

Box Office Movie Data

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Questions

What are the top grossing movies?

How much do they cost to make?

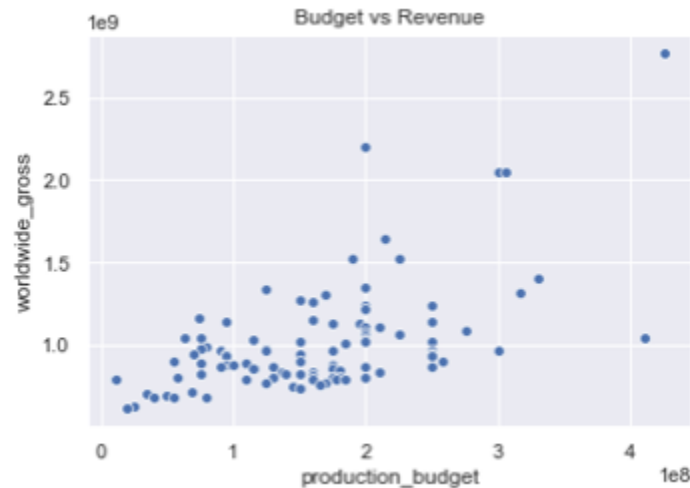
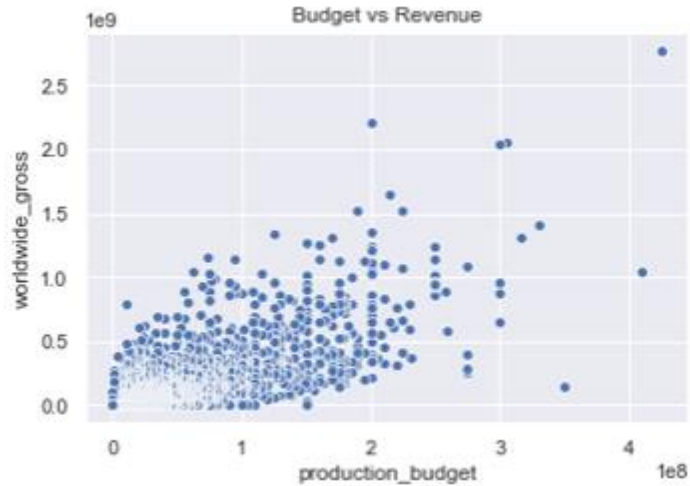
What genres do the best at the box office?

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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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

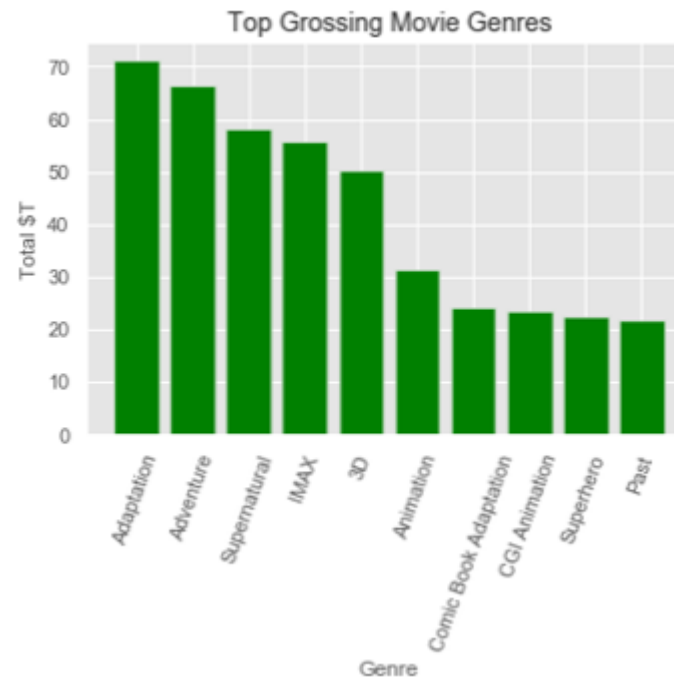
Top Grossing Genres and Ratings

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 movie goers
 - Smaller universe of people allowed to see R rated movies



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

Final Thoughts

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