

# Box Office Movie Data

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# Questions

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What are the top grossing movies?

How much do they cost to make?

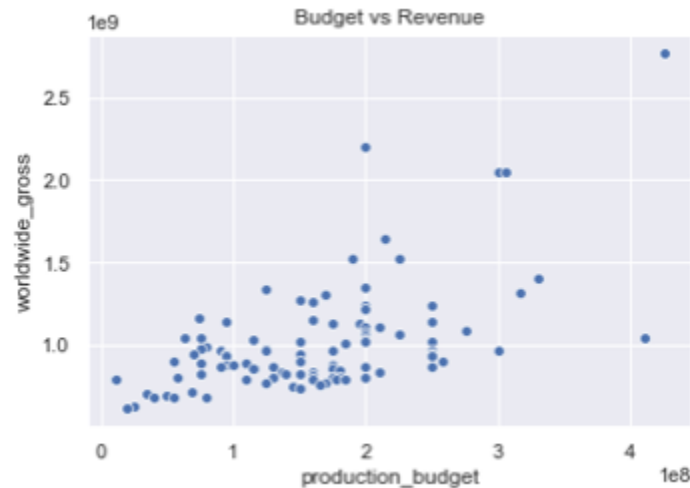
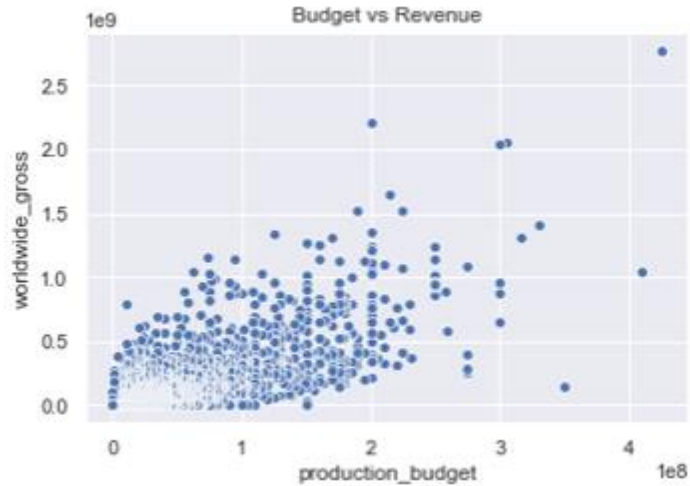
What genres do the best at the box office?

What movies/genres are the highest rated?

| id release_date |    |              | movie   | production_budget | domestic_gross | worldwide_gross | net_profit   |
|-----------------|----|--------------|---|-------------------|----------------|-----------------|--------------|
| 0               | 1  | Dec 18, 2009 | Avatar  | 425000000.0       | 760507625.0    | 2.776345e+09    | 2.351345e+09 |
| 42              | 43 | Dec 19, 1997 | Titanic                                       | 200000000.0       | 659363944.0    | 2.208208e+09    | 2.008208e+09 |
| 6               | 7  | Apr 27, 2018 | Avengers: Infinity War                        | 300000000.0       | 678815482.0    | 2.048134e+09    | 1.748134e+09 |
| 5               | 6  | Dec 18, 2015 | Star Wars Ep. VII: The Force Awakens          | 306000000.0       | 936662225.0    | 2.053311e+09    | 1.747311e+09 |
| 33              | 34 | Jun 12, 2015 | Jurassic World                                | 215000000.0       | 652270625.0    | 1.648855e+09    | 1.433855e+09 |
| 66              | 67 | Apr 3, 2015  | Furious 7                                     | 190000000.0       | 353007020.0    | 1.518723e+09    | 1.328723e+09 |
| 26              | 27 | May 4, 2012  | The Avengers                                  | 225000000.0       | 623279547.0    | 1.517936e+09    | 1.292936e+09 |
| 260             | 61 | Jul 15, 2011 | Harry Potter and the Deathly Hallows: Part II | 125000000.0       | 381193157.0    | 1.341693e+09    | 1.216693e+09 |
| 41              | 42 | Feb 16, 2018 | Black Panther                                 | 200000000.0       | 700059566.0    | 1.348258e+09    | 1.148258e+09 |
| 112             | 13 | Jun 22, 2018 | Jurassic World: Fallen Kingdom                | 170000000.0       | 417719760.0    | 1.305773e+09    | 1.135773e+09 |

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| 26              | 27 | May 4, 2012  | The Avengers                                  | 225000000.0       | 623279547.0    | 1.517936e+09    | 1.292936e+09 |
| 3               | 4  | May 1, 2015  | Avengers: Age of Ultron                       | 330600000.0       | 459005868.0    | 1.403014e+09    | 1.072414e+09 |
| 41              | 42 | Feb 16, 2018 | Black Panther                                 | 200000000.0       | 700059566.0    | 1.348258e+09    | 1.148258e+09 |
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# Top Movies: Gross & Net Profit



# Movie Budget vs Revenue

Plot production budget vs box office revenue

- First look at all movies in data set
- Cut down sample size to look at top 100 highest grossing movies

Findings:

- Outliers like Avatar where a massive budget paid off
- General trend of higher budgets leading to higher revenues
- Some evidence that slightly lower budget movies are able to be just as profitable (many data points in \$100M-\$200M budget range had wide range of revenue)

# Exploring Lower Budget Movies

What if the production company does not have the funds to start out making high budget films?

- Filtered data by movies with a budget less than \$100M

Conclusion: Several of these are animated films, which is one option for the production company to explore when starting out.

|     | id | release_date | movie   | production_budget | domestic_gross | worldwide_gross | net_profit   |
|-----|----|--------------|---|-------------------|----------------|-----------------|--------------|
| 672 | 73 | Jul 10, 2015 | Minions                                       | 74000000.0        | 336045770.0    | 1.160336e+09    | 1.086336e+09 |
| 425 | 26 | Dec 17, 2003 | The Lord of the Rings: The Return of the King | 94000000.0        | 377845905.0    | 1.141403e+09    | 1.047403e+09 |
| 824 | 25 | Jun 11, 1993 | Jurassic Park                                 | 63000000.0        | 395708305.0    | 1.038813e+09    | 9.758126e+08 |
| 629 | 30 | Jun 30, 2017 | Despicable Me 3                               | 75000000.0        | 264624300.0    | 1.034728e+09    | 9.597278e+08 |
| 608 | 9  | Jun 15, 1994 | The Lion King                                 | 79300000.0        | 421785283.0    | 9.862149e+08    | 9.069149e+08 |
| 621 | 22 | Jul 3, 2013  | Despicable Me 2                               | 76000000.0        | 368065385.0    | 9.752168e+08    | 8.992168e+08 |
| 437 | 38 | Dec 20, 2017 | Jumanji: Welcome to the Jungle                | 90000000.0        | 404508916.0    | 9.644962e+08    | 8.744962e+08 |
| 692 | 93 | May 19, 2004 | Shrek 2                                       | 70000000.0        | 441226247.0    | 9.370081e+08    | 8.670081e+08 |
| 424 | 25 | May 30, 2003 | Finding Nemo                                  | 94000000.0        | 380529370.0    | 9.364294e+08    | 8.424294e+08 |
| 426 | 27 | Dec 18, 2002 | The Lord of the Rings: The Two Towers         | 94000000.0        | 342548984.0    | 9.346996e+08    | 8.406996e+08 |

# Movie Popularity

Highest rated movies on IMDB (with more than 1M votes)

- Action, Adventure, Thriller, Drama are top rated

Most popular movies in The Movie Database

- Comic and book adaptations are popular as well as action films

| average_rating | num_votes | primary_title           | original_title          | start_year | runtime_minutes | genres                  |
|----------------|-----------|-------------------------|-------------------------|------------|-----------------|-------------------------|
| 8.1            | 1005960   | Shutter Island          | Shutter Island          | 2010       | 138.0           | Mystery,Thriller        |
| 8.4            | 1387769   | The Dark Knight Rises   | The Dark Knight Rises   | 2012       | 164.0           | Action,Thriller         |
| 8.6            | 1299334   | Interstellar            | Interstellar            | 2014       | 169.0           | Adventure,Drama,Sci-Fi  |
| 8.4            | 1211405   | Django Unchained        | Django Unchained        | 2012       | 165.0           | Drama,Western           |
| 8.2            | 1035358   | The Wolf of Wall Street | The Wolf of Wall Street | 2013       | 180.0           | Biography,Crime,Drama   |
| 8.1            | 1183655   | The Avengers            | The Avengers            | 2012       | 143.0           | Action,Adventure,Sci-Fi |
| 8.8            | 1841066   | Inception               | Inception               | 2010       | 148.0           | Action,Adventure,Sci-Fi |

| popularity | release_date | title                                       | vote_average | vote_count |
|------------|--------------|---|--------------|------------|
| 80.773     | 2018-04-27   | Avengers: Infinity War                      | 8.3          | 13948      |
| 78.123     | 2014-10-24   | John Wick                                   | 7.2          | 10081      |
| 60.534     | 2018-12-14   | Spider-Man: Into the Spider-Verse           | 8.4          | 4048       |
| 53.783     | 2014-12-17   | The Hobbit: The Battle of the Five Armies   | 7.3          | 8392       |
| 50.289     | 2012-05-04   | The Avengers                                | 7.6          | 19673      |
| 49.606     | 2014-08-01   | Guardians of the Galaxy                     | 7.9          | 17958      |
| 48.508     | 2018-11-16   | Fantastic Beasts: The Crimes of Grindelwald | 6.9          | 4870       |
| 48.057     | 2018-11-21   | Ralph Breaks the Internet                   | 7.2          | 2626       |
| 46.775     | 2017-07-07   | Spider-Man: Homecoming                      | 7.4          | 11585      |
| 45.253     | 2017-02-10   | John Wick: Chapter 2                        | 7.0          | 5863       |

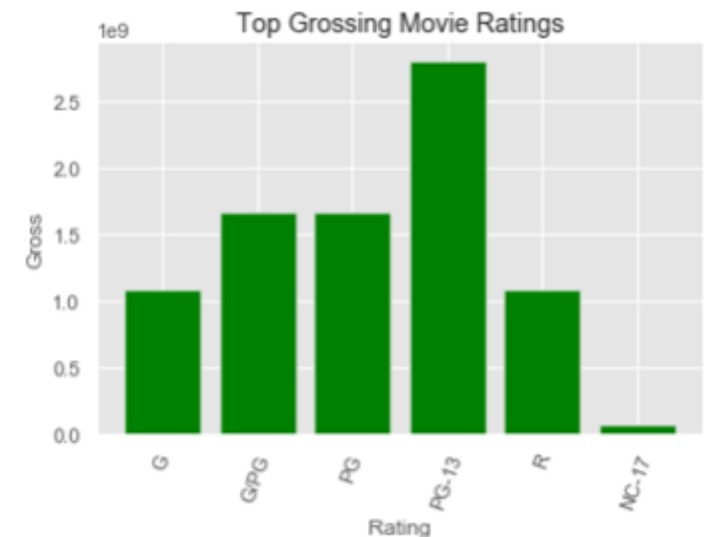
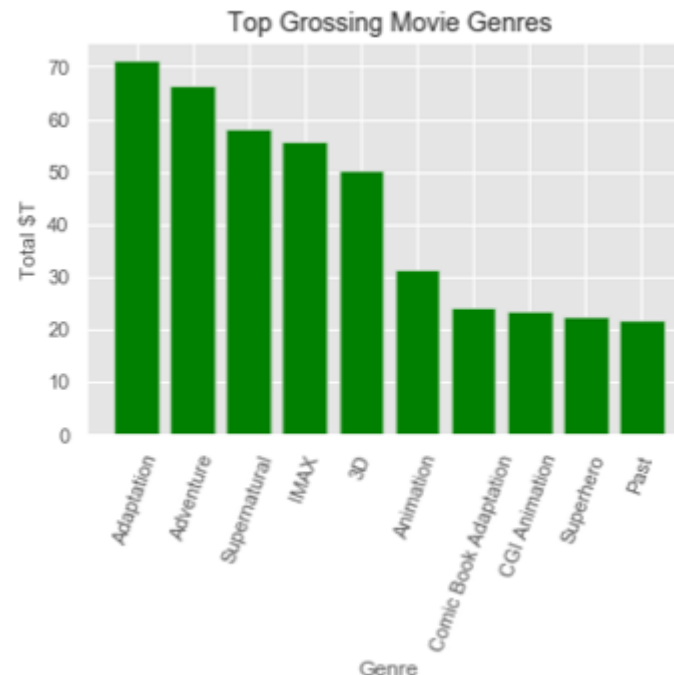
# Top Grossing Genres and Ratings

Data from box office Mojo on top grossing genres overall

- Adaptation and adventure movies have made the most money overall

Box Office Mojo- top grossing movie for each MPAA rating

- The top grossing PG-13 movie made significantly more than any other rating
- Could be partially due to lower interest in G rated movies or demographics
  - Fewer younger moviegoers
  - Smaller universe of people allowed to see R rated movies



# Final Thoughts

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Action, adventure movies tend to be highest rated and highest grossing

More specifically, comic and book adaptations are popular and bring in revenue

These budgets can be pretty high so depending on starting production budgets the company could look into other options like animation or explore further to find even smaller budget films that still do well