# Analysis of Profitable Movies 2010 - 2018

**Brent Smart**
**Flatiron**

# Data

- Box Office Mojo
- IMDB
- The-numbers.com

# Joining Data (only 2/4)

| # | Column | Non-Null Count |
|---|---|---|
| 0 | tconst | 146144 non-null |
| 1 | primary_title | 146144 non-null |
| 2 | start_year | 146144 non-null |
| 3 | runtime_minutes | 114405 non-null |
| 4 | genres | 140736 non-null |

| # | Column | Non-Null Count |
|---|---|---|
| 0 | release_date | 5782 non-null |
| 1 | movie | 5782 non-null |
| 2 | production_budget | 5782 non-null |
| 3 | domestic_gross | 5782 non-null |
| 4 | worldwide_gross | 5782 non-null |

Considerations when joining:

- Columns with different names (but same data)
  - Investigate databases.
- Missing data - Was it relevant to questions/analysis?
- Punctuation & Human error - Investigate and run programs to clean data.

# Data Preview (Top)

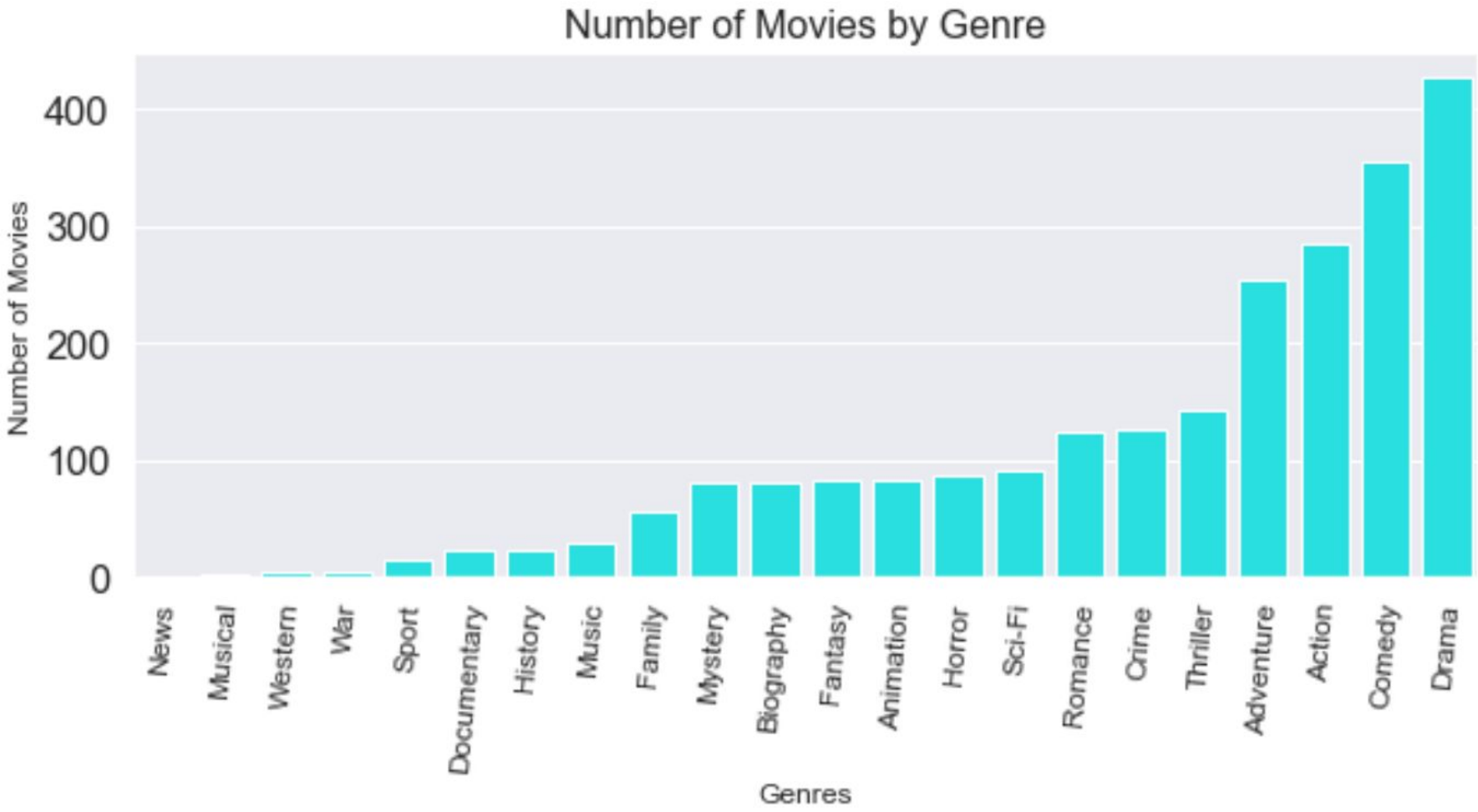
| | movie | studio | runtime_minutes | production_budget | domestic_gross_y | foreign_gross_millions | worldwide_gross | total_profits_millions | numvotes | averagerating |
|---|---|---|---|---|---|---|---|---|---|---|
| **0** | avengers infinity war | bv | 149.0 | 300.0 | 678.82 | 1369.31 | 2048.13 | 1748.13 | 670926 | 8.5 |
| **1** | jurassic world | uni | 124.0 | 215.0 | 652.27 | 996.58 | 1648.85 | 1433.85 | 539338 | 7.0 |
| **2** | furious 7 | uni | 137.0 | 190.0 | 353.01 | 1165.71 | 1518.72 | 1328.72 | 335074 | 7.2 |
| **3** | black panther | bv | 134.0 | 200.0 | 700.06 | 648.20 | 1348.26 | 1148.26 | 516148 | 7.3 |
| **4** | jurassic world fallen kingdom | uni | 128.0 | 170.0 | 417.72 | 888.05 | 1305.77 | 1135.77 | 219125 | 6.2 |
| **5** | frozen | bv | 102.0 | 150.0 | 400.74 | 871.73 | 1272.47 | 1122.47 | 516998 | 7.5 |
| **6** | minions | uni | 91.0 | 74.0 | 336.05 | 824.29 | 1160.34 | 1086.34 | 193917 | 6.4 |
| **7** | avengers age of ultron | bv | 141.0 | 330.6 | 459.01 | 944.00 | 1403.01 | 1072.41 | 665594 | 7.3 |

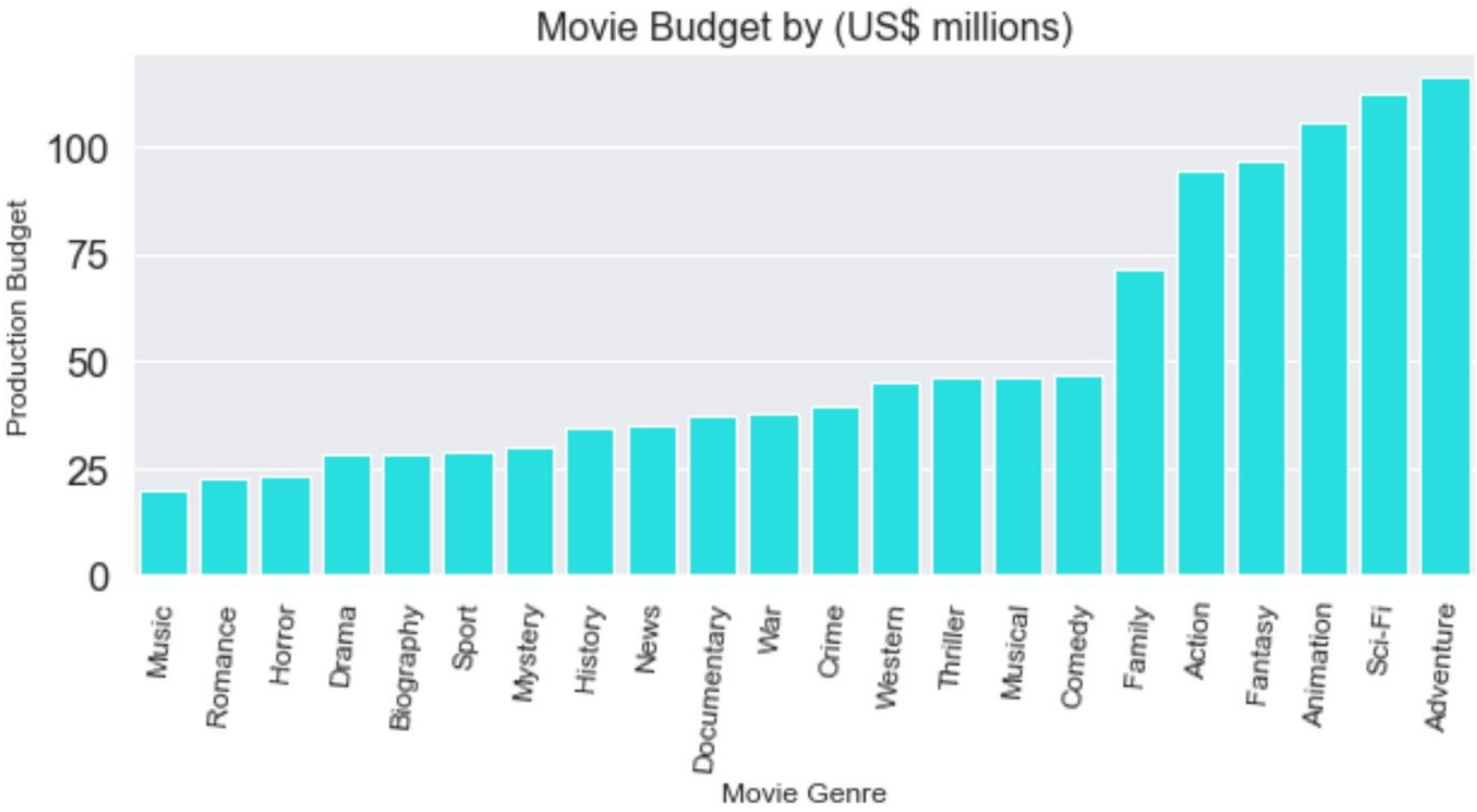
# Data Preview (bottom)

| movie | studio | runtime_minutes | production_budget | domestic_gross_y | foreign_gross_millions | worldwide_gross | total_profits_millions | numvotes | averager |
|---|---|---|---|---|---|---|---|---|---|
| palo alto | trib | 100.0 | 1.0 | 0.77 | 0.39 | 1.16 | 0.16 | 25402 | |
| locke | a24 | 85.0 | 2.0 | 1.37 | 0.72 | 2.09 | 0.09 | 120703 | |
| circumstance | ratt | 107.0 | 0.9 | 0.45 | 0.51 | 0.96 | 0.06 | 7055 | |
| hugo | par | 80.0 | 180.0 | 73.86 | 106.19 | 180.05 | 0.05 | 11 | |
| stoker | foxs | 99.0 | 12.0 | 1.70 | 10.33 | 12.03 | 0.03 | 97393 | |

# Data Analysis (questions)

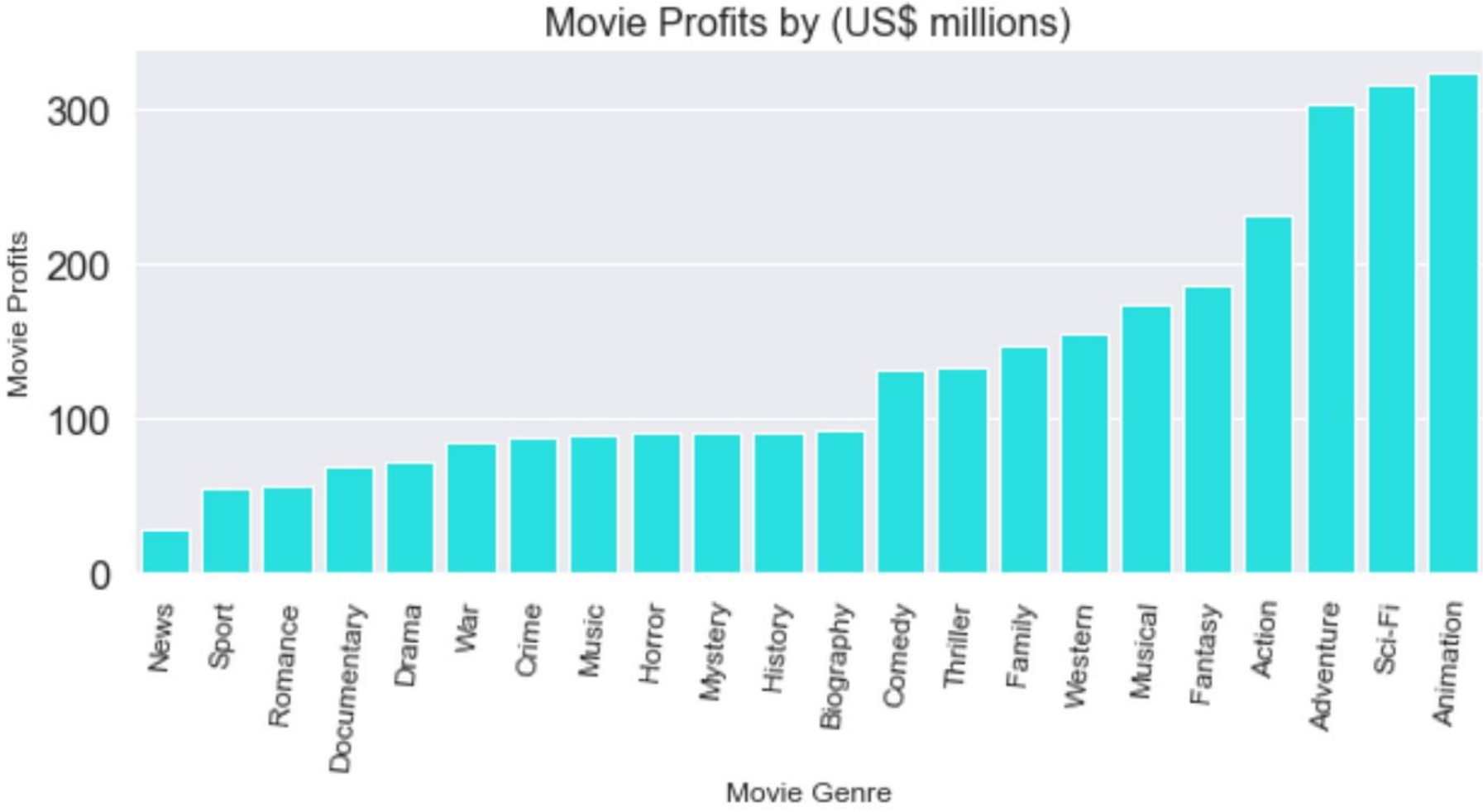
*Which movie genres are most common and what are typical budgets?


Number of Movies by Genre
Number of Movies
0
100
200
300
400
News
Musical
Western
War
Sport
Documentary
History
Music
Family
Mystery
Biography
Fantasy
Animation
Horror
Sci-Fi
Romance
Crime
Thriller
Adventure
Action
Comedy
Drama
Genres


Movie Budget by (US$ millions)
Production Budget
100
75
50
25
0
Music
Romance
Horror
Drama
Biography
Sport
Mystery
History
News
Documentary
War
Crime
Western
Thriller
Musical
Comedy
Family
Action
Fantasy
Animation
Sci-Fi
Adventure
Movie Genre

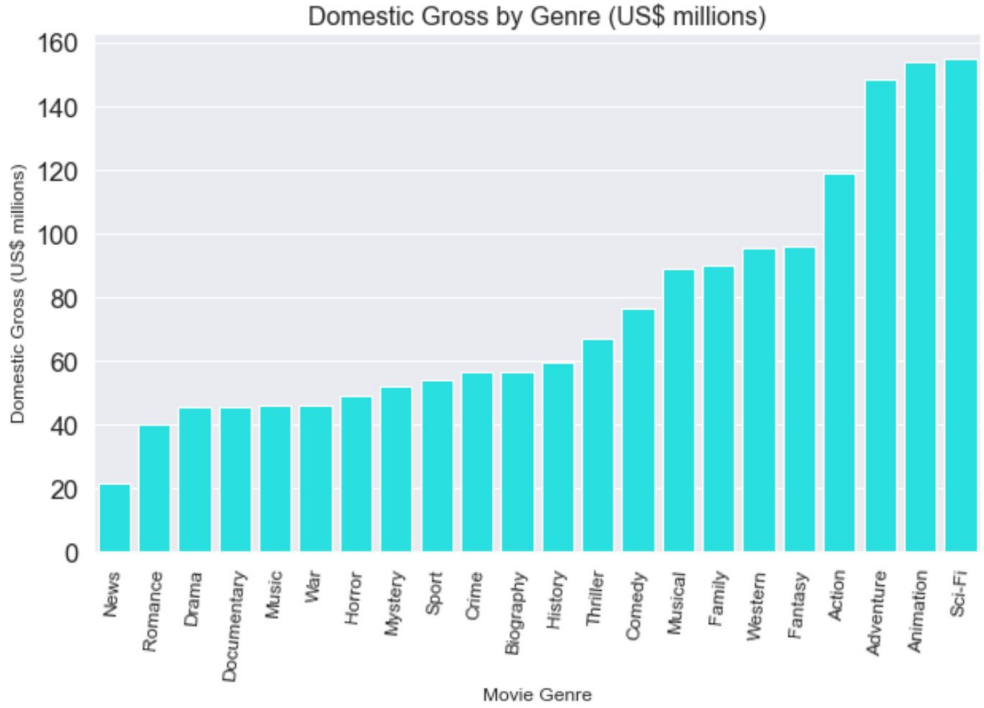
# Data Analysis (questions)

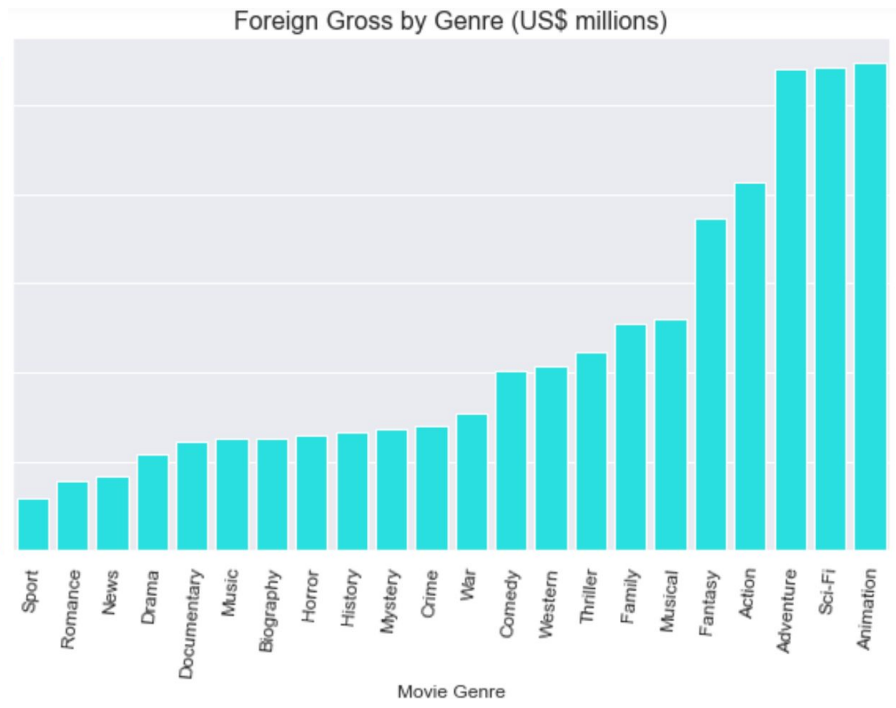
*Which movie genres generated the most profit?

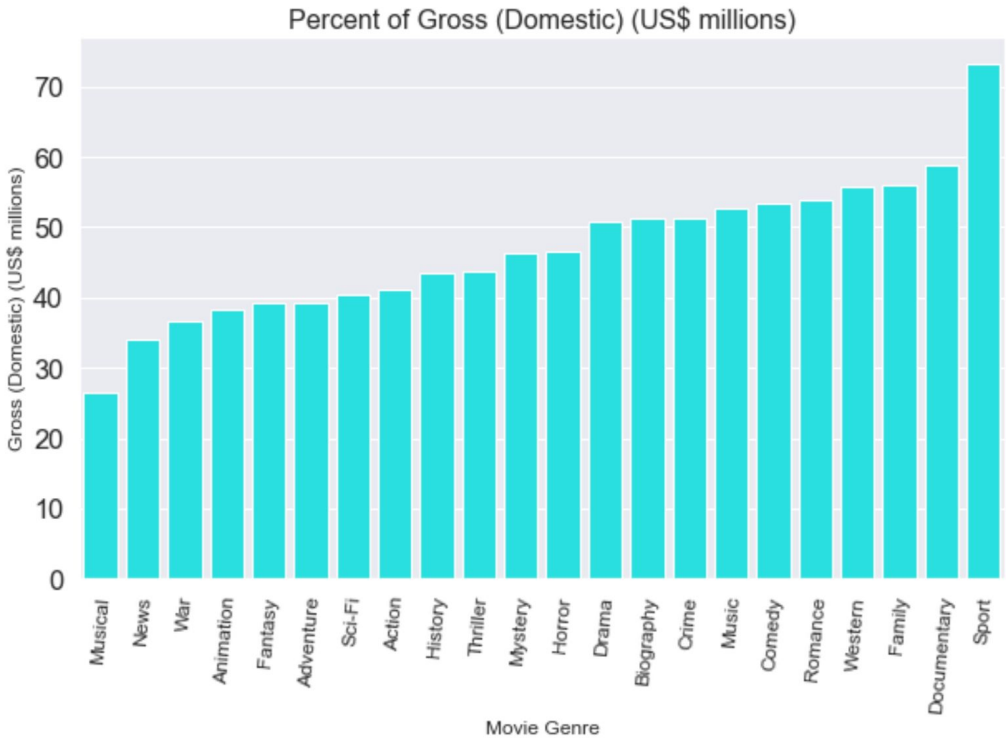

Movie Profits by (US$ millions)
Movie Profits
300
200
100
0
News
Sport
Romance
Documentary
Drama
War
Crime
Music
Horror
Mystery
History
Biography
Comedy
Thriller
Family
Western
Musical
Fantasy
Action
Adventure
Sci-Fi
Animation
Movie Genre

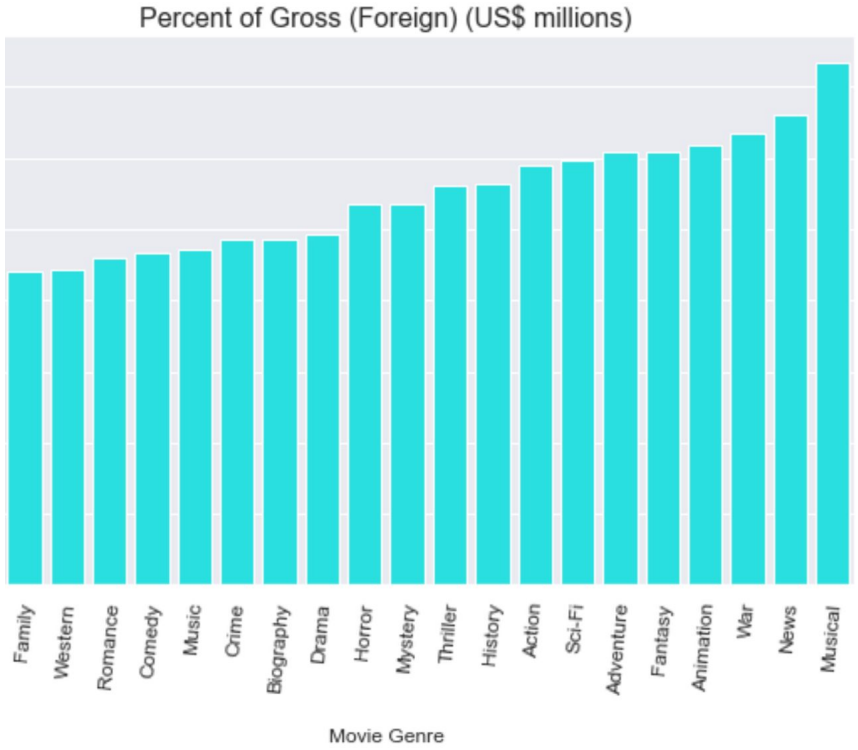
# Data Analysis (questions)

*What percentage of revenue was generated in foreign and domestic markets?


Domestic Gross by Genre (US$ millions)
Domestic Gross (US$ millions)
160
140
120
100
80
60
40
20
0
News
Romance
Drama
Documentary
Music
War
Horror
Mystery
Sport
Crime
Biography
History
Thriller
Comedy
Musical
Family
Western
Fantasy
Action
Adventure
Animation
Sci-Fi
Movie Genre


Foreign Gross by Genre (US$ millions)
Sport
Romance
News
Drama
Documentary
Music
Biography
Horror
History
Mystery
Crime
War
Comedy
Western
Thriller
Family
Musical
Fantasy
Action
Adventure
Sci-Fi
Animation
Movie Genre


Percent of Gross (Domestic) (US$ millions)
Gross (Domestic) (US$ millions)
0
10
20
30
40
50
60
70
Musical
News
War
Animation
Fantasy
Adventure
Sci-Fi
Action
History
Thriller
Mystery
Horror
Drama
Biography
Crime
Music
Comedy
Romance
Western
Family
Documentary
Sport
Movie Genre


Percent of Gross (Foreign) (US$ millions)
Family
Western
Romance
Comedy
Music
Crime
Biography
Drama
Horror
Mystery
Thriller
History
Action
Sci-Fi
Adventure
Fantasy
Animation
War
News
Musical
Movie Genre

# Data Analysis (findings)

Produce movies that are a combination of Sci-Fi, Animation, and or Adventure. Few movies in the original dataset were of one genre.

Allocate a movie production budget of about one million US. Sci-fi, Animation, and Adventure were the three most expensive and profitable genres to produce.

Produce movies that can be marketed both domestically and internationally.

NBC
Any questions?

moochas gracias!