



Exploratory Data  
Analysis for

**NCW MOVIE  
STUDIO**



# THE GOAL

-  Understand the factors driving financial and audience success in films.
-  Equip the movie studio with actionable recommendations to guide their production strategy.

# **Business Problem**

## **WHY IT MATTERS**

**The company is entering a competitive content production landscape. Strategic decisions are needed to ensure profitability in a crowded marketplace.**

# HOW WE ANALYZED THE DATA

- Merged insights from Box Office Mojo, IMDb, and other key sources.
- Examined key metrics: ROI, revenue distribution, ratings, production budgets, and release timing.

# What the data reveals

## Domestic vs. International Revenue

- Movies like Avatar: The Way of Water perform exceptionally well internationally, while others thrive domestically.
- International audiences contribute significantly to overall success.

## Production Budget Impact

- Larger budgets correlate positively with worldwide gross (correlation = 0.78).
- No strong relationship between larger budgets and ROI (correlation = -0.05).

## Genre ROI Trends

- Genres like crime, drama, family and horror/mystery/thriller yield the highest ROI.
- Action-comedy combinations show lower profitability.

## Ratings Influence

- Higher IMDb ratings positively influence revenue but do not guarantee ROI.



# FILM SUCCESS ANALYSIS

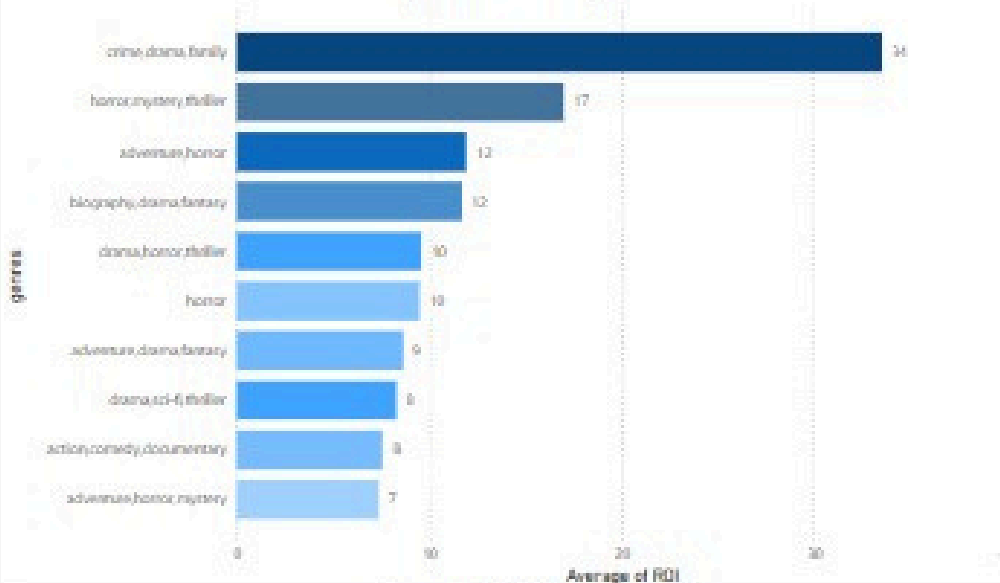
Genres

action	action.adventure	action.adventure.animation
action.adventure.biography	action.adventure.comedy	action.adventure.crime
action.adventure.drama	action.adventure.family	action.adventure.fantasy

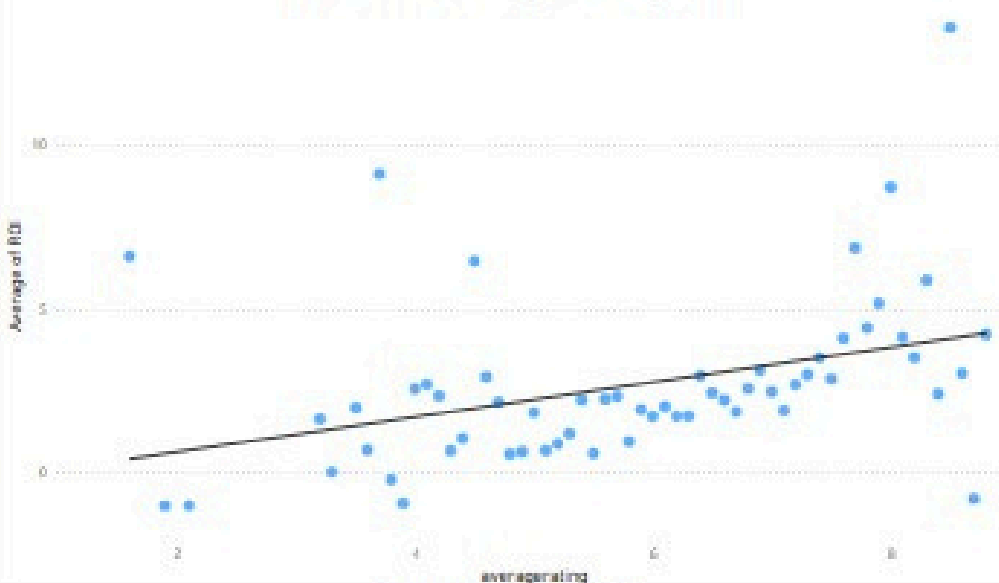
MonthName

April	August	December
February	January	July
June	March	May

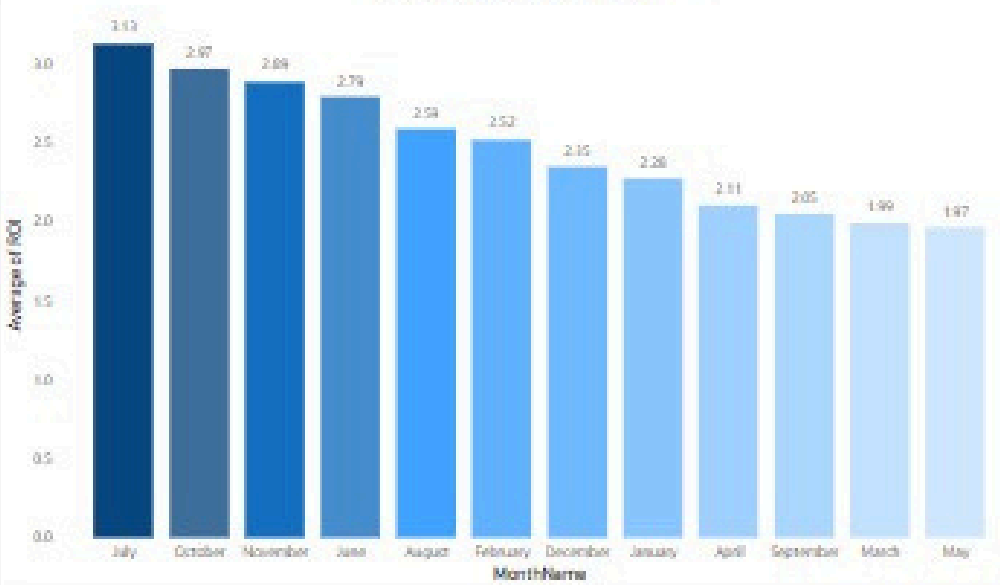
Top 10 Movie Genres by ROI



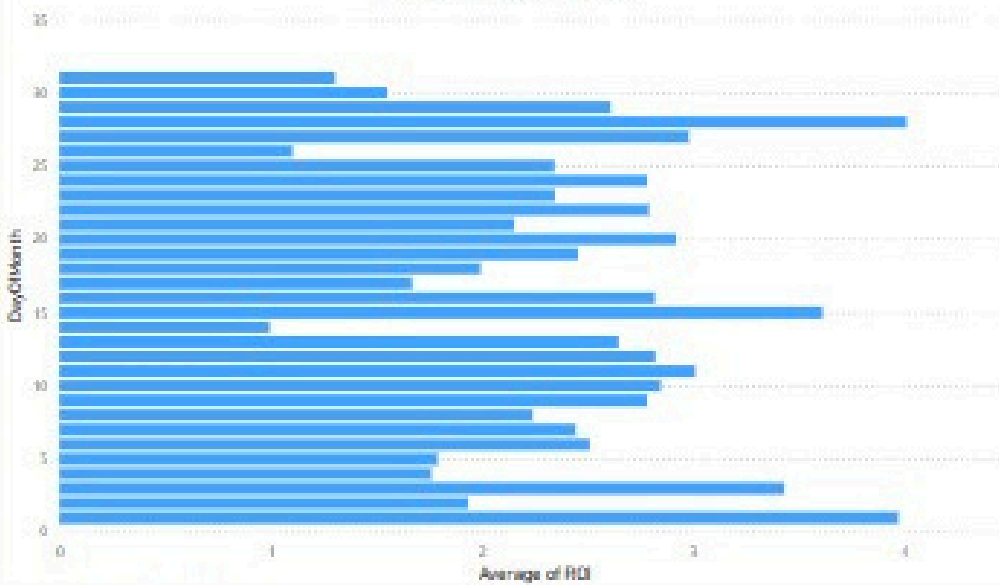
Correlation Between Average IMDb Rating and ROI



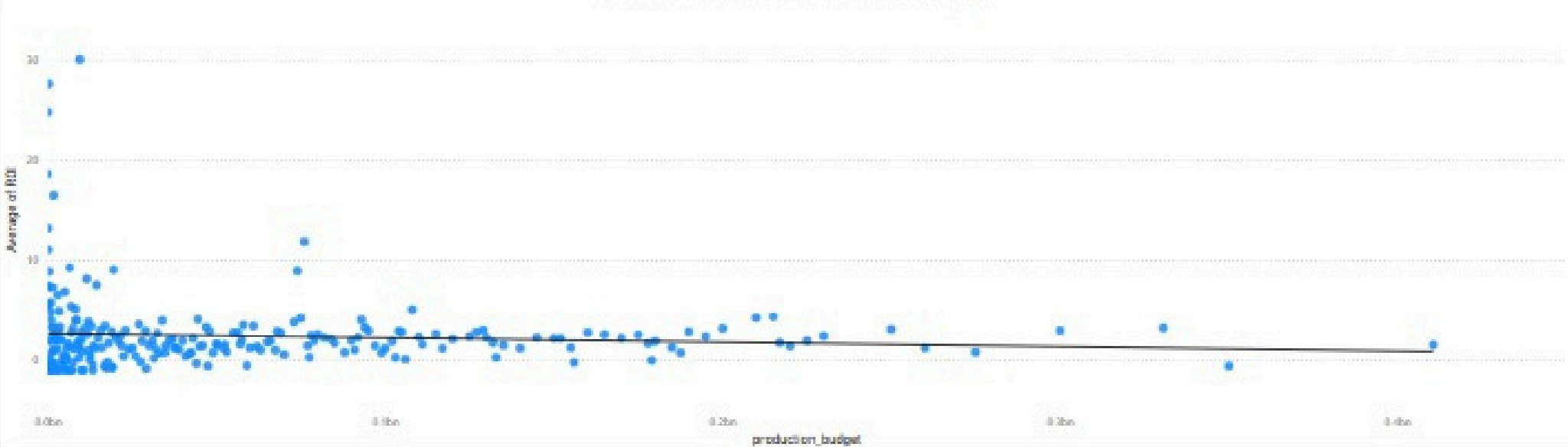
Average of ROI by MonthName



Average of ROI by DayOfMonth

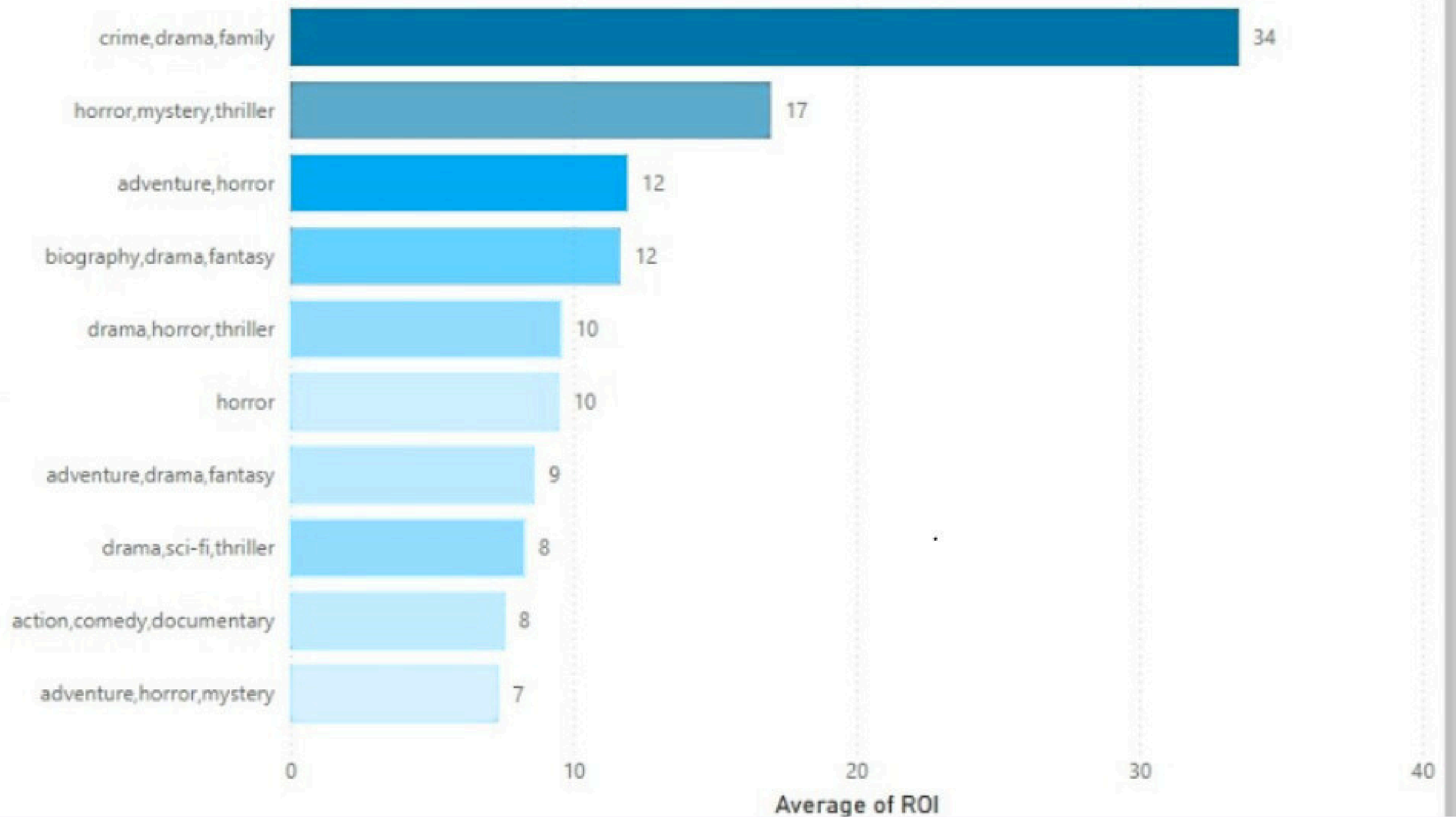


Correlation between Average of ROI And Production\_budget

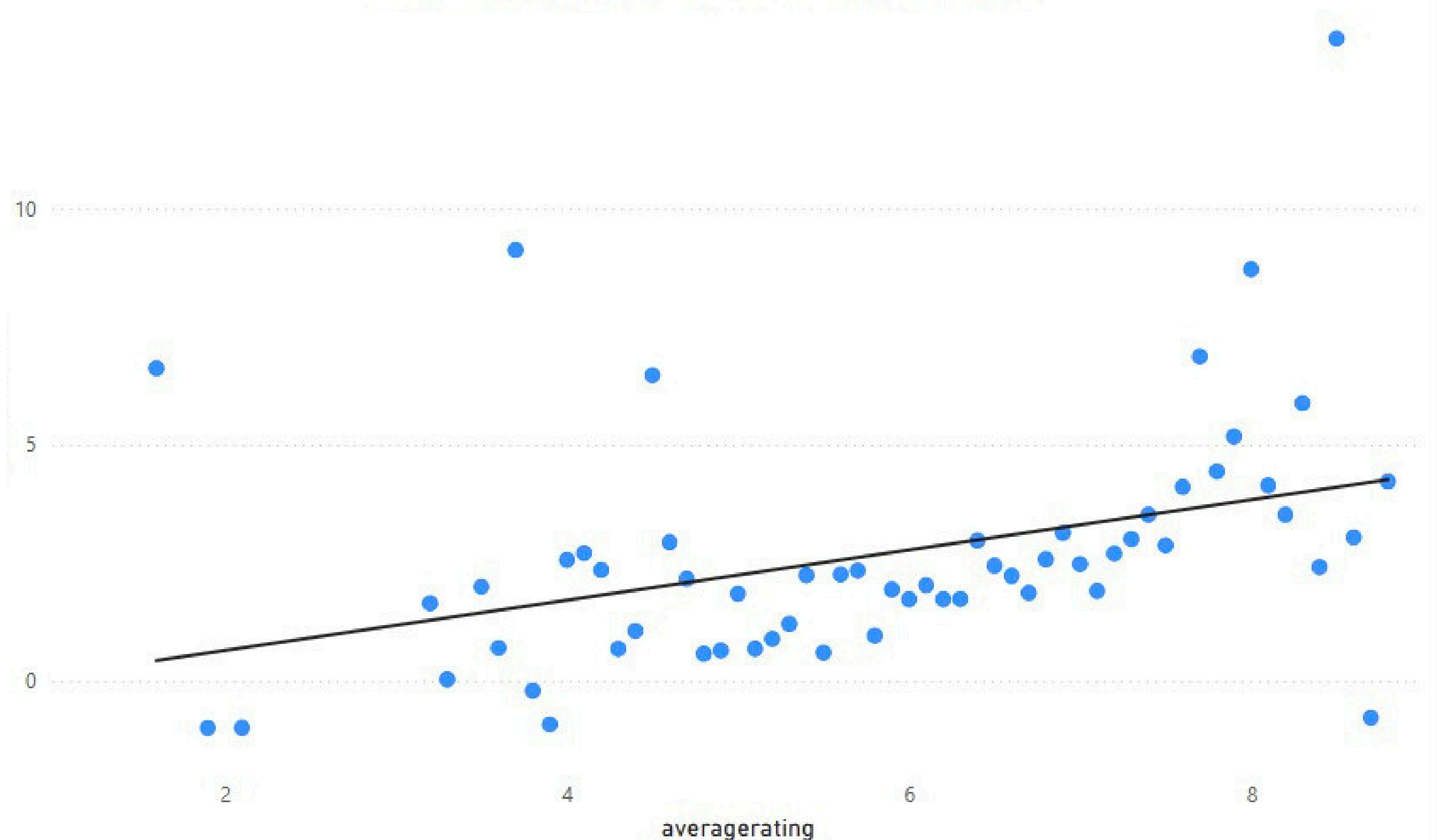


## Top 10 Movie Genres by ROI

genres

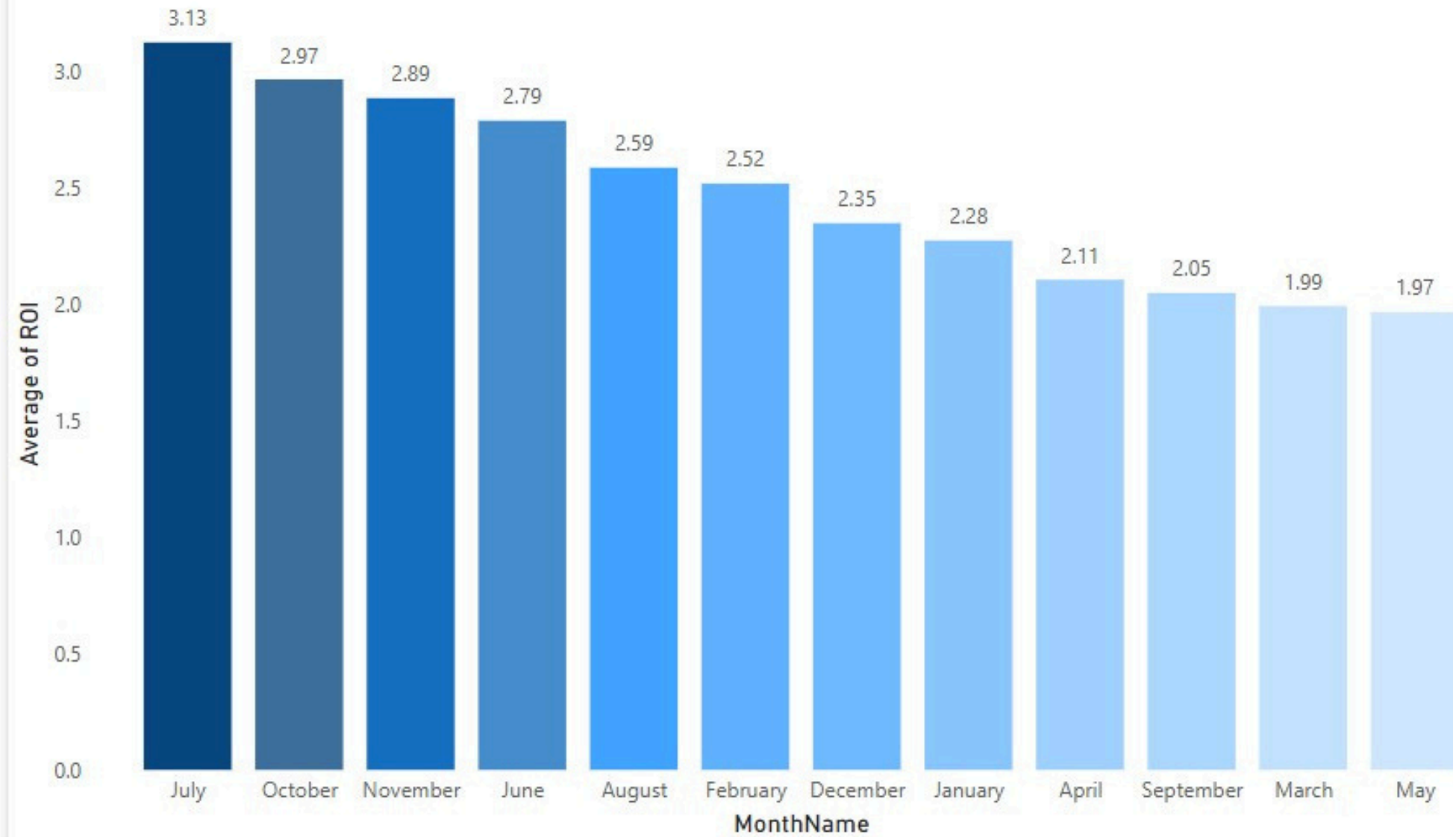


Correlation Between Average IMDb Rating and ROI

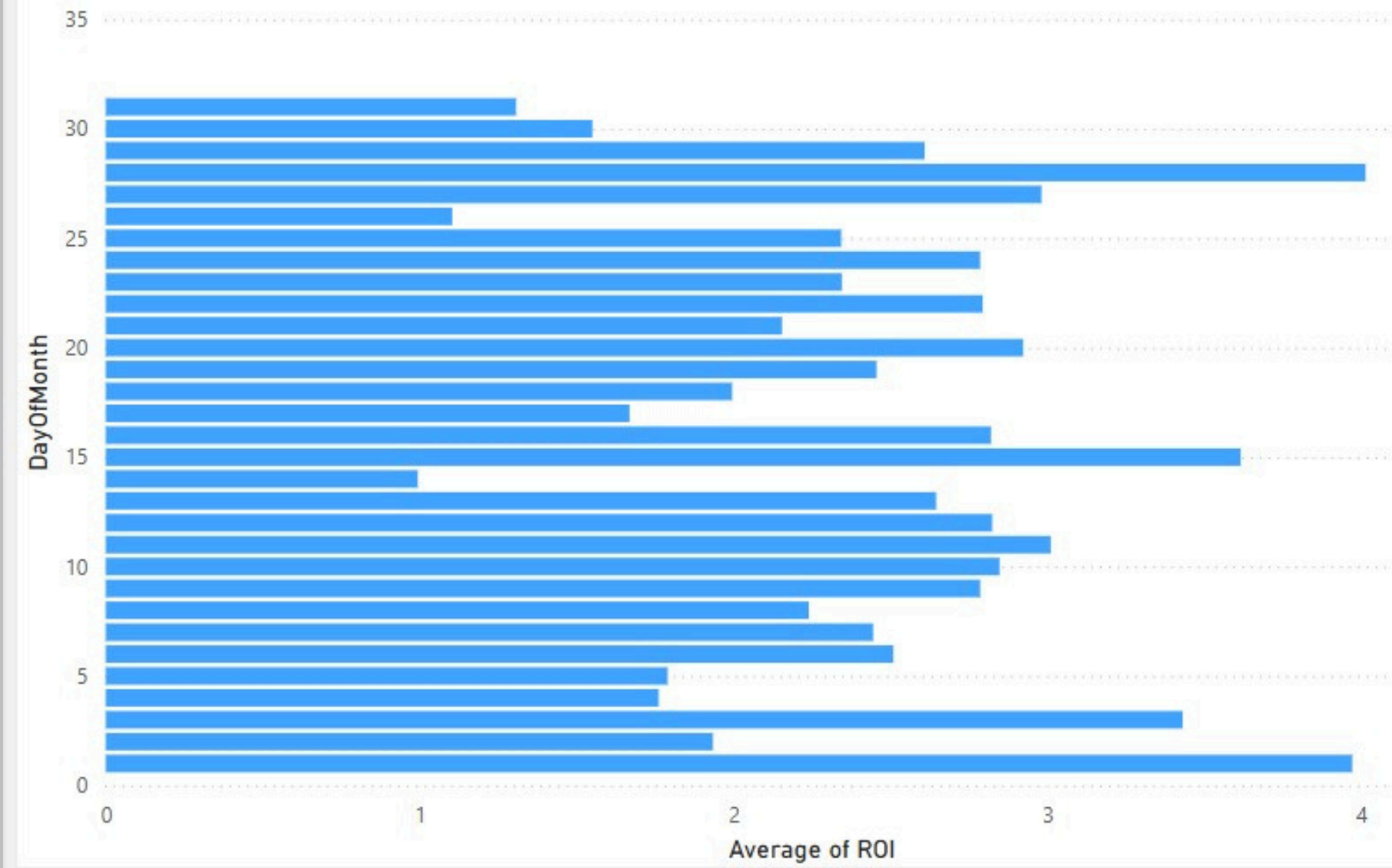




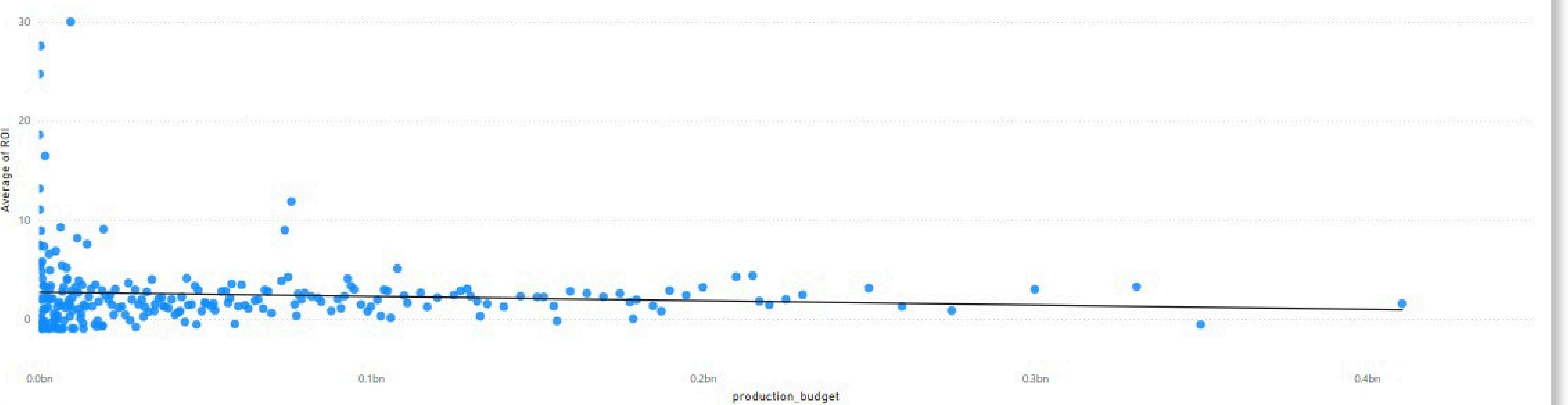
Average of ROI by MonthName

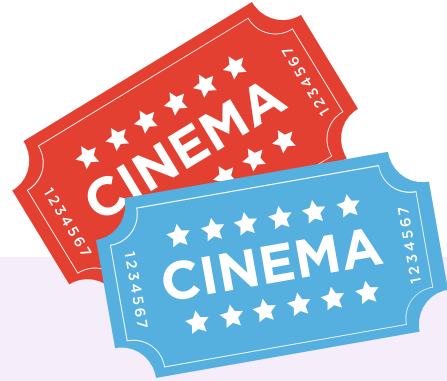


Average of ROI by DayOfMonth

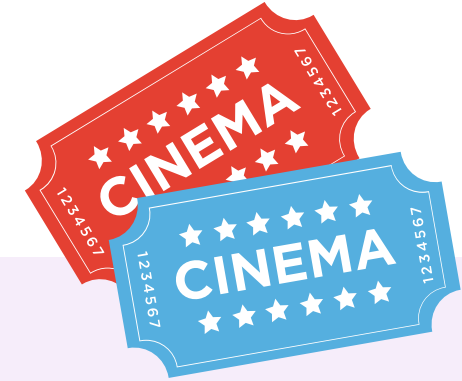


Correlation between Average of ROI And Production\_budget





# Our suggestions



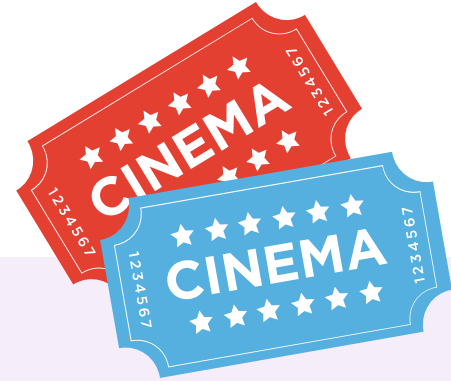
- Focus on crime, drama, family and horror/mystery/thriller genres.
- Avoid overinvestment in low-profitability action-comedy hybrids

- Prioritize cost management to maximize ROI.
- Increase efficiency without compromising quality

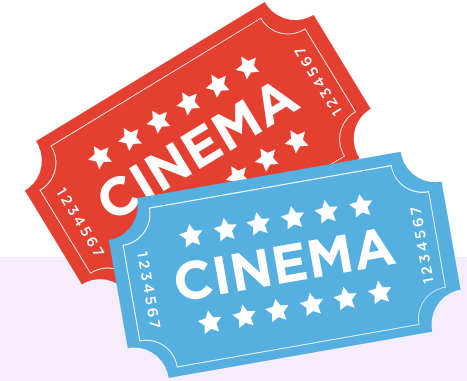
- Tailor campaigns to global audiences, leveraging data on international success.

- Schedule releases during peak seasons, such as summer or holidays.

- Use higher-rated films to attract premium marketing opportunities and wider audience engagement.



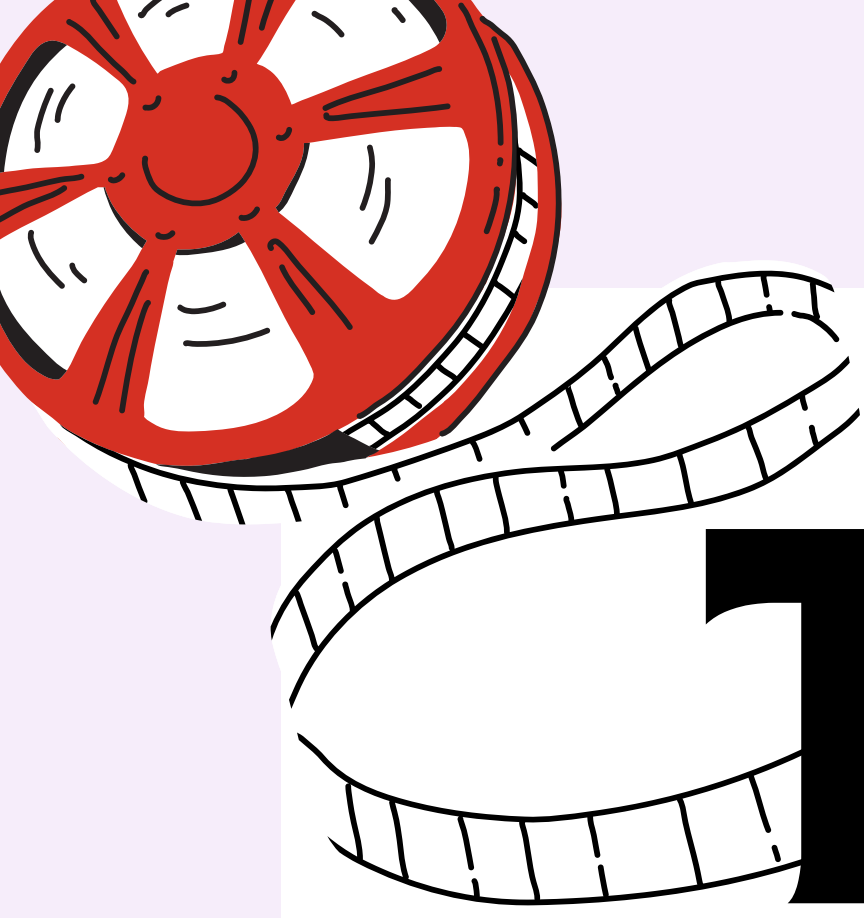
# MOVING FORWARD



Conduct deeper analyses into audience demographics for top-performing genres.

Test and refine strategies for budget efficiency and marketing effectiveness.

Present detailed findings to stakeholders and implement iterative improvements



# Thank you

**Empowering the Movie Studio with Data-Driven  
Decisions**

