Movie analysis project

Microsoft Debut Studio Analysis

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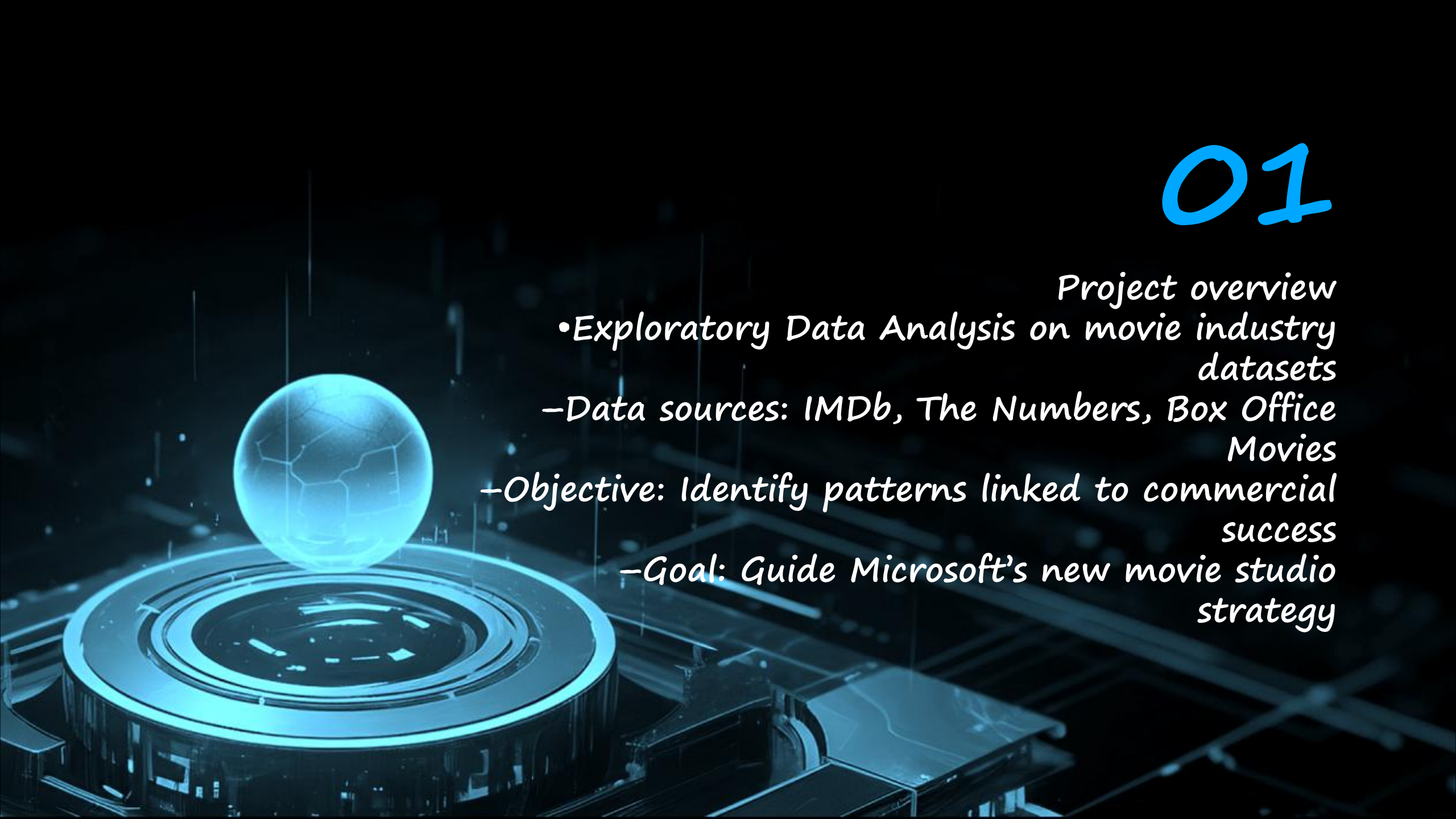


01

Project overview

- Exploratory Data Analysis on movie industry datasets
  - Data sources: IMDb, The Numbers, Box Office Movies
  - Objective: Identify patterns linked to commercial success
  - Goal: Guide Microsoft's new movie studio strategy

Introduction

Business problem

.Microsoft plans to launch a new movie studio

–Limited experience in film production

–Need to identify high-performing film characteristics

–Translate insights into actionable production strategy

Project Objectives

Project Objectives

•Identify highest and lowest grossing genres

–Analyze relationship between budget and revenue

–Examine impact of ratings on financial performance

–Determine common traits of top-performing films.

Key business questions

Key Business Questions

•Which genres generate the highest revenue?

–Does higher budget lead to higher returns?

–Do highly rated movies earn more?

–What traits define top-grossing films?

–Which genres are most frequently produced?

Findings

01

genre perfomance insights

-Certain genres consistently generate higher box office revenue

–High-performing genres attract larger audiences

–Genre selection strongly impacts profitability

02

Production budget vs box office revenue

•Positive relationship between production budget and revenue

–Higher budgets often correlate with higher gross earnings

–However, budget alone does not guarantee

03

Ratings and finacial perfomance

Ratings and Financial Performance

•Higher-rated films tend to perform better financially

–Audience reception influences revenue potential

–Quality and audience appeal matter

Movie Analysis

01

Emerging Trends

Examination of latest movie releases and audience reception.

02

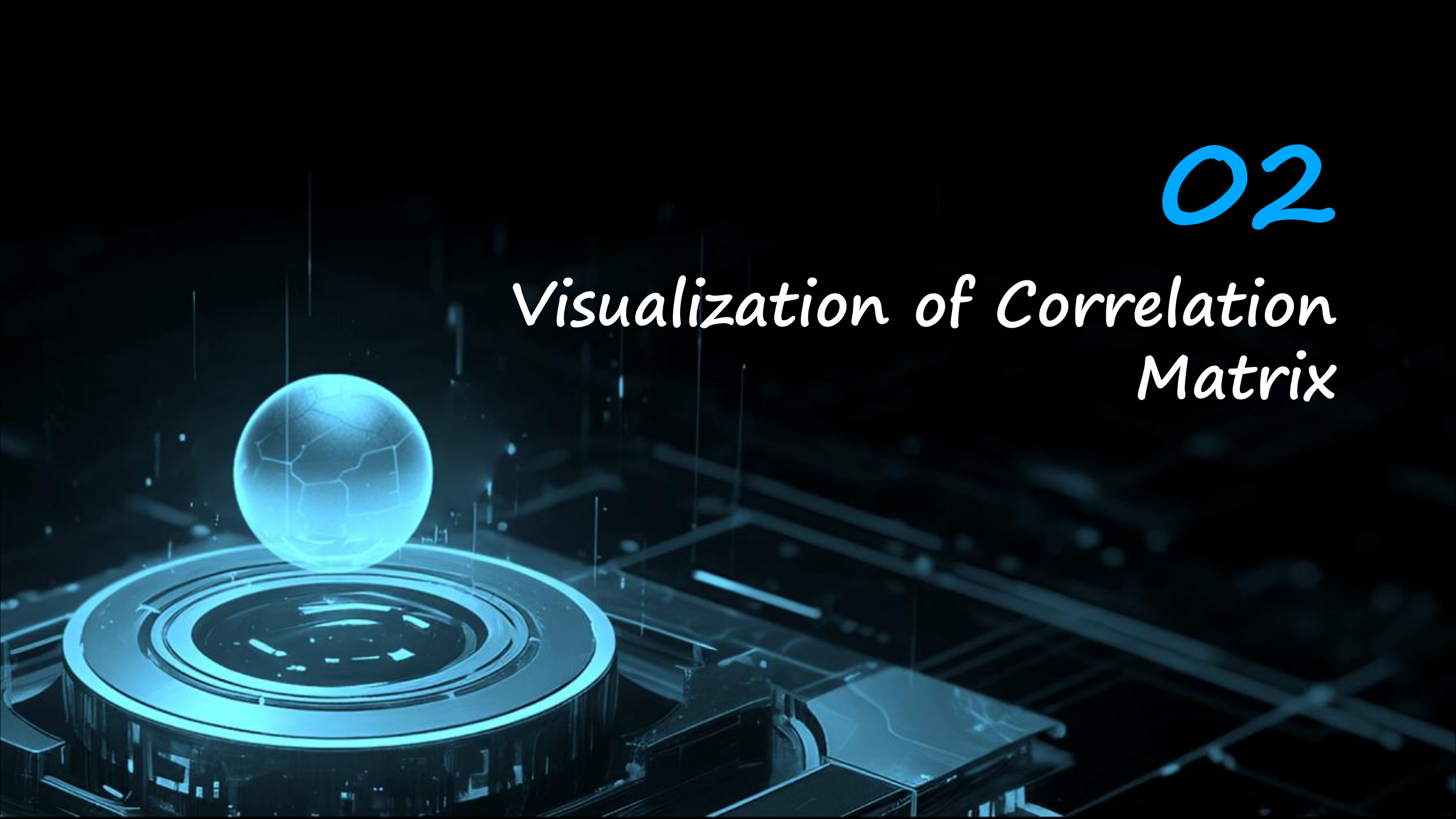
Financial Performance

Analysis of box office revenue and profitability.

03

Critical Reception

Evaluation of movie reviews and industry recognition.



02

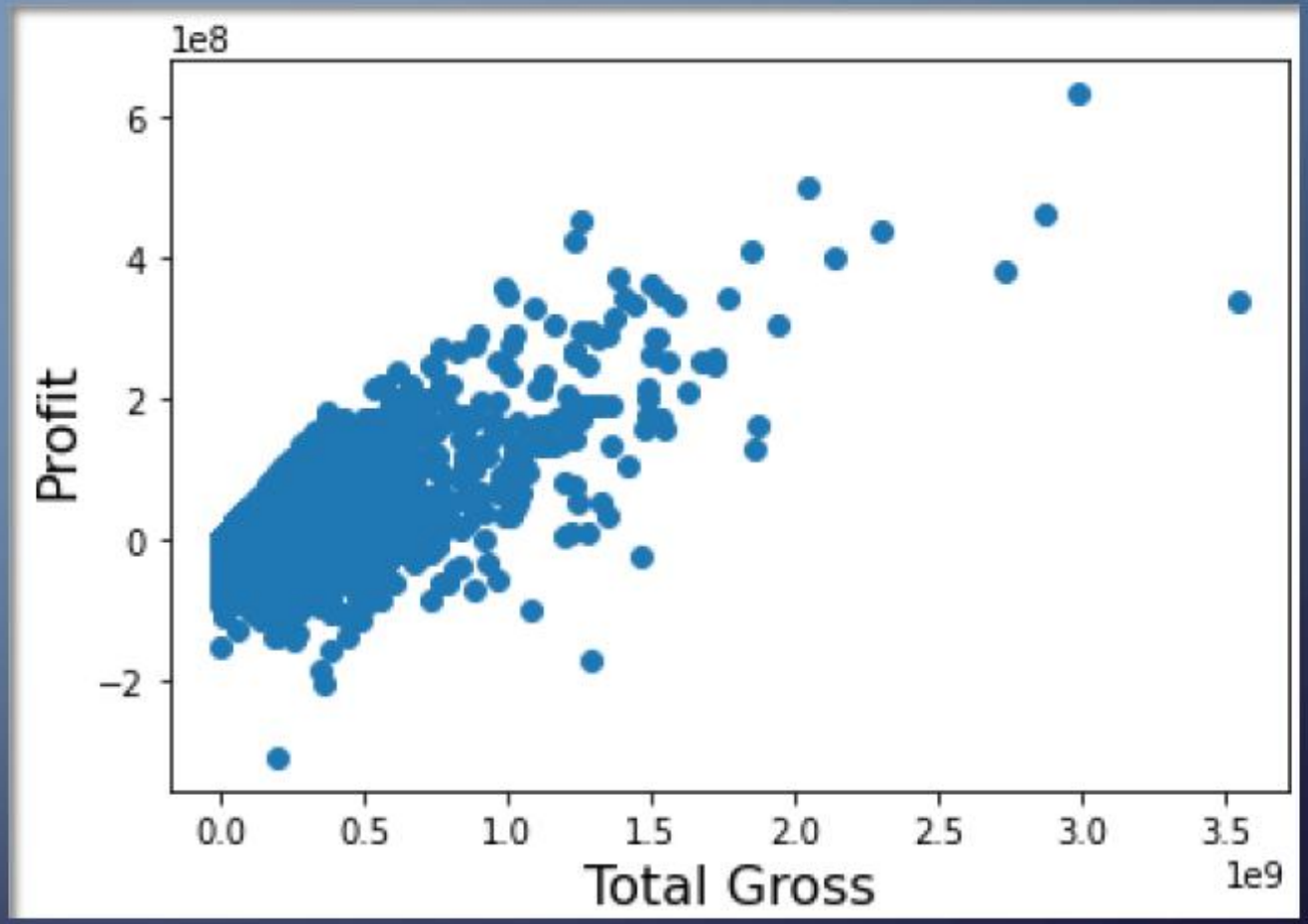
Visualization of Correlation Matrix

Visualization of the Correlation Matrix Graph

There is a strong correlation(0.7)where increased production spending helps us predict high gross revenue. There is a perfect correlation(0.1)the entire profit is almost driven by worldwide_gross. At the ROI paradox there is zero correlation(0.0)since there is no relationship between how much you spend and your percentage return on investment.

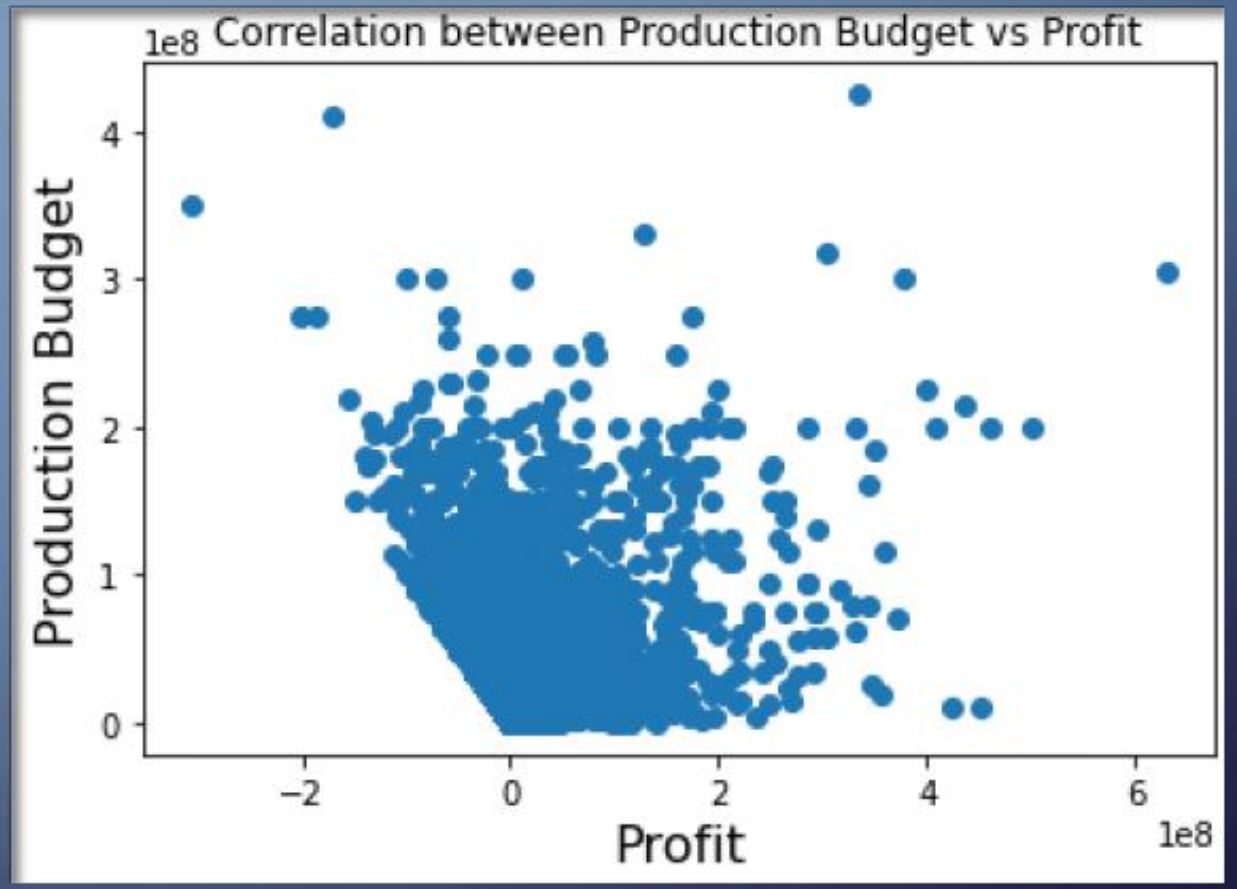
Correlation on the tn_budget_df2 between total_gross (x-axis)and profit(y-axis)graph (positive correlation)

The points are tightly clustered along diagonal line, indicating that as a movie's Total Gross increases ,its profit almost always increases at a predictable rate. Hence increase in total gross of budget leads to increase in the profit.



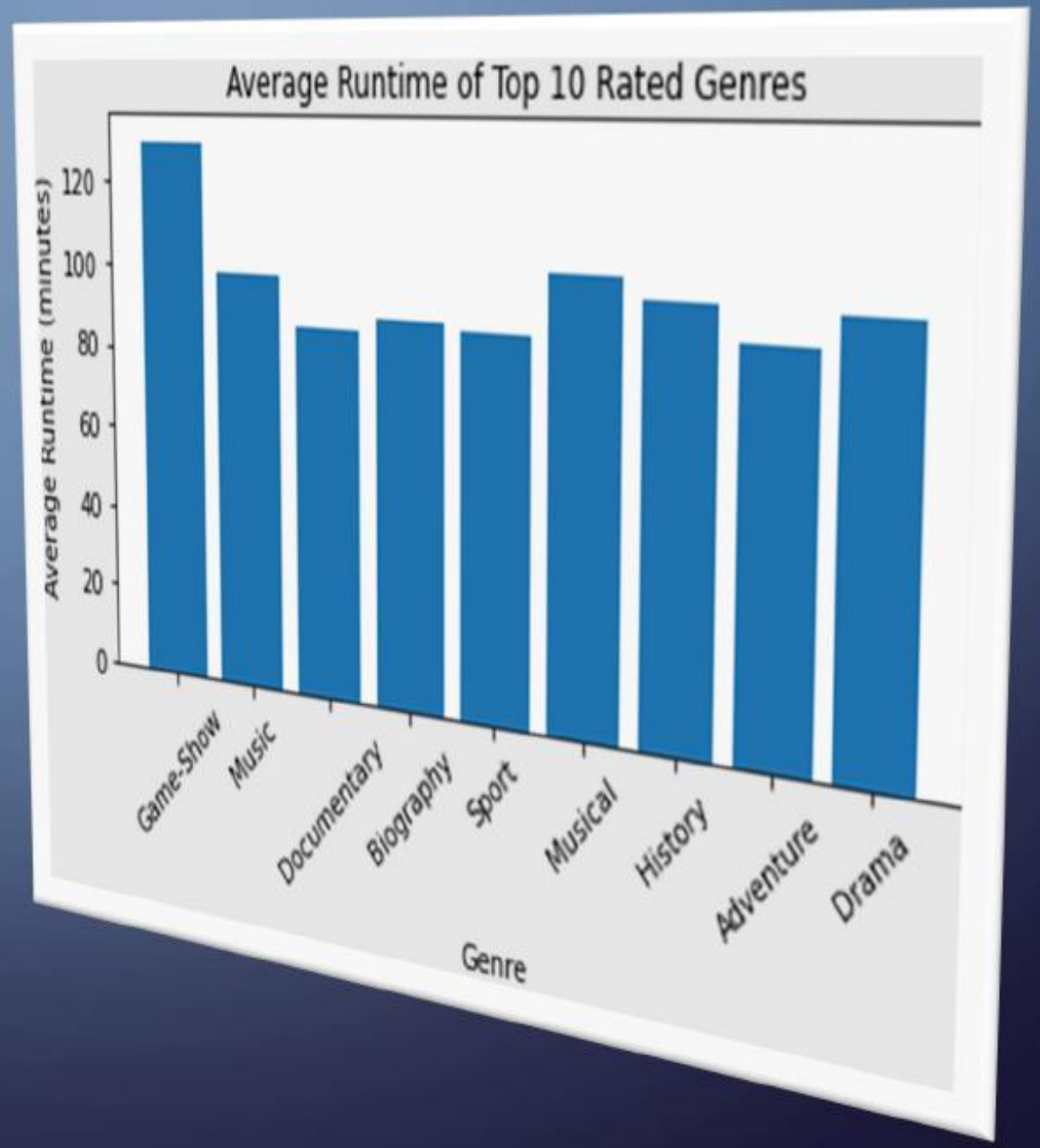
Correlation between Profit (x-axis) and Production budget(y-axis) df2graph (Weak Negative Correlation)

The production budget has a weak negative correlation with profit. Splurging on production does not necessarily translate to making profits. Hence , we need to balance the cost of production with the quality of film produced i.e a better storyline over a very expensive set for instance.



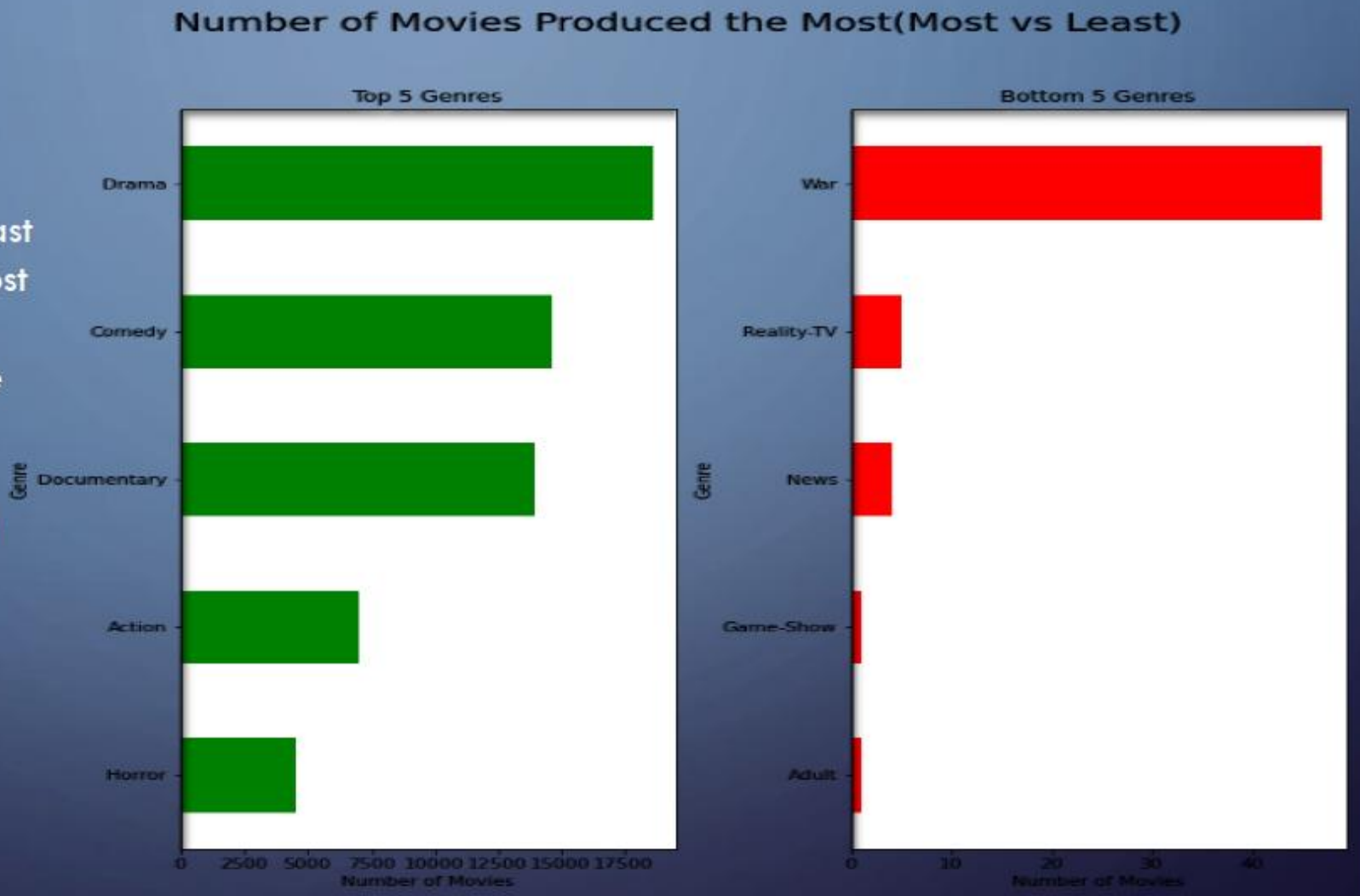
This graph compares how long movies typically last across high-rated categories of genres;

- Games-show movies have the longest average runtime significantly exceeding 120 minutes.
- The standard : most top-rated genres like music, musical history and drama are consistently around the 90-100minute mark.
- The shortest :documentary, sport and adventure tend to have the shortest average runtime among the top categories staying slightly below 90 minutes.

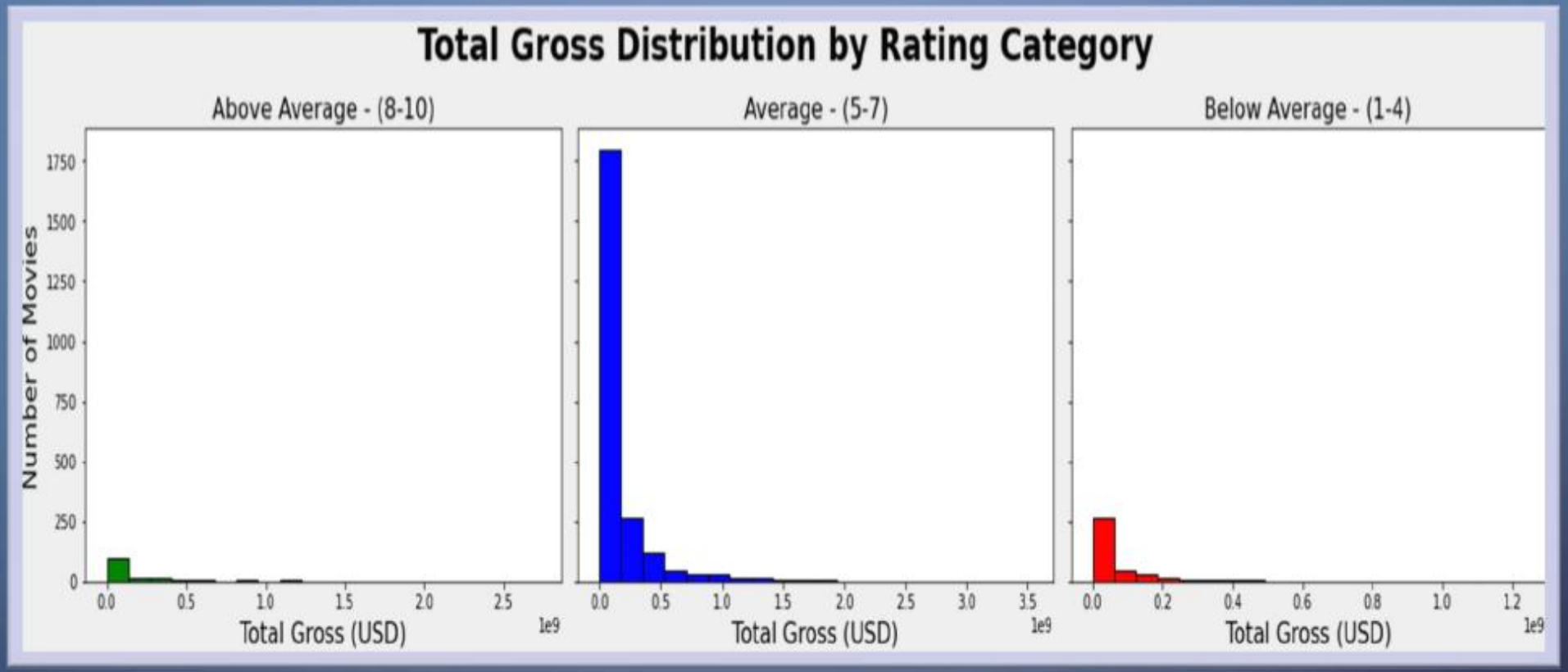


Number of movies produced the most and least graph

This graph compares the most produced genres against the least produced ones. Drama is the most produced genre, followed by comedy and documentary, while war leads the least produced genre, together with reality TV, news, game shows, and adult at the bottom 5.

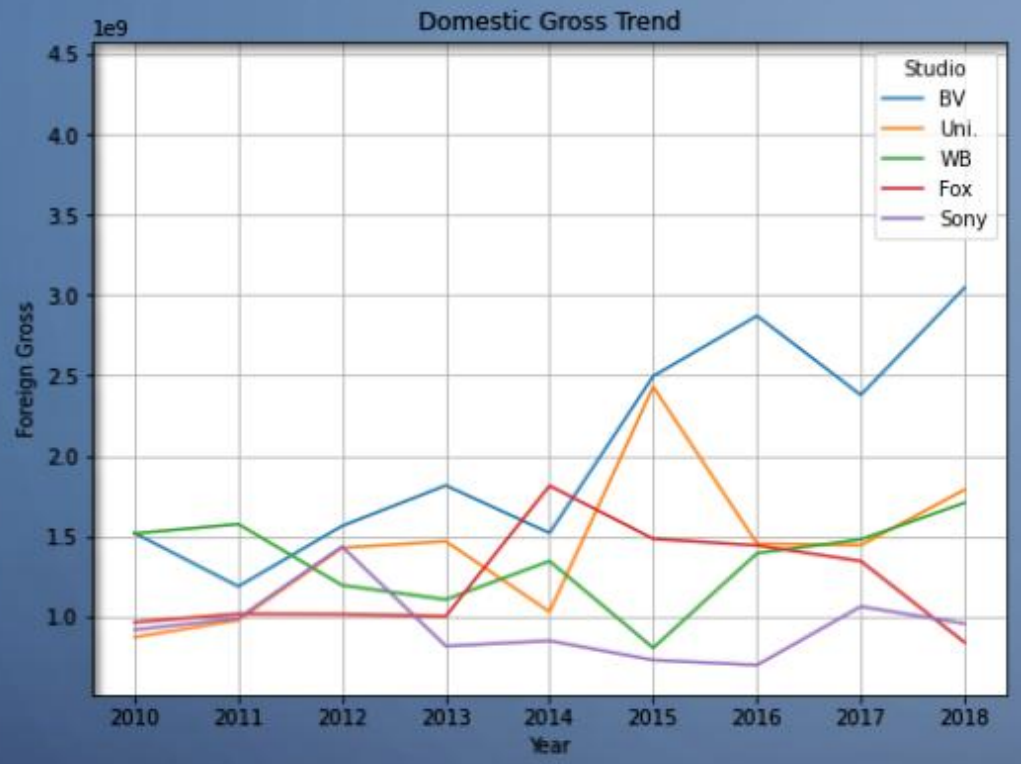


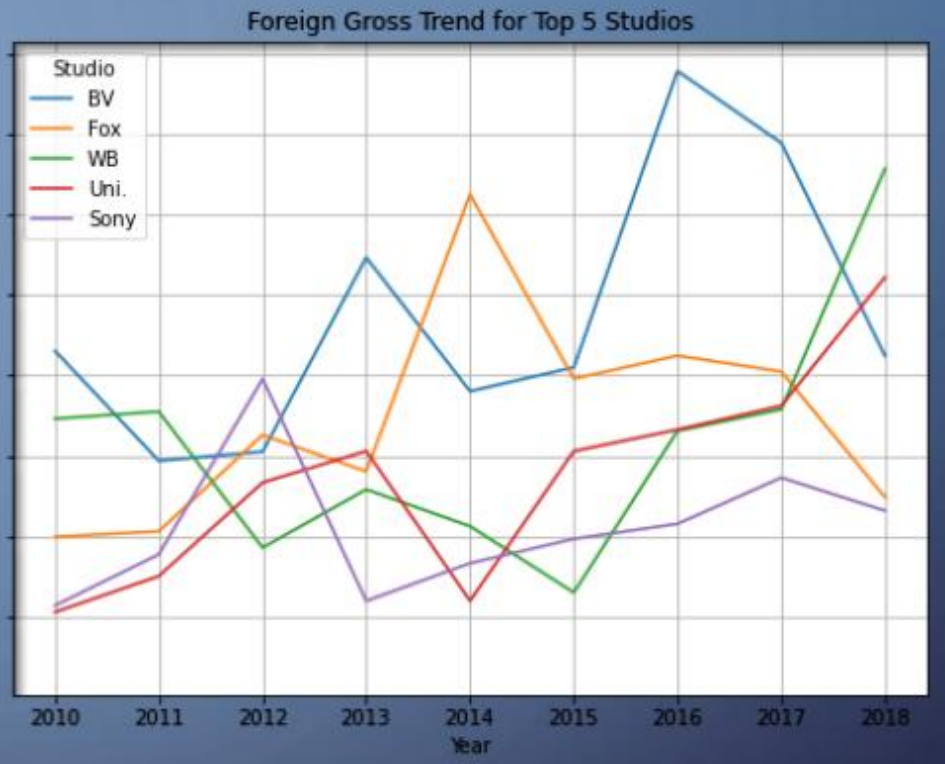
Number of movies against Total Gross Distribution graph



This graph explains the financial reality of the movie ratings. Where the average (5-7) is where most movies produced fall under and are rated the most, while above average (8-10) are rare—there are fewer movies produced, leading to less earnings—and below average (1-4) earn the least since the movies are heavily skewed toward the zero-dollar mark, hence showing they rarely become financial successes.

Market trend graphs





The graphs above show market trends on how different types of studios perform in different years on different grosses. Like for BV studio shows, a strong, overall upward trend, particularly in foreign gross, where it peaked significantly around 2016. Other studios like Sony and Fox show much more up-and-down performances, indicating their revenue is more dependent on specific hit releases rather than a consistent year.

03

Conclusion

- Data insights can reduce production risk
  - Genre, budget, and ratings influence profitability
  - Strategic focus increases likelihood of commercial success
  - Microsoft can enter the industry competitively with data-backed decisions

Thank You

By group 4