Box Office Hit or Best Picture at the Oscars: Can You Really Have Both?

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Project goal

Did you ever wonder why the movies that are widely appreciated by critics and moviegoers don't win an Oscar but some movies that you have never even heard of win them? Is there a discrepancy with movies that perform well at the Oscars and their performance at the box office? Take James Cameron's *Avatar* (2008) for example, it earned more than $2 billion worldwide and was an international box office hit. Both critics and moviegoers loved the movie. But, the Oscar for best picture that year was given to Kathryn Bigelow's *Hurt Locker*, a movie relatively unheard of amongst moviegoers. Today, *Hurt Locker* stands as the lowest grossing best picture winner of all time. In 2003, *The Lord of the Rings: The Return of the King* became the rare popcorn event film to achieve mass appeal, earning $377 million in its theatrical run, and also emerge with the year's top Oscar honor. This reflects a difference in taste between moviegoers and film industry professionals. In the past 30 years, only four movies were named best picture while topping box office charts.

By making visualizations we will draw inferences as to why this is the case.

Few more examples:

- In 2006, *Crash,* a film with just $70.6 million gross, beat out blockbuster *Brokeback Mountain* ($105 million).
- In 2014, *12 Years a Slave* ($57 million), a wrenching film about slavery with no marquee name actors, vanquished *Gravity* ($270 million), which starred Sandra Bullock and George Clooney.

Director Alejandro Gonzalez-Inarritu's *Birdman* arrived as one of the lowest grossing best picture winners in history with only $37 million in domestic ticket sales at the time while its competition, Clint Eastwood's *American Sniper*, had earned $320 million by February 2015.

Data Set

https://www.kaggle.com/nazimamzz/notebook3111ee630d/data
https://www.kaggle.com/theacademy/academy-awards

The data is as follows:

IMDB DATA:

ATTRIBUTE	TYPE	SUMMARY
movie_title	Categorical	Title of the movie
num_critic_for_reviews	Quantitative	Number of critics who reviewed the movie
Duration	Quantitative	Total movie time (7-511)
director_name	Categorical	Name of the director
director_facebook_likes	Quantitative	Number of likes for the director on FB
actor_name	Categorical	Name of actors
actor_facebook_likes	Quantitative	Number of likes for the actor on FB
Gross	Quantitative	Gross income
Genres	Categorical	Genre
cast_total_facebook_likes	Quantitative	Total likes for all actors
Budget	Quantitative	Total amount invested
imdb_score	Quantitative	Score given by reviewers (1-10)
movie_facebook_likes	Quantitative	Number of likes for the movie on FB
Title_year	Categorical	Year Released (1916-2016)

OSCAR DATA:

ATTRIBUTE	TYPE	SUMMARY
Year	Categorical	Release year of the movie
Ceremony	Categorical	Academy Award Ceremony
Award	Categorical	Award Category
Winner	Binary	Award won or not
Name	Categorical	Name of Winner
Film	Categorical	Name of Film

Analytical Questions and Proxy Tasks

Make a list of questions you want to answer in your project and corresponding proxy tasks (referring to the attributes described in the previous section).

1. Which movies work at the Oscars?
Tasks: What genre of movies win awards for best picture?
Value: genre, best_picture_winner

2. Is there a discrepancy between movies that are huge box office hits and ones that have under-performed but win an Academy award?
Tasks: Is there a correlation between movies having high domestic gross and ones that have won an academy award?
Value: gross, movie_title, best_picture_winner

3. Does the Drama genre have preference over other genres at the Oscars?
Task: How many awards have gone to best picture with Drama genre?
Value: genre, best_picture_winner

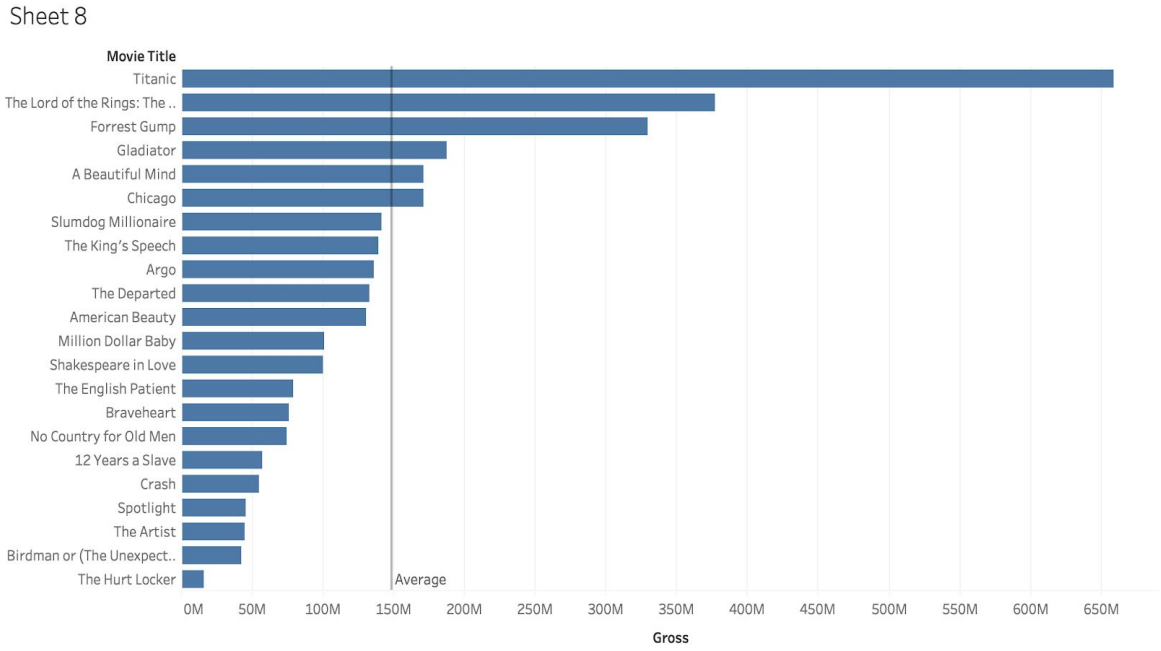
4. How do Best Picture winners compare with Highest Grossing movies for the respective year?
Task: Is Gross of best picture winners comparable with highest grossing movies?

Value: Gross, best_picture_winner, movie_title

Story Design

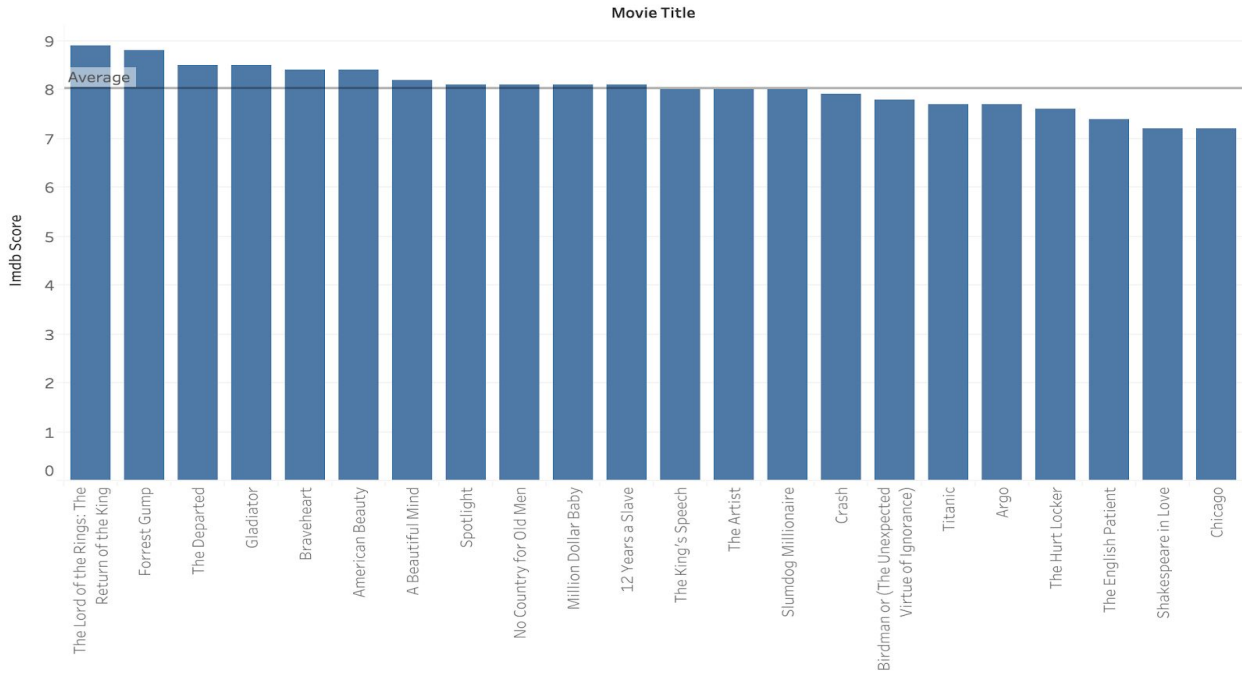
Data Analysis (all graphs that can be drawn from the dataset, not necessarily a part of our story)

1. What is the Box Office revenue of the Best Picture winners?



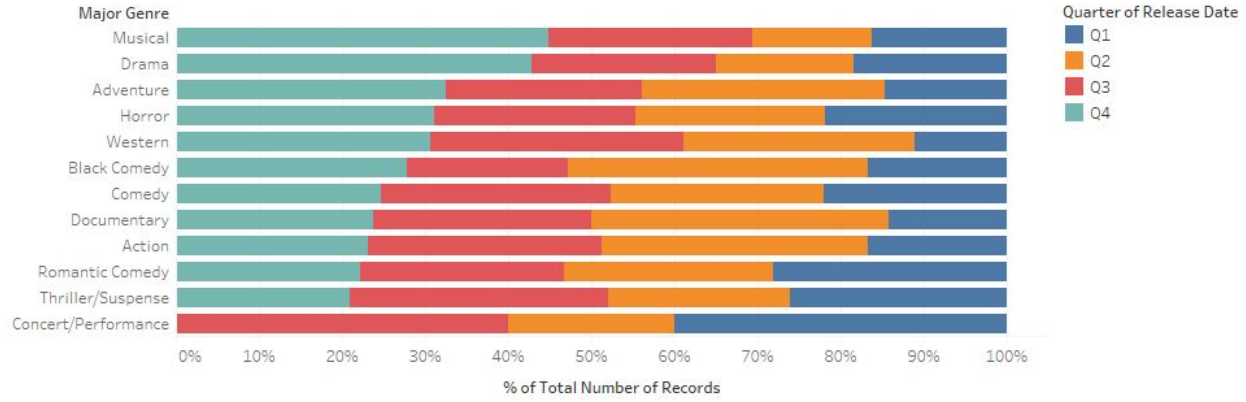
2. What is the average IMDB rating of the Best Picture award winning movies?

Sheet 8



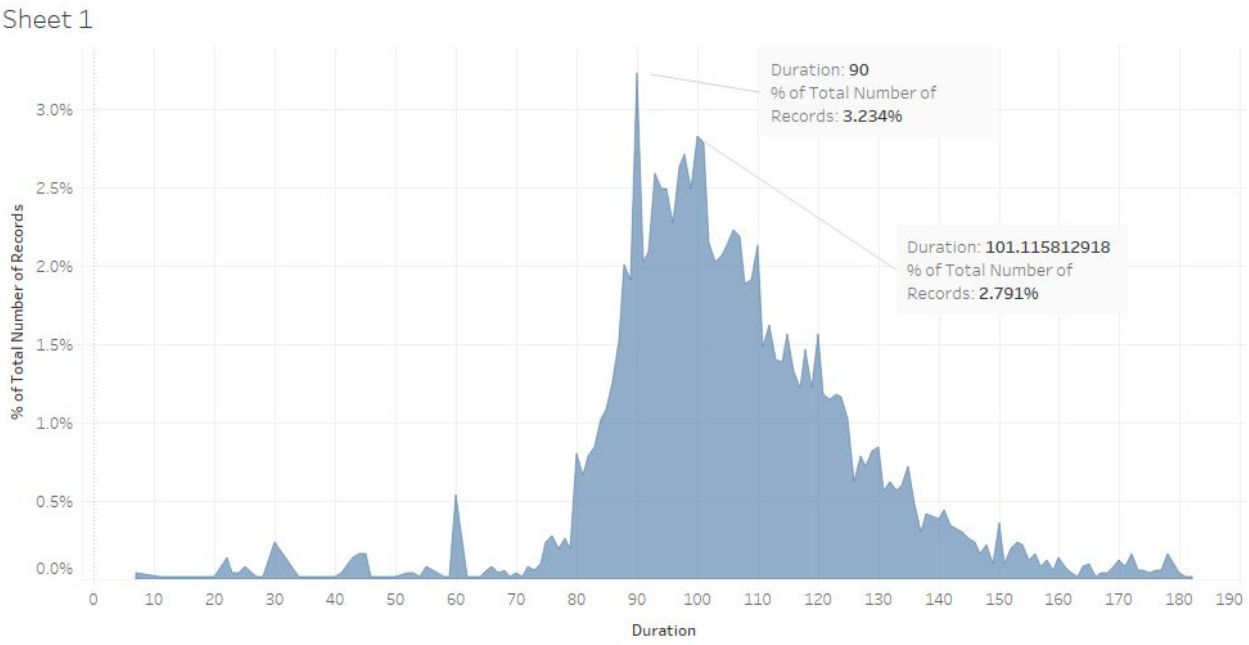
3. Is there any impact of winning an Oscar on the movie revenue?

Sheet 7



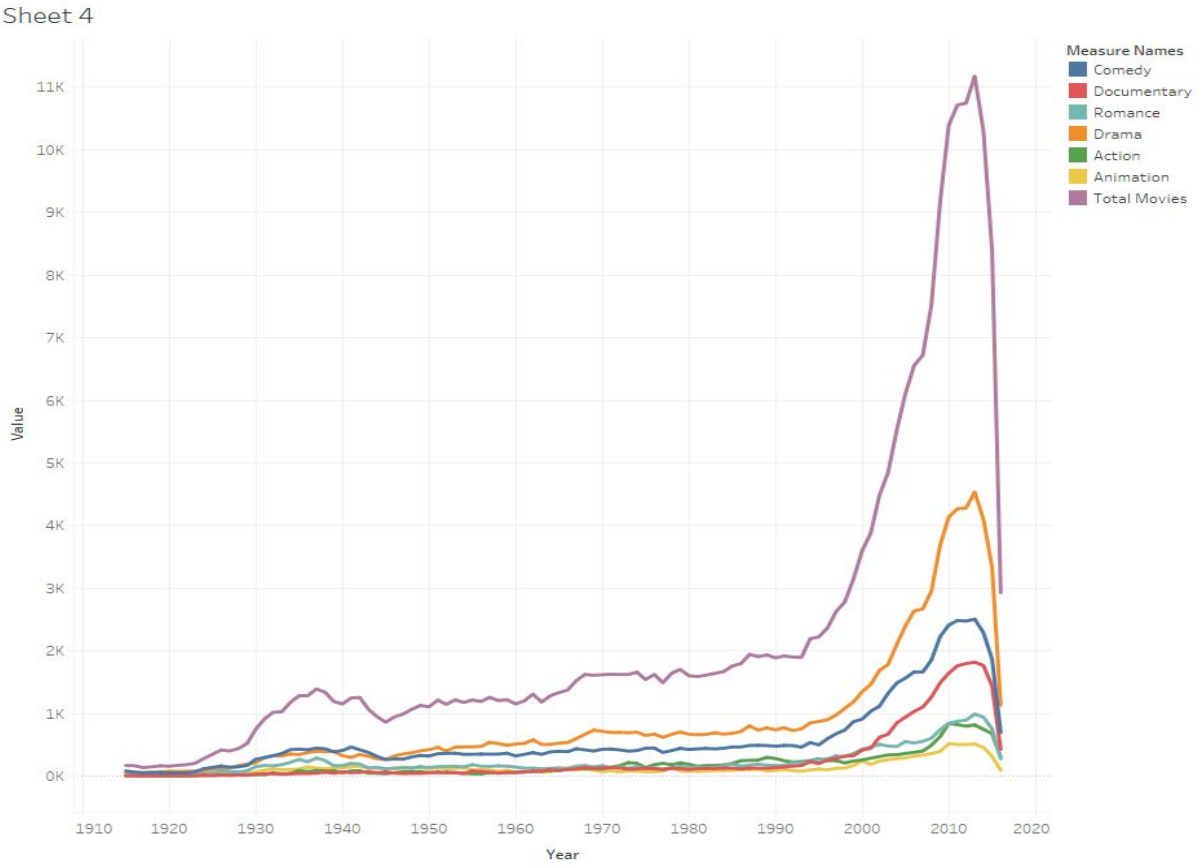
% of Total Number of Records for each Major Genre. Color shows details about Release Date Quarter. The view is filtered on Major Genre and Release Date Quarter. The Major Genre filter excludes Null. The Release Date Quarter filter keeps Q1, Q2, Q3 and Q4.

4. What are the average duration of movies over the course of 20 years (1995-2015)?

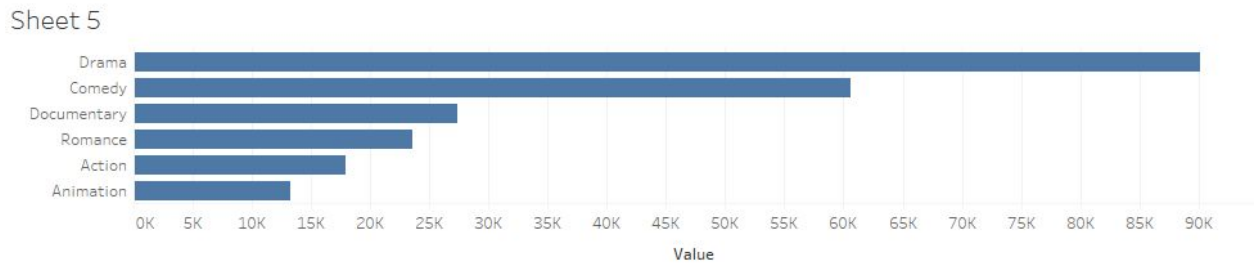


The plot of % of Total Number of Records for Duration. The data is filtered on Duration, which keeps 151 of 192 members. Percents are based on the whole table .

5. How has the movie genre changed over the course of 100 years? (1915-2015)?

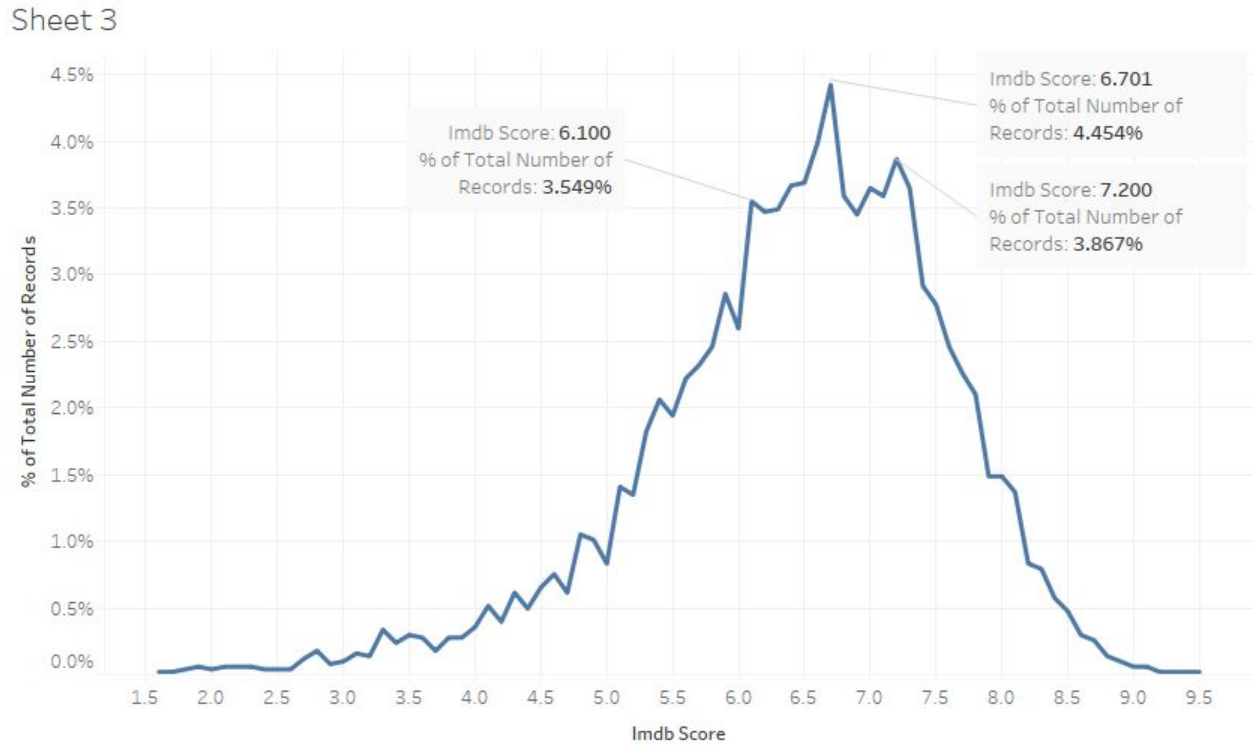


The trends of Comedy, Documentary, Romance, Drama, Action, Animation and Total Movies for Year. Color shows details about Comedy, Documentary, Romance, Drama, Action, Animation and Total Movies. The view is filtered on Year, which ranges from 1915 to 2016.



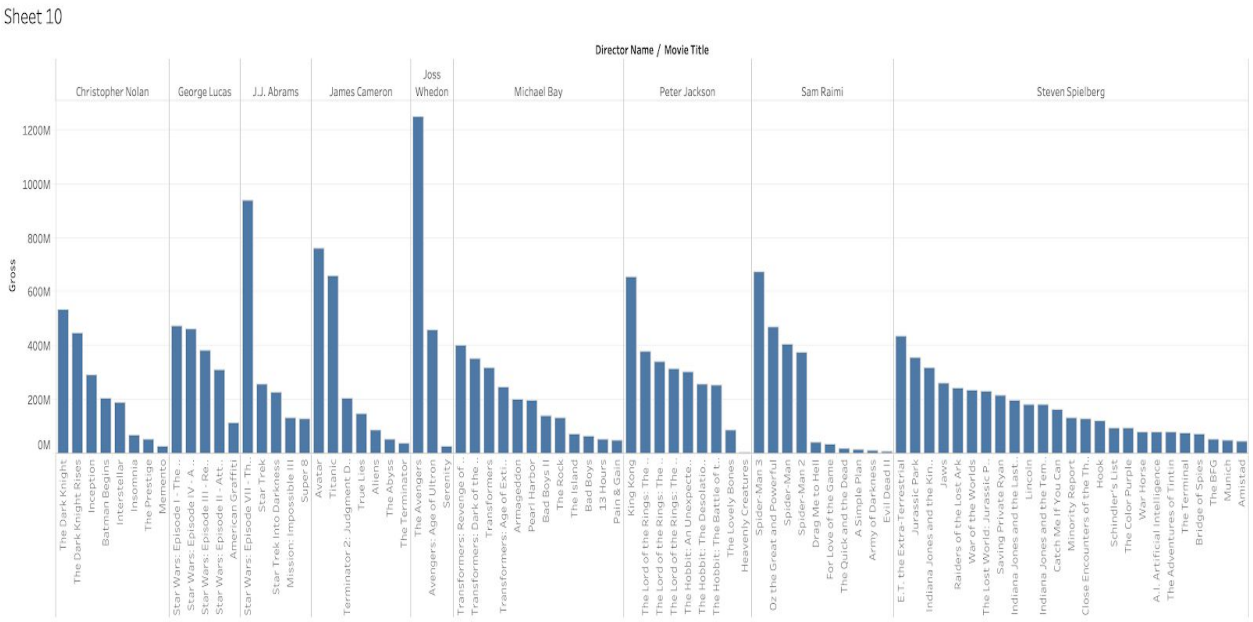
Action, Drama, Animation, Comedy, Documentary and Romance.

6. What is the average movie rating distribution over the course of 20 years (1995-2015)?



The trend of % of Total Number of Records for Imdb Score. Percents are based on each row of the table.

7. Which director has the highest grossing film and number of movies?

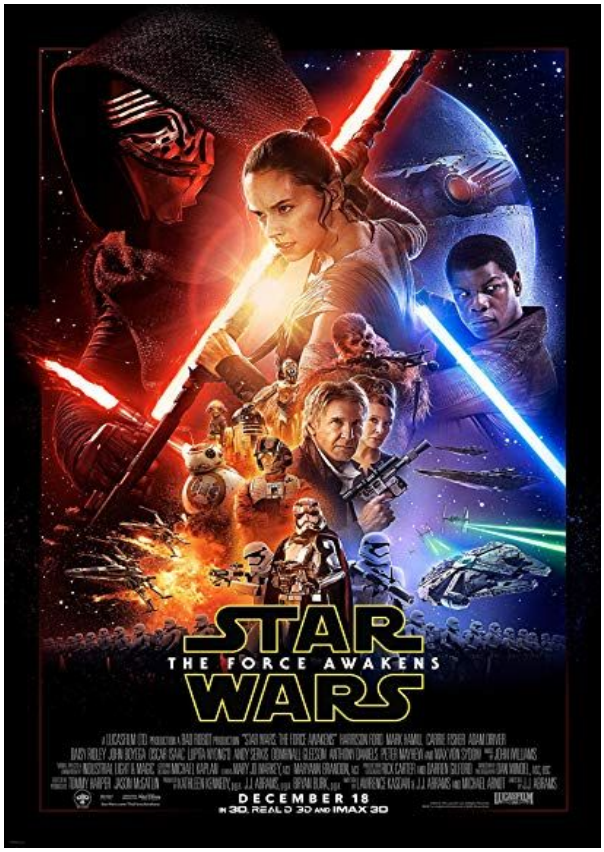


Storyboard

The Oscars were first hosted in 1929 and over the years have played a huge role inspiring numerous artists, writers, directors and creators. But often, the movies awarded by the Academy awards are not the audience's favourite. We are here to show you if this theory is true or not using our representation.

- In 2015, "Star Wars: The Force Awakens," the first live-action "Star Wars" movie since 2005, opened with enormous success, smashing multiple box office records. The film took in $970 million domestically, and more than $1 billion internationally. But "Spotlight," which tells the story of a team of investigative journalists at The Boston Globe, won best picture. It took in only $47 million domestically — less than 5 percent of the revenue of the year's biggest film.

STAR WARS ($0.9B) SPOTLIGHT($0.04B)



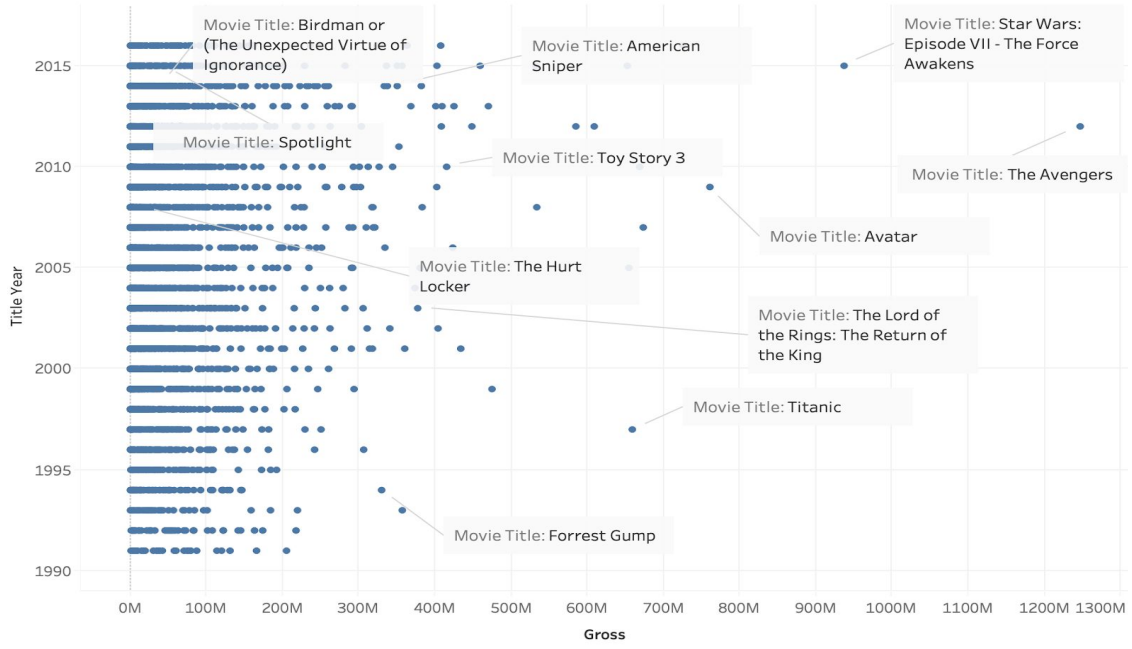
- In one of the biggest Oscars upsets, “The Hurt Locker,” a low-budget film about the Iraq war released in 2009, won best picture, snubbing the blockbuster “Avatar,” which broke the record for highest-grossing film worldwide.

AVATAR (Domestic gross: $0.8B)

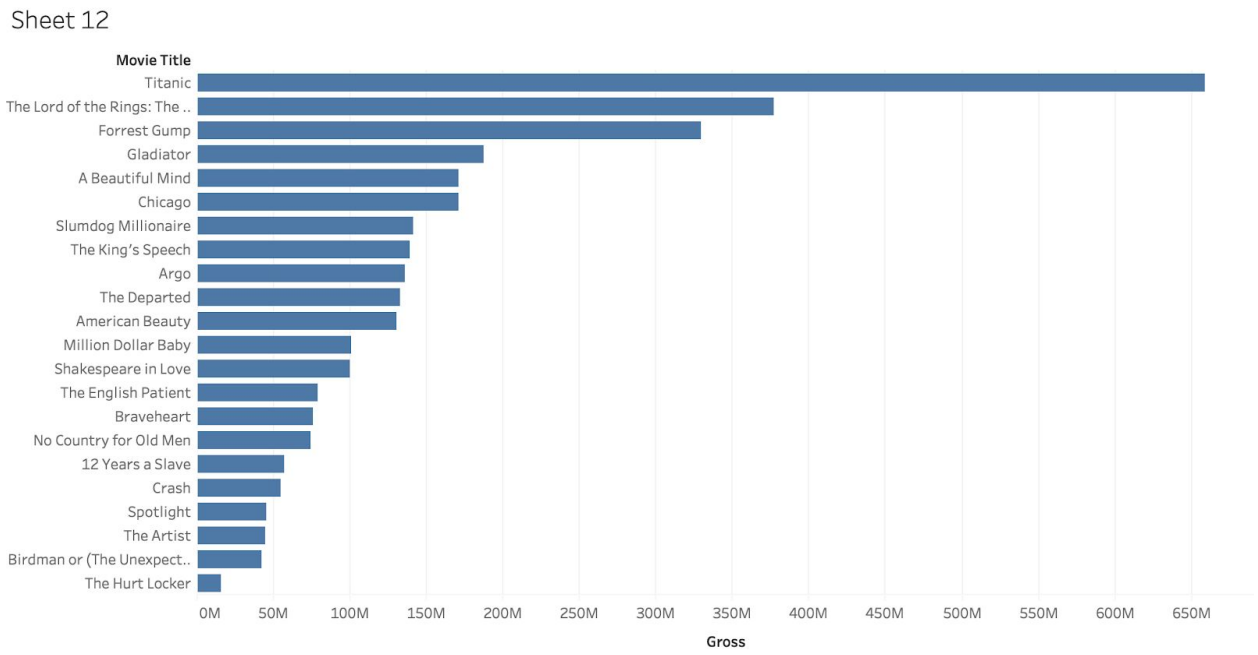
HURT LOCKER(Domestic gross: $0.02B)

- The last movie to win best picture while topping that year's box office was "The Lord of the Rings: The Return of the King" in 2003. Since 1990, only two other best picture winners have reached No. 1 at the box office: "Titanic" (1997) and "Forrest Gump" (1994).

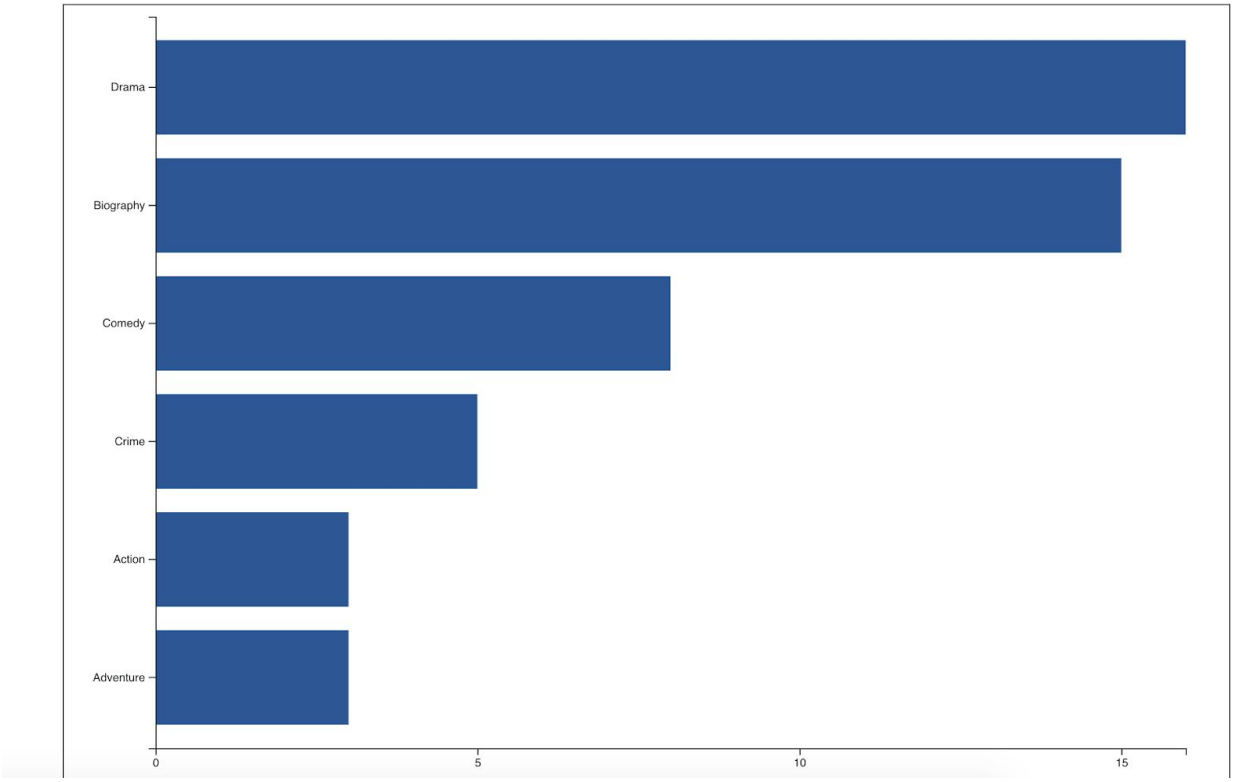
The below graph tells us that Oscars aren't just for popular movies. Instead of mass appeal, the best picture award recognizes intangible qualities such as originality, technical innovation, cultural significance and artistic value.



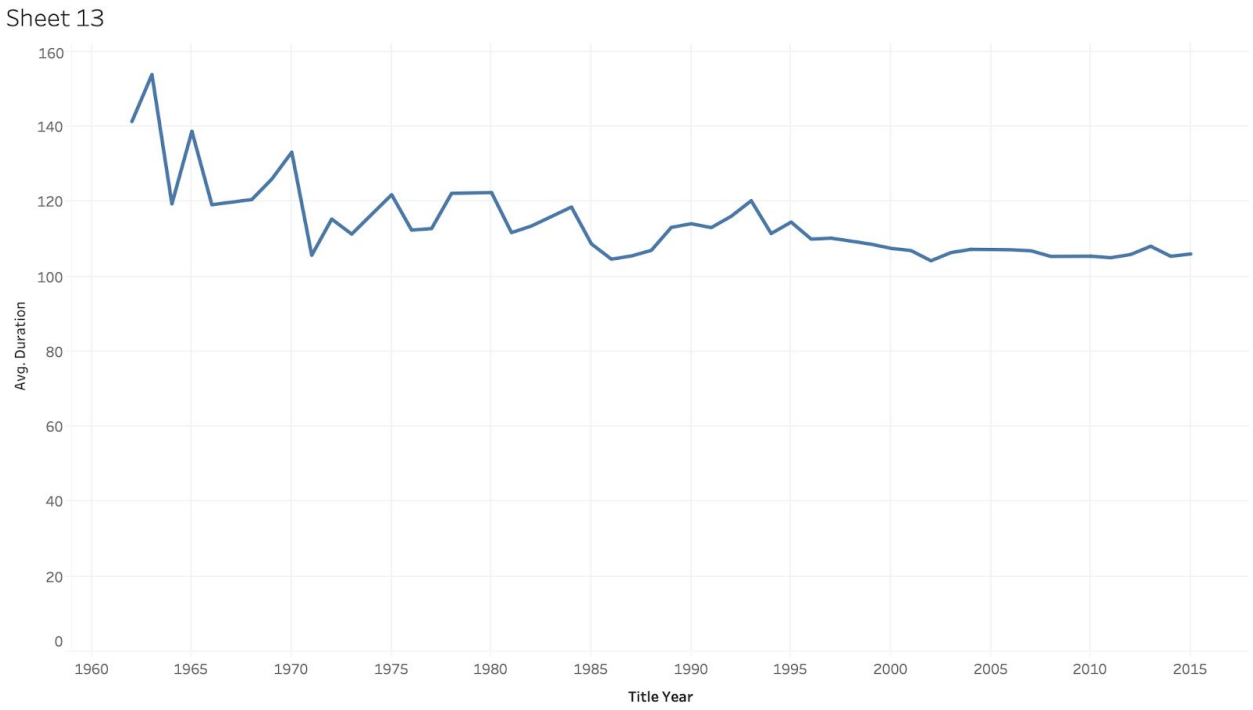
The below graph shows the box office collection of best picture winners at the Oscars. (1994-2015)



The below graph also tells us what genre works at the Oscars. We can see that genres like Drama, History and War do well.



By observing the below graph we can see that the avg. duration of Best Pictures is on a slow decline. The graph can be grouped by a period of 2 decades.
The movies in late 60s-70s tend to be longer, ranging from 140 minutes to 150 minutes.
The movies in 80s-90s tend to be shorter, just about 120 minutes.
The best picture nominees in the past decade have shown similar trends.



Changelog on 5/12/2018

- Separated the Genres which were earlier in the format (Drama|Adventure|Action) to make it more easy to interpret.
- Highlighted the movies that have won an Oscar for best picture in the scatter plot.
- Made the scatter plot visualization more interactive by enabling the user to view additional information on hovering over the data point.
- Changed the Title from 'Movie Mania' to 'Box Office Hit' or 'Best Picture?'

Changelog on 5/19/2018

- Over imposed 2 radar charts into one as suggested by Professor.
- Shifted the y-axis by few pixels for the scatter Plot graph as suggested by the Professor.
- Added legends to the scatter plot graph.
- Added tooltips to line charts.
- Made all the graphs smaller as suggested by Professor.

GitHub Repo

https://github.com/NYU-VIS-FALL2018/storytelling-group-5

GitHub Demo page

https://nyu-vis-fall2018.github.io/storytelling-group-5/