
PRODUCTION
DIRECTOR
CAMERA

FILM GENRE ANALYSIS TO INFORM FILM PRODUCTION DECISIONS

Overview

This is an analysis of historical movie data to identify patterns

associated with financial success and positive audience reception.

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/

- This 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.

- 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

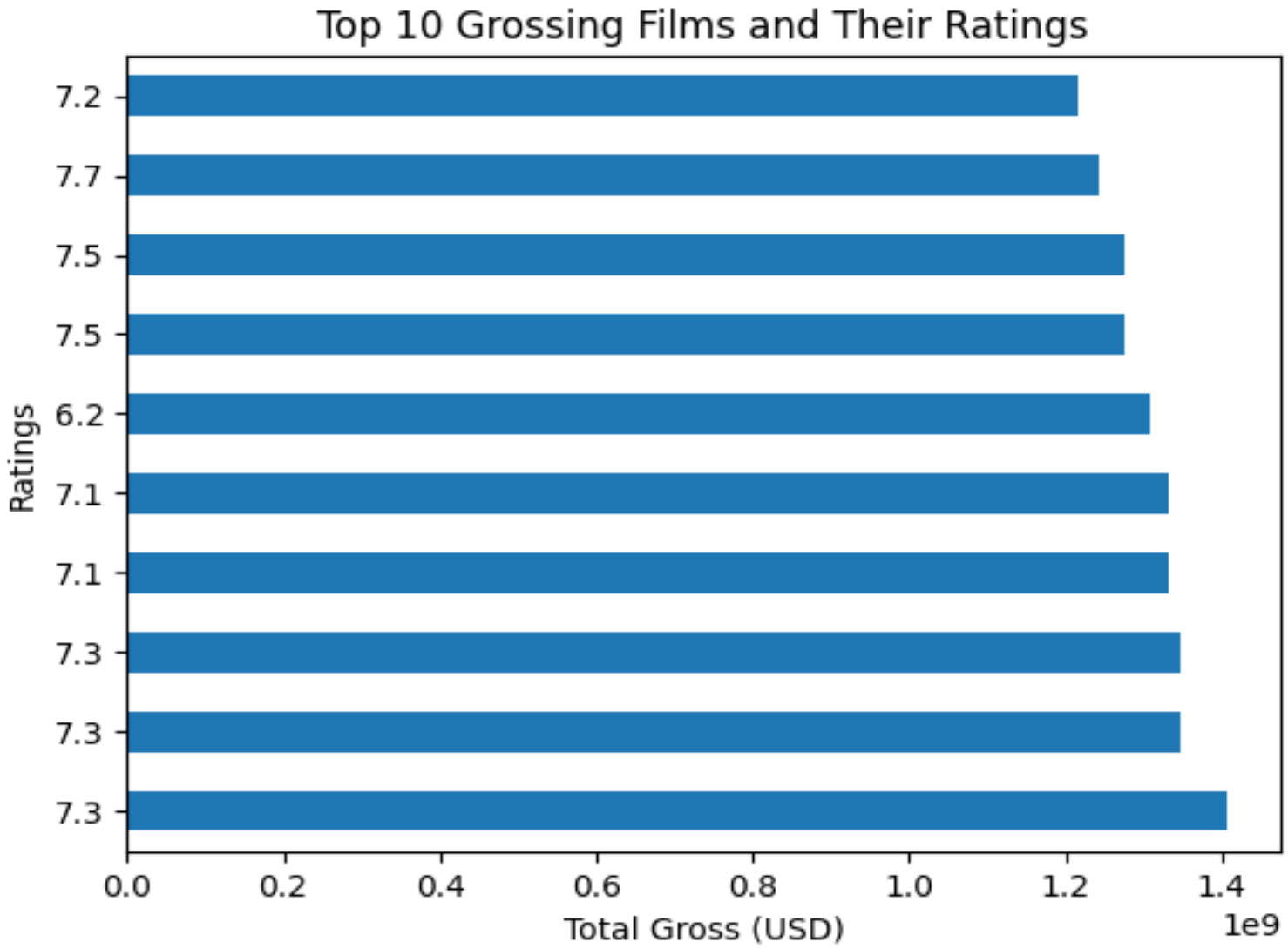
- The visualizations are classified into 2 :

❖Financial performance

❖Market demand

Financial performance

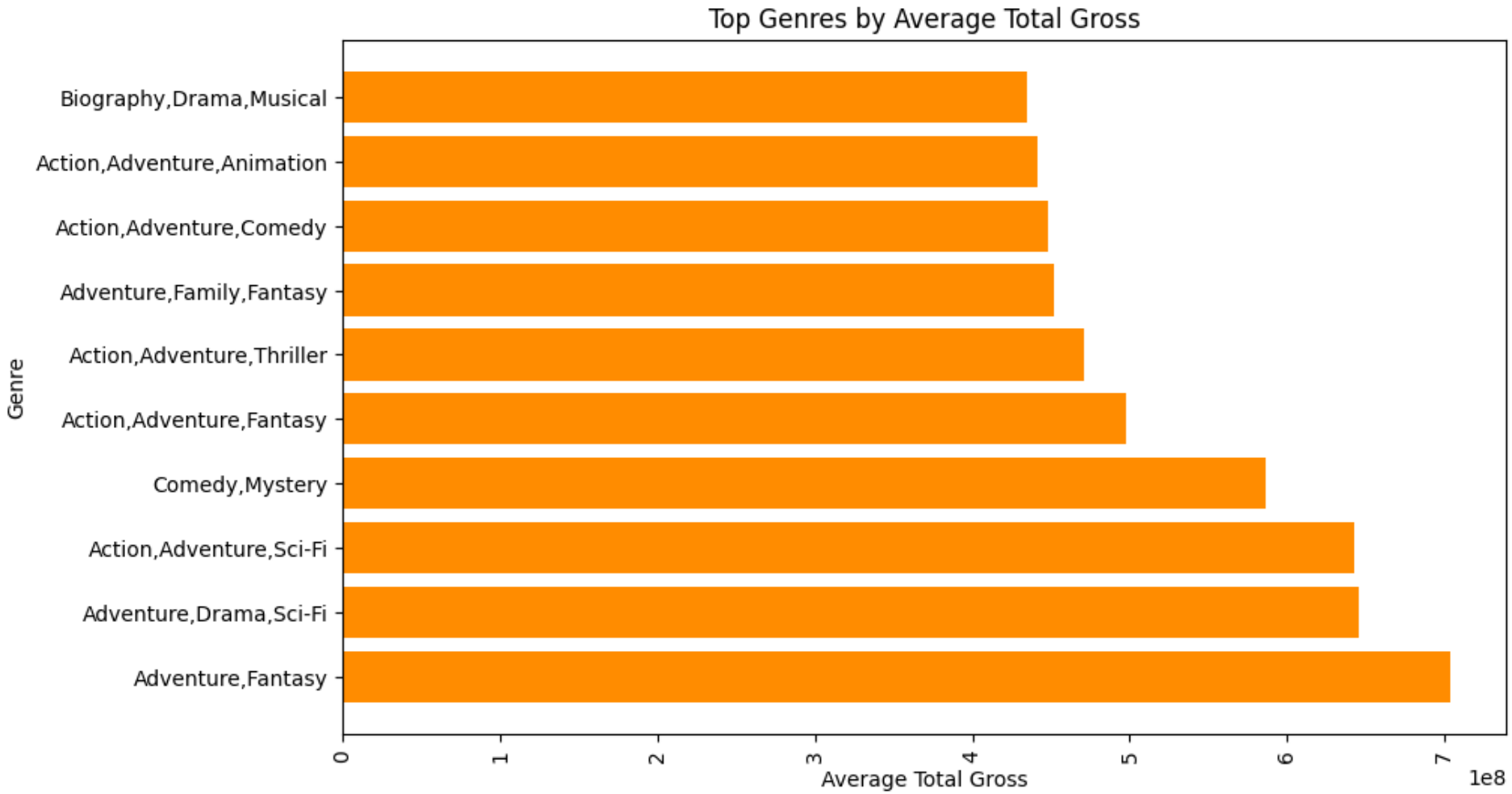
Ratings Against Gross



Finding

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

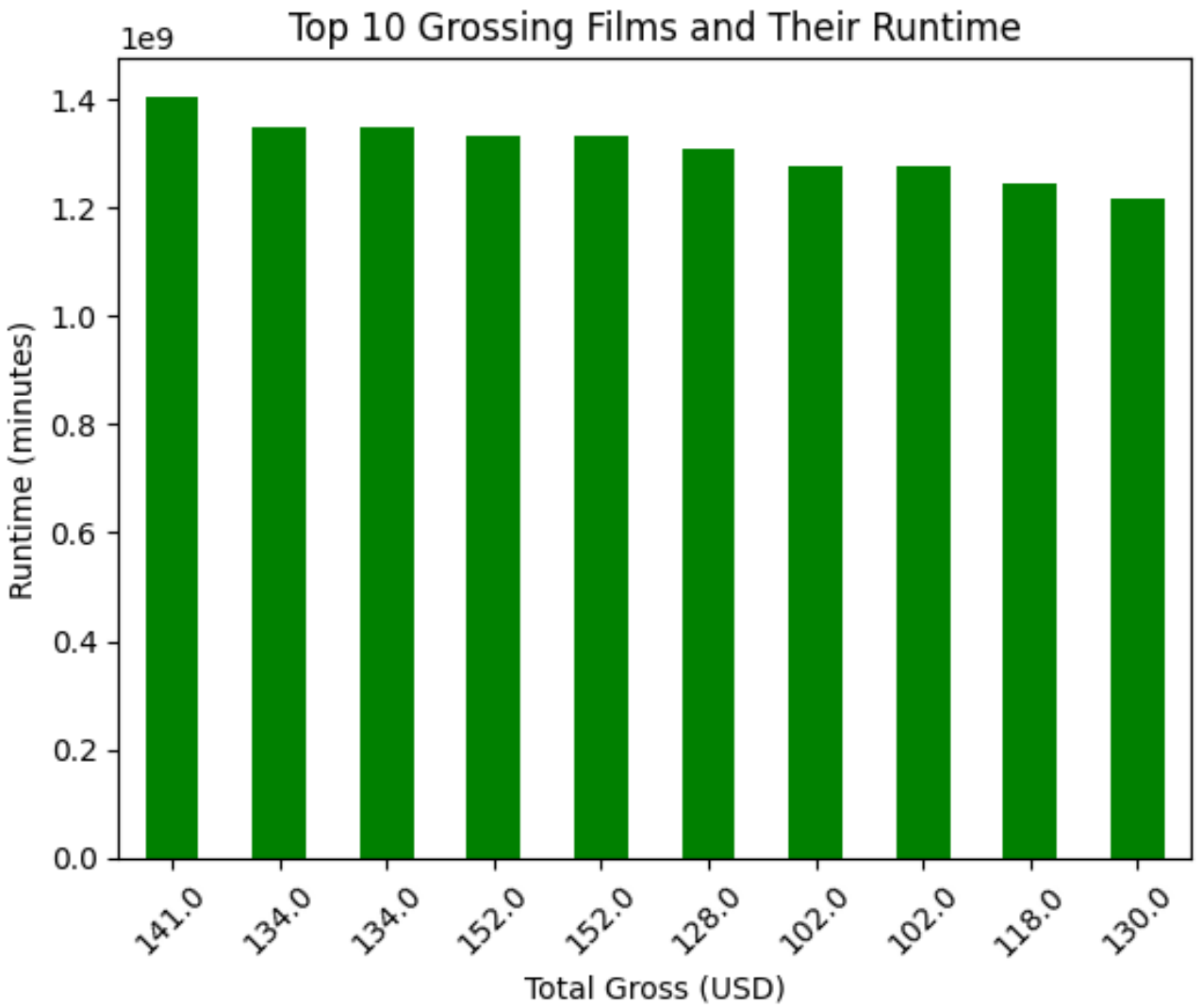
Genre against gross



Finding

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

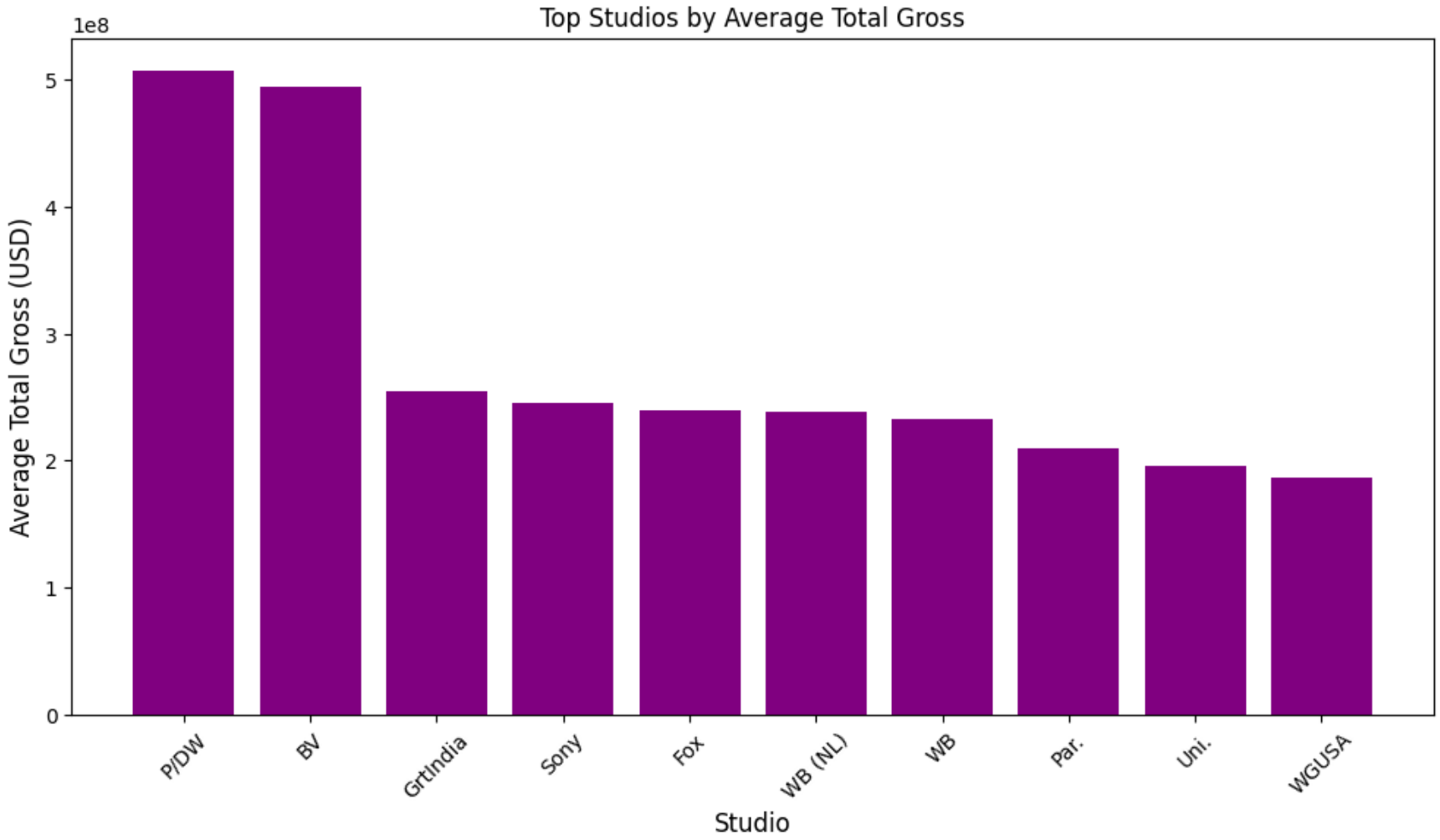
Runtime against Gross



Finding

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

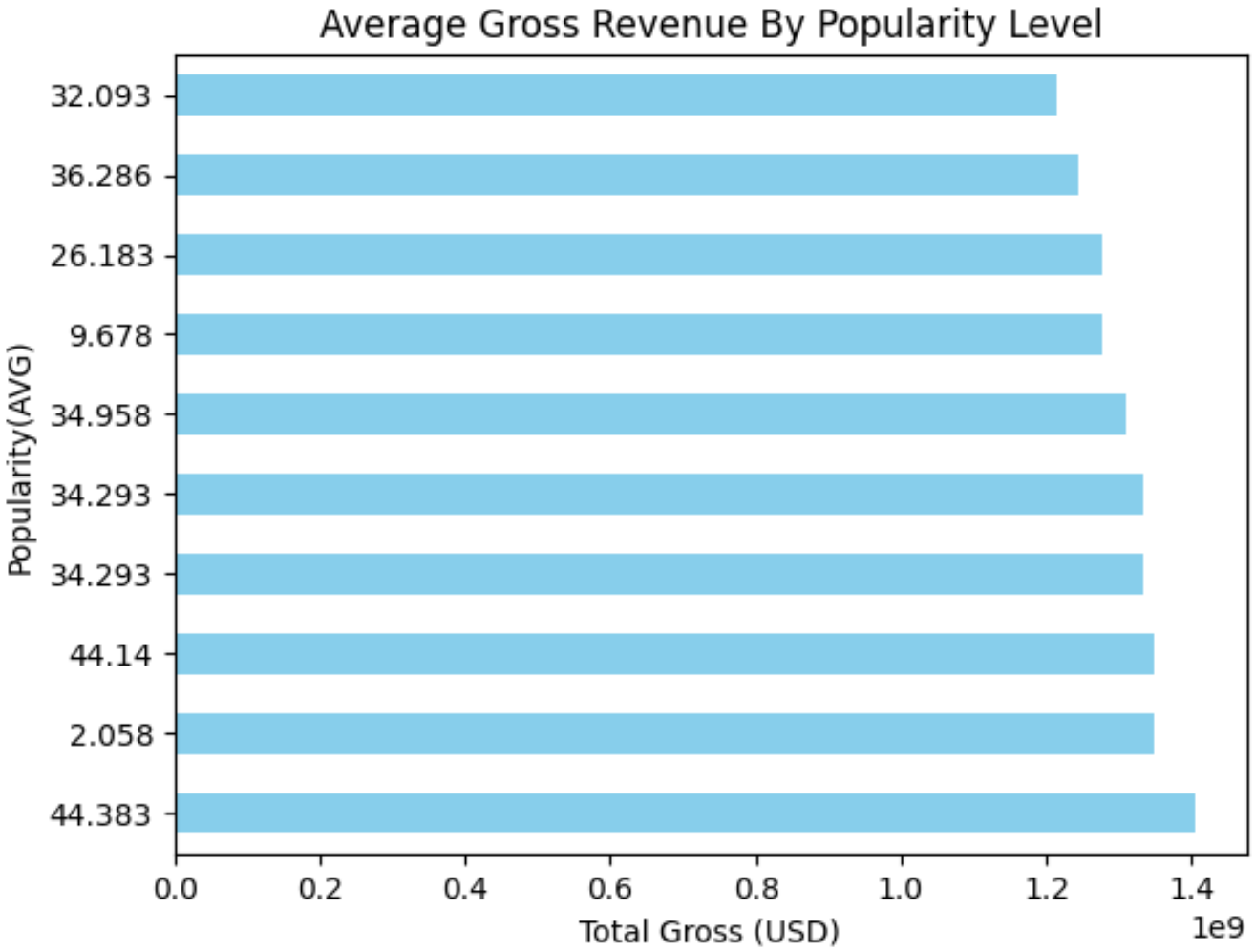
Studio against Gross



Finding

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

Popularity against gross

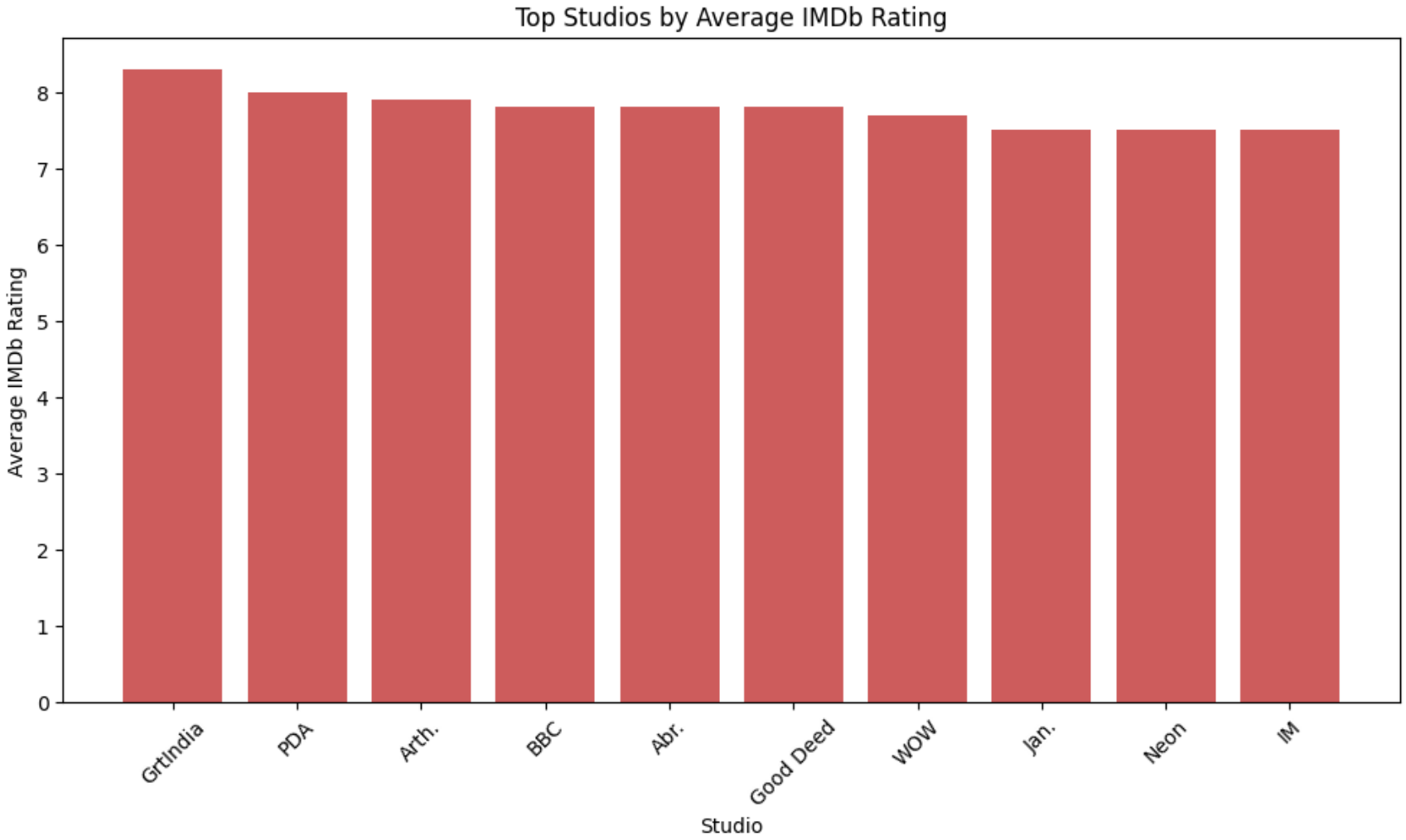


Finding

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

Market Demand

Studio against ratings

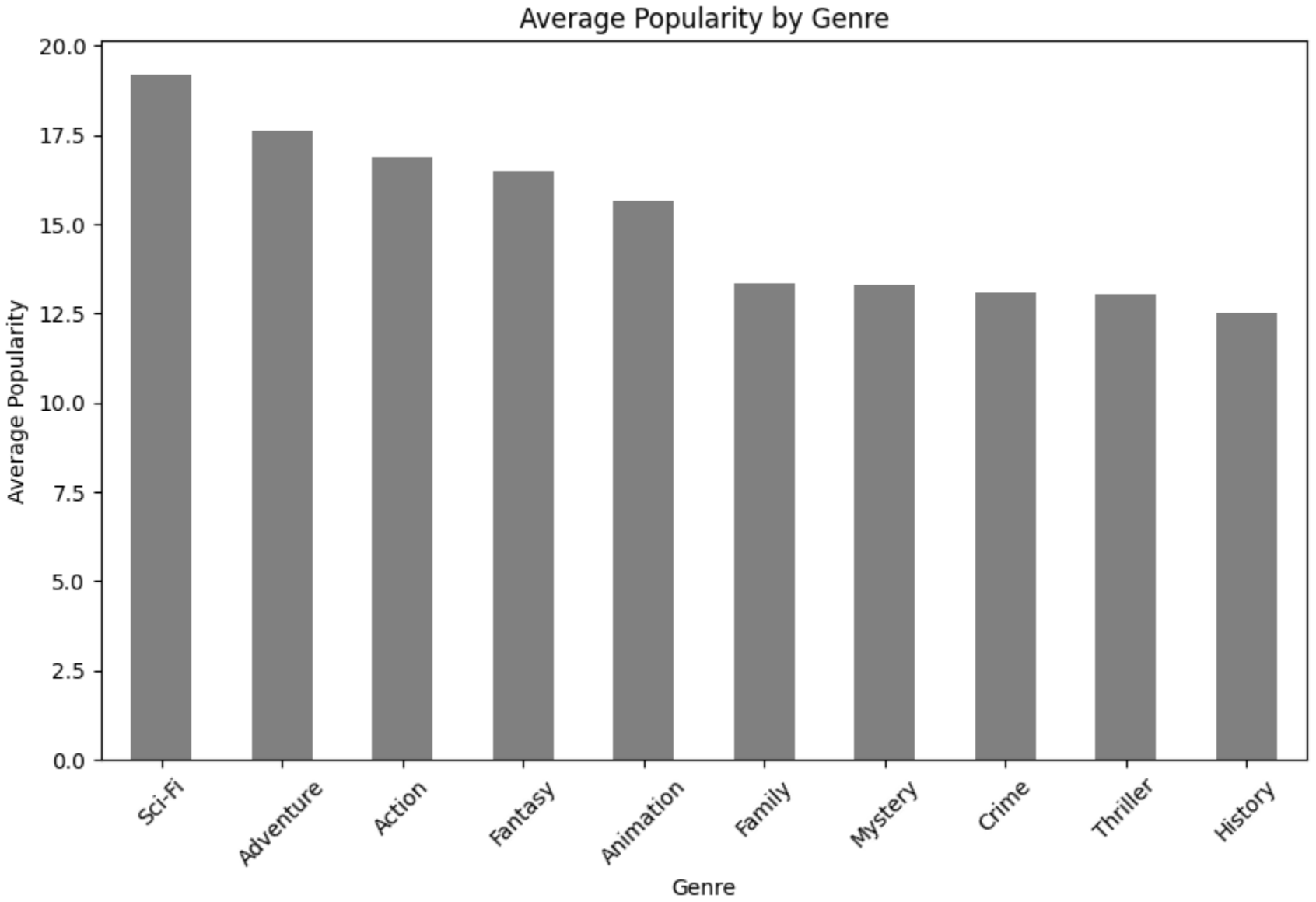


Findings

- GrtIndia, DreamWorks Pictures(*P/DW*) and Arth

Studios have the best ratings from movies they have produced

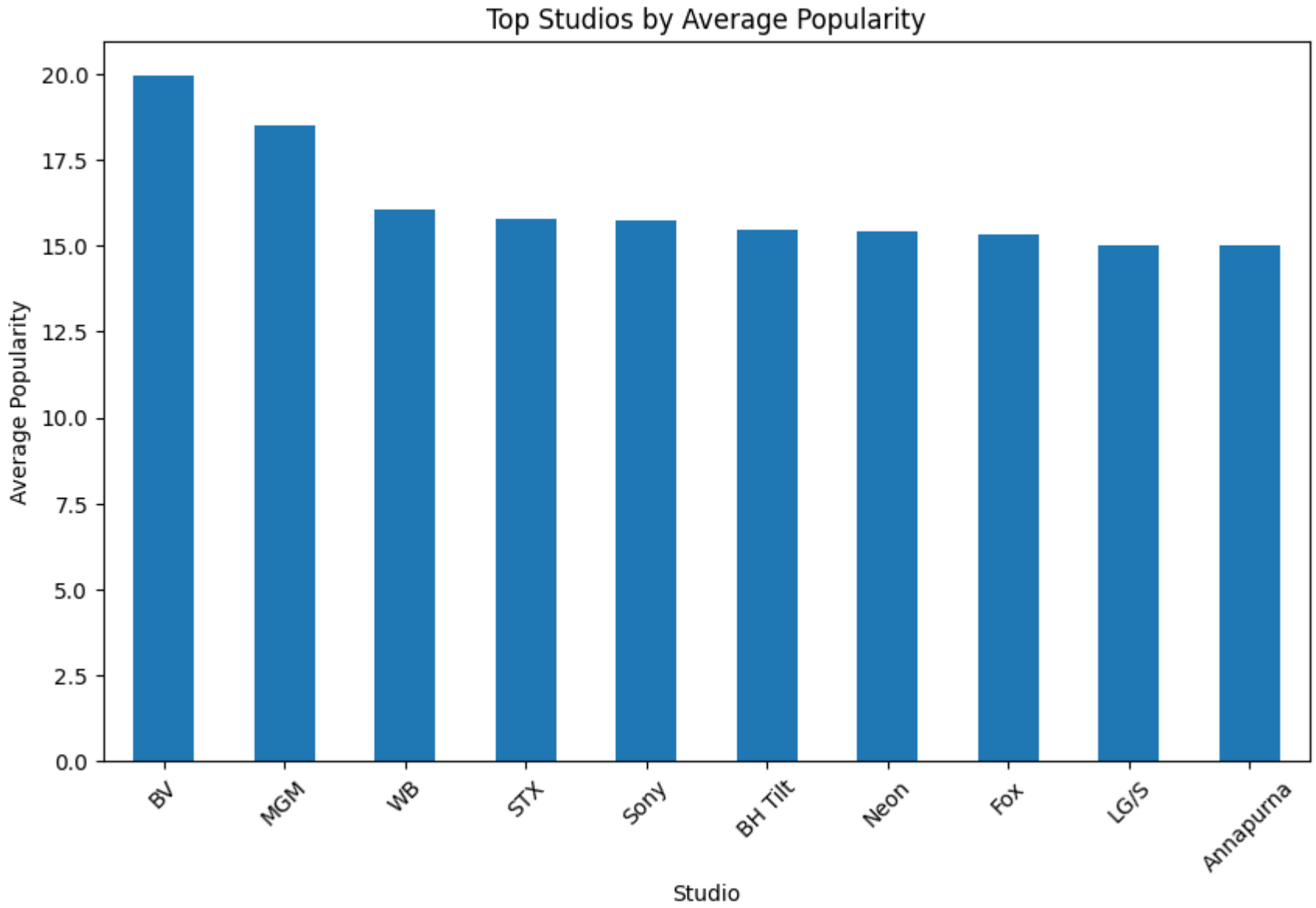
Genre against Popularity



Findings

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

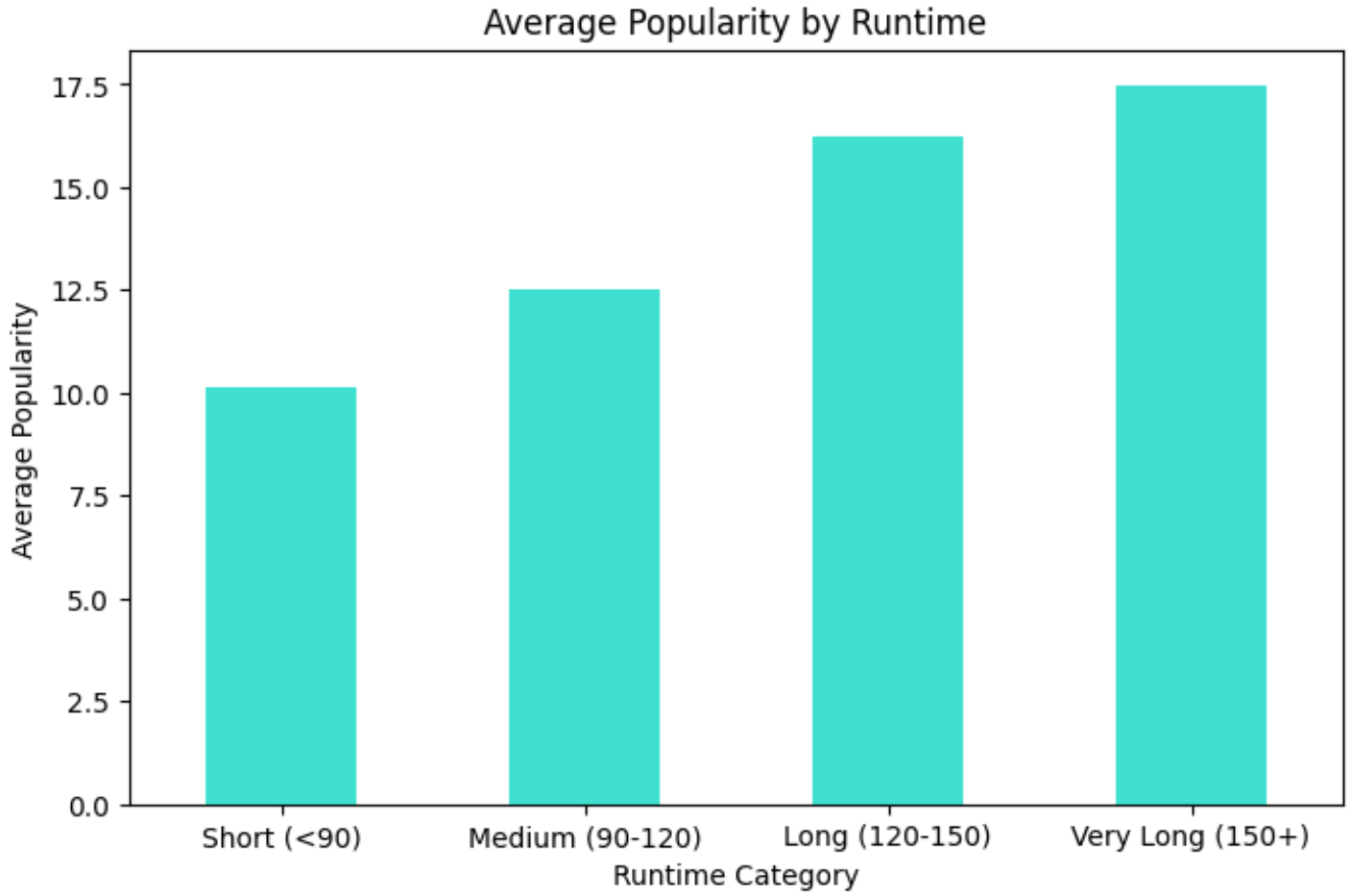
Studio against Popularity



Findings

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

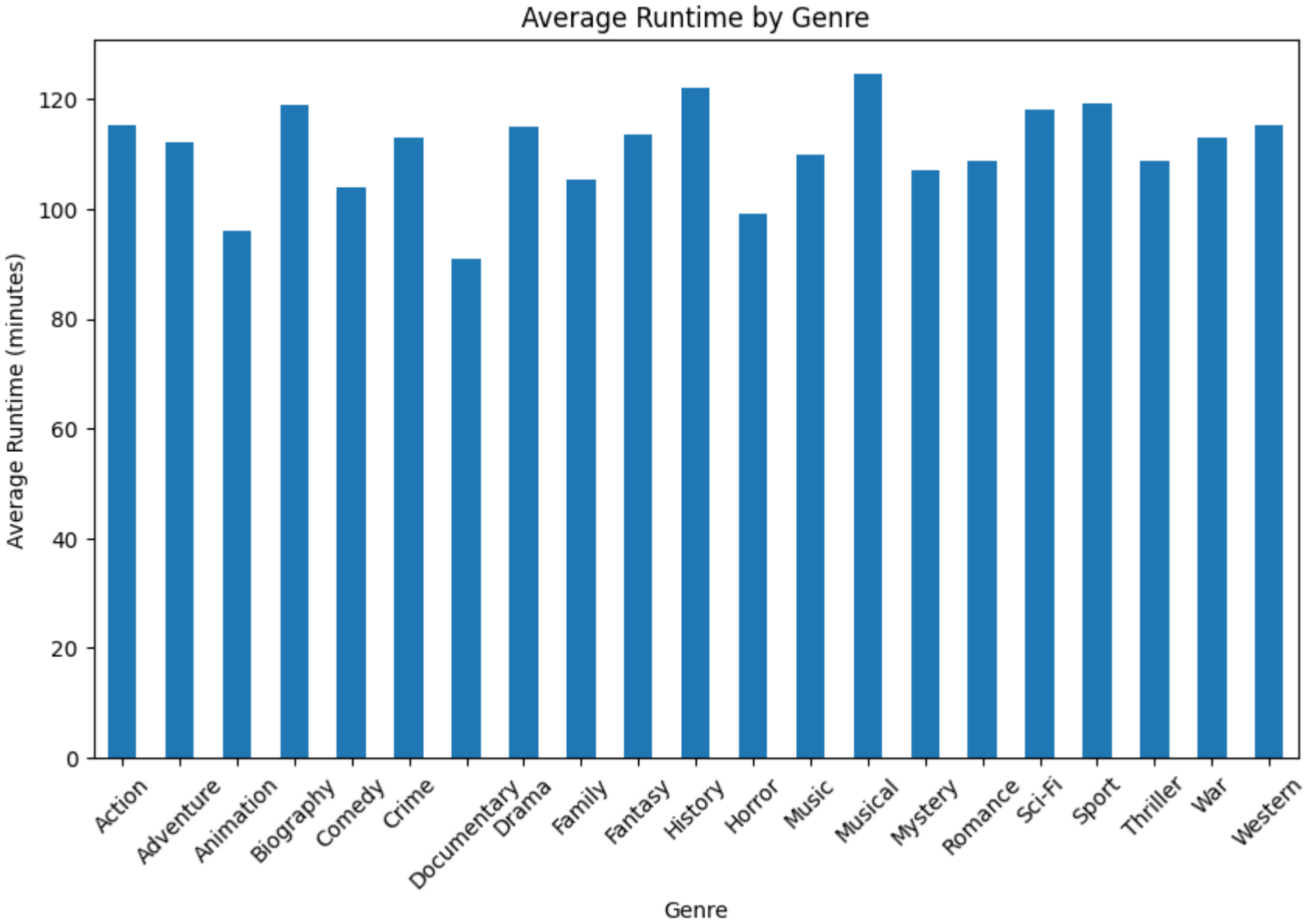
Runtime against Popularity



Findings

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

Genre against Runtime



Findings

- *Action*, *Adventure* and *Sci-fi* movies tend to have a runtime longer than 100 minutes

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