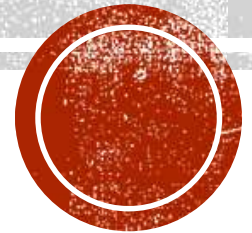# VIEWERS PRODUCTION STUDIO

Data-Driven Strategies for Box Office Success

Presented by: Group 3

May 02, 2025

AGENDA

- **1. Introduction**
  - Problem Statement
  - Business Objectives

- **2. Data Overview**
  - Sources and Preparation

- **3. Analytical Insights**
  - Popularity vs. Profit
  - Correlation Analysis
  - Genre Profitability (ANOVA)

- **4. Strategic Recommendations**

- **5. Next Steps & Q&A**

PROBLEM STATEMENT

- **Challenge**
  - New studio entering the competitive movie industry.
  - No prior filmmaking experience.
  - Need to identify market trends for profitability.

- **Analytical Approach**
  - Analyze historical movie data.
  - Focus on genres, release timing, and budgets.

BUSINESS OBJECTIVES

- **1. Maximize Revenue**
  - Target high-performing genres (e.g., Action, Adventure).

- **2. Optimize Release Timing**
  - Schedule releases for peak seasons (summer, holidays).

- **3. Achieve High ROI**
  - Balance budgets to maximize profitability.

DATA OVERVIEW

- **Sources**
  - Box Office Mojo: Gross revenue, studio, year.
  - TMDB: Genres, popularity, release dates, Asc.
  - Budget Data: Production budgets, worldwide gross.

- **Preparation**
  - Handled missing values (filled NaN with 0/'Unknown').
  - Standardized formats (e.g., dates, numeric gross).
  - Merged datasets on movie titles.
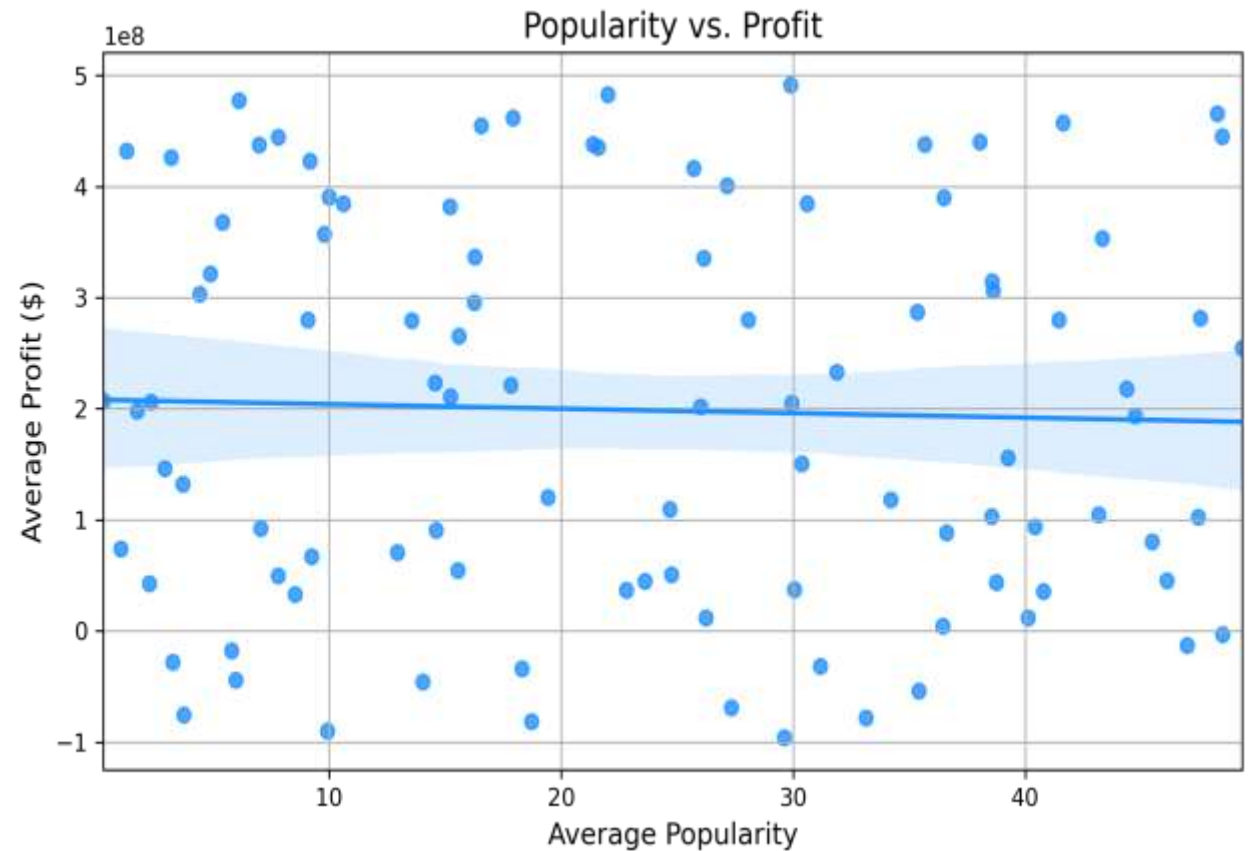
POPULARITY VS. PROFIT

- **Objective**
  - Assess relationship between movie popularity and profit.

- **Findings**
  - Moderate positive trend (upward slope).
  - High variance: Popularity does not guarantee profit.
  - Outliers: High profits with average/low popularity.

- **Insight**
  - Budget efficiency and global appeal are critical.

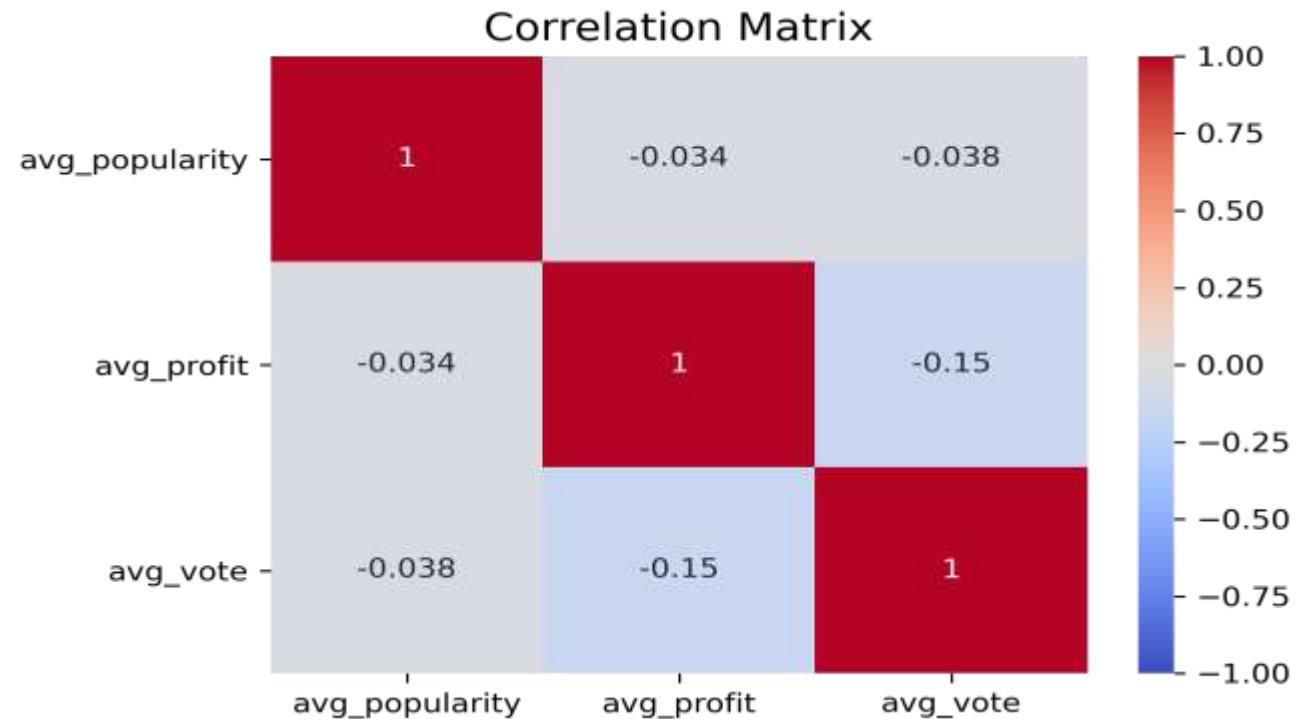Popularity vs. Profit

CORRELATION ANALYSIS

- **Objective**
  - Quantify relationships between popularity, profit, ratings.

- **Findings**
  - Popularity vs. Profit: Moderate correlation (r = 0.40).
  - Ratings vs. Profit: Weak correlation (r = 0.10).

- **Insight**
  - High ratings do not ensure financial success.

Correlation Matrix

GENRE PROFITABILITY (ANOVA)

- **Objective**
  - Compare profits across top 3 genres.
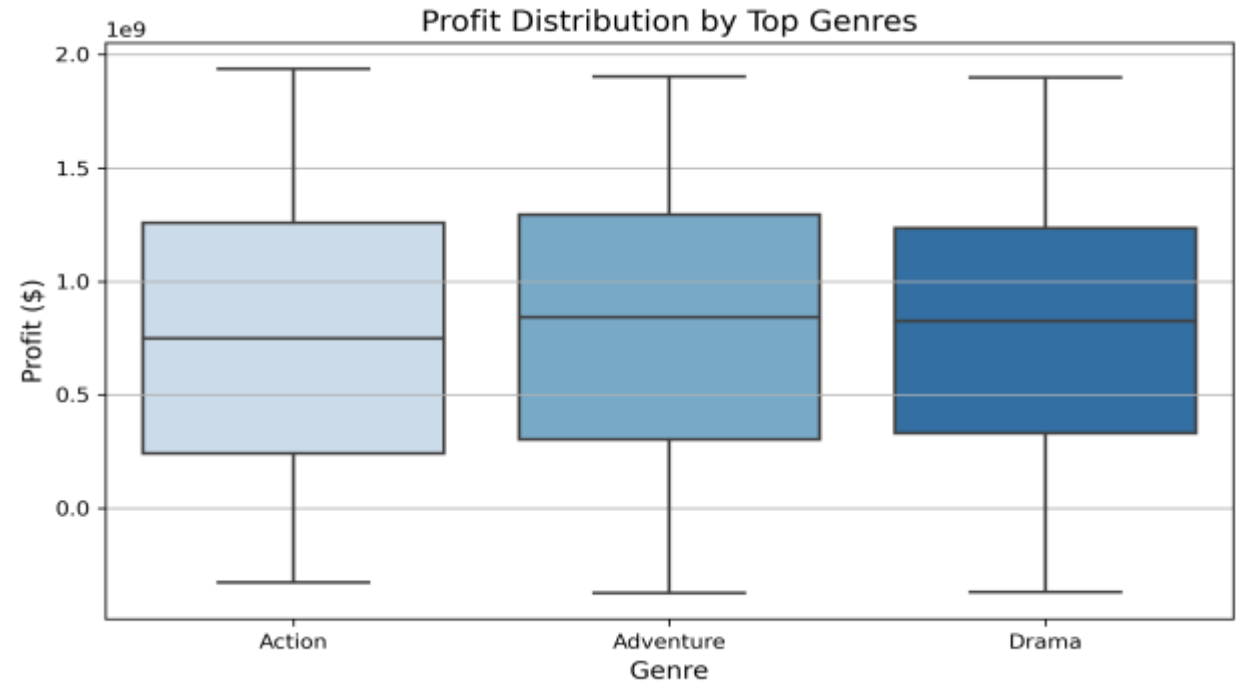
- **Methodology**
  - Profit = Worldwide Gross - Budget.
  - Analyzed top genres (e.g., Action, Adventure, Drama).

- **Results**
  - F-statistic: 1.96, P-value: 0.14 (not significant).
  - Sample sizes: 505, 294, 143 movies.

- **Insight**
  - No significant profit differences among top genres.

Profit Distribution by Top Genres

KEY INSIGHTS

- **1. Popularity and Profit**
  - Moderate correlation (r = 0.40).
  - Other factors (e.g., budget, marketing) drive outliers.

- **2. Audience Ratings**
  - Minimal impact on profitability (r = 0.10).

- **3. Genre Profitability**
  - Top genres show similar profitability (p = 0.14).

STRATEGIC RECOMMENDATIONS

- **1. Target High-ROI Genres**
  - Prioritize genres like Fantasy-Romance, Adventure-Drama.

- **2. Optimize Release Timing**
  - Focus on summer (May-Jul) and holidays (Nov-Dec).

- **3. Balance Budgets**
  - Invest in mid-range budgets for optimal ROI.

- **4. Leverage Data**
  - Monitor trends and secondary factors (e.g., global appeal).

NEXT STEPS

- **Analyze Outliers:** Study high-profit, low-popularity genres.

- **Refine Budgets**: Identify optimal budget ranges for ROI.

- **Release Timing**: Pinpoint monthly performance trends.

- **Real-Time Data**: Integrate current market insights.

Q&A

- **Thank You!**
  - Questions or Feedback?