

# MICROSOFT FILM STUDIO - DATA ANALYSIS REPORT

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# SUMMARY

03

—This project aims to provide a detailed overview of the film industry, what sorts of films are popular, and how to define success.

## GENRE POPULARITY

Dramas are the most frequently produced, however they are not the most popular by average rating. We find that non-fiction work - news, documentaries, and biographies - tend to be the most popular by rating. However, we find that these movies do not rank in the top 10 in terms of revenue.

## YEARLY BUDGETS

We find that average film budgets per year are increasing while the number of movies produced a year are on a downward trend. Production budgets are strongly correlated with revenues, meaning studios are taking bigger swings in hopes of billion dollar films.

## ROI

Return on investment is not a good predictor of revenues or average rating. The types of movies with the largest returns (between 60-100x) are horror and mystery films - largely low budget productions. The top grossing movies tend to have returns between 7-10x.

# MICROSOFT FILM STUDIO

Microsoft has decided to enter the film business, but where to start? Microsoft is already well integrated in millions of homes across the country with its Office software in virtually every PC. The company also maintains a vast entertainment business with Xbox and its associated game studio.

How can it create a profitable film business?

The following provides data and insights on the film industry by exploring what success looks like, and what areas are worth pursuing.

## BUSINESS PROBLEM

# DATA

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—A total of 4 datasets were used from 3 sources:

- IMDB
- Box Office Mojo
- The Numbers



## IMDB

- 105K movies
- Contained:
  - Titles
  - Production Year
  - Runtime
  - Genres
  - Average Rating
  - Number of Votes
  - Unique ID



## BOX OFFICE MOJO

- 3.4K movies
- Contained:
  - Titles
  - Studio Initials
  - Domestic Gross Revenues
  - Foreign Gross Revenues
  - Production Year
- This data was primarily used to find total revenue for each studio.



## THE NUMBERS

- 5.8K movies
- Contained:
  - Titles
  - Production Budgets
  - Domestic Gross Revenues
  - Foreign Gross Revenues
  - Production Year

# IMDB DATA

- This data allowed for genre-specific analysis
- Data revealed:
  - most frequently made genres
  - most popular by average rating
  - most lucrative genres

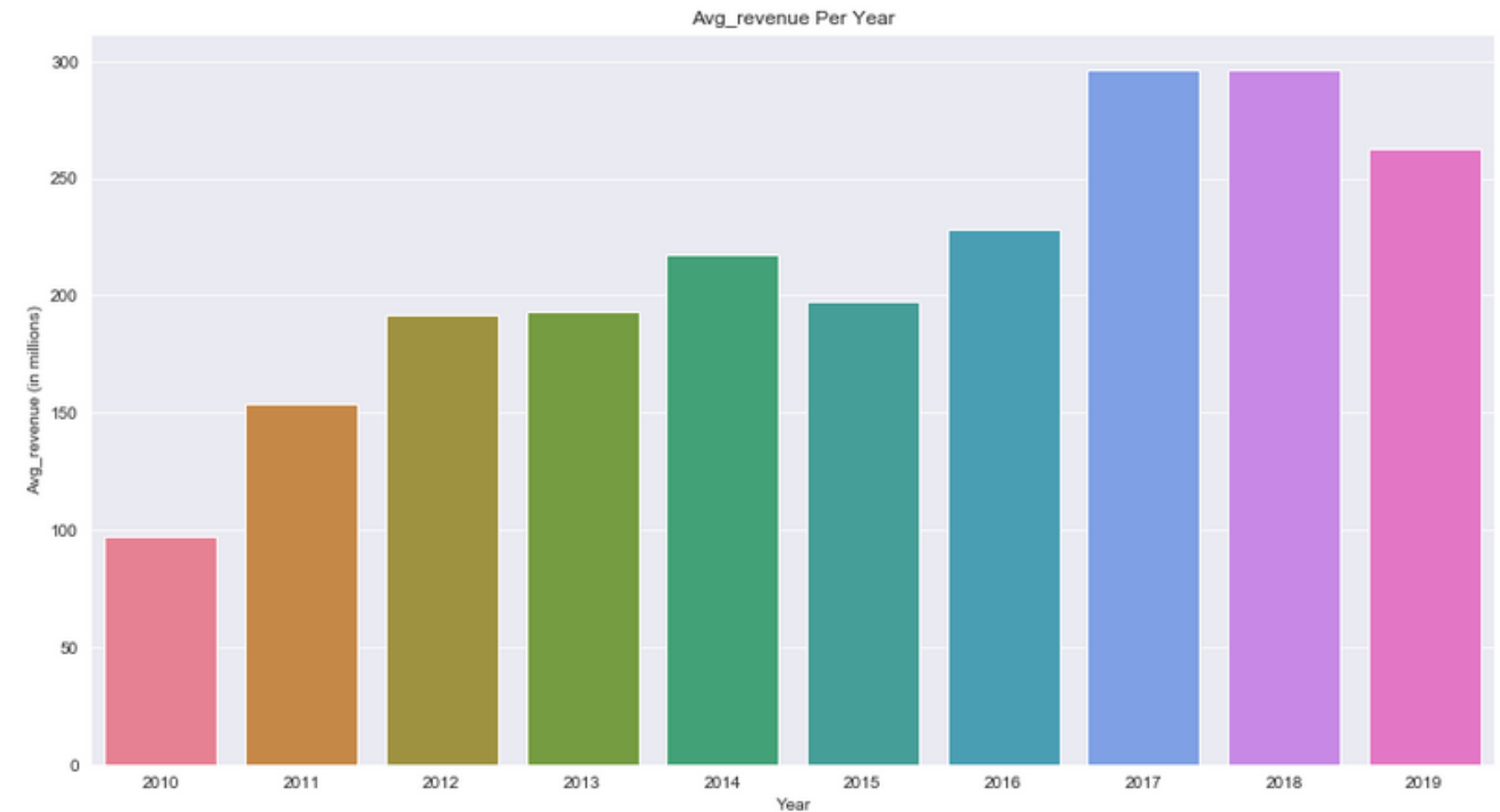
# PRODUCTION BUDGETS DATA

- Only data on movies made between 2010 - 2019 were used
- This data provided us with the ability to analyze the following:
  - most profitable genres and most profitable movies
  - year-over-year average budgets
  - top earning studios
  - which types of movies offer the highest returns

# CORRELATION CALCULATIONS

- Budgets and revenues
- Budgets and average rating
- Revenue and average rating

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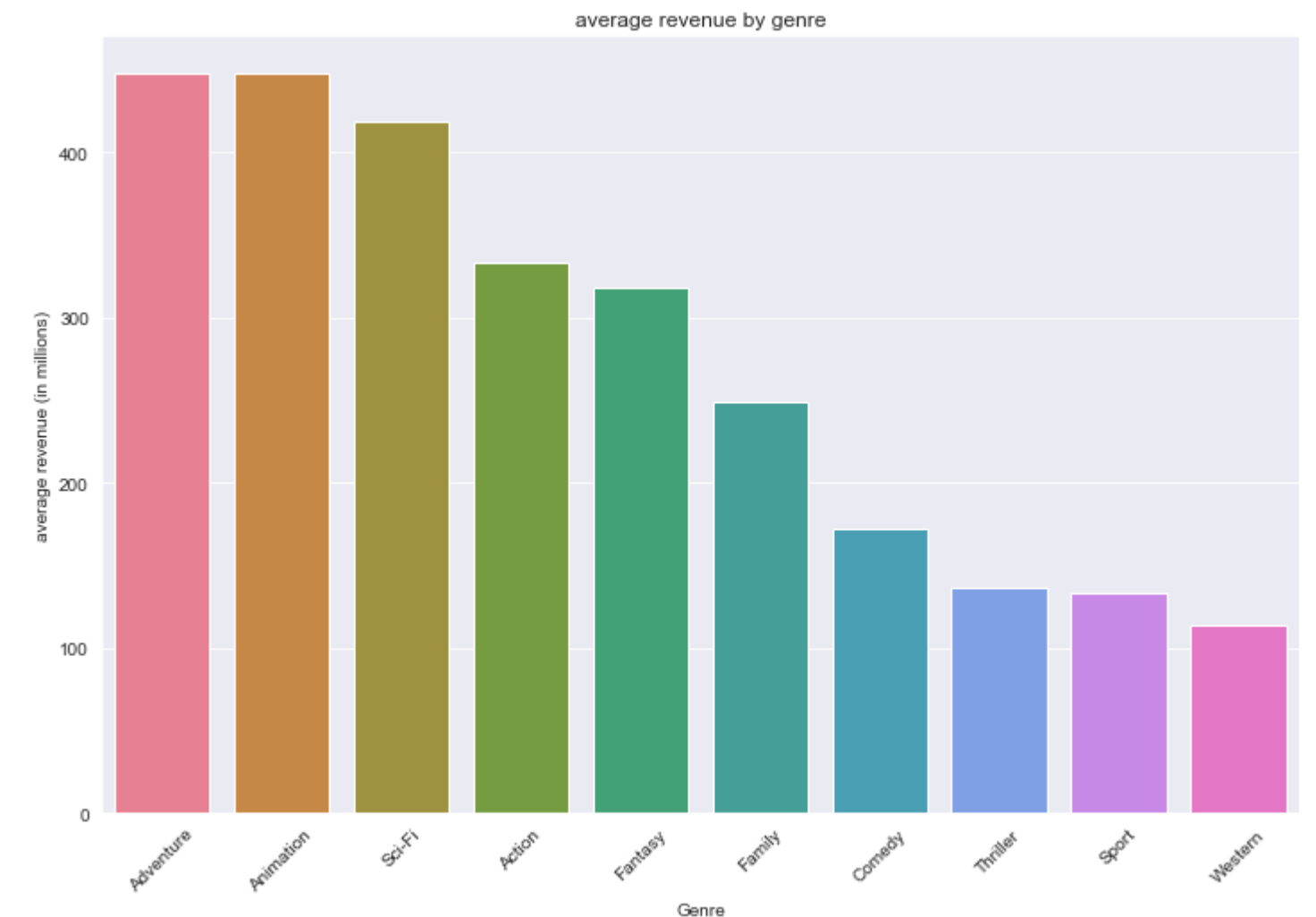
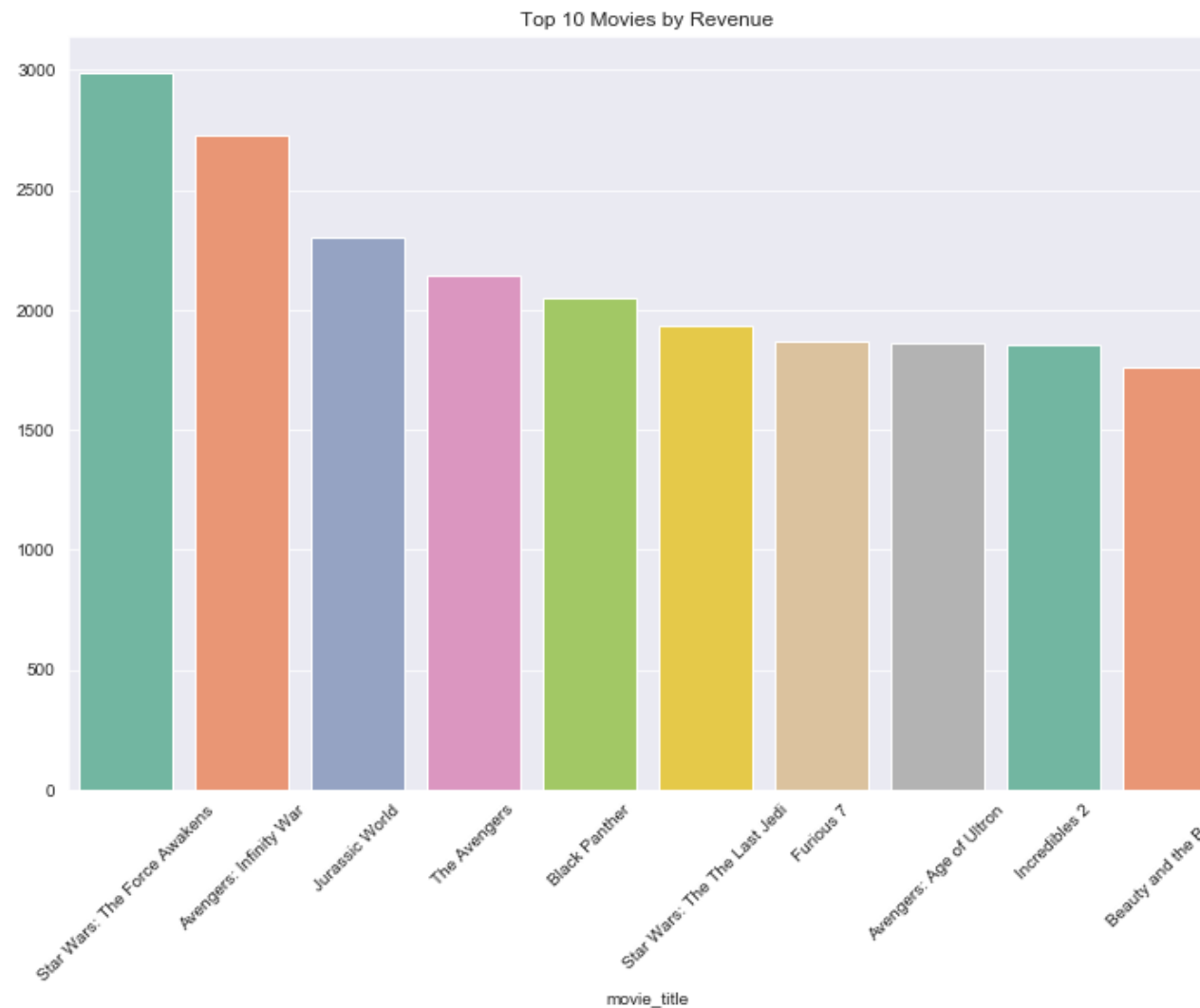
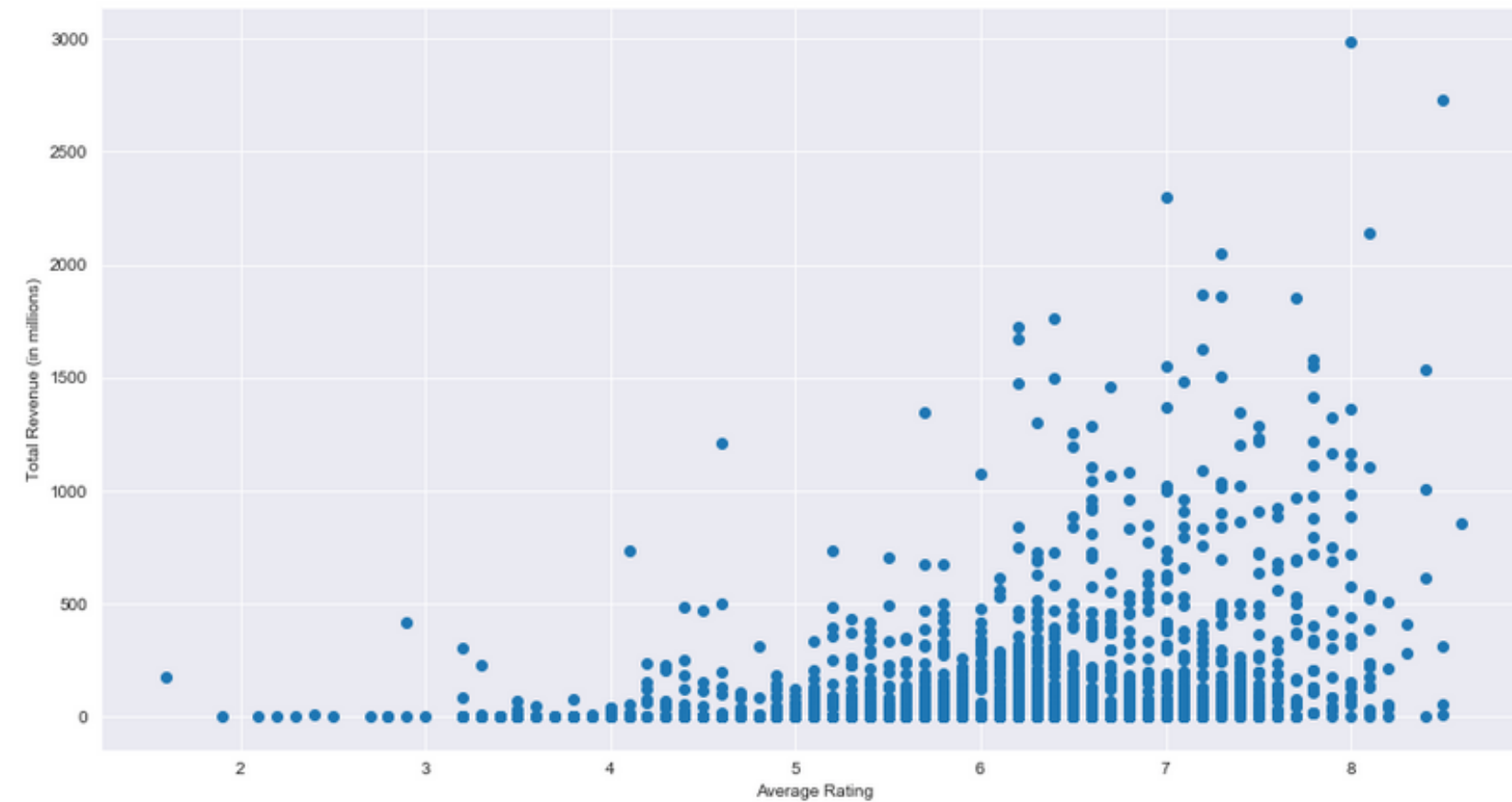


# METHODS



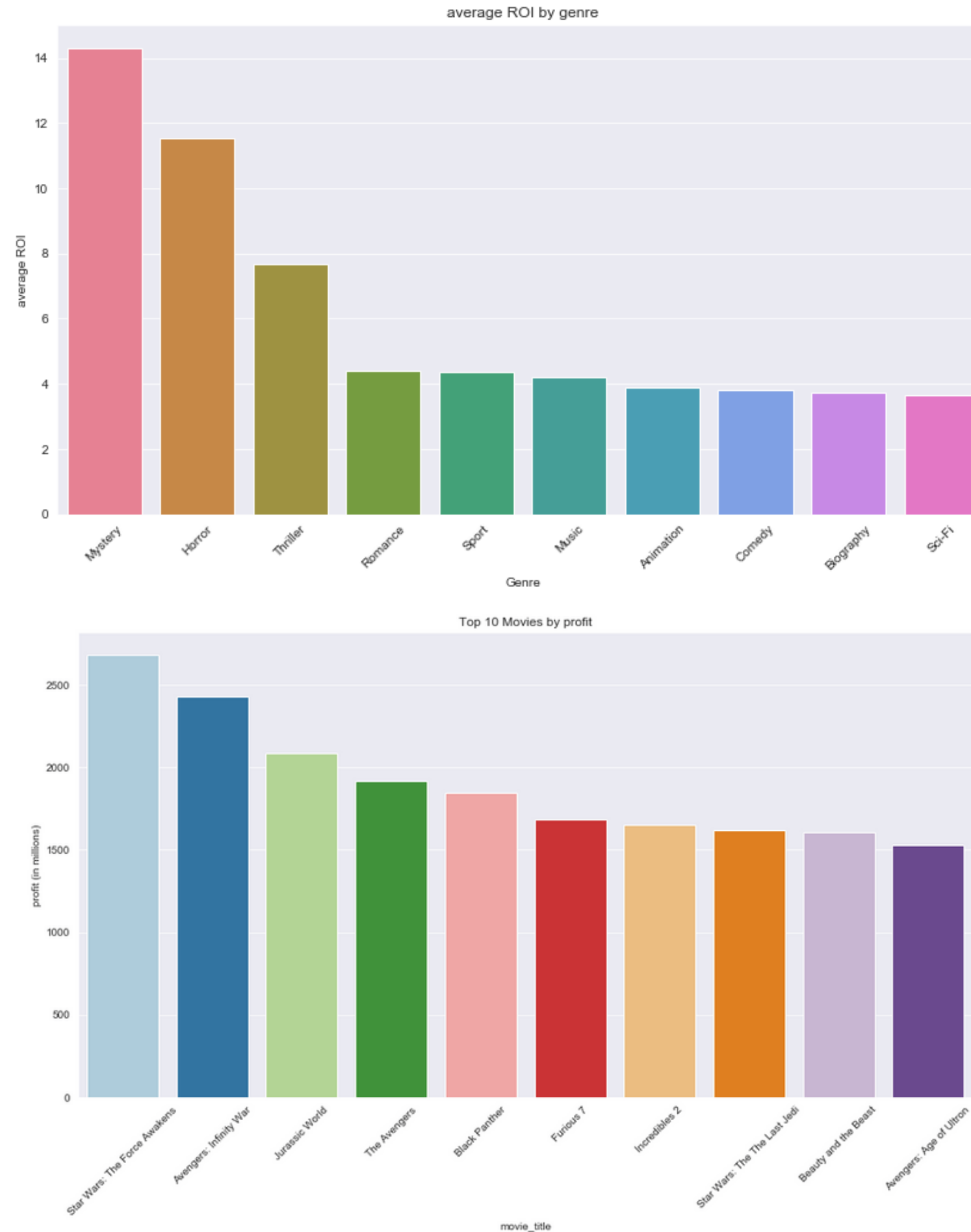
# RESULTS

- Average rating strongly correlated with revenue
- Adventure, animation, sci-fi, action, and fantasy movies round out the top 5 of highest grossing genres
- Top grossing movies are franchise tentpoles with vast brand name recognition, broad appeal



# RESULTS

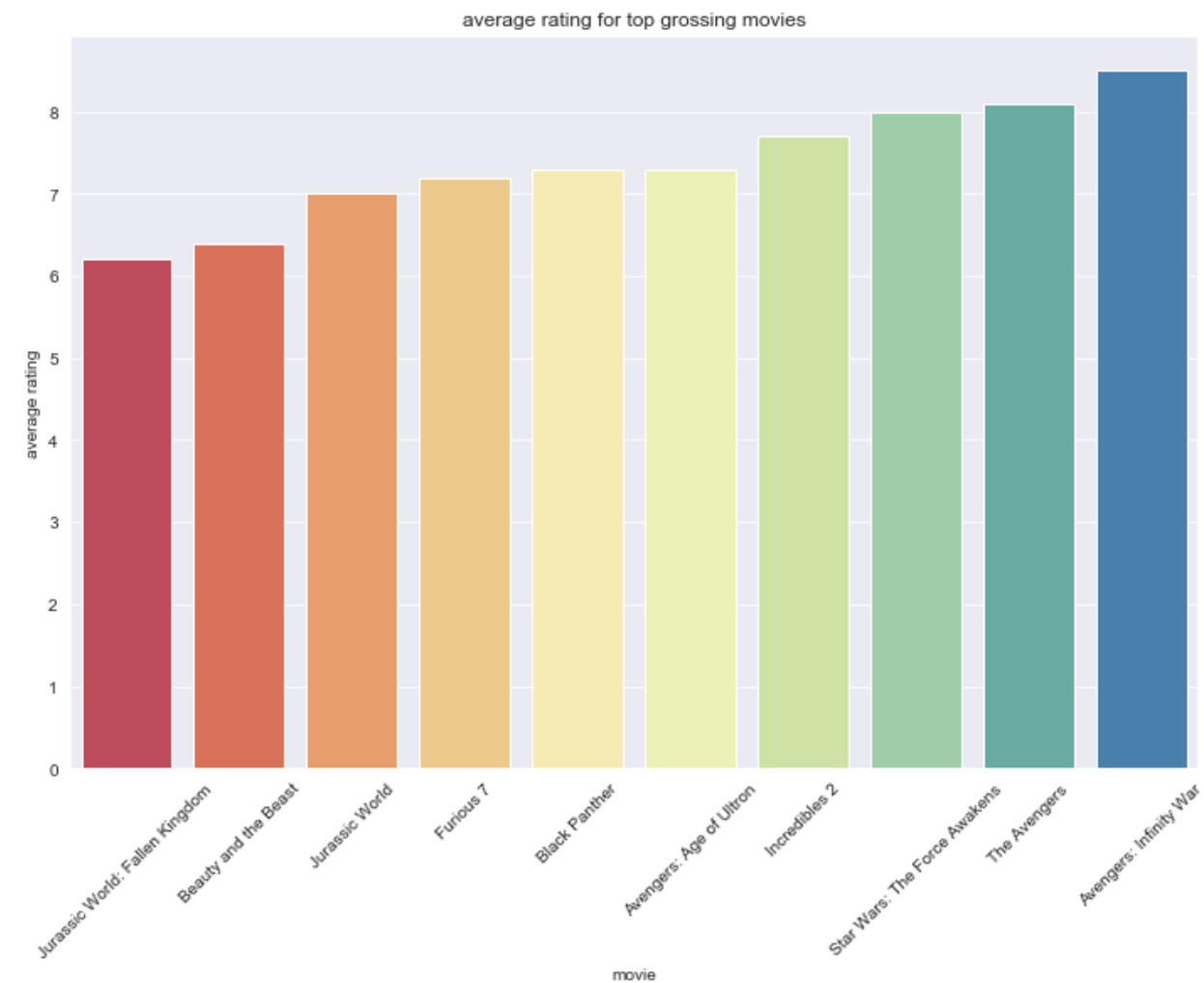
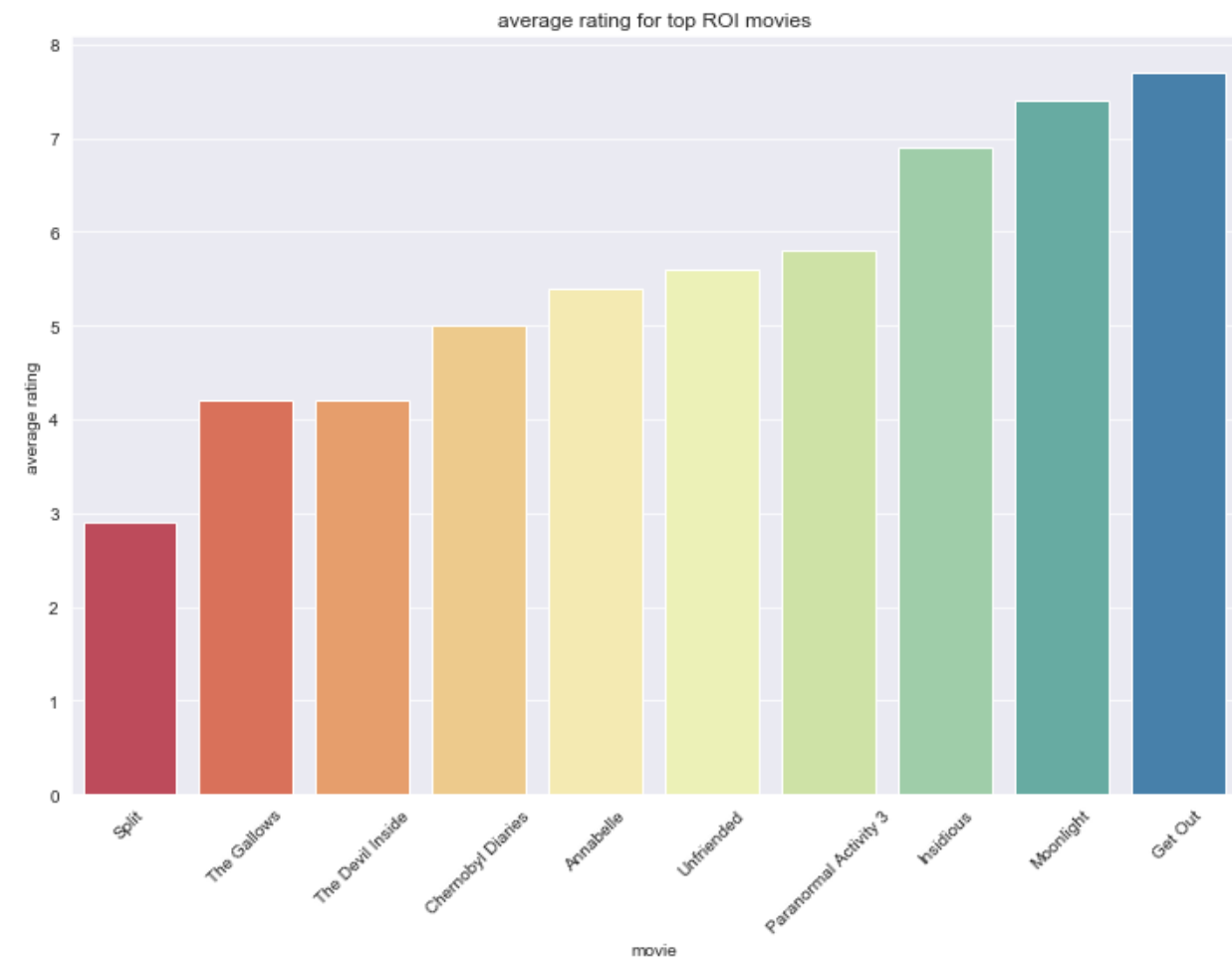
- Mystery, horror deliver the largest ROI but not the most profit





# RESULTS

- The average ratings for the top ROI movies are much less than those of the top grossing



# CONCLUSIONS



## TAKEAWAY 1

Profits and revenues continue to increase over time with budgets, number of movies being produced declining



## TAKEAWAY 2

Adventure, animation, action, and sci-fi movies earn the most out of any other genre - these often have the largest budgets



## RECOMMENDATION

Invest in large, franchise tentpoles. Microsoft's vast resources allow it to take big swings - however, don't always bank on multiple sequels due to fatigue



## RECOMMENDATION

- Consider using Microsoft-owned IP like its video game franchises
- Well-known brands often do better in theaters



## FUTURE

- Causation between revenue and ratings?
- Causation between budgets and ratings?
- Decreased movie production a blip or a trend? Growing budgets crowding out smaller productions?



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