FILM DATA ANALYSIS

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SUMMARY

This is an analysis of film industry data for the purposes of identifying types of movies that may be currently profitable to produce.

The top two genres by both 1) median ROI and 2) profitability are **Adventure and Animation**. These two genres also rank highly in total top-line revenue and in profitability consistency.

Many directors consistently make profitable films. Utilizing the twenty-two listed directors who consistently make profitable films may add to a film's probability of profitability.

Do not focus on making films **solely** for "high ratings," as film ratings are almost completely uncorrelated with return on investment.
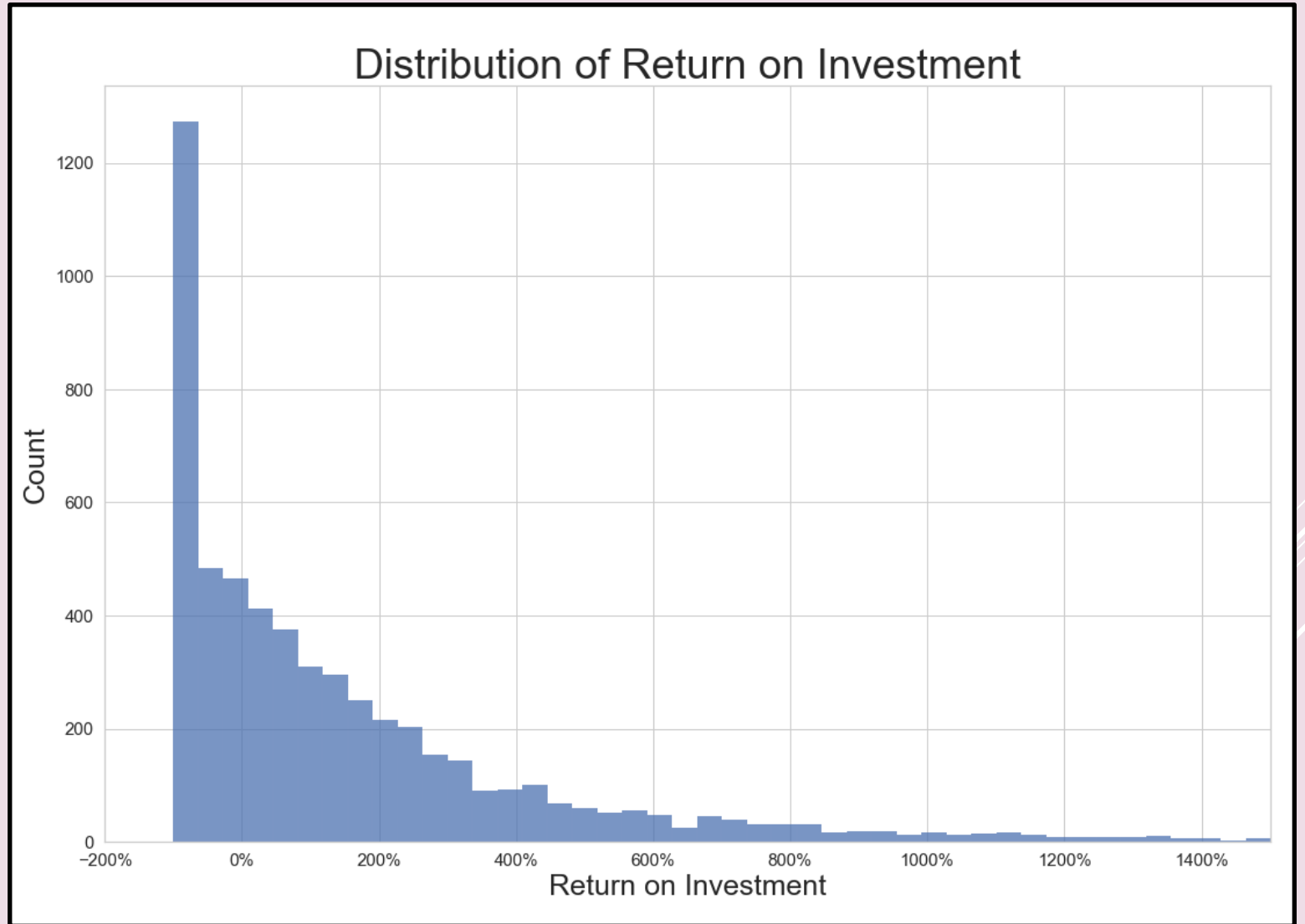
OUTLINE

- **Business Problem**
- **Data**
- **Methods**
- **Results**
- **Conclusion**

BUSINESS PROBLEM

o Microsoft is (hypothetically) creating a movie studio division.

o The task is to use various data to analyze what types of films are currently performing well in order to guide Microsoft on what types of movies to produce.

DATA

- Film revenues
- Genres
- Production budgets
- Directors and writers
- Film ratings and synopsis
- Film reviews
- Data from these websites:
  - IMDB,
  - Rotten Tomatoes,
  - Box Office Mojo,
  - TheMovieDB
  - The Numbers

Distribution of Return on Investment

METHODS

Data Preparation

- Access data tables from different data types

- Join data tables together to form new data frames for analysis

Data Cleaning

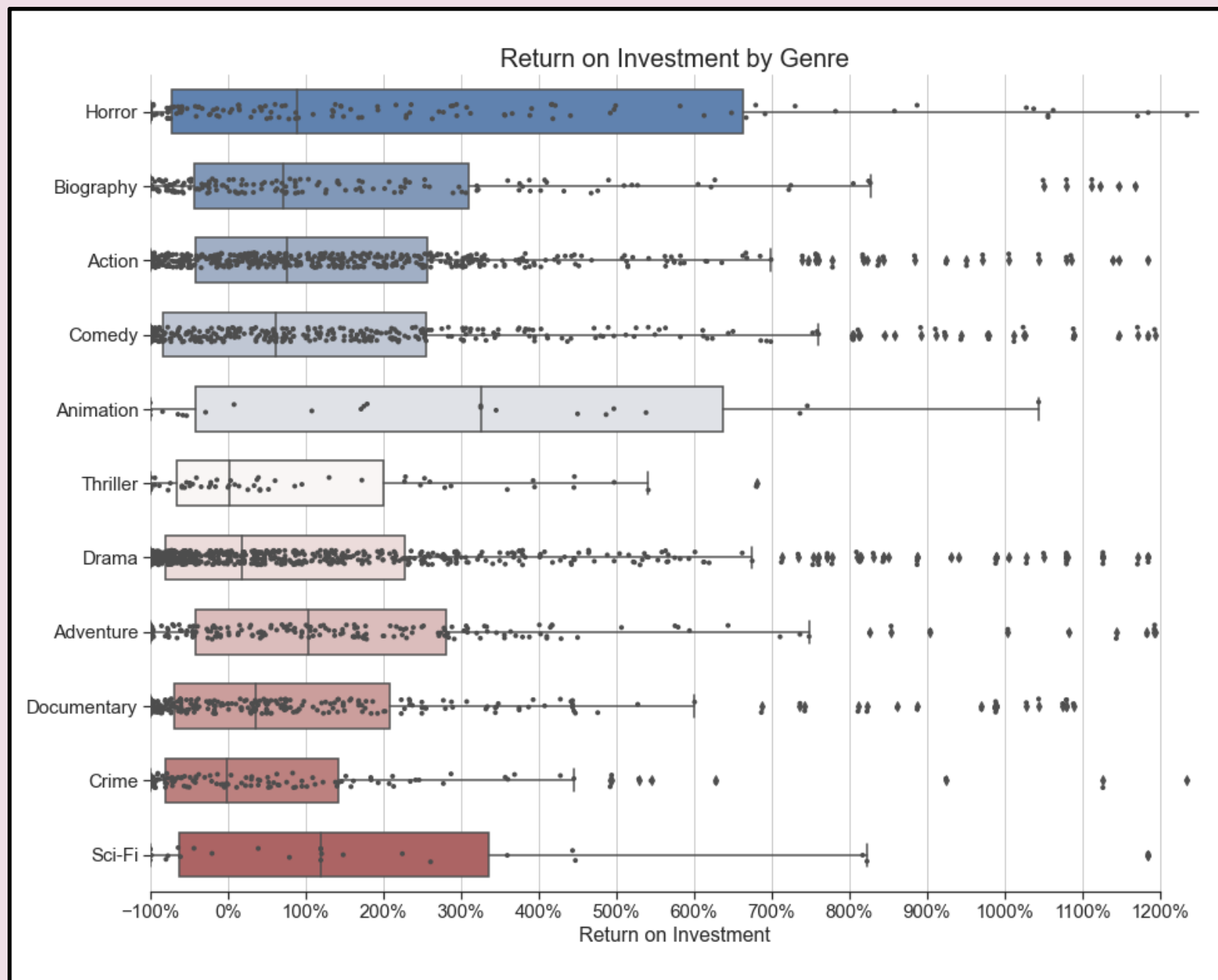- Removing excess observations that were a) repeats or b) missing pertinent data

Analysis

- Objective-oriented analysis involving mathematical distributions and correlations, typically stratified by film genre.
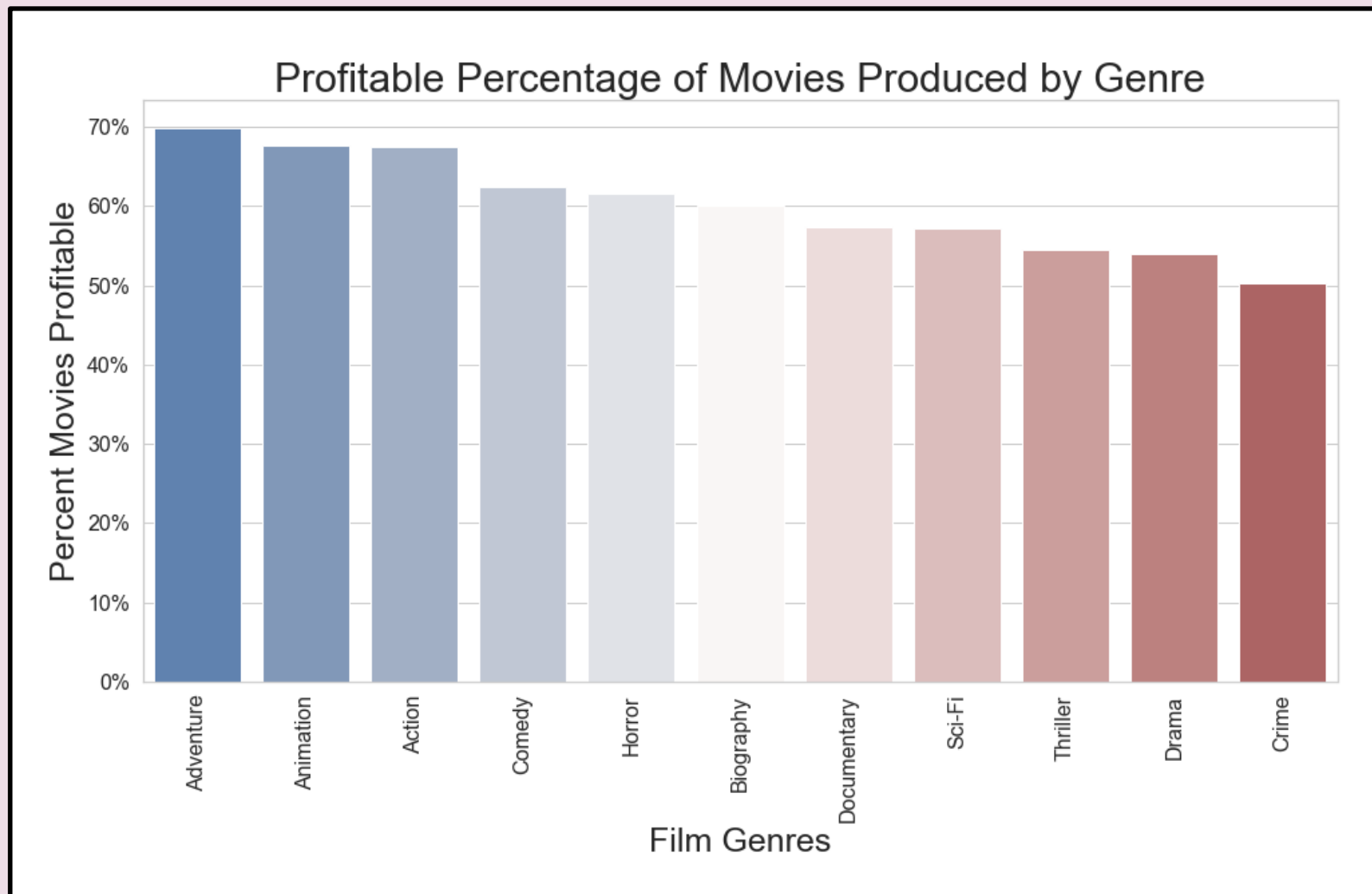
RESULTS

o If Microsoft wants the best return on investment (ROI), they should consider making films in the following genres (in order, by median ROI):

- o Animation
- o Adventure
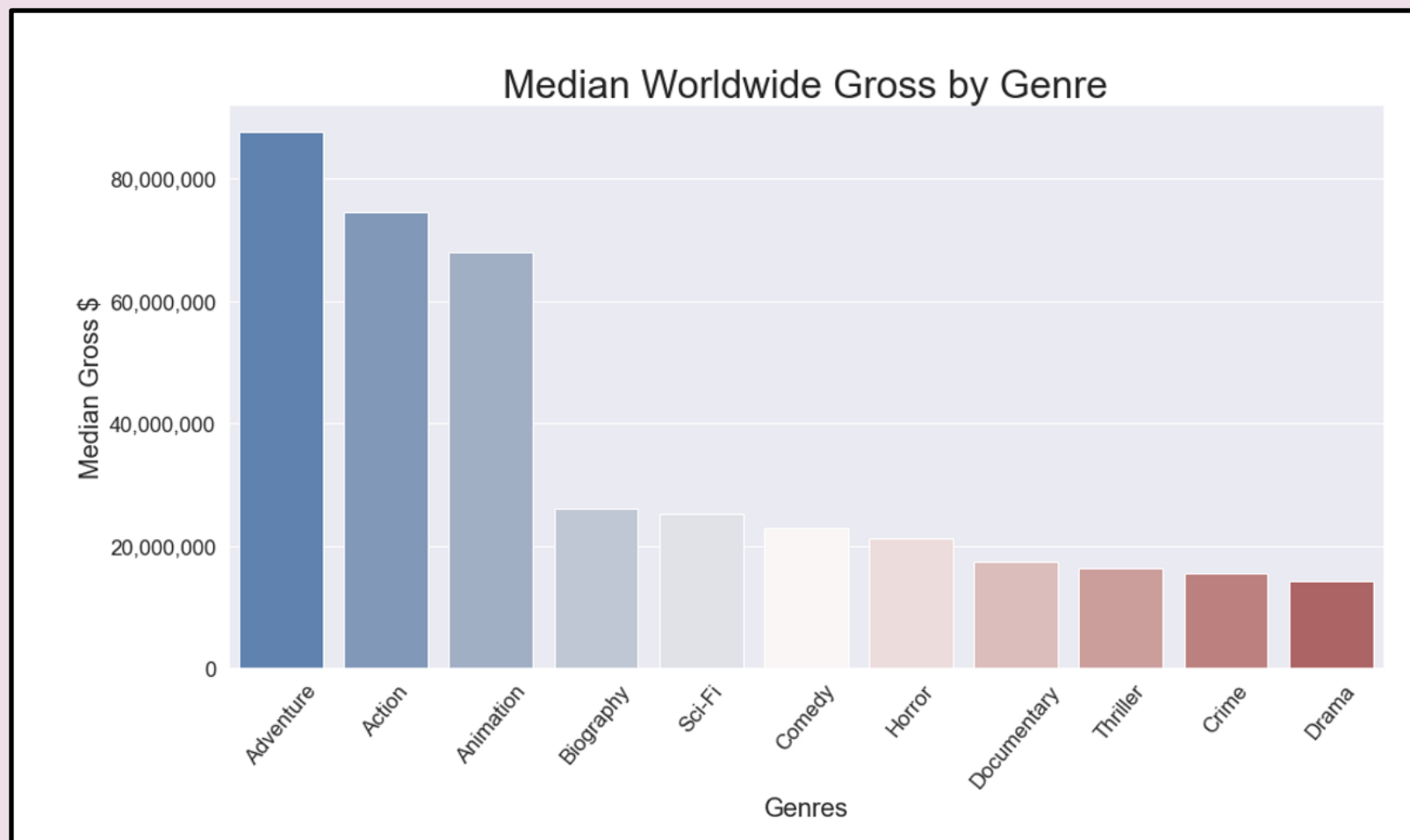- o Sci-Fi
- o Horror
- o Action

RESULTS

○ If the company wants the highest probability of profitability, they should consider making films in the following genres (in order):

  ○ Adventure

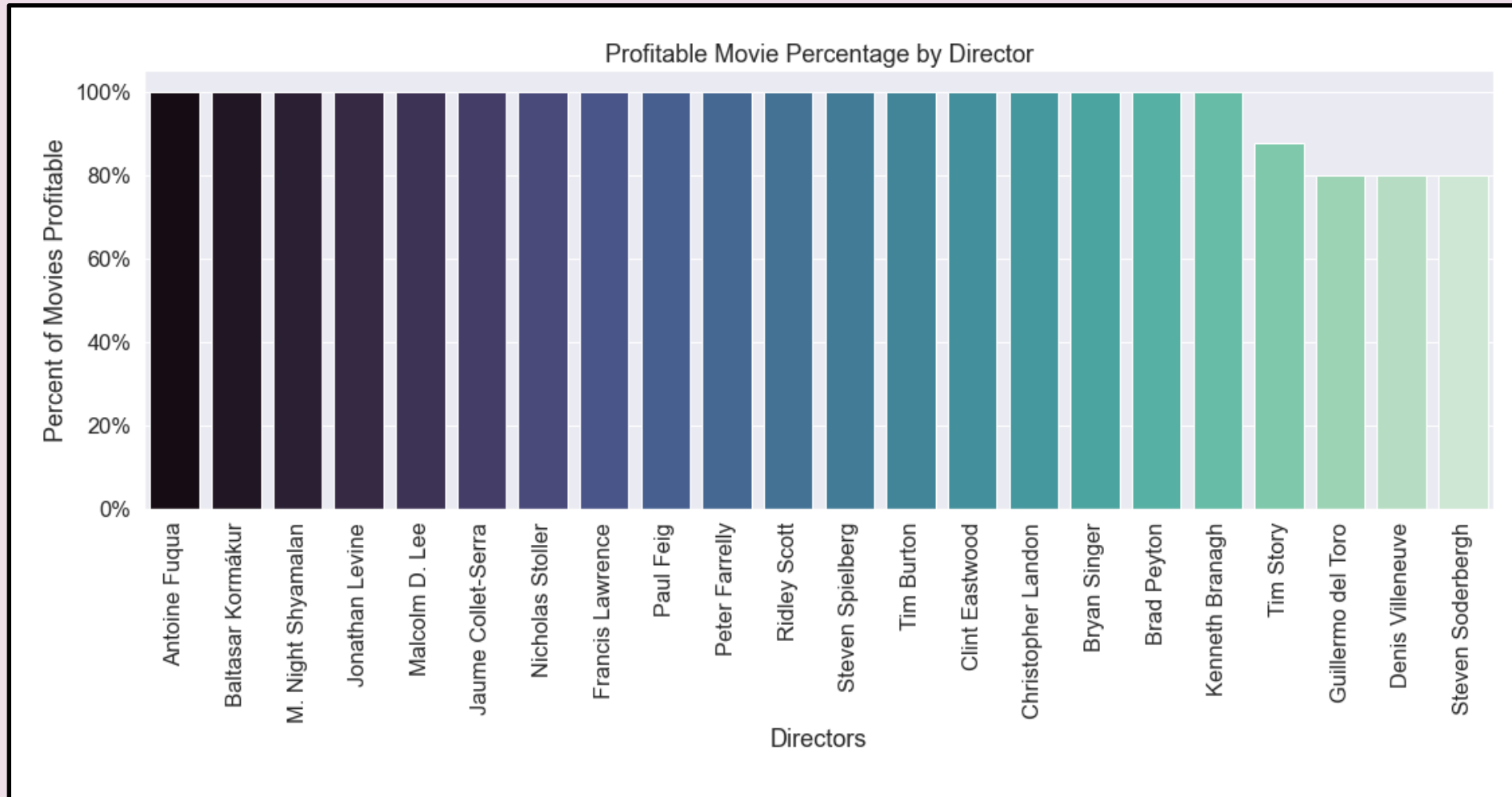 ○ Animation

  ○ Action

  ○ Comedy

  ○ Horror

Profitable Percentage of Movies Produced by Genre

RESULTS

- Three genres clearly have higher median gross profits:

  - Adventure
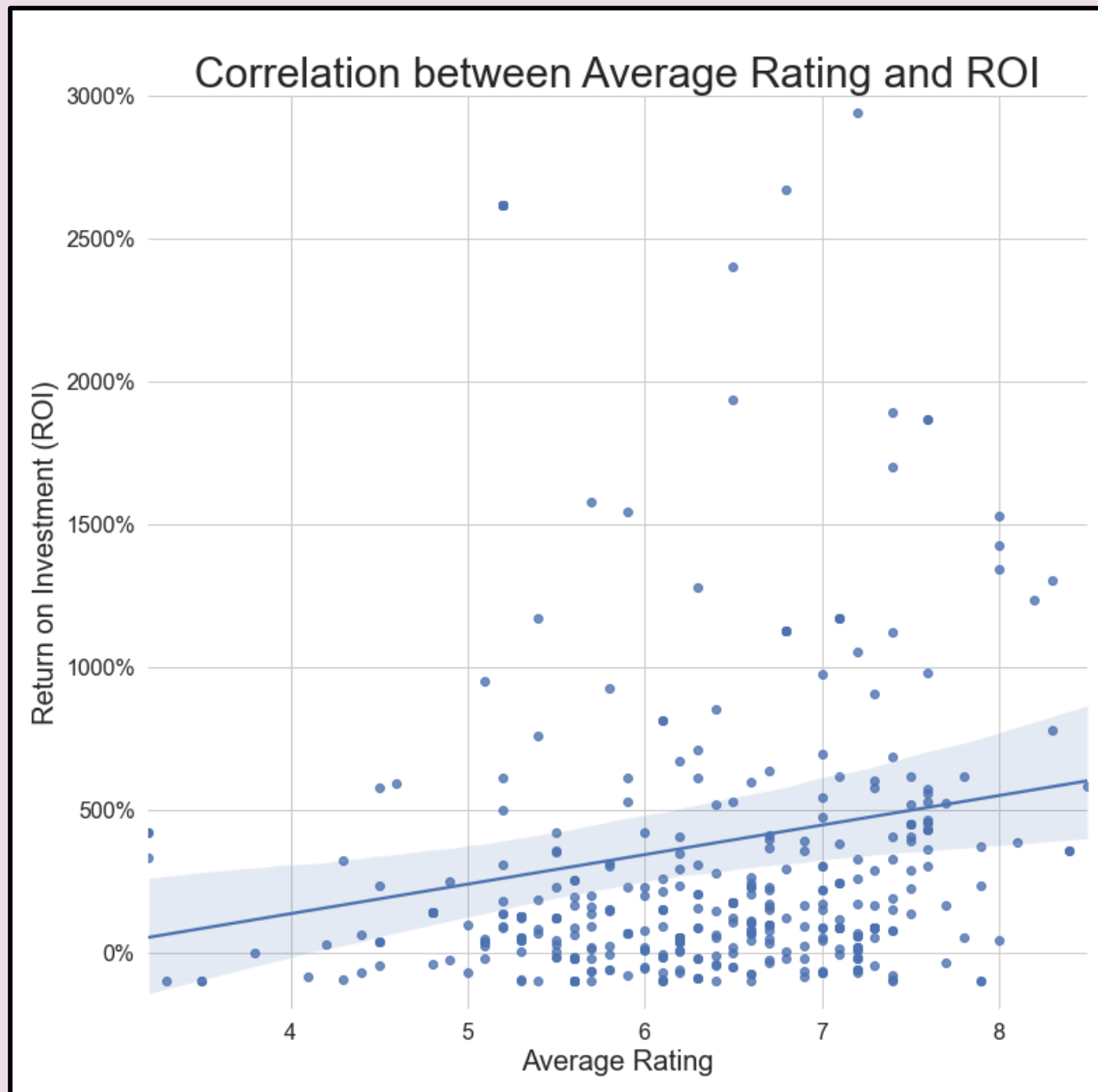
  - Action

  - Animation

Median Worldwide Gross by Genre

RESULTS

○ This analysis identified 22 directors with 1) film profitability above 75% and 2) more than 3 films made in the past decade:
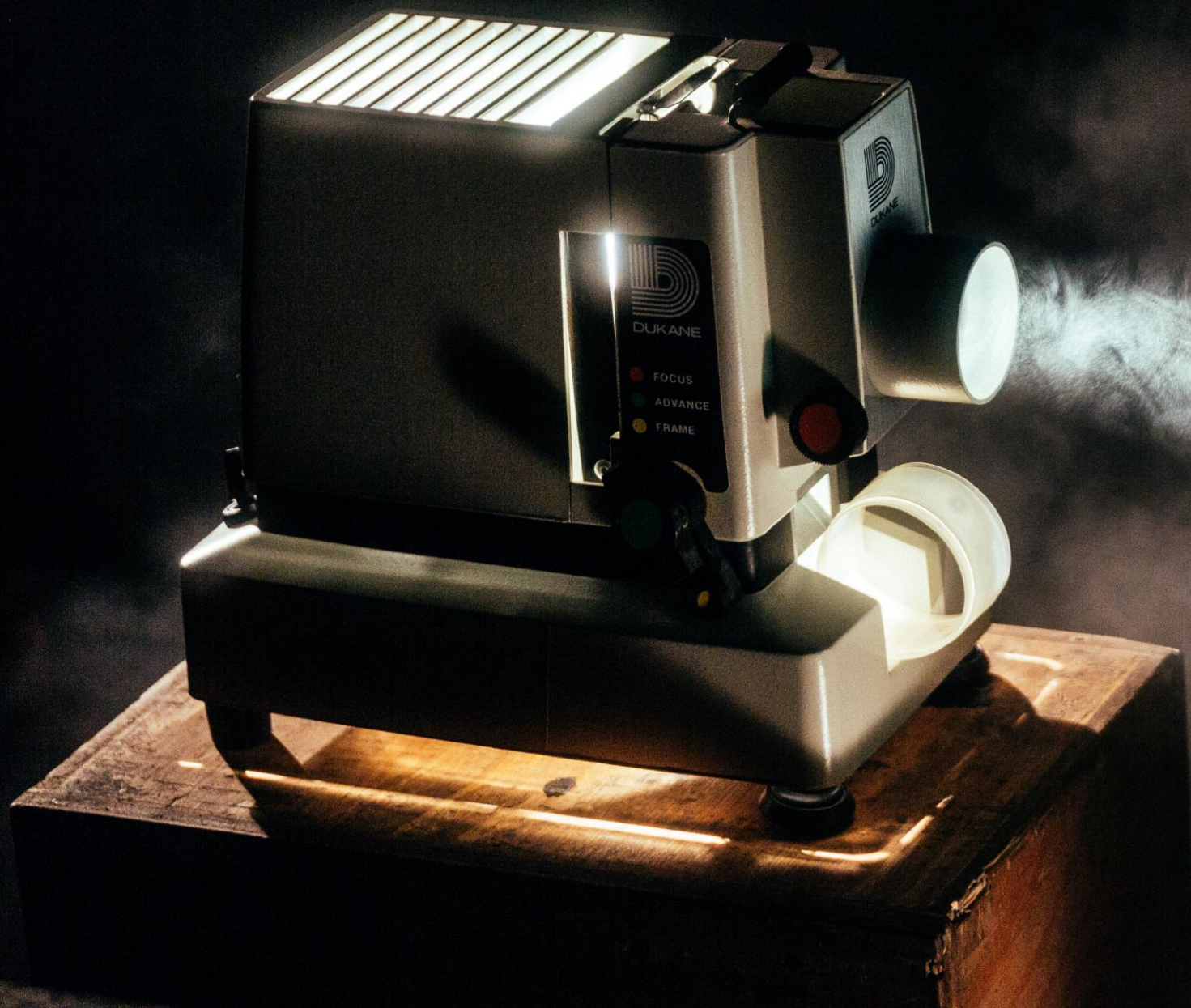

Profitable Movie Percentage by Director

RESULTS

o There is positive correlation between average film rating and return on investment, but it is weak (.08)

Correlation between Average Rating and ROI

CONCLUSIONS

o The analysis established genres with a high median return on investment (ROI) and high probability of profitability.

  o The top two genres under these metrics are **Adventure and Animation**.

  o These two genres also rank highly in total top-line revenue and profitability percentage.

o Utilize the twenty-two listed directors who consistently make profitable movies.

o Do **not** focus on making movies **solely** for the sake of receiving high ratings, as high ratings have very low correlation **(0.08)** with return on investment.

THANK YOU

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