



PRODUCTION  
DIRECTOR  
CAMERA

# FILM GENRE ANALYSIS TO INFORM FILM PRODUCTION DECISIONS

# INTRODUCTION

This project was a collaborative effort, with each group member contributing their skills and expertise to different aspects of the work. The following are the team members and their individual roles and contributions:

1. Koech Carl Collins – EDA and Notebook.
2. Ted Mwenda – Repo structure and Tableau.
3. Mading Garang – Tableau dashboard and story.
4. Faith Ng'endo – Non-Technical presentation.

# Business understanding

A company has come up with a new studio where they intend to create movies.

They are new to the movie creation space and therefore need to know the type of films that are doing the best at the box office.

This will help the head of the company's new studio decide on the type of films to create.

# Objectives

- The project aims to analyze historical movie data to identify patterns associated with financial success and positive audience reception.
- This will be through the use of box office performance and audience ratings.

# Key questions

- Which movie genres consistently perform best at the box office?
- How does audience reception (ratings and engagement) relate to financial success?
- What movie characteristics (such as runtime or release trends) are most associated with successful films?

# Data Understanding

# Data overview

- This analysis made use of 3 key datasets;

- ❑ <https://www.boxofficemojo.com/>

- ❑ <https://www.imdb.com/>

- ❑ <https://www.themoviedb.org/>

- These well recognized sources of data ensured that different facets of film production were considered, hence a well-rounded analysis.

# Box Office Mojo Dataset

- This dataset contains box office revenue data for movies paired with the years they were released.
- These are movies that were released domestically and internationally.

# IMDB dataset

- The IMDB data is stored in a SQLite database.
- The database contains multiple tables; however this analysis focuses on:
  - a) movie\_basics
  - b) movie\_ratings

# The Movie Database

- The TMDB dataset provides detailed information about movies, including popularity metrics and audience ratings.
- This dataset perfectly complements the IMDB and Box Office Mojo datasets.

# DATA ANALYSIS

# Movie\_basics dataset

- All null values were removed from the movie\_basics dataset.
- The original\_title column was removed as it held no significance in the analysis.
- The dataset did not contain any duplicates.

# Movie\_ratings dataset

- The movie\_ratings dataset did not contain any null values.
- The movie\_basics and movie\_ratings were merged using the common column being *movie\_id* which resulted in rows with matching *movie\_id* to be chosen and resulted in the merged\_imdb dataset.

# Box Office Mojo Dataset

- All null values were removed from the gross dataset.
- The domestic and foreign gross columns were merged and dropped to form a *total\_gross* column.

# The Movie Database (*TMDB*)

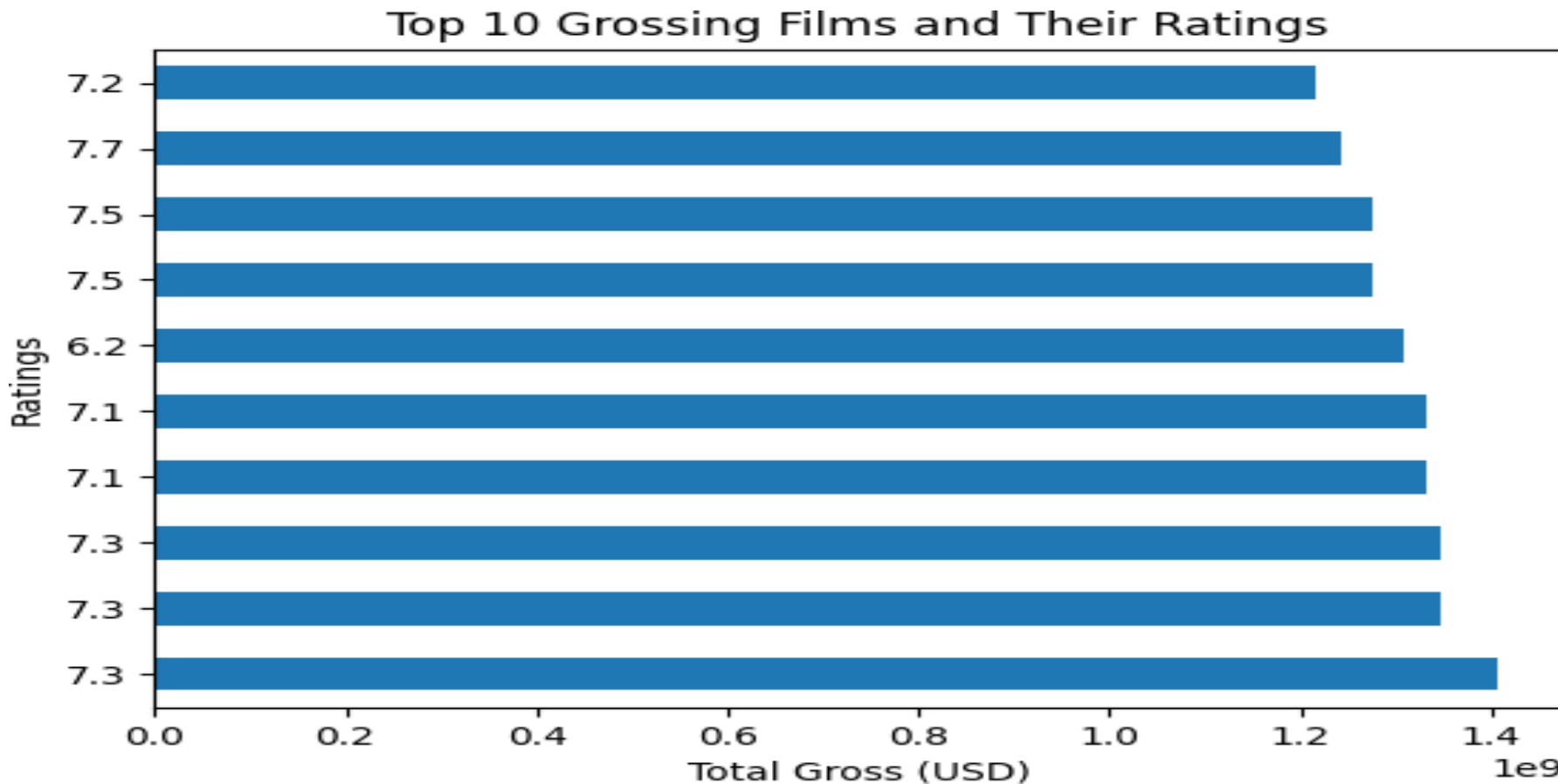
- This TMDB dataset did not contain any null values.
- The IMDB and gross datasets were merged using the common columns, title and year, found in both datasets.
- The title column of the TMDB dataset was also merged.
- The final merge resulted in 1424 rows and 9 handpicked columns.

# VISUALIZATIONS

- The visualizations are classified into 2 :
  - ❖ Financial performance
  - ❖ Market demand

# Financial performance

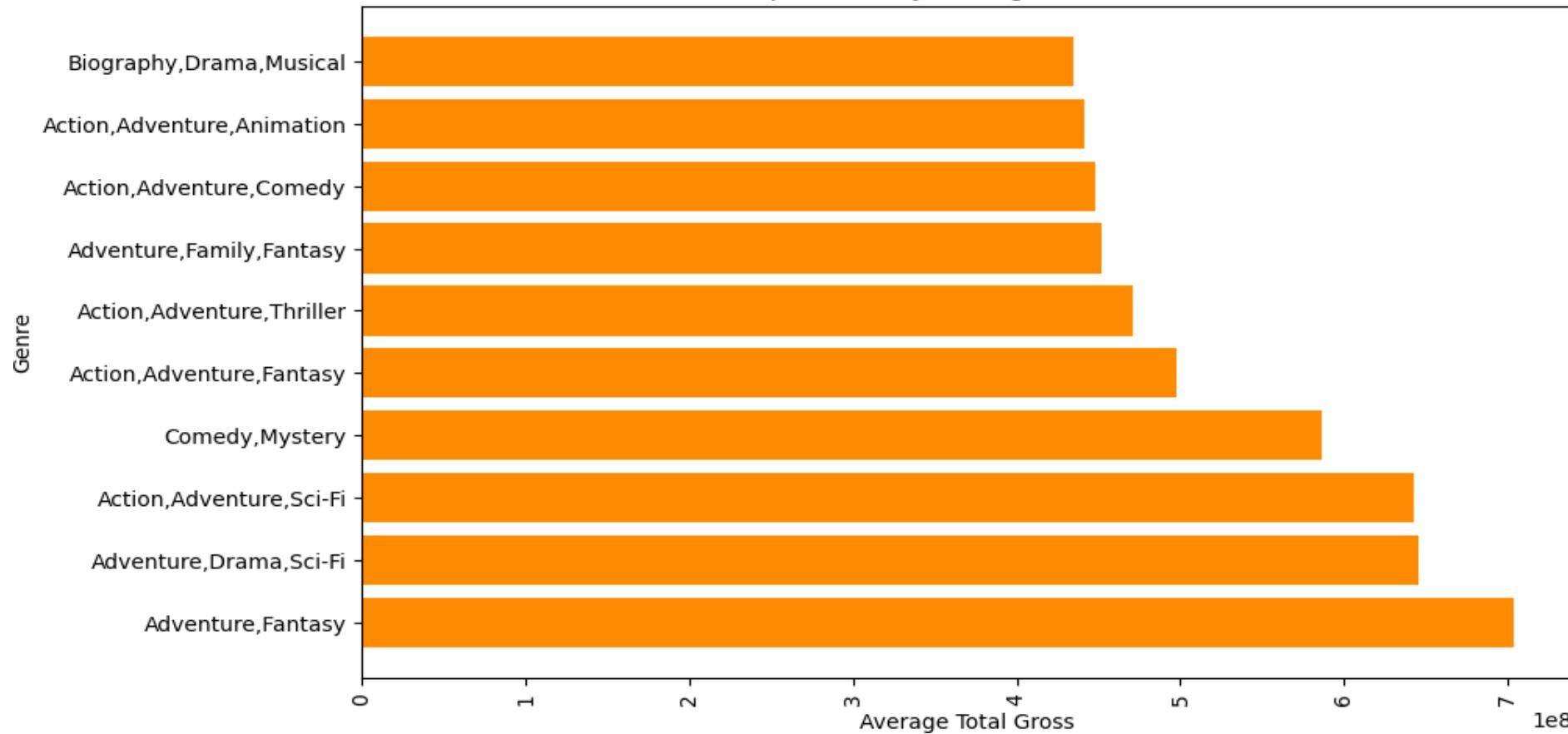
## Ratings Against Gross



- Films with an average rating of 7 do very well in terms of gross.

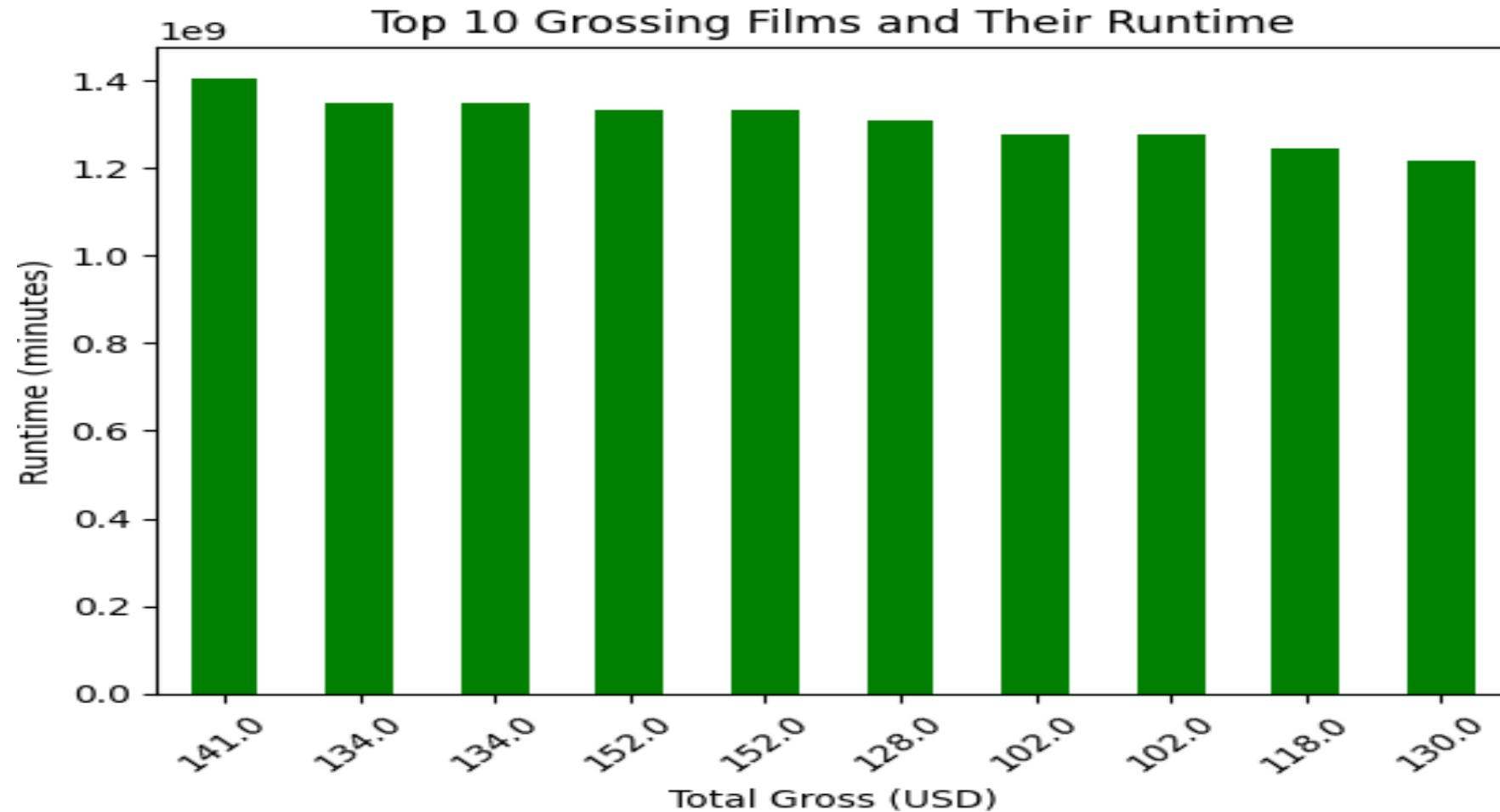
# Genre against gross

Top Genres by Average Total Gross



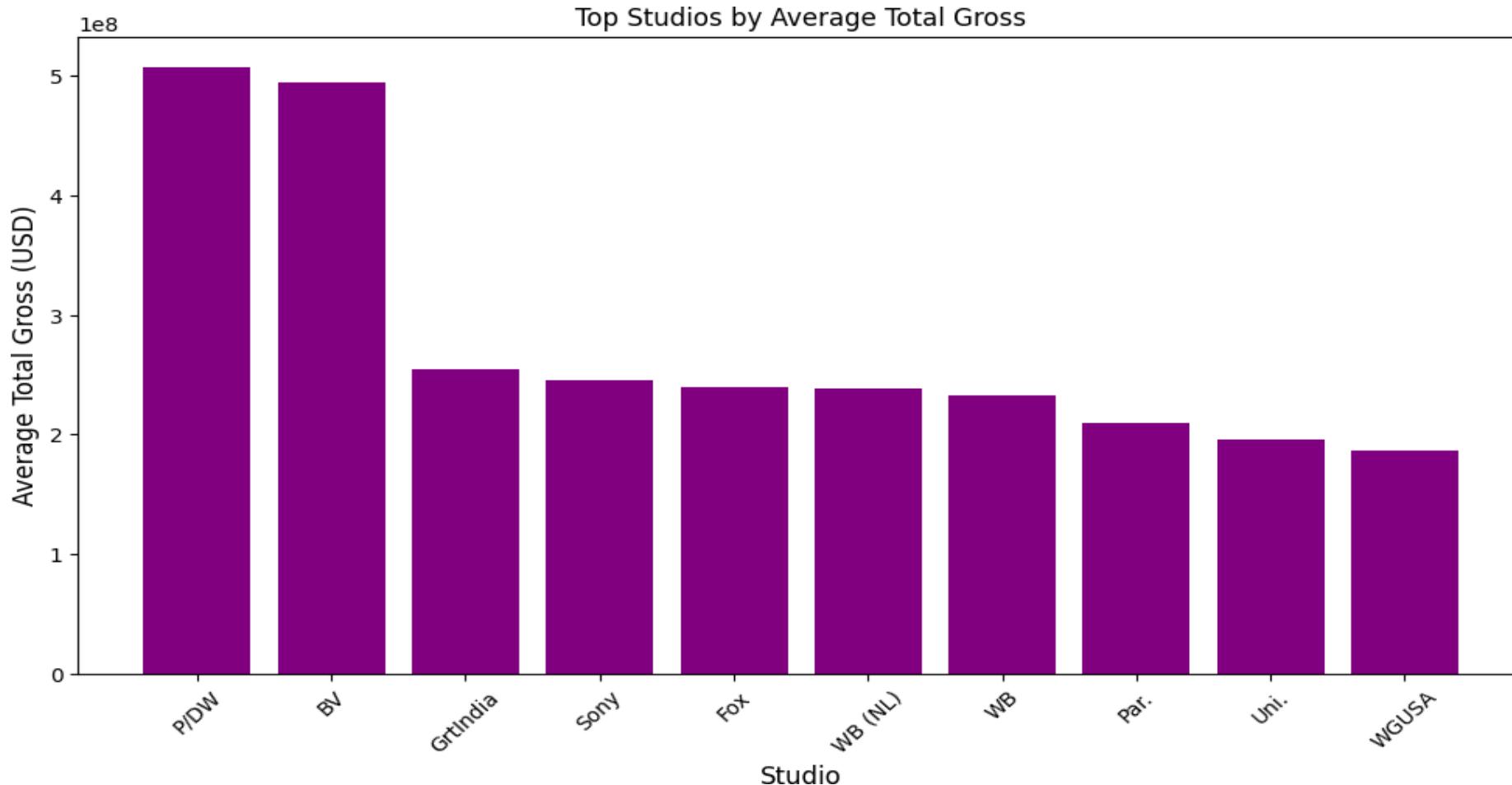
- Movies with genres centered around Action and Adventure generally attain a high gross.

# Runtimes against Gross



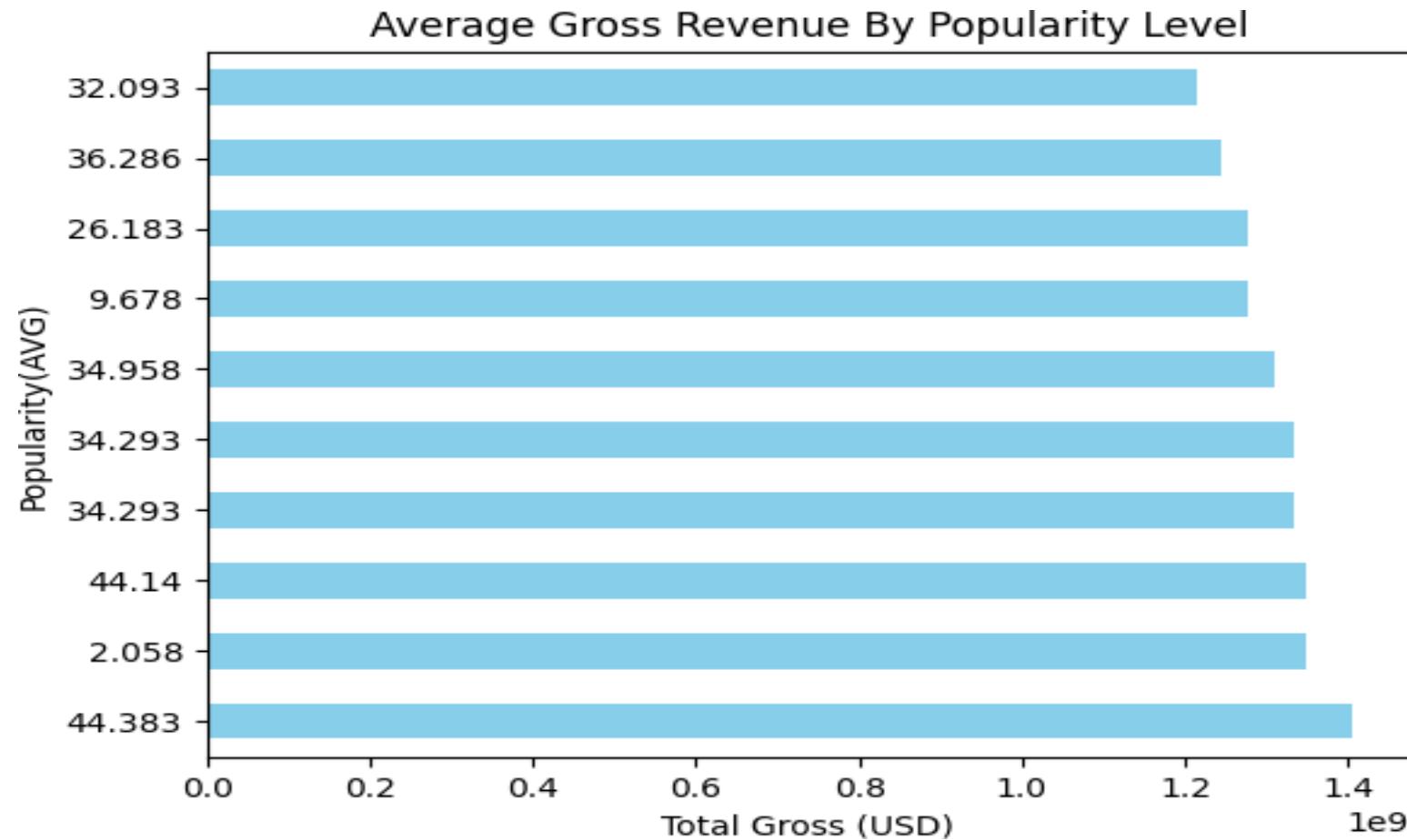
- Movies with a runtime of 100 - 150 minutes are akin to a good grossing movie

# Studio against Gross



- DreamWorks Pictures(*P/DW*) , BV Studios(*BV* ) and GrtIndia consistently produce high grossing films

# Popularity against gross

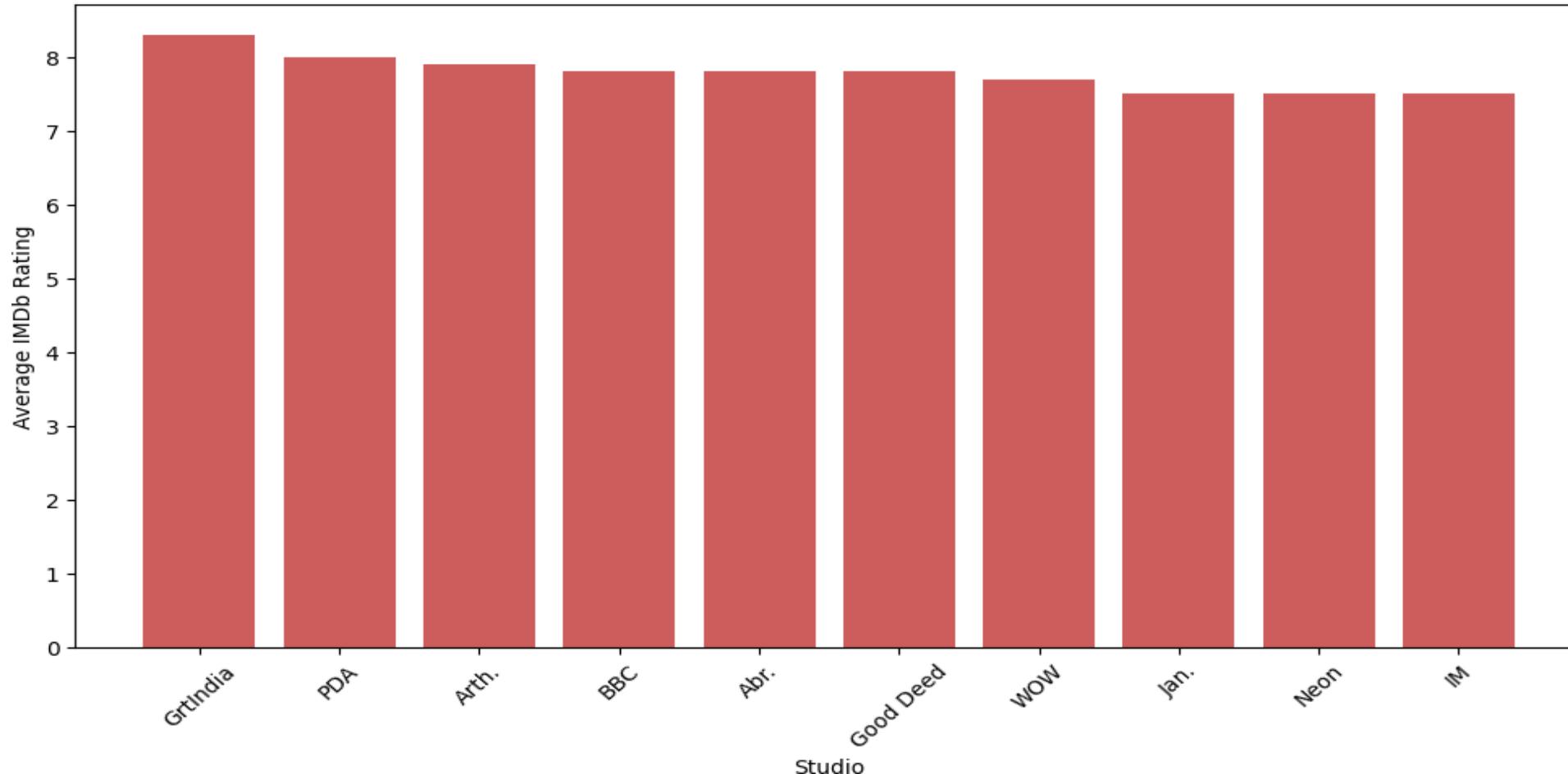


- Movies with a popularity of 30 and higher attain a high grossing.

# Market Demand

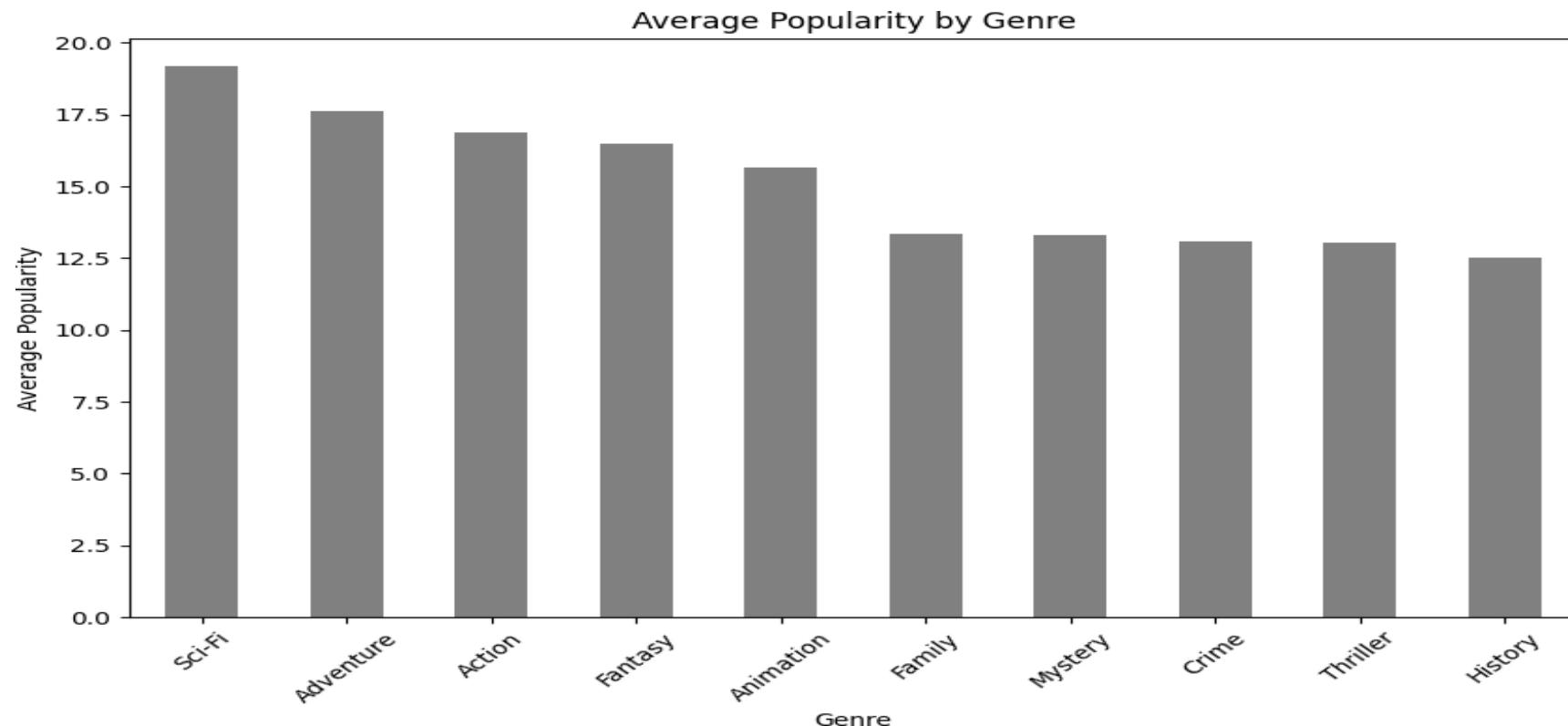
## Studio against ratings

Top Studios by Average IMDb Rating



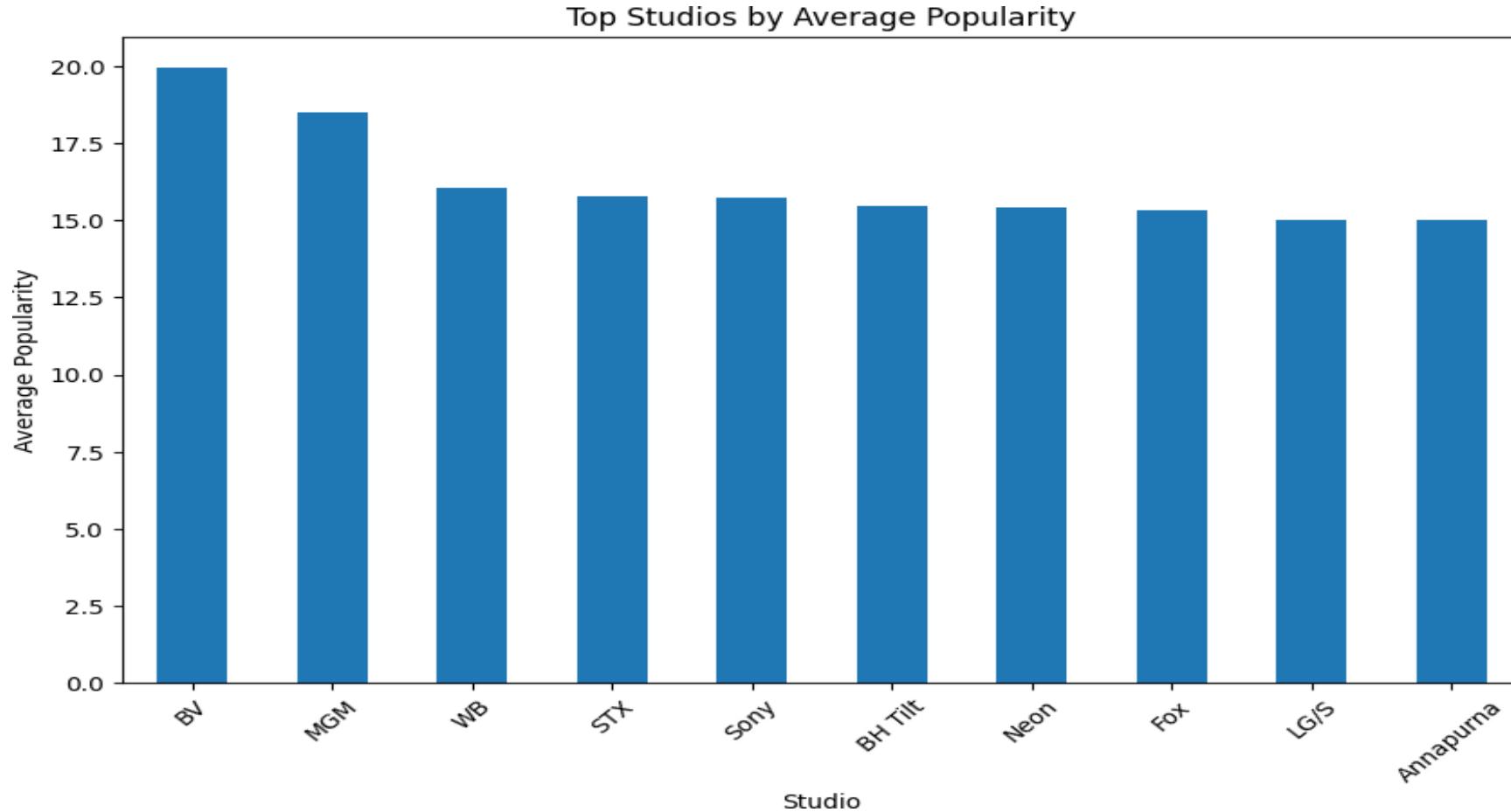
- GrtIndia, DreamWorks Pictures(P/DW) and Arth Studios have the best ratings from movies they have produced

# Genre against Popularity



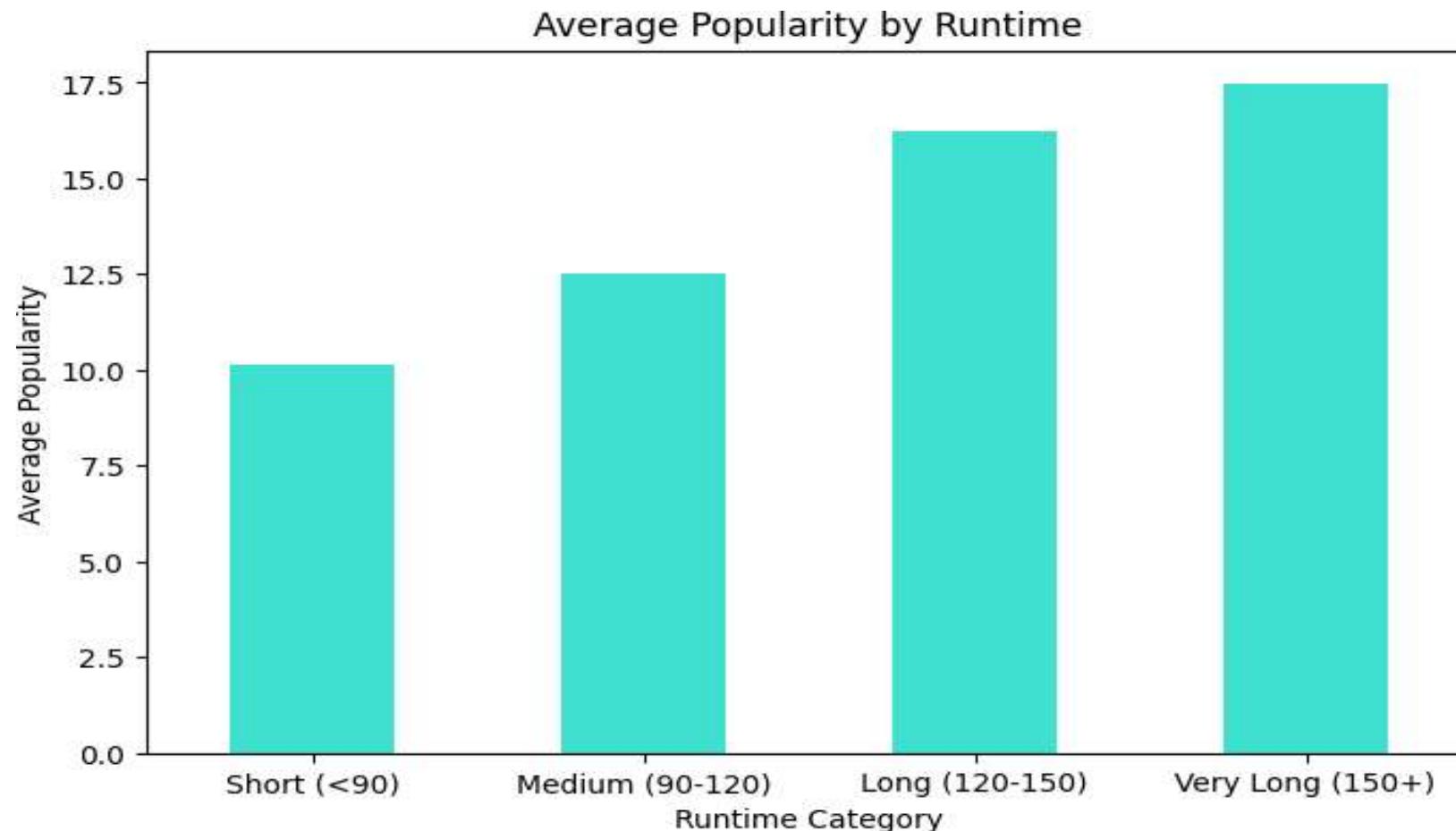
- *Sci-fi , Adventure and Action* movies tend to gain the most attention from the audience

# Studio against Popularity



- BV Studios, Metro-Goldwyn-Mayer(*MGM*) and Warner Bros(*WB*) dominate the audiences' attention.

# Runtimes against Popularity



- Movies with a runtime of 120 and higher are found more popular by the audience

# RECOMMENDATIONS

## Prioritize High Grossing Genres

The studio should prioritize producing films in these genres, particularly for early releases, to maximize return on investment and attract audiences.

## Invest in quality to drive revenue

Allocate budget toward strong scripts, experienced directors, and higher production quality to improve audience satisfaction rather than focusing solely on quantity of releases.

## Target Optimal Movie Runtime

The studio should aim to keep most productions over the 120 minute range to balance storytelling, viewer attention, and production costs.

## Learning From Top Studios

The studio should study their genre focus, franchise development, marketing tactics and consider even partnerships or niche differentiation.

## Use Popularity Driven Data To Guide Greenlighting

The studio should incorporate pre-release popularity signals (social buzz, early screenings, trailers, online engagement) into decision-making when selecting projects.

## Align Genre With Production Planning

The head of the studio and the executive should plan budgets and schedules according to genre expectations (e.g., longer runtimes for action, adventure and Sci-fi).

# Future actions

- Benchmark from top studios
- Keep an eye out for genre trends to predict future demand
- Come up with a runtime guidelines for each genre
- Track trailer views, social media mentions, search trends, and ratings.



THANK  
YOU

