

# Genre, Release Time, and Budget: Recommendations for Microsoft Movie Studio

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# Presentation Outline

- Business Problem
- Data
- Methods
- Results
- Recommendations

# About the Movie Industry

- 2021, \$99.7 billion globally<sup>1</sup>
  - Digital, theatrical, and physical sales
  - \$36.8 billion in domestic revenue
  - Streaming services at \$59 billion in the U.S.
- Digital sales account for 80% of all revenue
- Theatrical sales is 12%
- Physical media is 8%



WARNER BROS.



dreamstime.



NEW LINE CINEMA





# Microsoft

## Business Problem

Microsoft is creating a new movie studio and wants insight on:

- What types of movies they should produce
- When to release them
- How much to budget for each movie

# Data used for analysis

## Internet Movie Database



- >70,000 movies
- Owned by Amazon
- Registered users generated content <sup>2</sup>
- Data used
  - Movie title
  - IMDb rankings

## The Numbers Database (TNDB)

- Owned by Nash Information Services
- Data tracked in a systematic, algorithmic way <sup>3</sup>
- Data Used
  - Movie title
  - Production Budget
  - Worldwide Gross Revenue
  - Release Date



- Owned by Amazon
- Data from movie studios, distributors, sales agents, and others in the movie industry <sup>4</sup>
- Data Used
  - Movie title
  - Domestic Gross Revenue
  - Foreign Gross Revenue

# Data Processing

## Data Preparation

- Data is gathered and combined
- Variables assessed for relevance

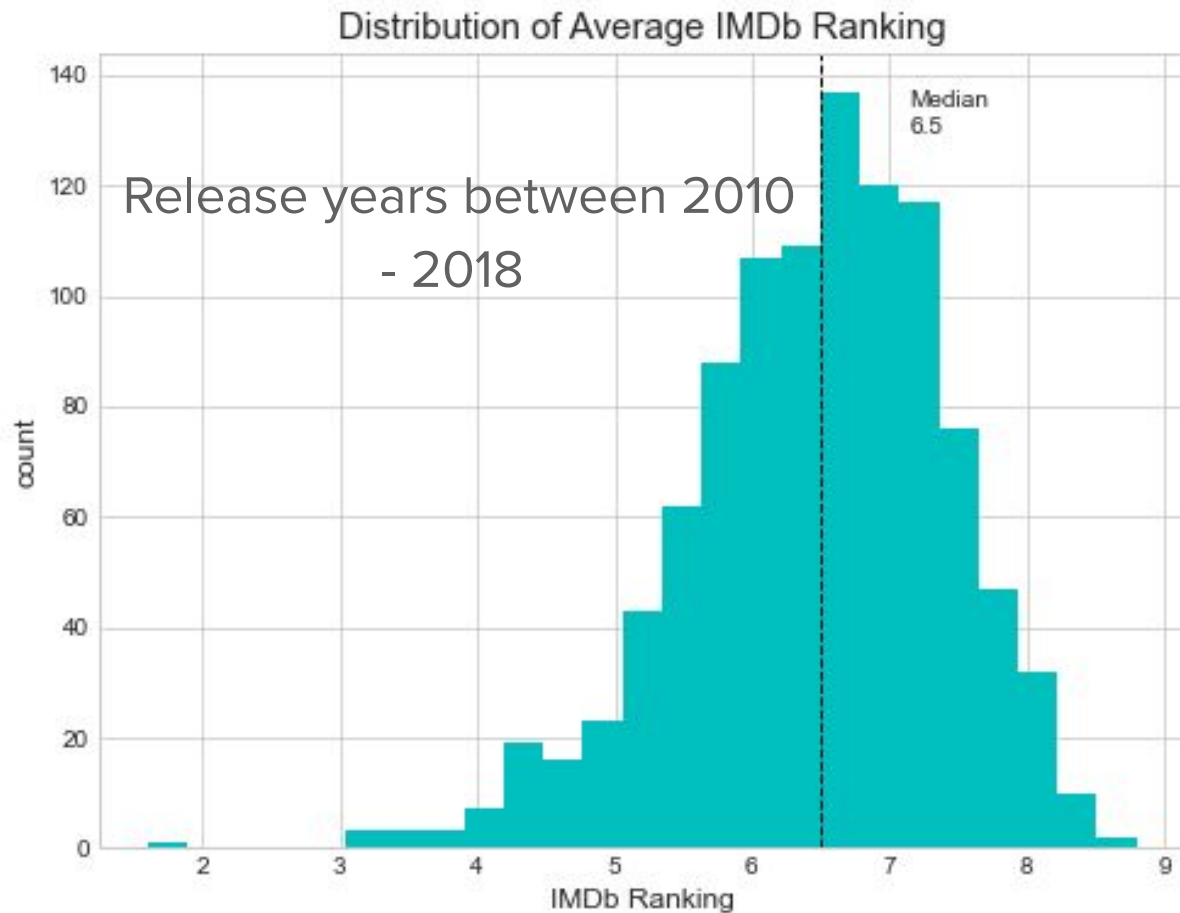
## Cleaning

- Removed duplicates
- Fixed missing values
- Corrected data type

## Analysis

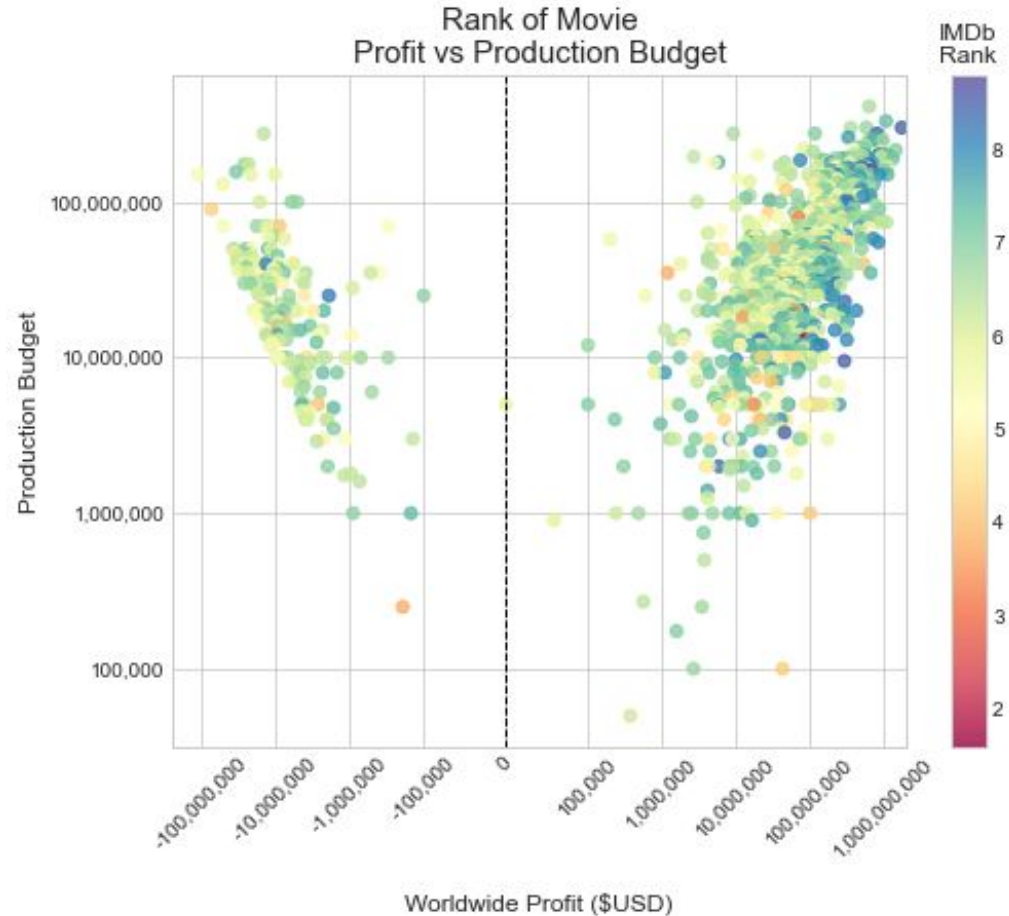
- Profit Calculated
- Assessed production budget's effect on revenue and ranking
- Discovered top four genres with highest gross revenue
- Analyzed yearly quarters with highest revenue and ranking

# Median of 6.5 IMDb ranking in 1025 movies analyzed



# Large budget and ranking does not guarantee profit

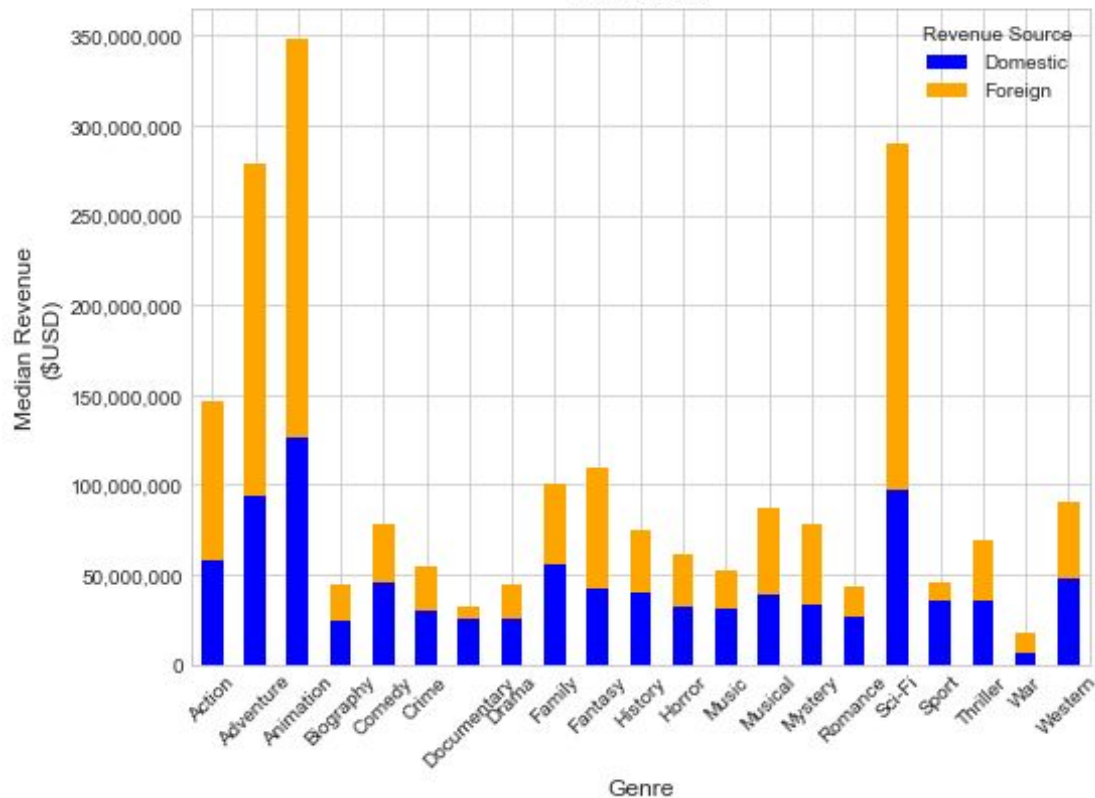
- Estimated profit does not include marketing costs
- 83% of movies generated a profit
- 17% lost money



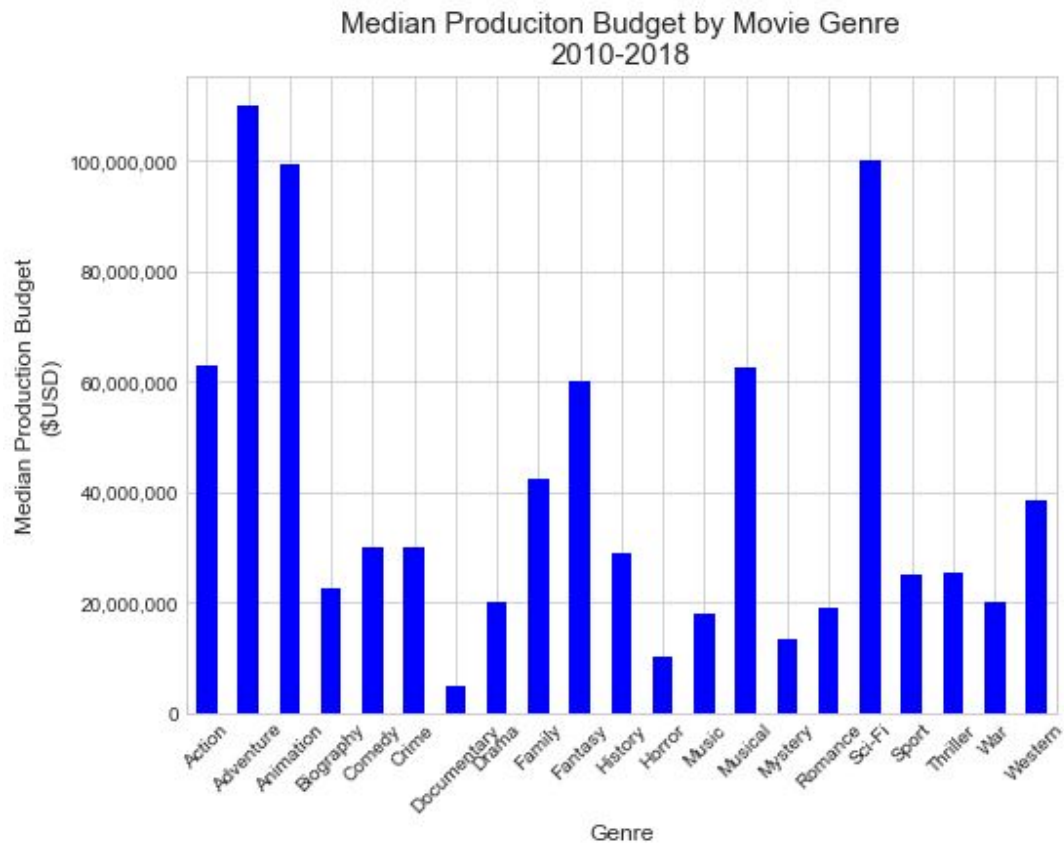


# Top four performing genres Action, Adventure, Animation, Sci-Fi

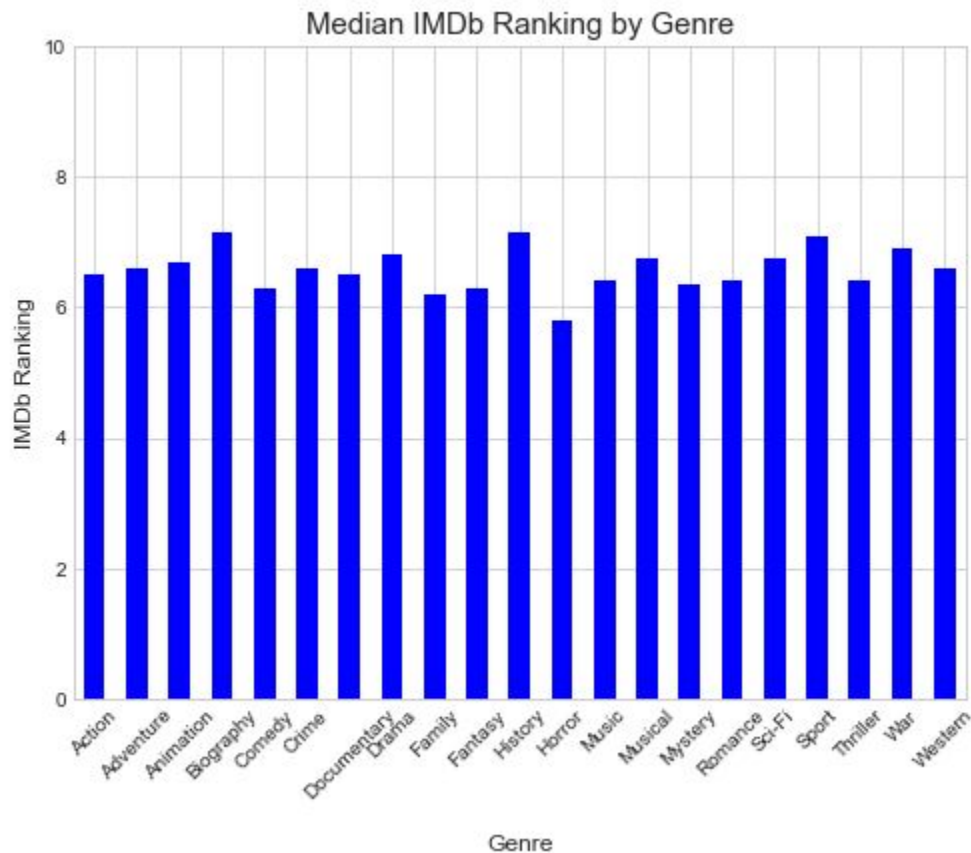
Median Domestic and Foreign Revenue by Genre  
2010-2018



# Action, Adventure, Animation, and Sci-Fi have highest median production budgets

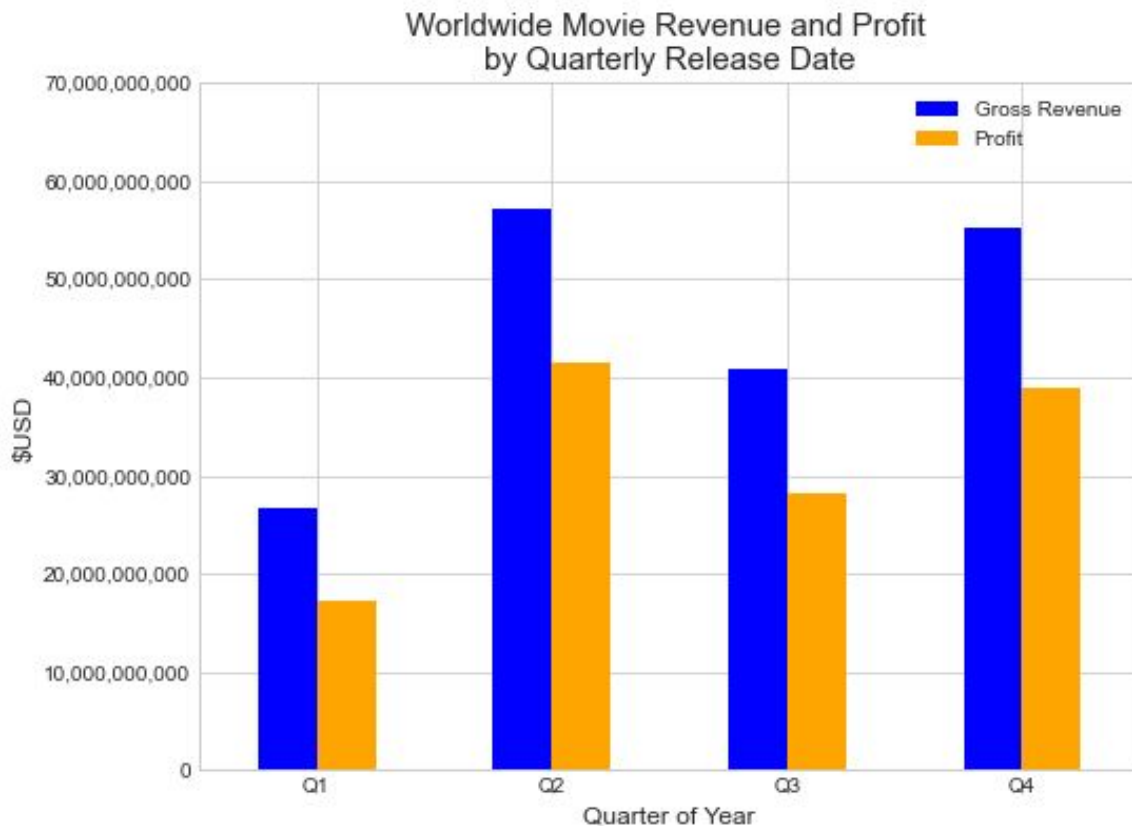


# IMDb Ranking is similar across genres



# Q2 and Q4 releases have the highest revenue and profit

- Q2 overlaps summer holidays
- Q4 overlaps fall and winter holidays



# Recommendations

Microsoft's new movie studio should focus on

## Genre

Action  
Adventure  
Animation  
Science Fiction

## Budget

\$60 million  
to  
\$100 million

## Release Date

Q2  
or  
Q4

# Thank You!

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# References

1. Total Entertainment Spending in U.S. Increased 14% In 2021 To \$37 Billion. *Forbes*, 17 Mar 2022, <https://www.forbes.com/sites/bradadgate/2022/03/17/overview-of-the-entertainment-market-in-2021-coming-out-of-covid-19/?sh=67de1397519c>, 18 May 2022.
2. IMDb Ratings FAQ. *IMDb*, 31 Jan 2022, <https://help.imdb.com/article/imdb/track-movies-tv/ratings-faq/G67Y87TFYYP6TWAV#>. 18 May 2022.
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4. Box Office Mojo by IMDbPro FAQ. *IMDb*, <https://help.imdb.com/article/imdbpro/industry-research/box-office-mojo-by-imdbpro-faq/GCWTV4MQKGWRAUAP>. 18 May 2022.