

MARCH [2023]

MICROSOFT MOVIE STUDIO

PRESENTATION BY

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NEW STUDIO



Overview



Outline



• **Understanding
Business Problem**



• **Data Understanding**



• **Analysis**



• **Findings**



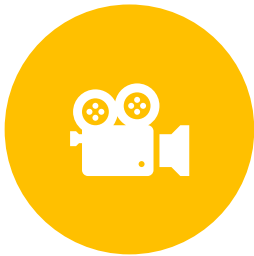
• **Summary/Conclusions**



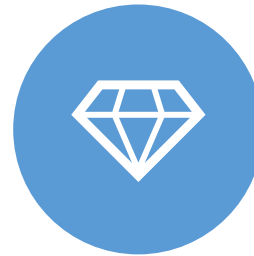
Business Problem



Microsoft wants to start a new movie studio.



- What type of movies are best performing?



- Projected profitability based on key indicators.



- Generate recommendations!

**Data
Sources used**

- Box Office Mojo Gross

Movie Budgets

IMDB

Movie reviews

- Performance metrics analyzed:

$$\text{ROI} = (\text{World} + \text{Domestic gross} - \text{Production cost}) / \text{Production cost}$$

ROI vs Genre

ROI vs Runtime

ROI vs Rating

ROI vs Budget

ROI vs average vote

High Budget Movies


Language

Number of Movies

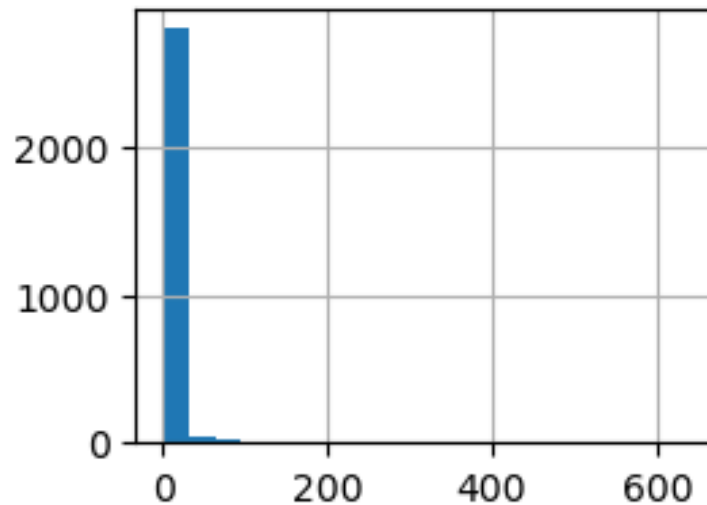
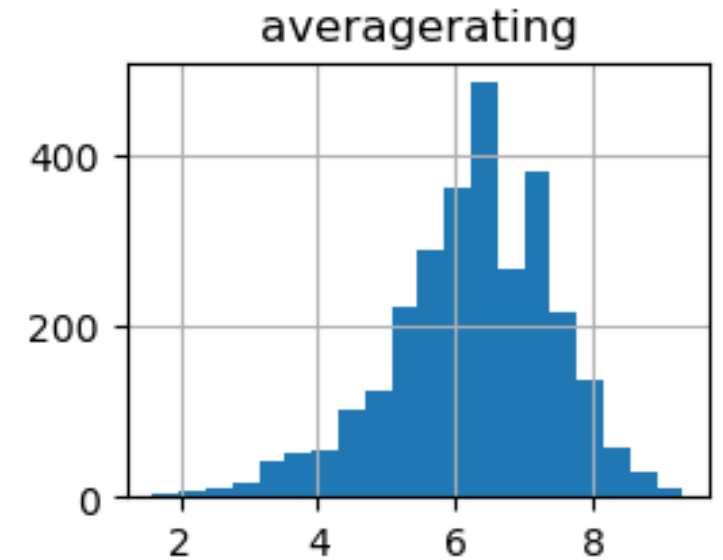
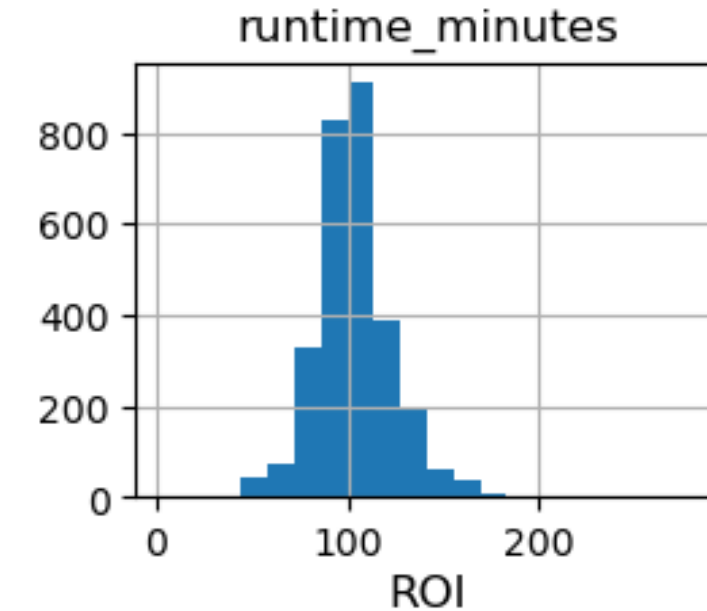
Studio



Analysis

- combined data from 5 different sources
 - Generated new performance metric, Return on Investment as dependent variable
 - Analyzed ROI against independent variables
 - Generated various plots to examine how these independent variables vary with ROI
 - Generated recommendations from the insights gained.
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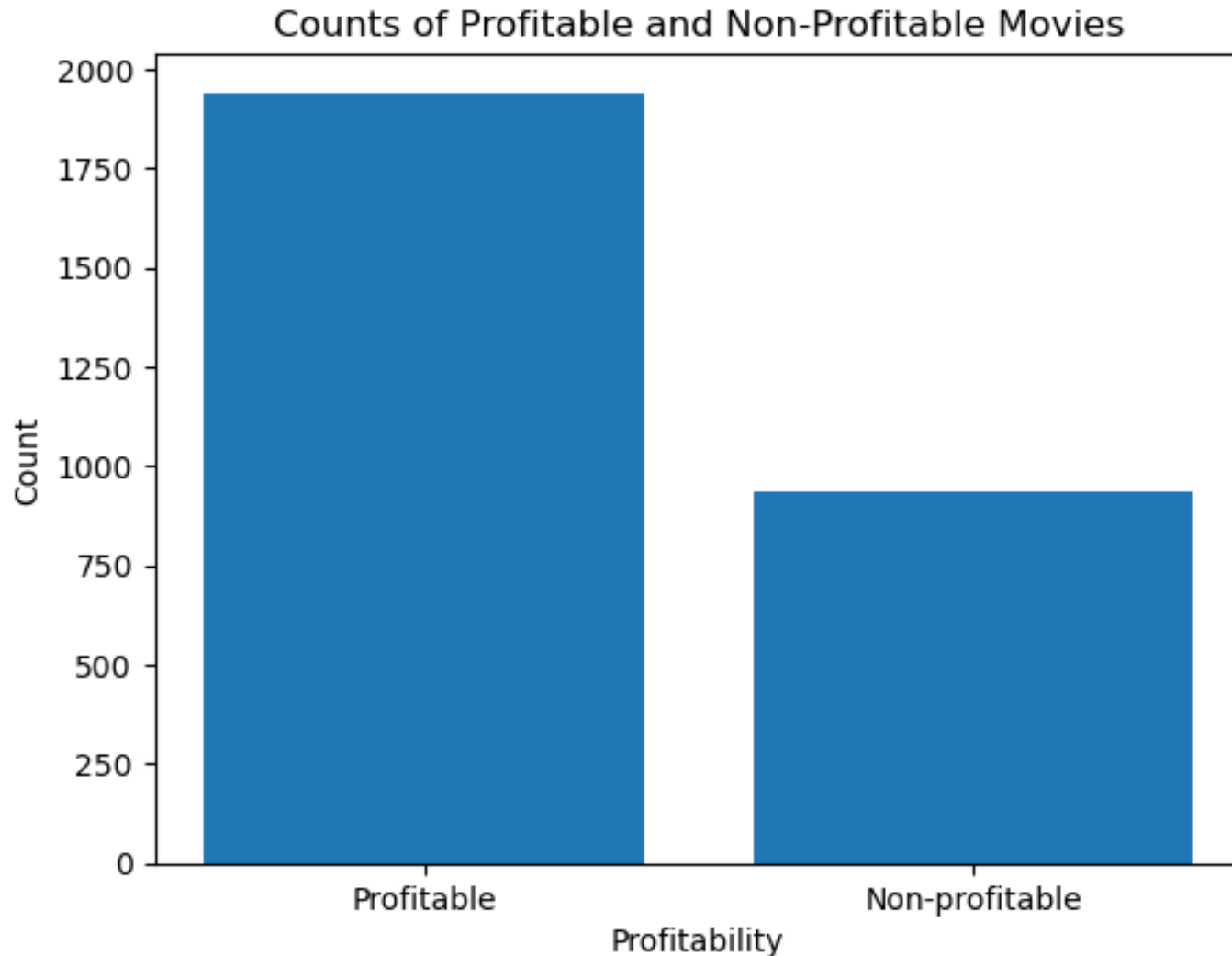
Visualize the distribution of runtime, ratings, and ROI using histograms



Results

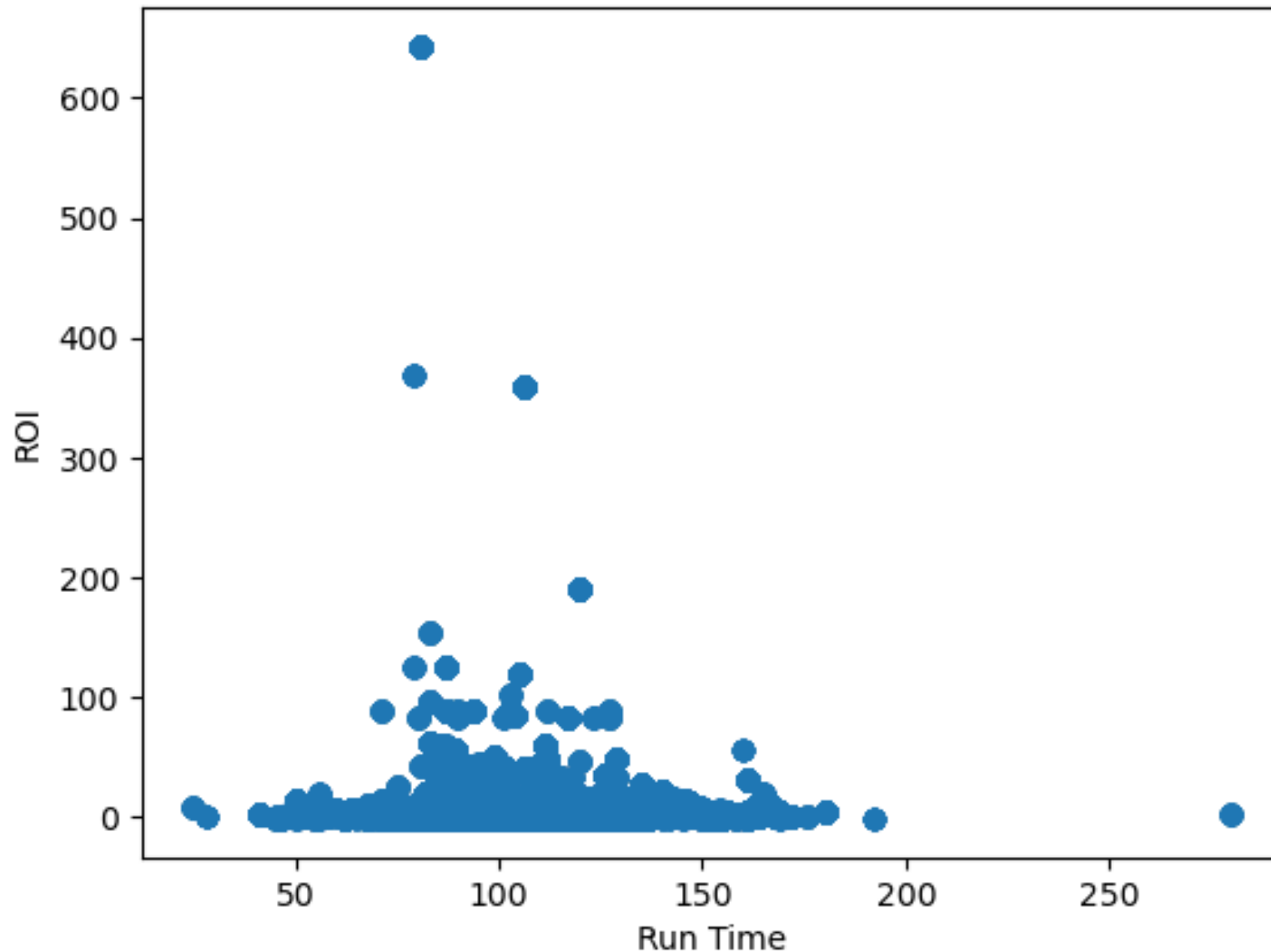


Is Movie Industry a profitable industry for investment?



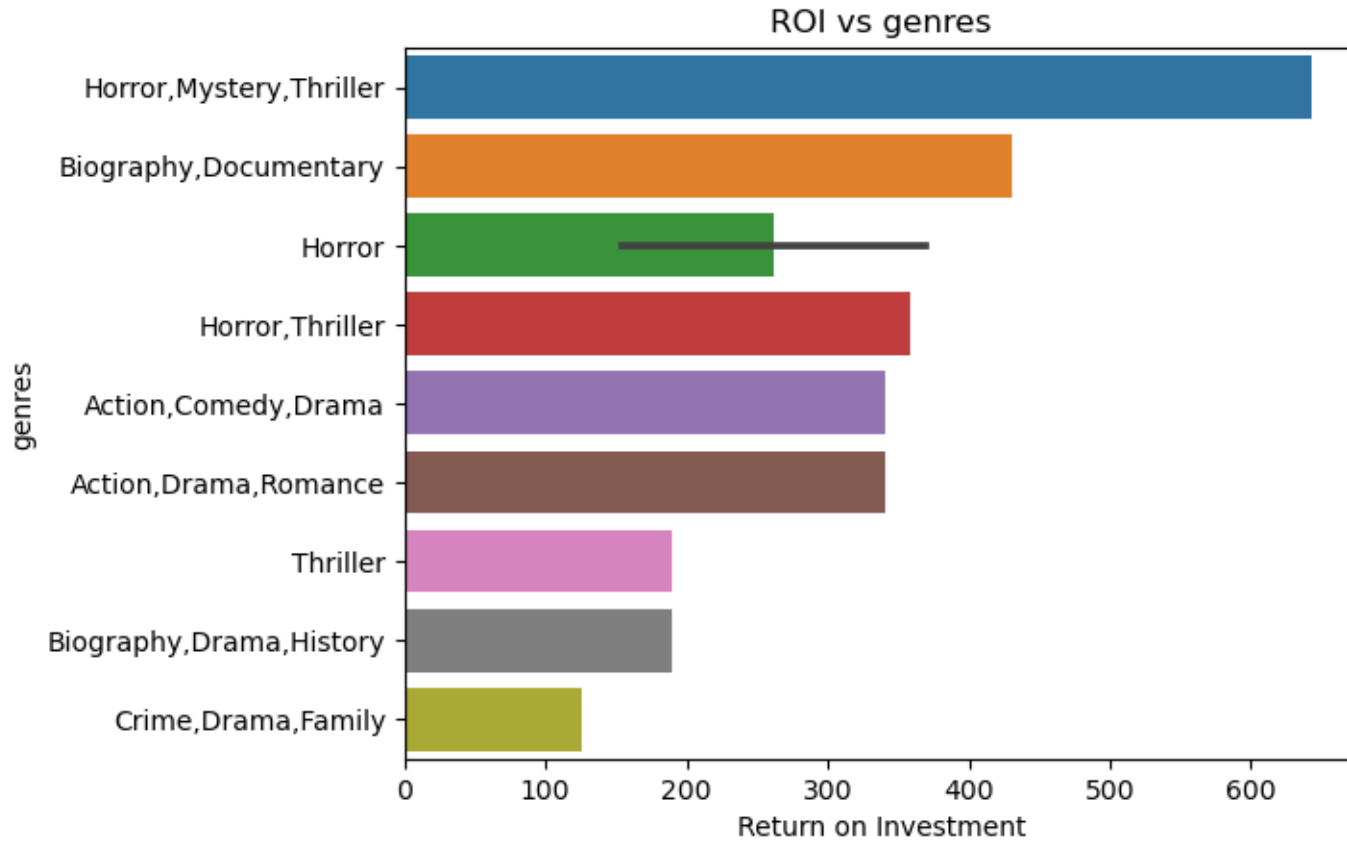
- Profitable & Non-Profitable Movies
- Most movies had a positive ROI meaning the industry is highly profitable.
- Among the more than 3000 movies analyzed, 65% of them had a positive ROI and hence this is an attractive industry for investment.

Runtime of Movies in Minutes Vs Return on Investment



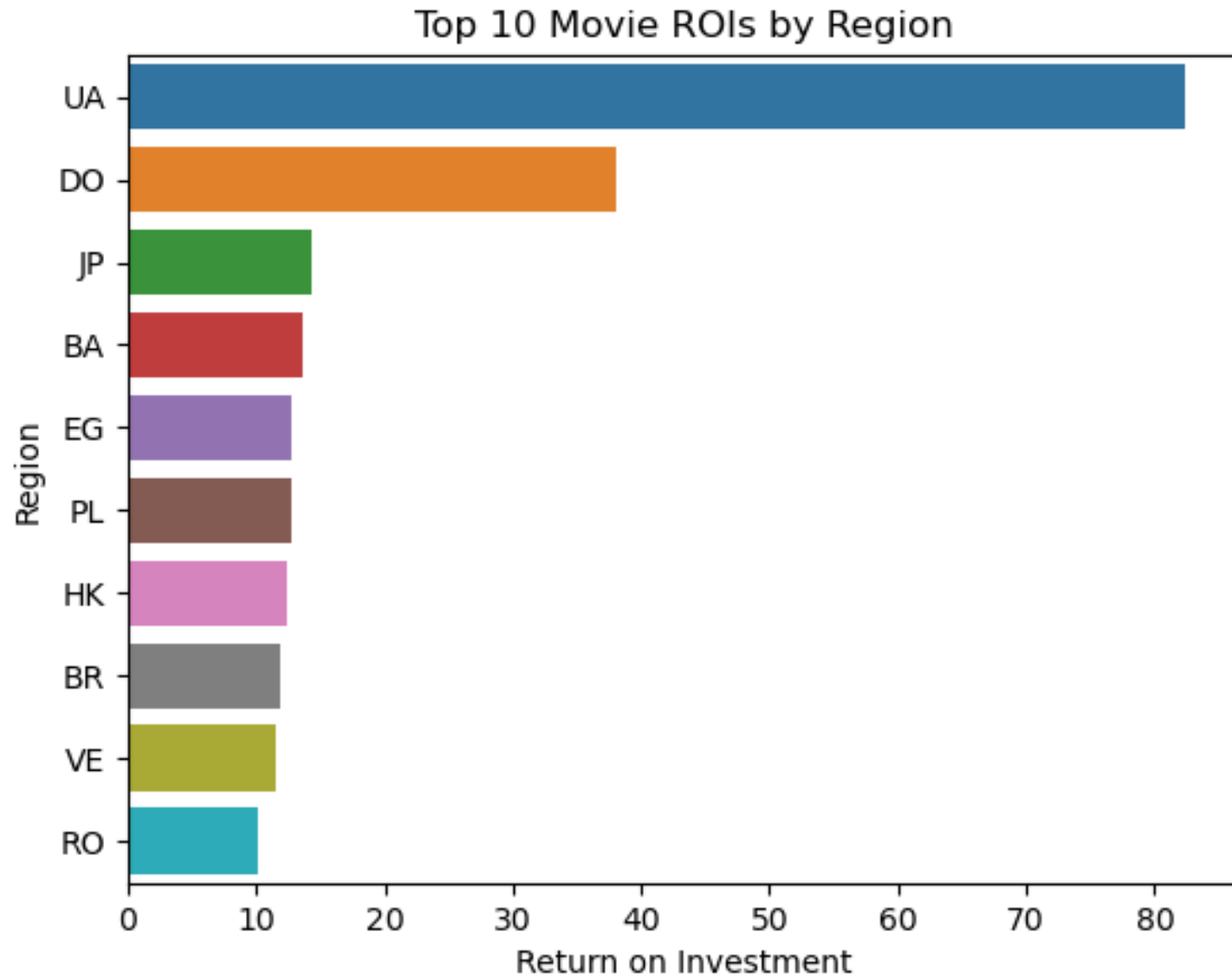
• Insights

- Bad performing Movies runtime < 80 min
- Short movies do not Perform well
- Long movies > 100 mins are bad performing i.e low ROI
- Optimal runtime is between 80 and 100 minutes

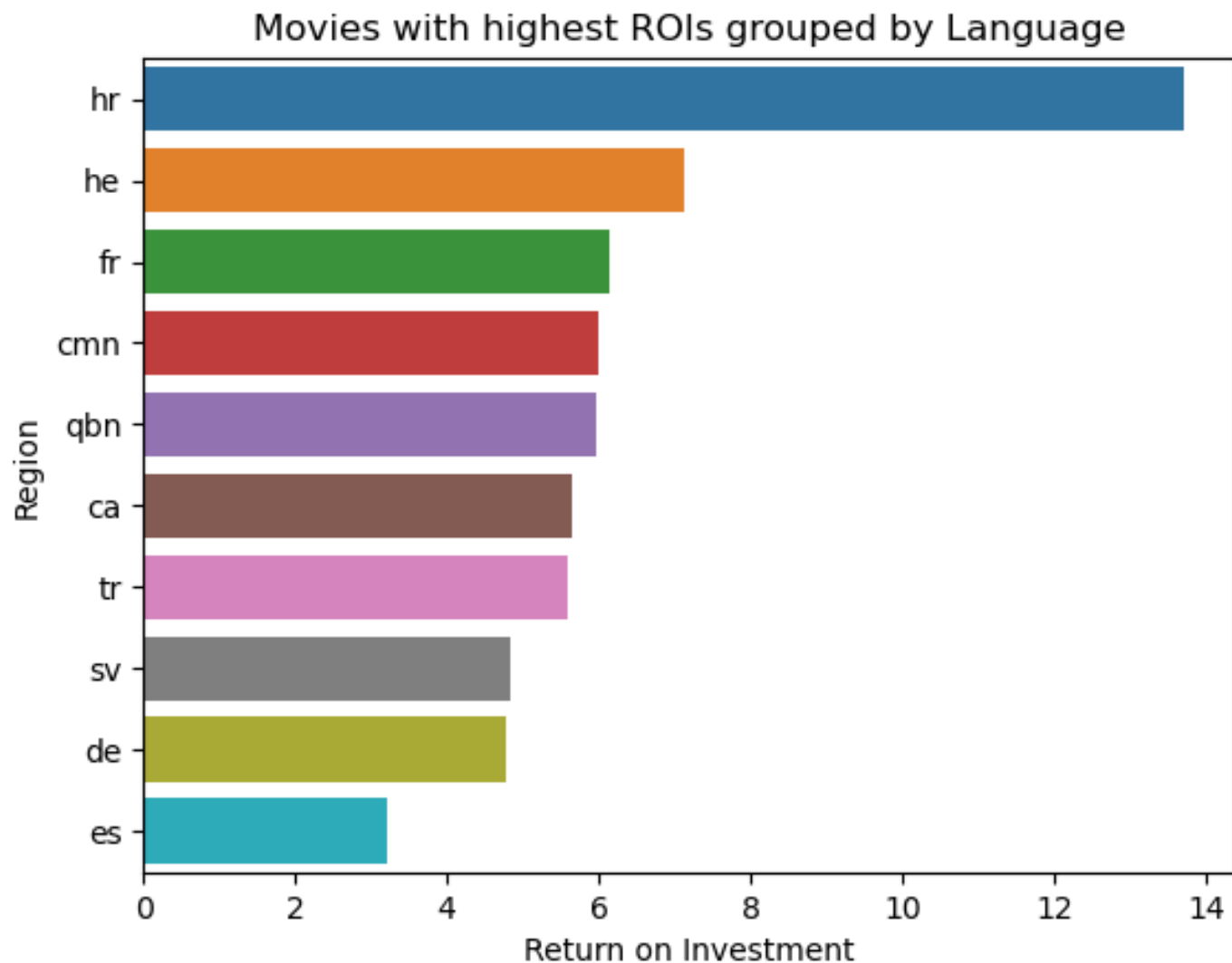


Insights

- **Horror, Mystery, Thriller Movies** best performing
- **Biography, Documentary** also highly preferred
- **Crime, Drama, Family** least preferred

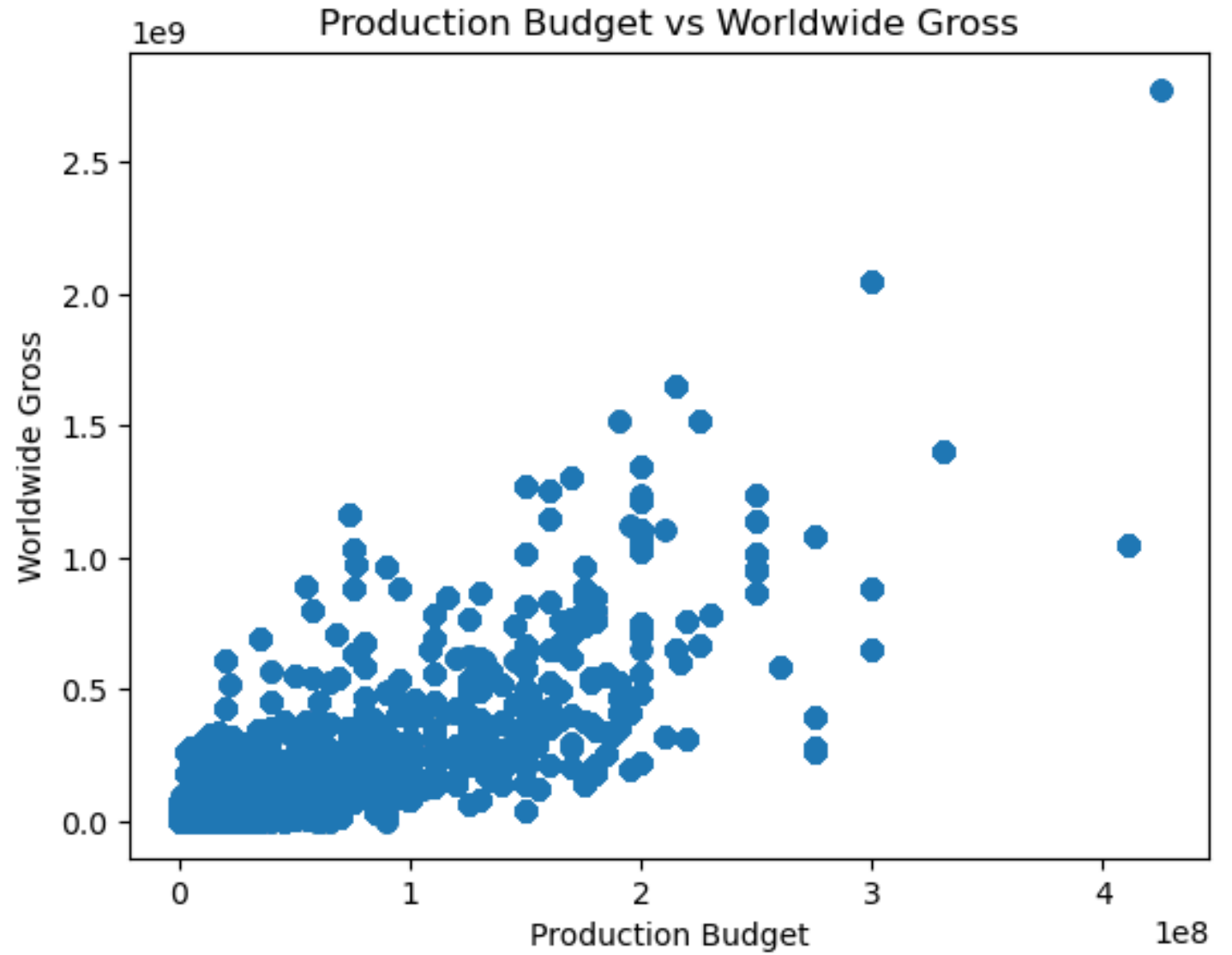


- Movies with highest ROI were ones produced in Ukraine , Dominican Republic and Japan



- Movies produced in Croatian, Hebrew and French had the highest ROIs

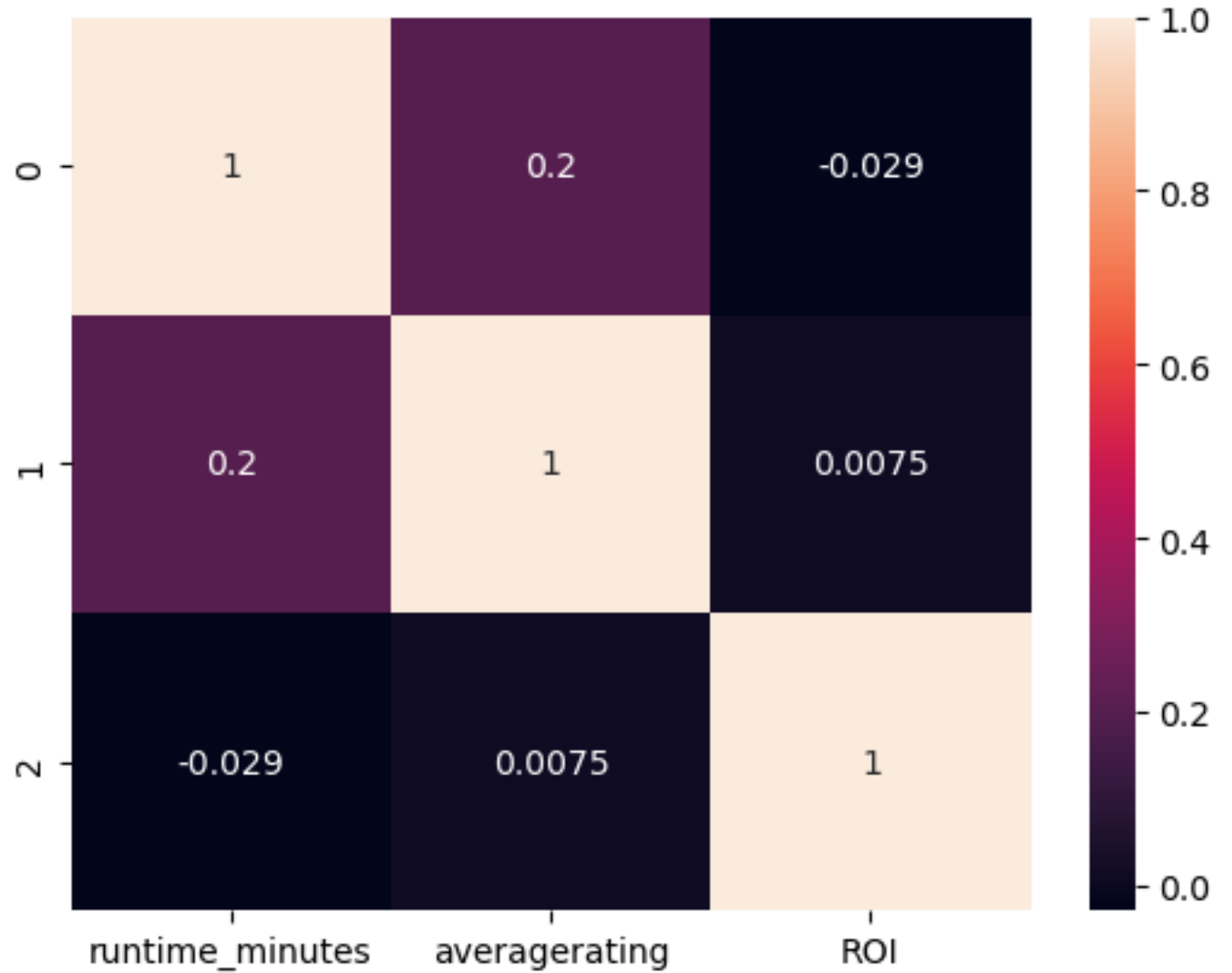
- Production Budget vs Worldwide Gross have strong positive correlation.
- High production budget > High worldwide gross



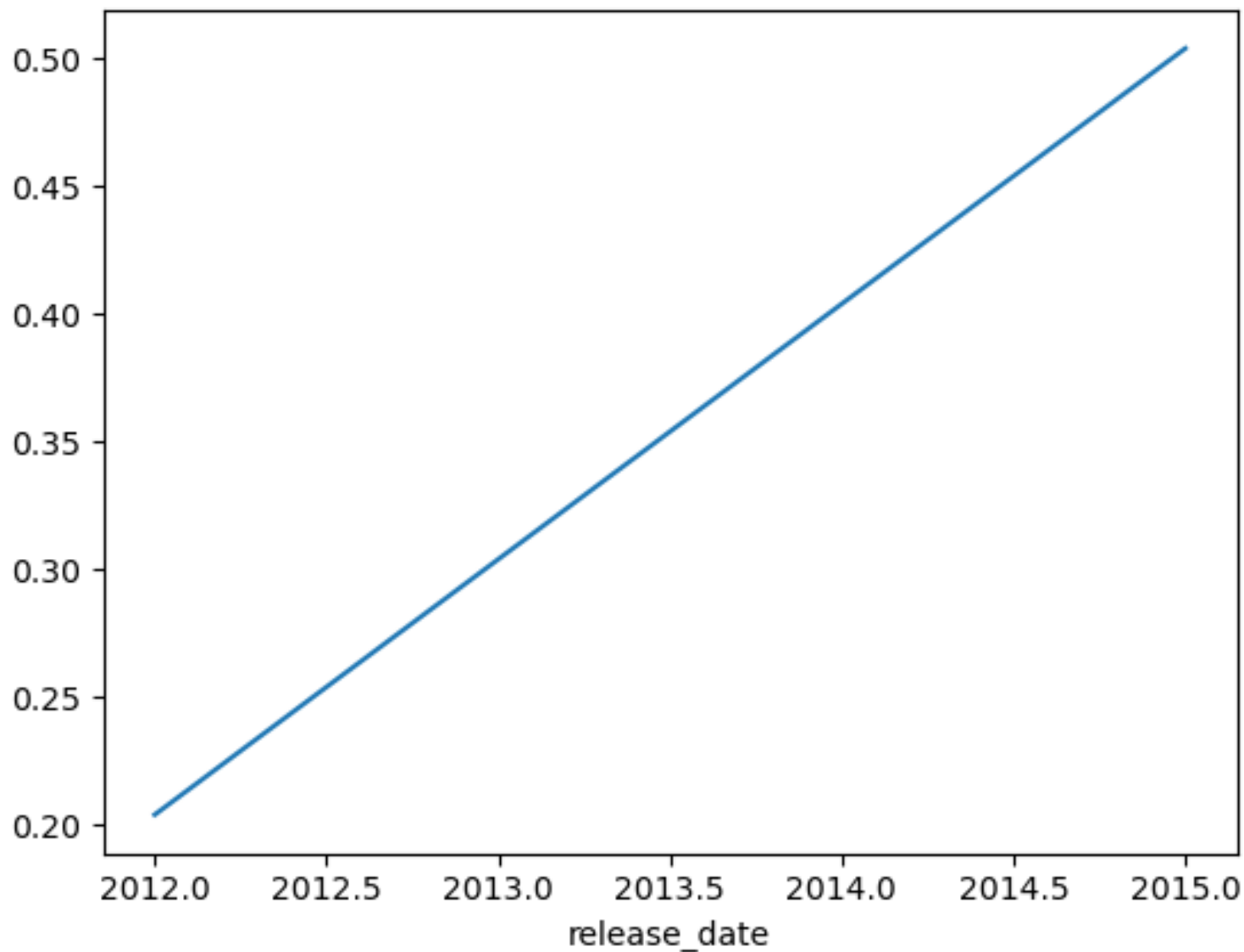
Correlation between variables

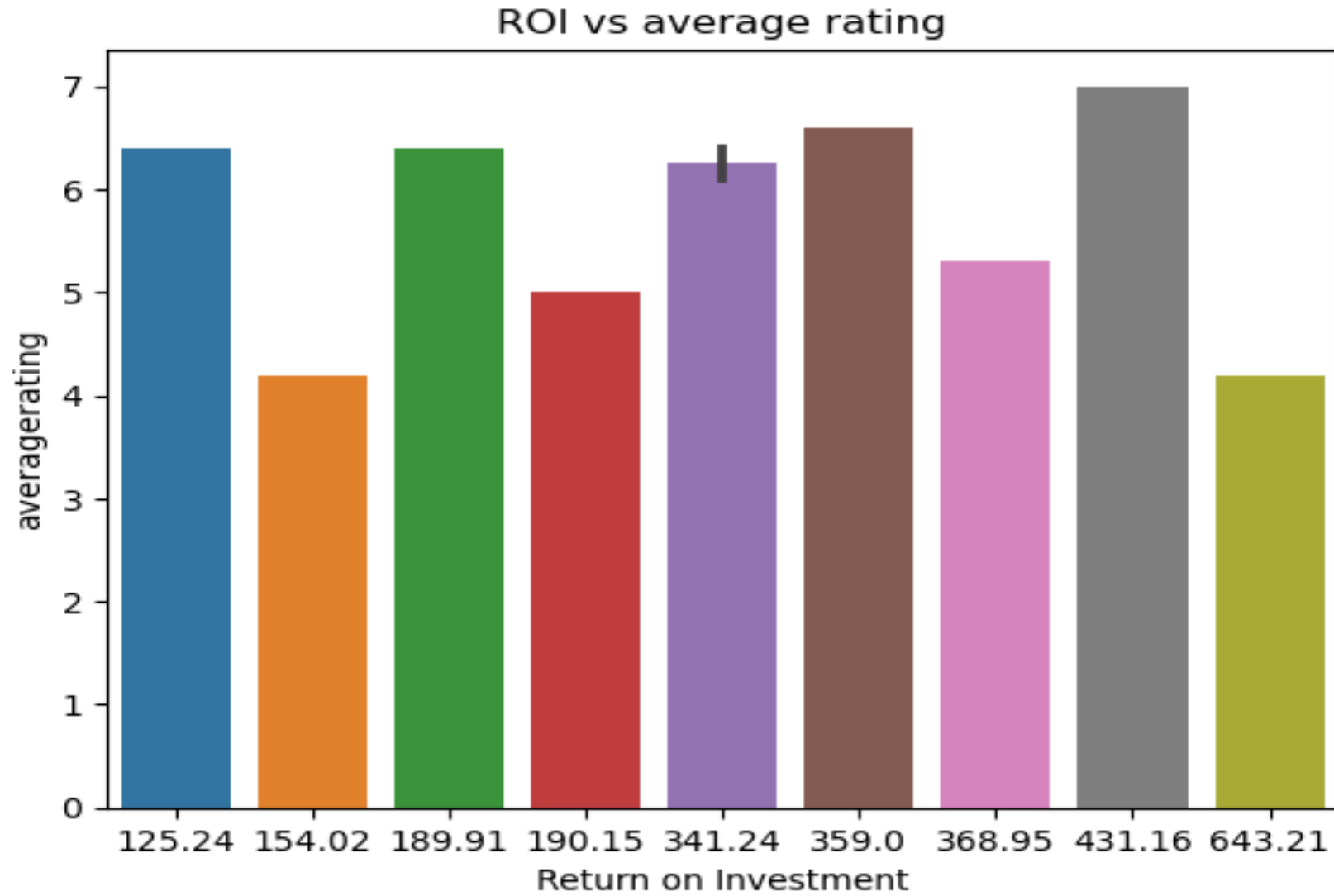
	runtime_minutes	averagerating	ROI
runtime_minutes	1.000000	0.203768	-0.028707
averagerating	0.203768	1.000000	0.007536
ROI	-0.028707	0.007536	1.000000

The darker shades indicate higher correlation values, while the lighter shades indicate lower correlation values

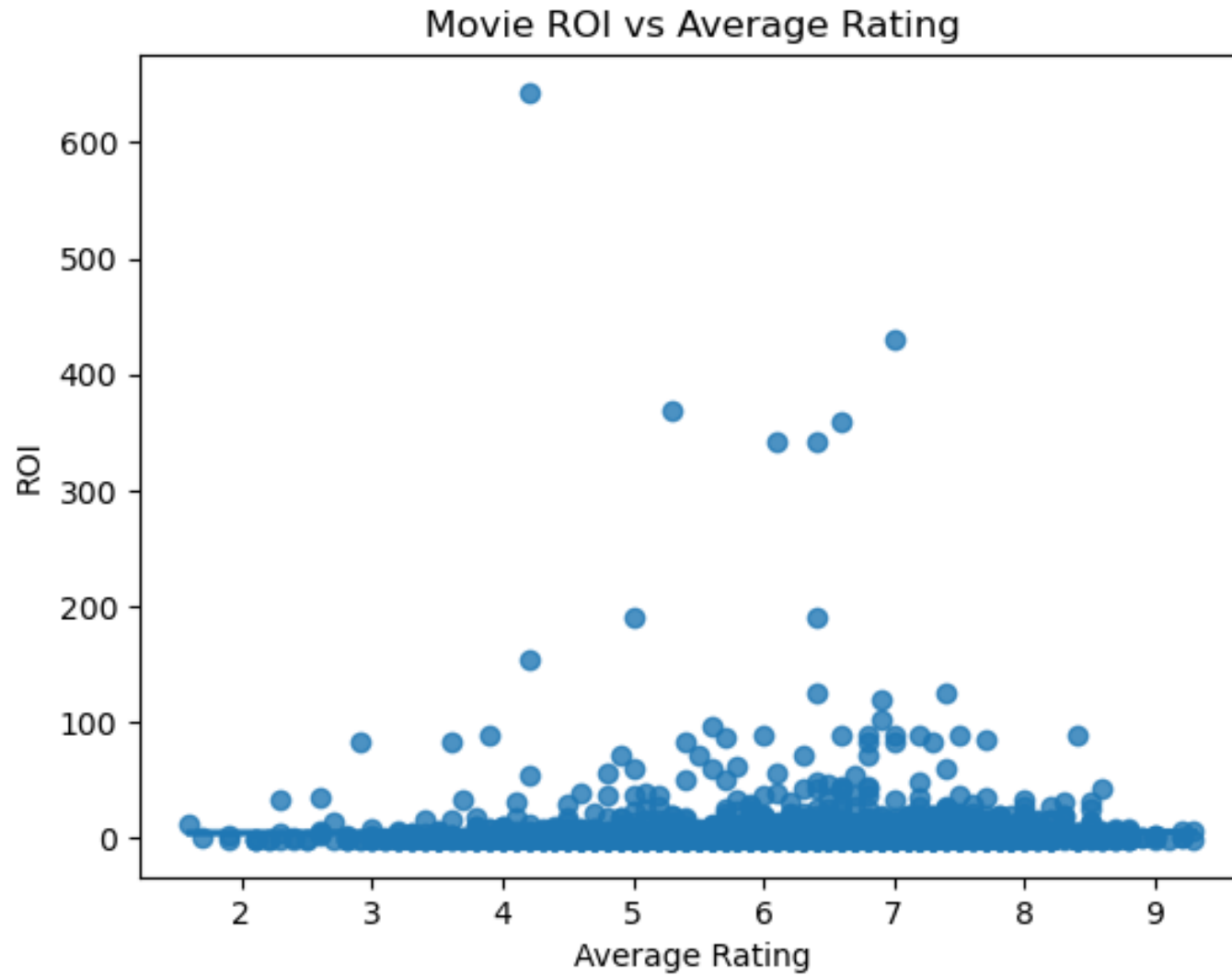


Movie Average Rating Over time



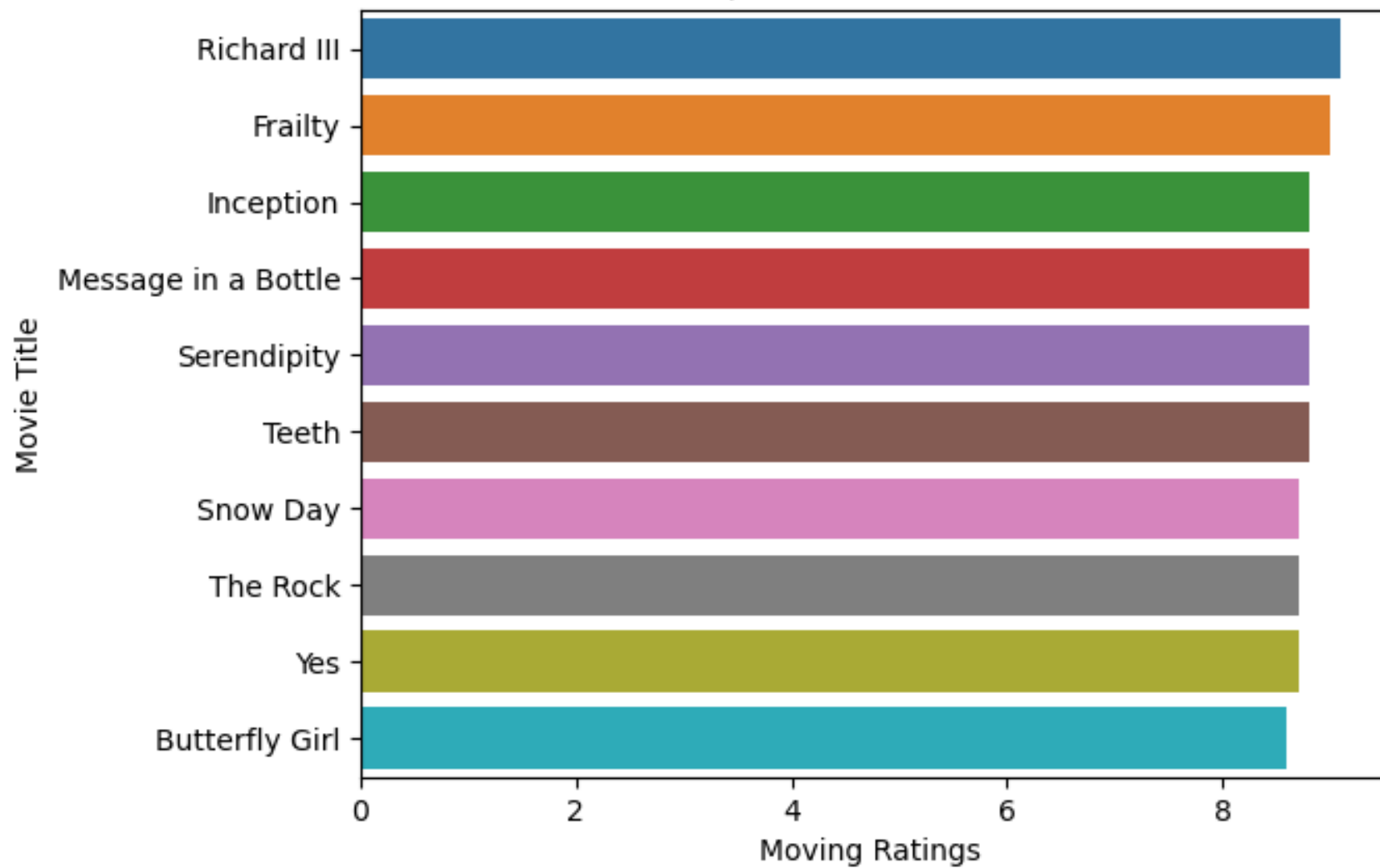


- Highly rated movies > 5 perform better
- Rating below implies low ROI

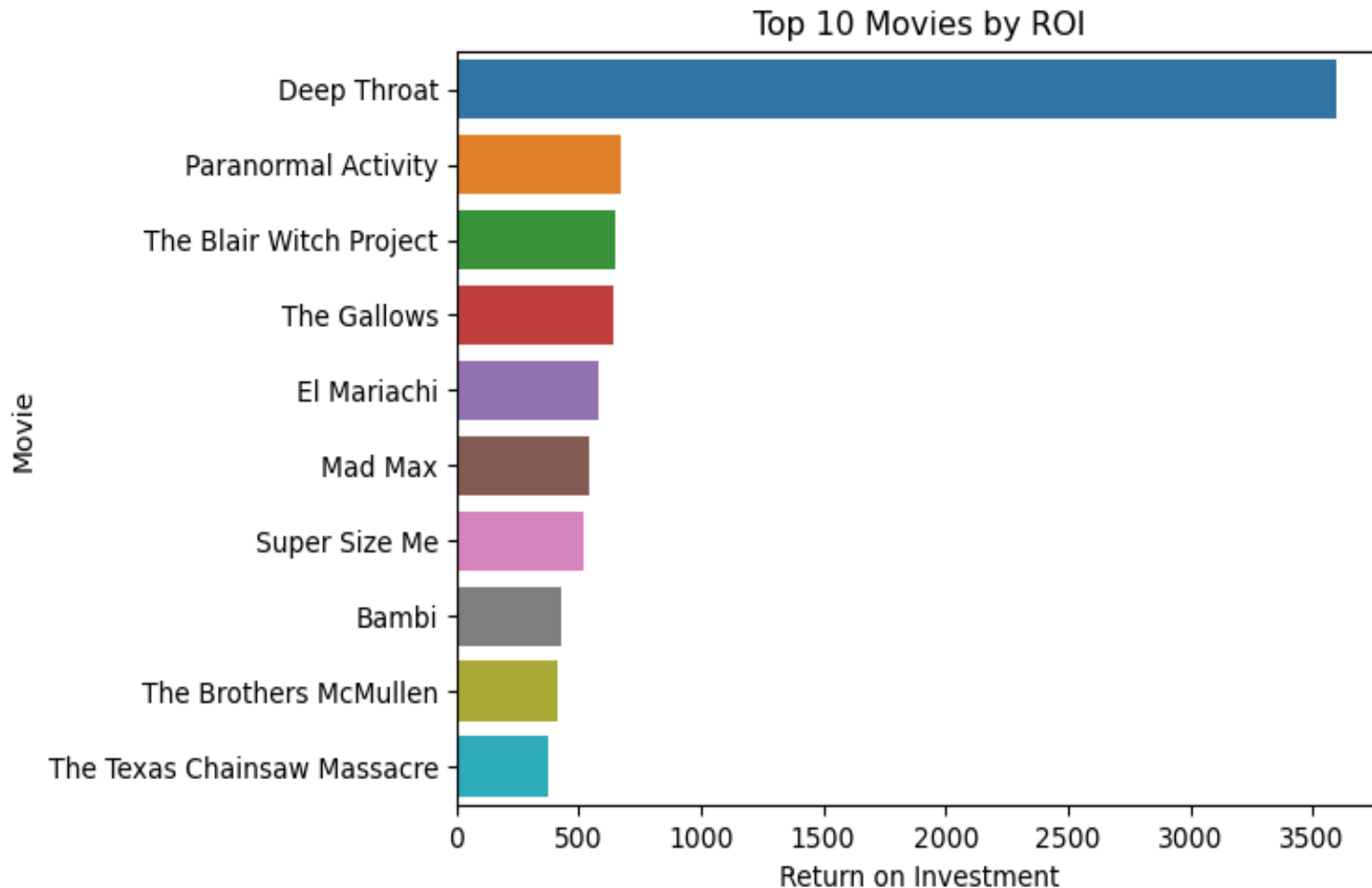


No strong
correlation
between
average rating
and ROI

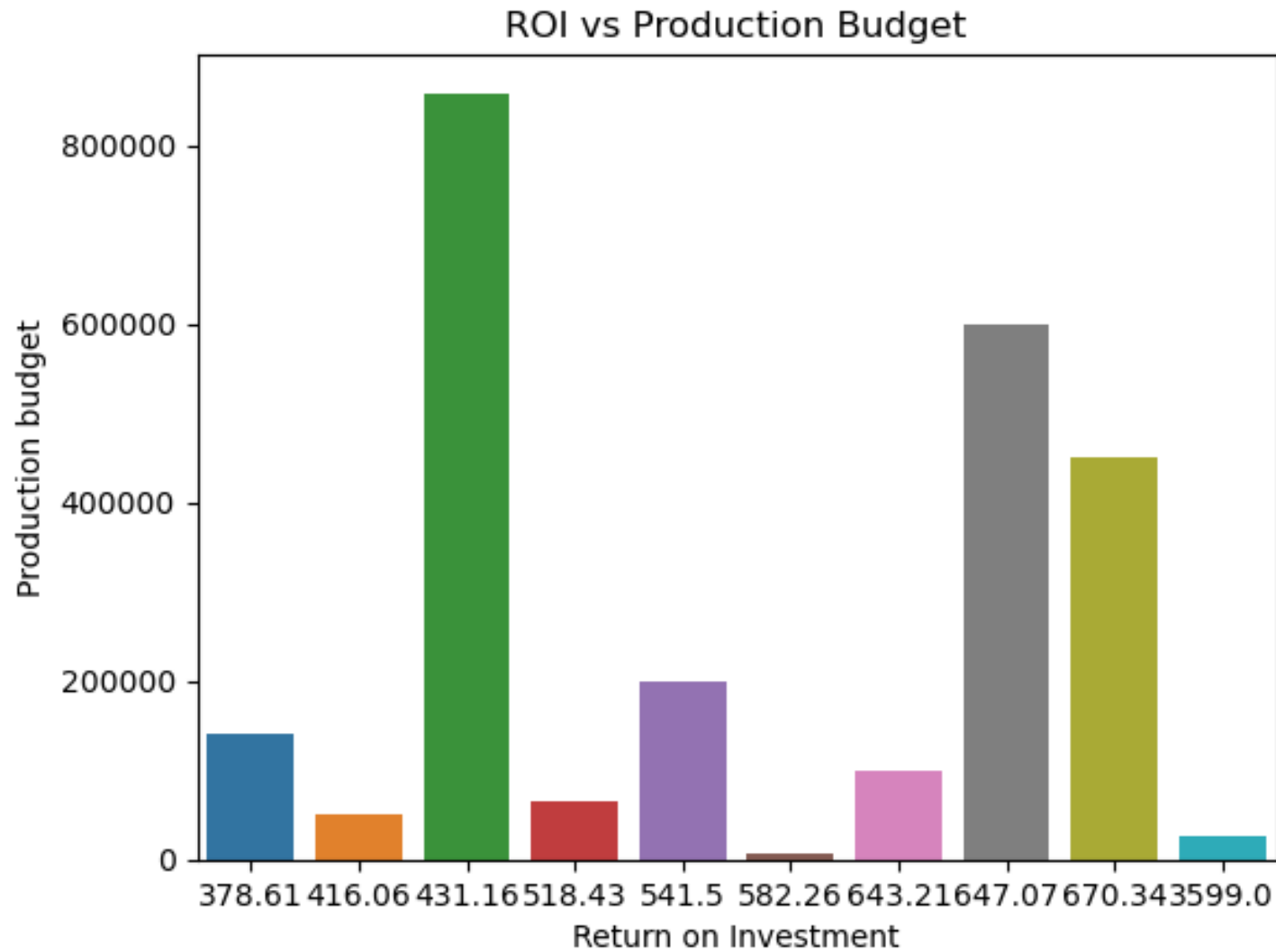
Top 10 Rated Movies



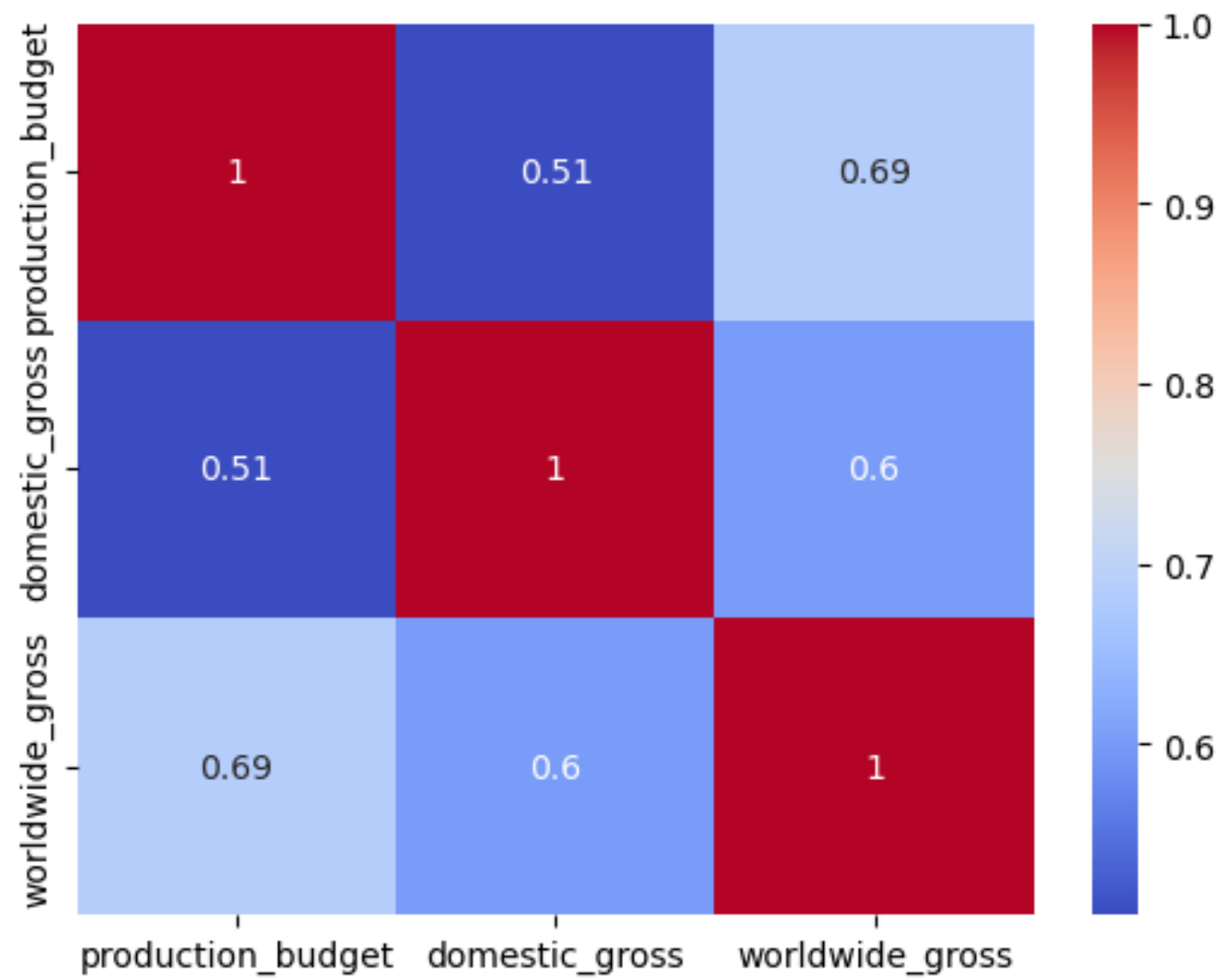
Top 10 Movies by ROI

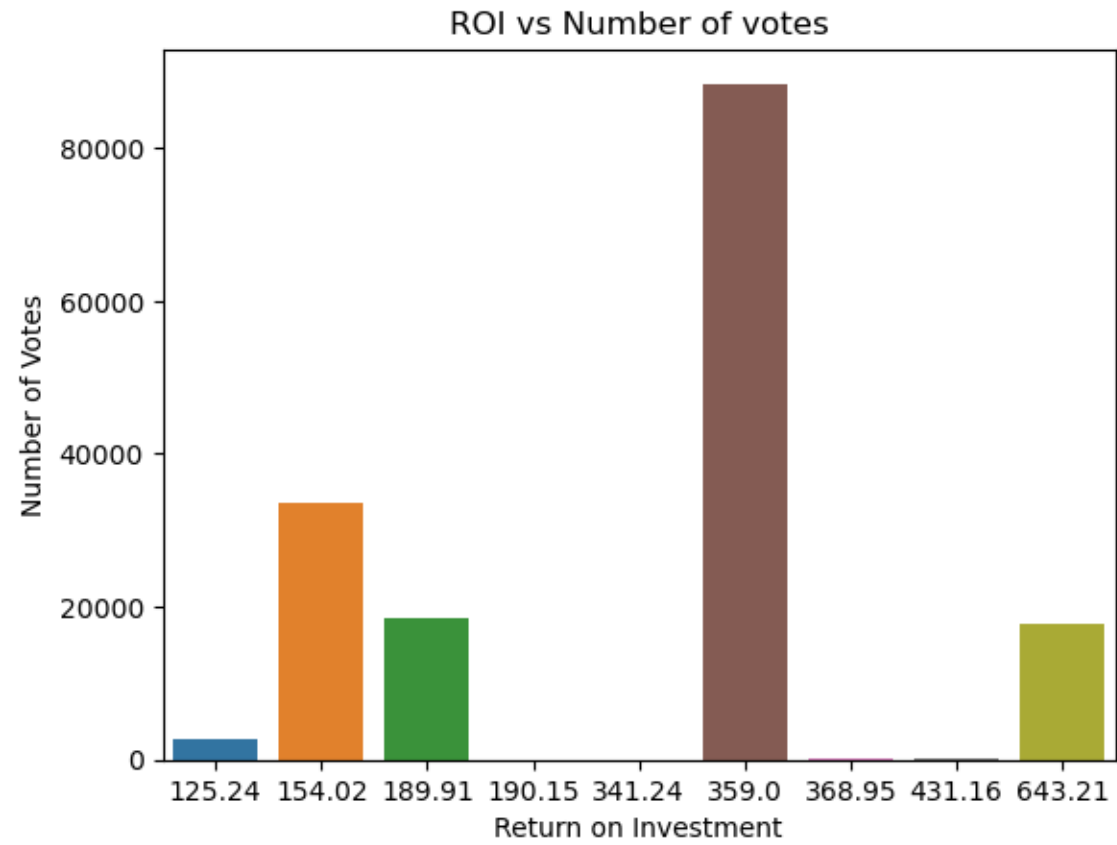


- **Insights**
- **Deep Throat is best Performing Movie followed by Paranormal Activity**
- **The Texas chainsaw Massacre closes list of top 10 movies**
- **Deep Throat outperforms the rest by more than 7 times, implying it had low budget but huge gross**



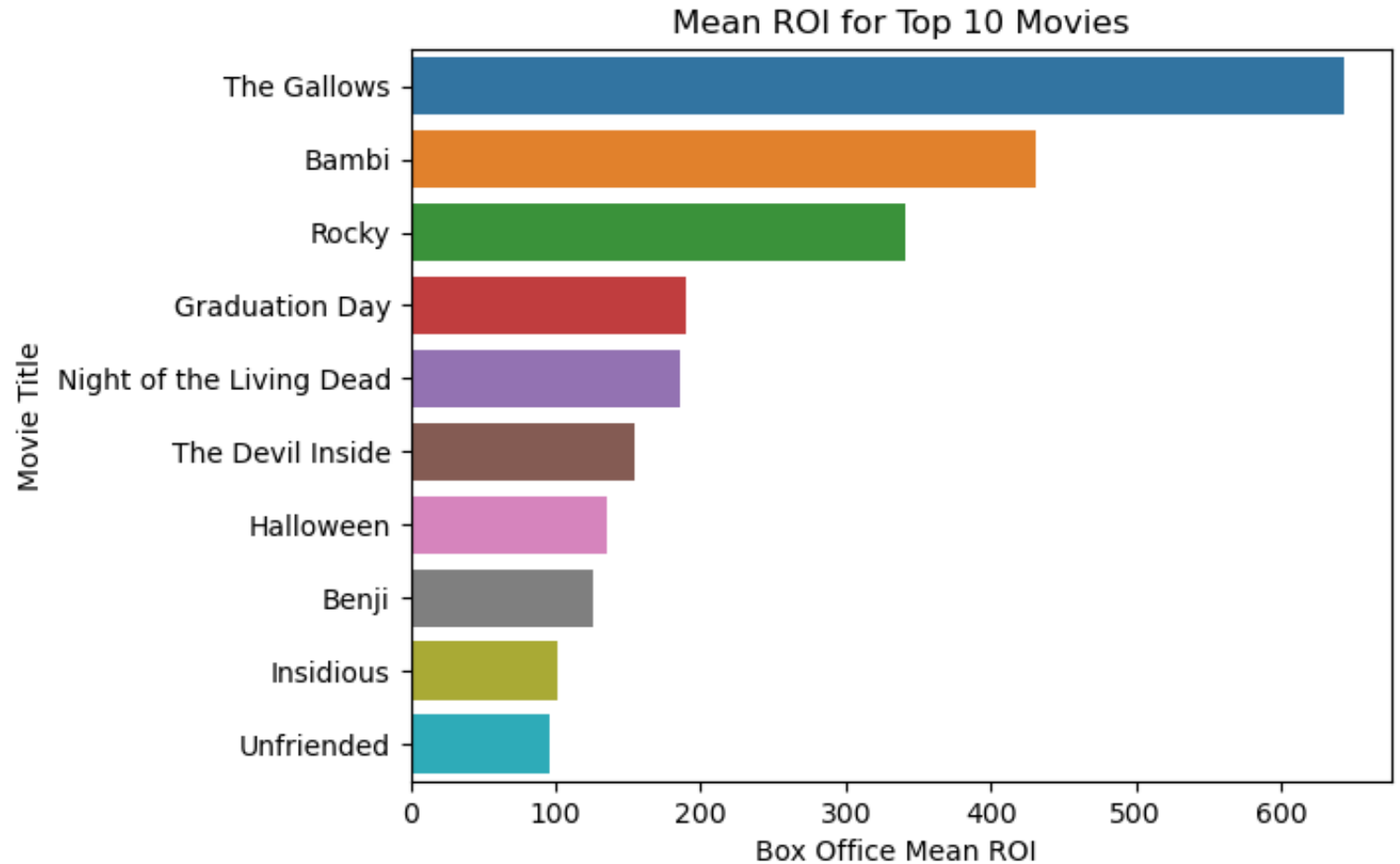
- ROI vs Production budget for top 10 movies



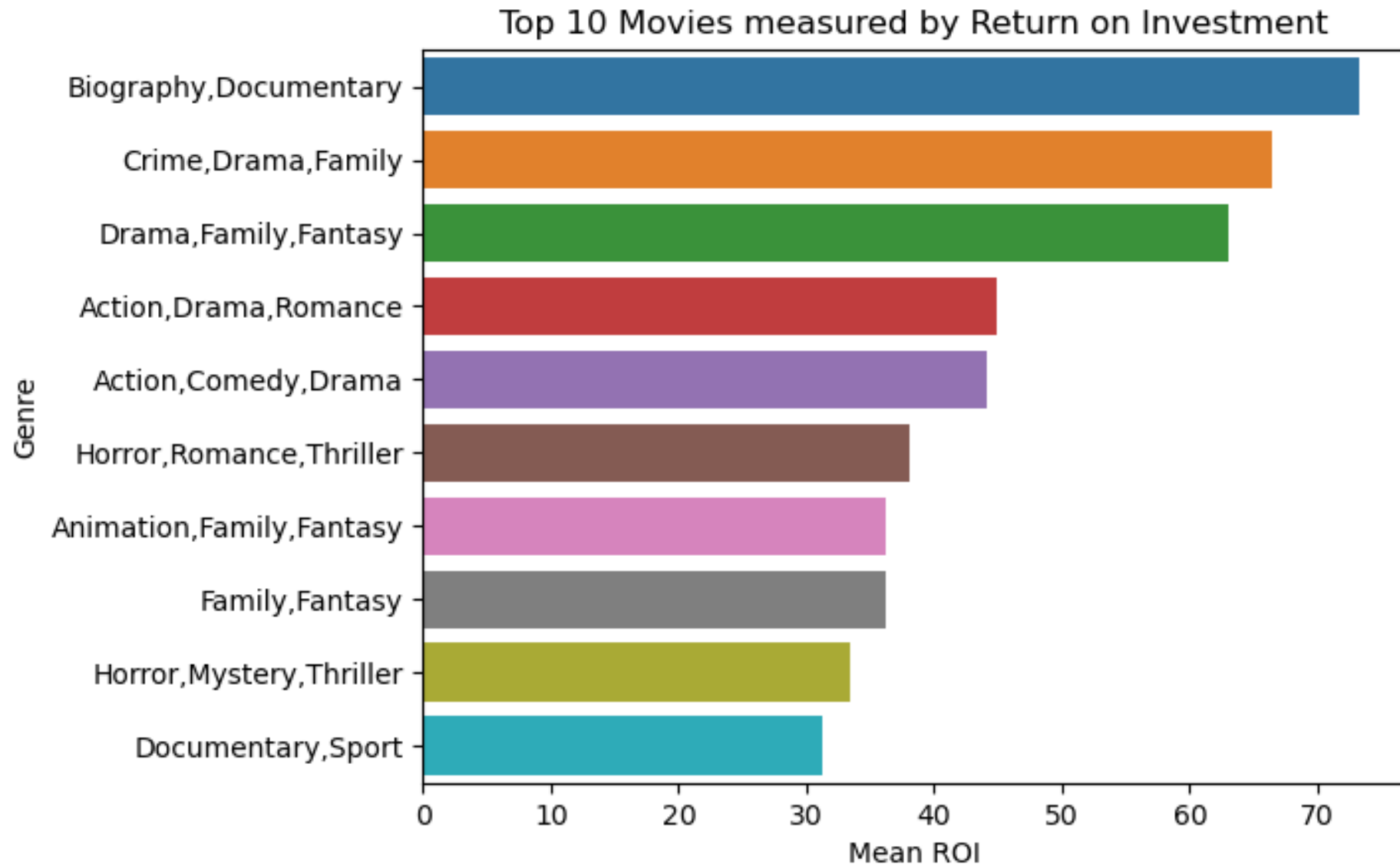


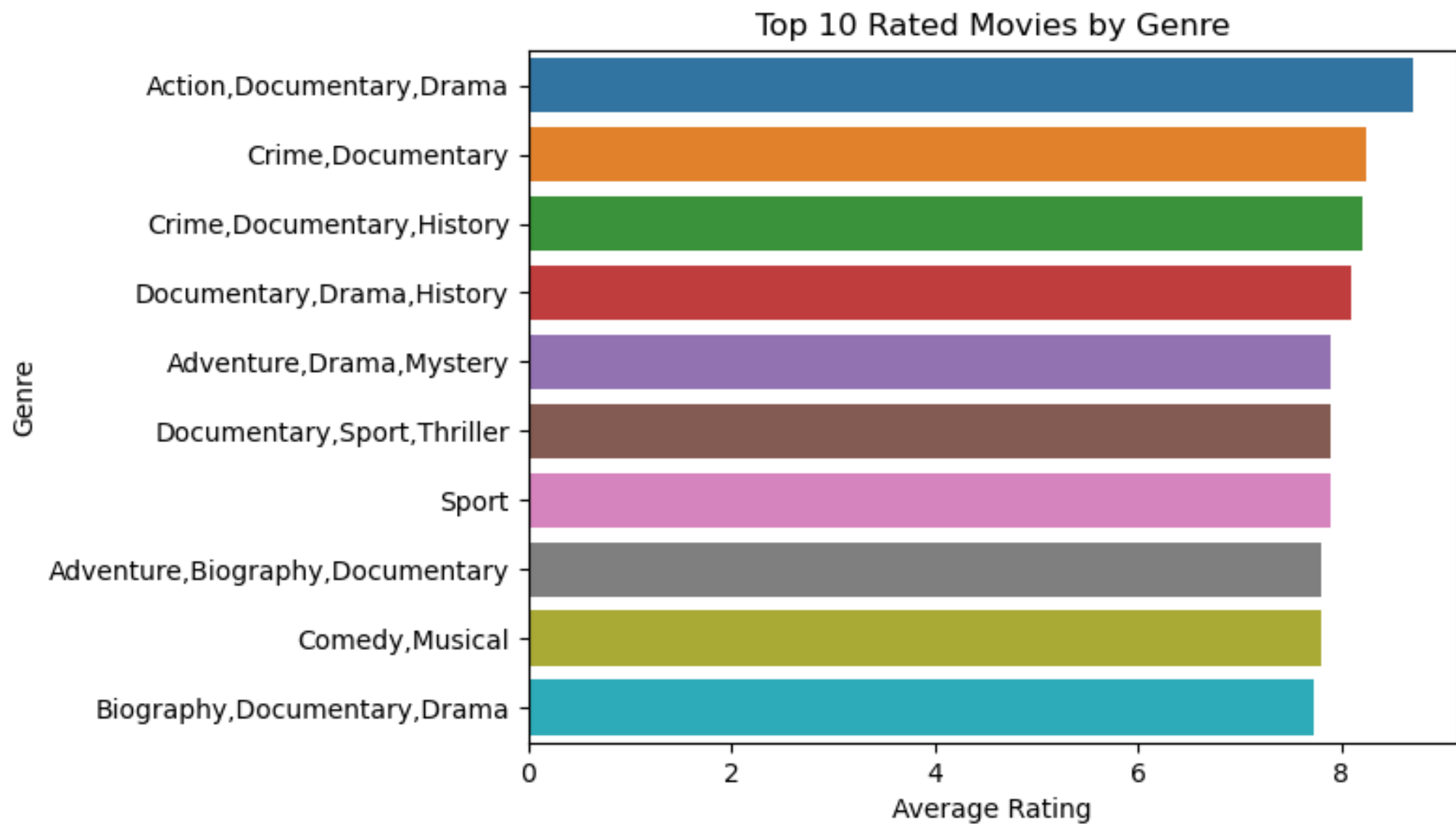
- **Movies with high number of votes**
- **Have high ROI**

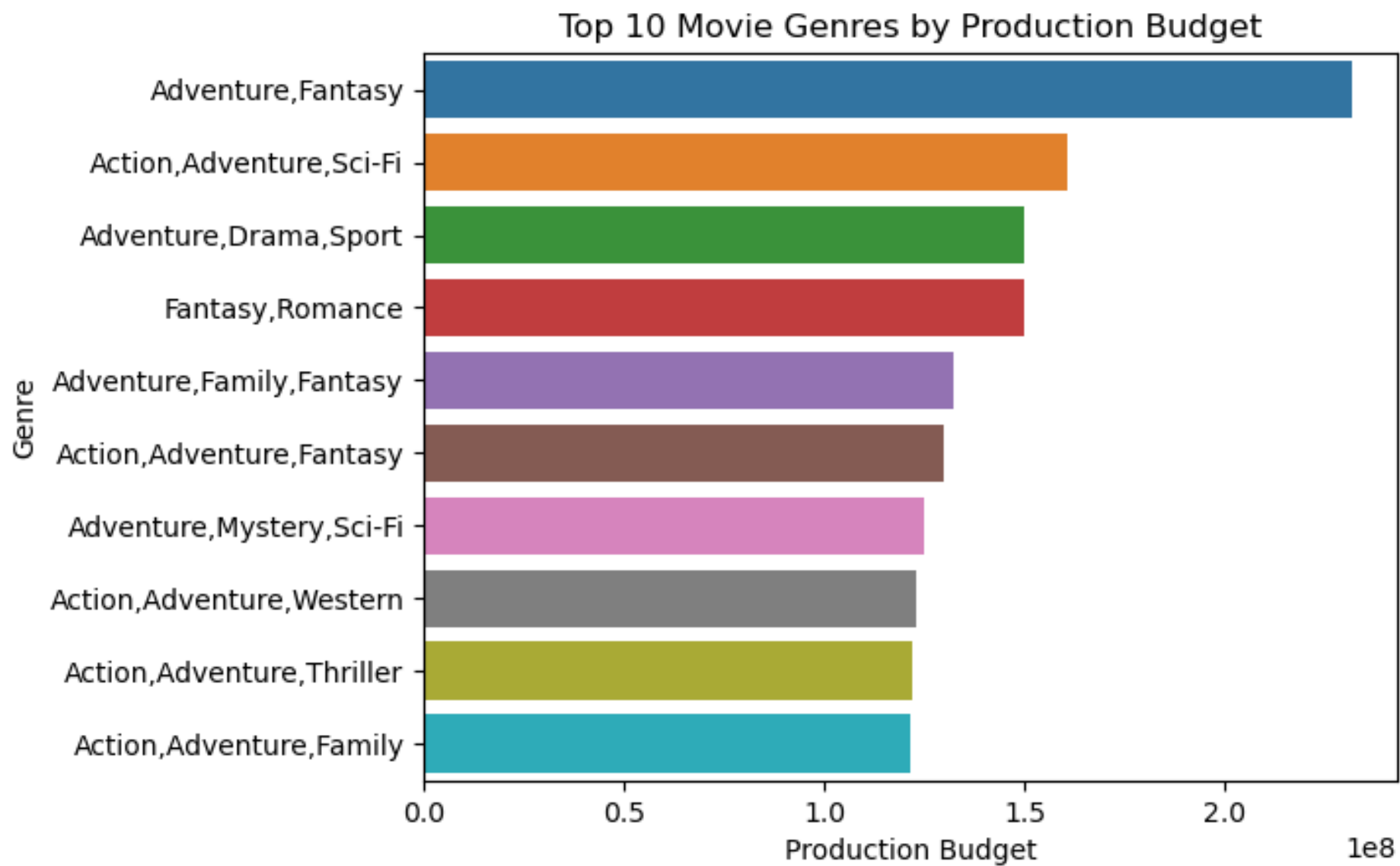
The Gallows"
has the highest
earnings by far,
followed by
"Bambi" and
"Rocky".



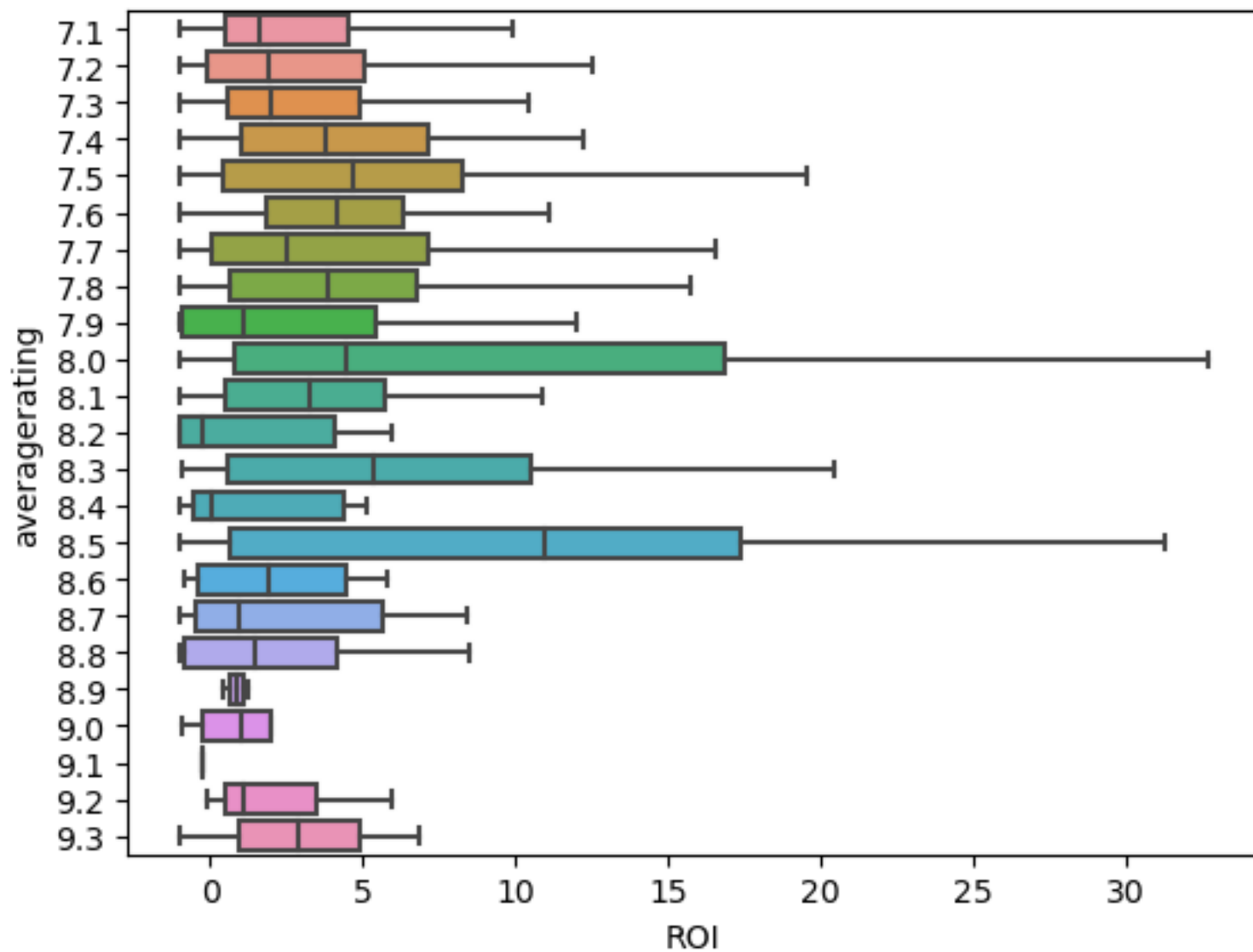
Movie Genre vs Mean ROI



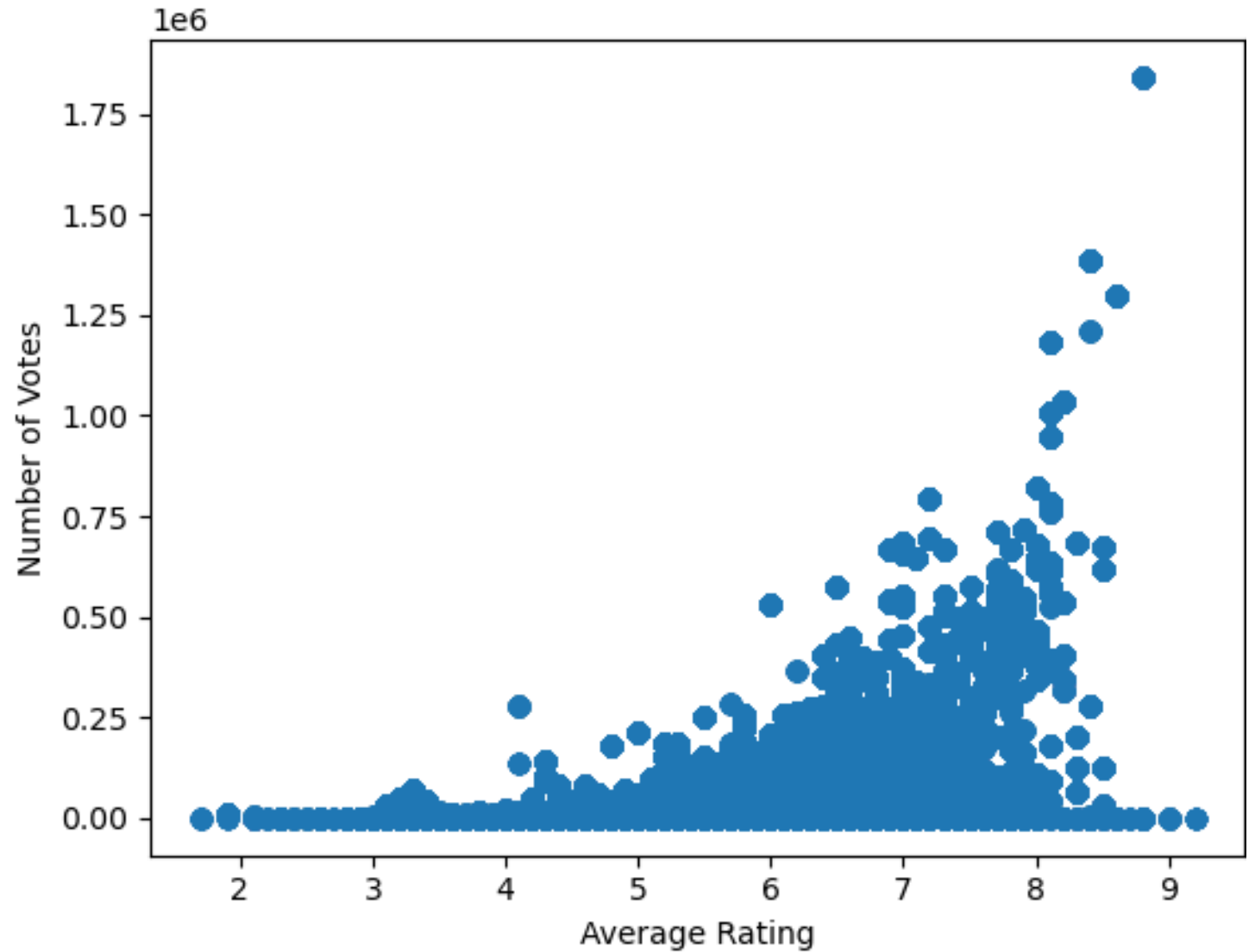


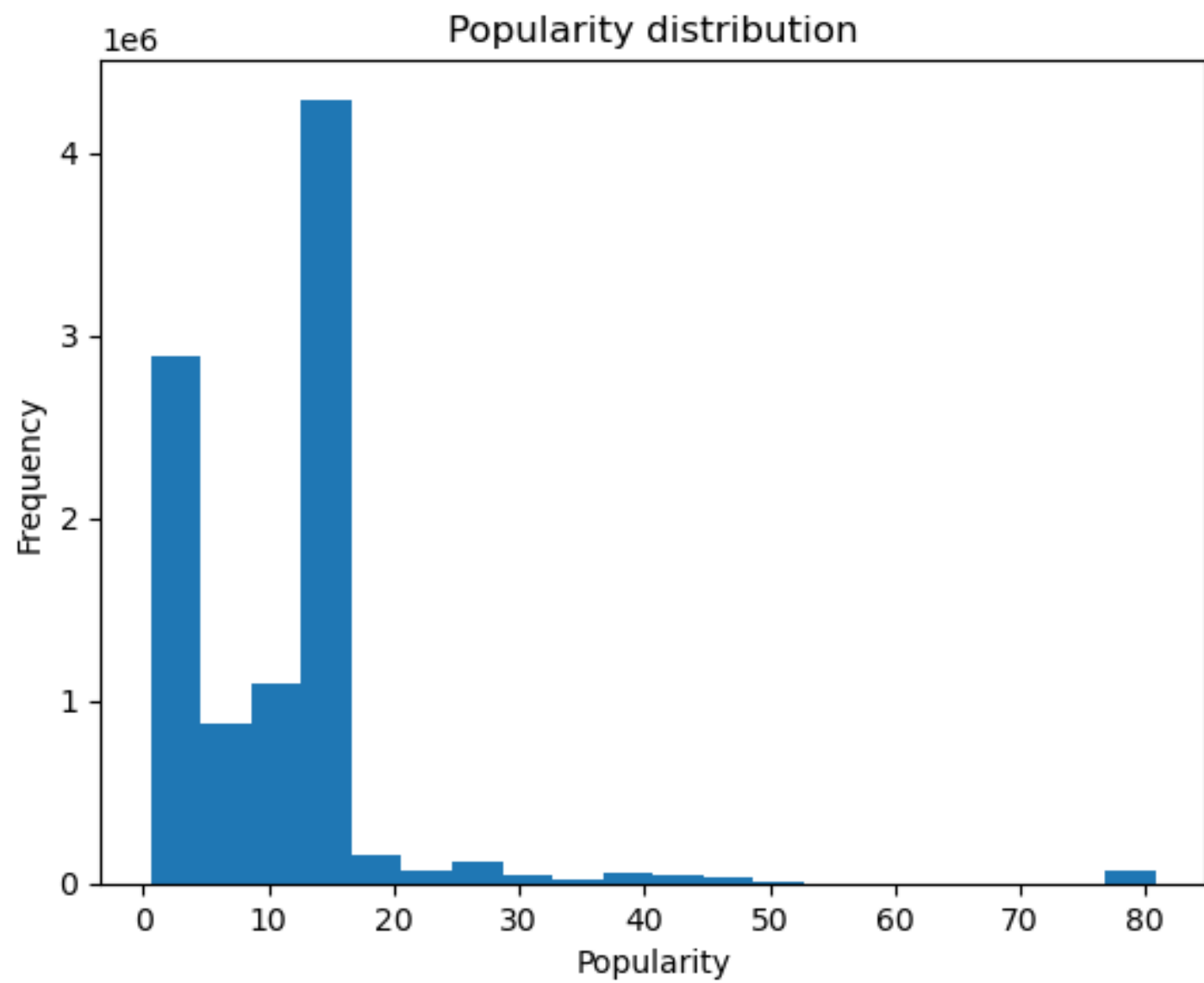


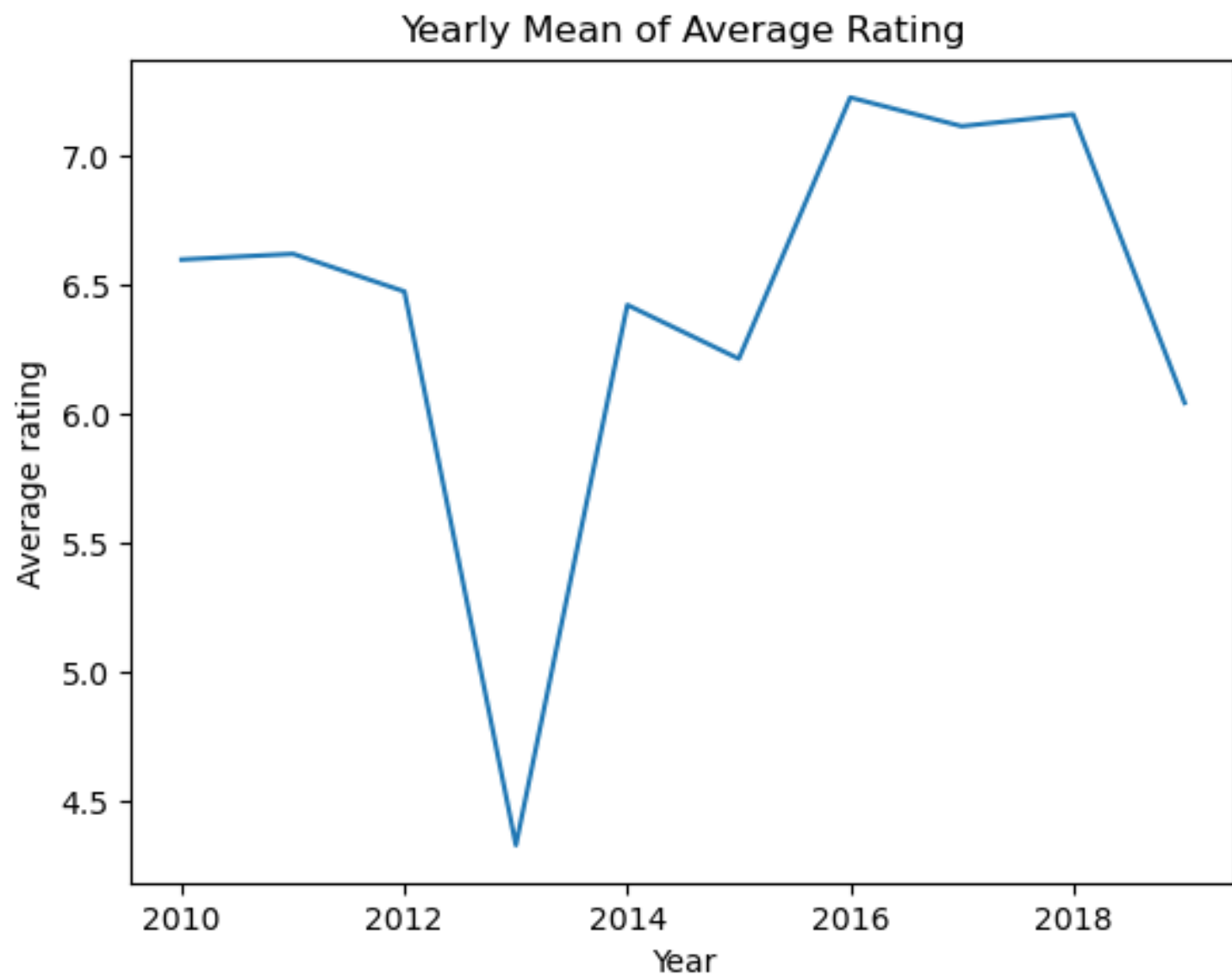
Highly Rated Movies Box Plot



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- Correlation coefficient between numvotes and averagerating: 0.5124943038145994
 - Average rating influences the number of votes





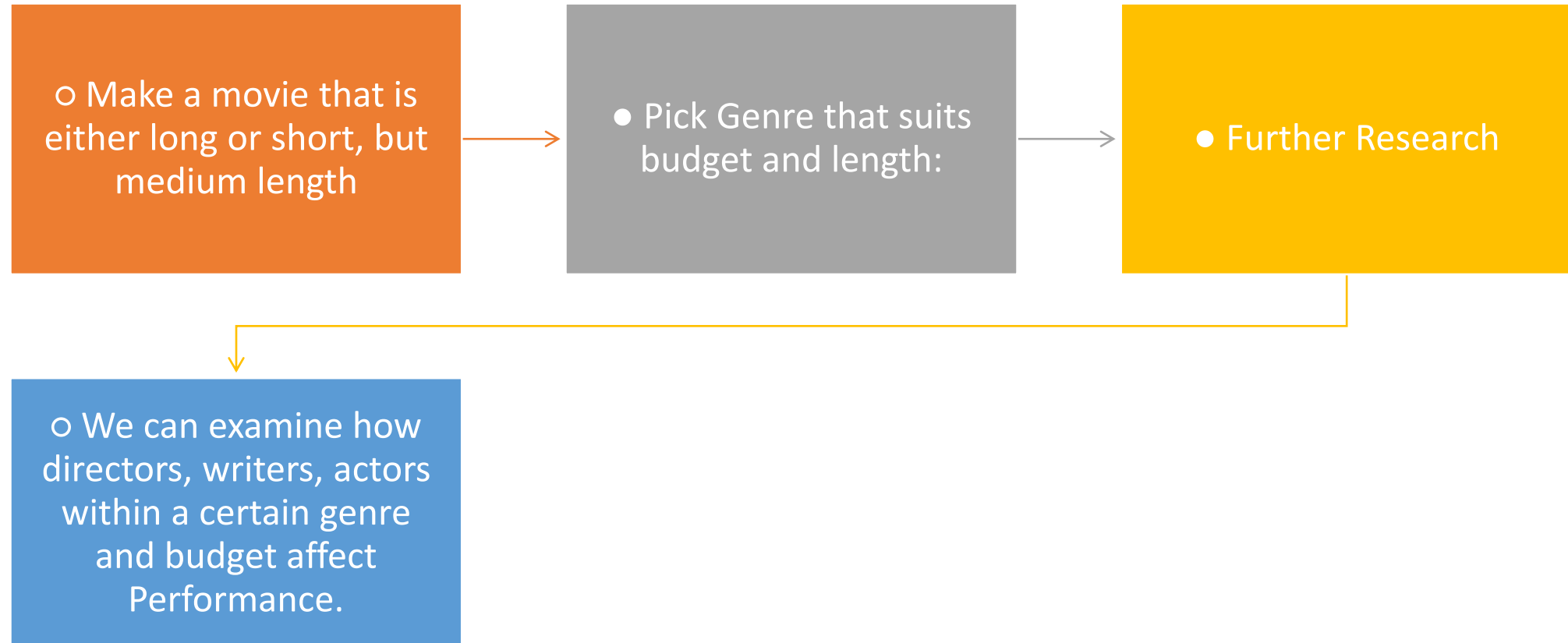


Recommendations

Analyzed: runtime, genre, TMDB average vote, language, region

- ❖ Runtime between 80 and 100 minutes.
- ❖ Genre: Horror, Mystery, Thriller , Biography or Documentaries
- ❖ Best ROI by Region:
Ukraine , Dominican Republic and Japan
- ❖ Best ROI by Language: Croatian, Hebrew and French
- ❖ Profitability: Most Movies were profitable hence highly attractive industry.

conclusions



Thank you

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MOVIE FUN

THANK YOU

MICROSOFT NEW MOVIE STUDIO

A large, empty movie theater with rows of red seats and a dark carpet, viewed from the back of the auditorium looking towards the stage. The seats are arranged in a wide aisle, and the stage is visible in the distance. The overall atmosphere is dark and cinematic.