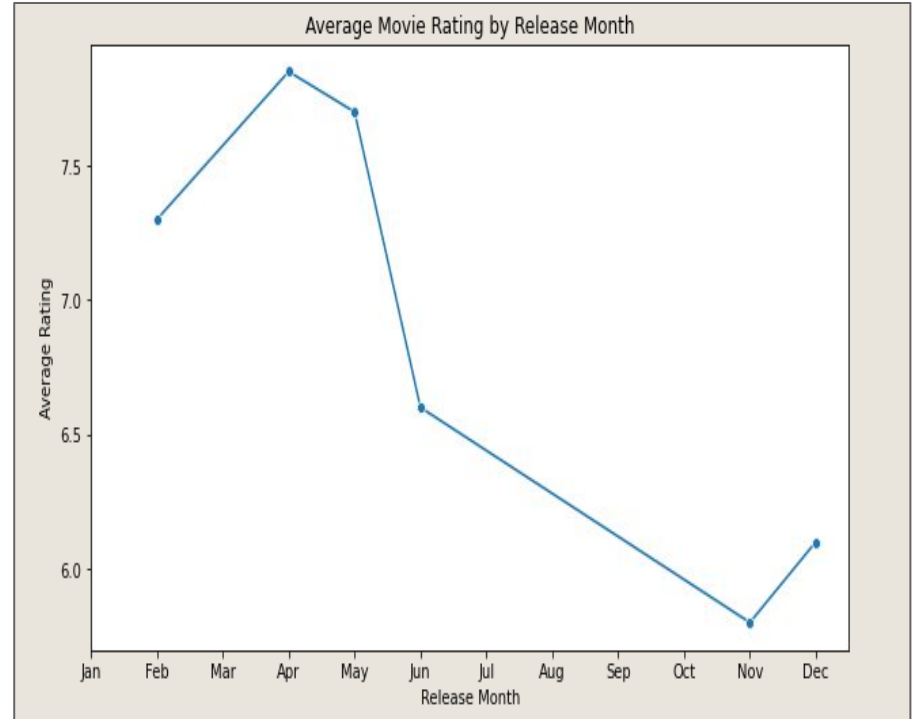
TOP 10 GENRES GENERATING HIGHER REVENUE

- A mix of Adventure, Drama and sports genres and also Fantasy and romance yield the most Profit.

- To the contrary Adventure and Fantasy seem to high profit worldwide and less likely to yield profit domestically.

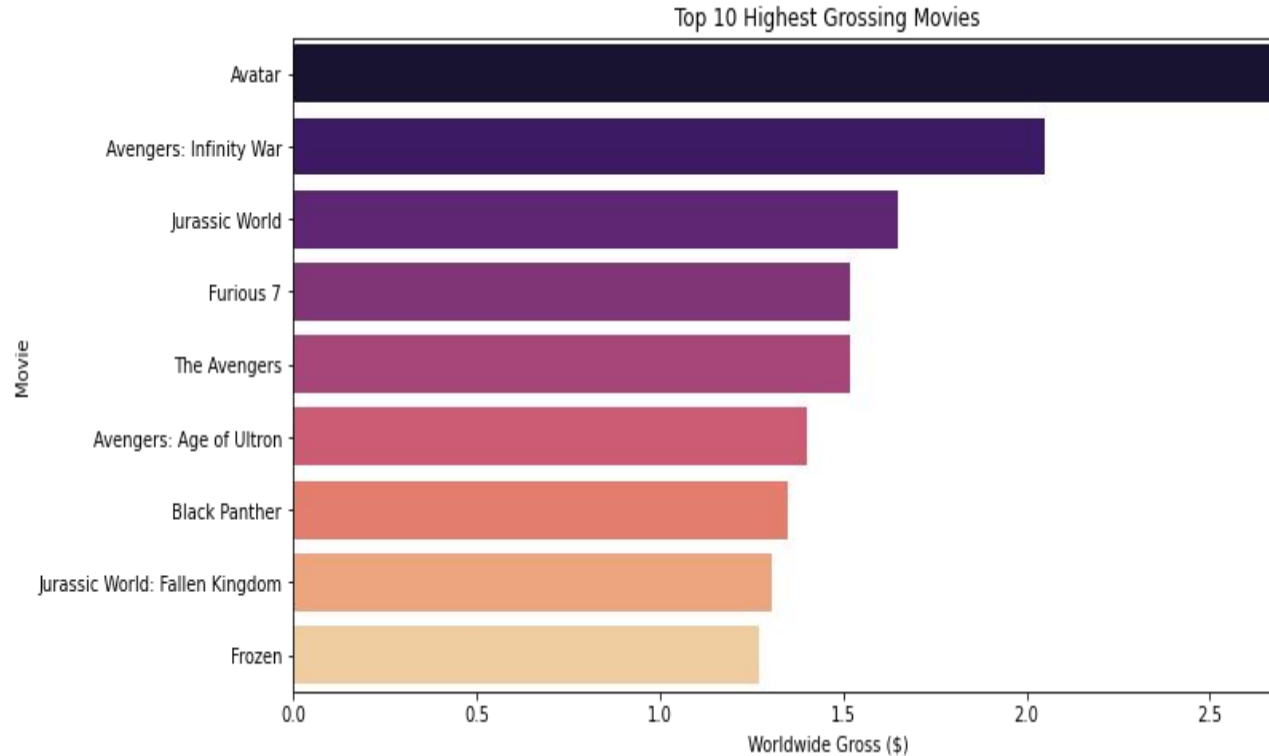bar plot of mean revenues of top 10 genres

EFFECT OF RELEASE MONTH ON MOVIE RATING

- From the line graph, it is clear that movies released during certain months tend to achieve higher ratings than others.

- Movies released in April and May had the highest average ratings on IMDb.

- This could be because studios release well-promoted, audience-friendly films toward the middle of the year.

Average Movie Rating by Release Month

TOP 10 MOVIES WITH THE HIGHEST PROFITS

- Avatar dominates as the highest-grossing movie globally, earning well over $2.7 billion.

- Other top performers include Avengers: Infinity War, Jurassic World, and Furious 7, each surpassing the $1.5 billion mark.

Top 10 Highest Grossing Movies

RECOMMENDATIONS

1. Invest More in Quality Production — Ratings Strongly Correlate with Revenue

2. Budget Strategically — Bigger Isn't Always Better

3. Optimize Release Timing — Seasonality Matters. May, June, July and November.

4. Focus on Genre Mix That Drives High Income

5. Prioritize Global Market Appeal

THANK YOU

Any further questions?