

Project: Visualizing Movie Data

Complete each section. When you are ready, save your file as a PDF document and submit it [here](#).

Step 1: Data Cleanup and Attribute Selection

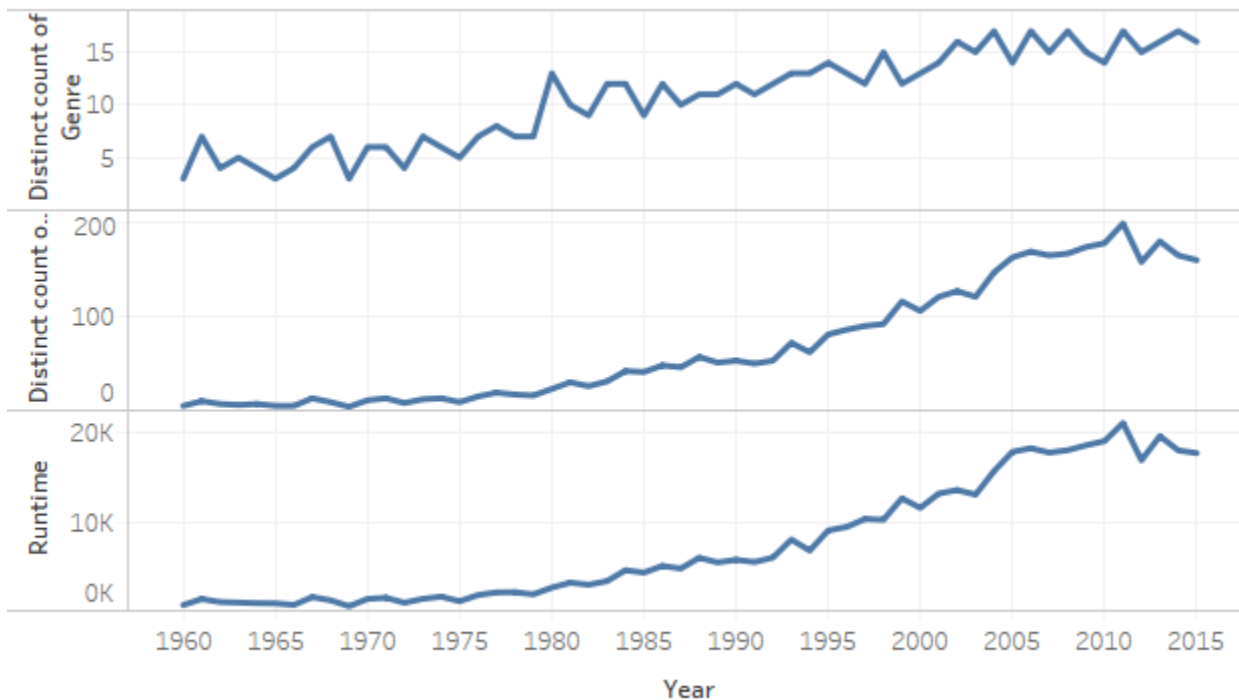
The data was cleaned and the following attributes were chosen for further analysis and the reasons thereof:

- YEAR:
- PRODUCTION HOUSE:
- PROFITABILITY
- BASED ON NOVEL
- GENRE
- POPULARITY
- BUDJET ADJ
- REVENUE ADJ

Step 2: Tableau Visualizations

Over time, movies have collectively become more popular as evidenced from the graphs below. The number of movies, distinct genres of movies being made and the total runtime all shows an increase as a result.

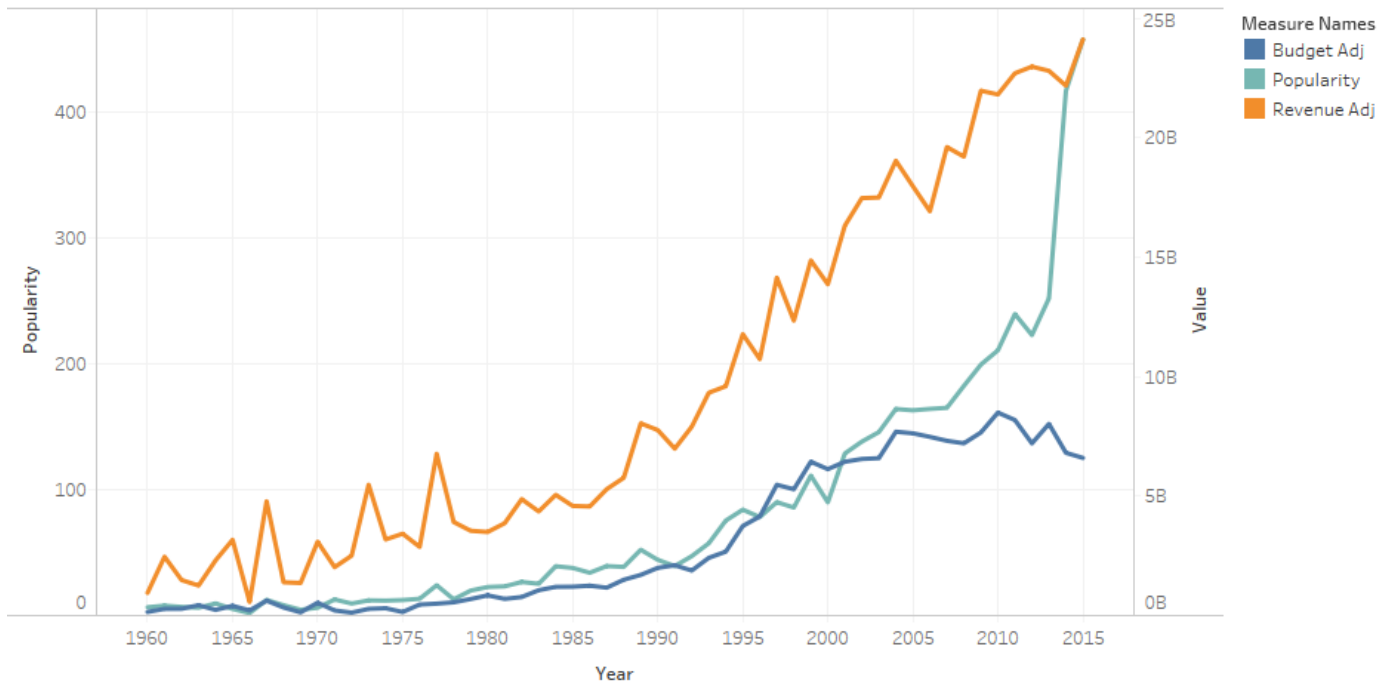
Movies quantification



The trends of distinct count of Genre, distinct count of IMDb Id and sum of Runtime for Year.

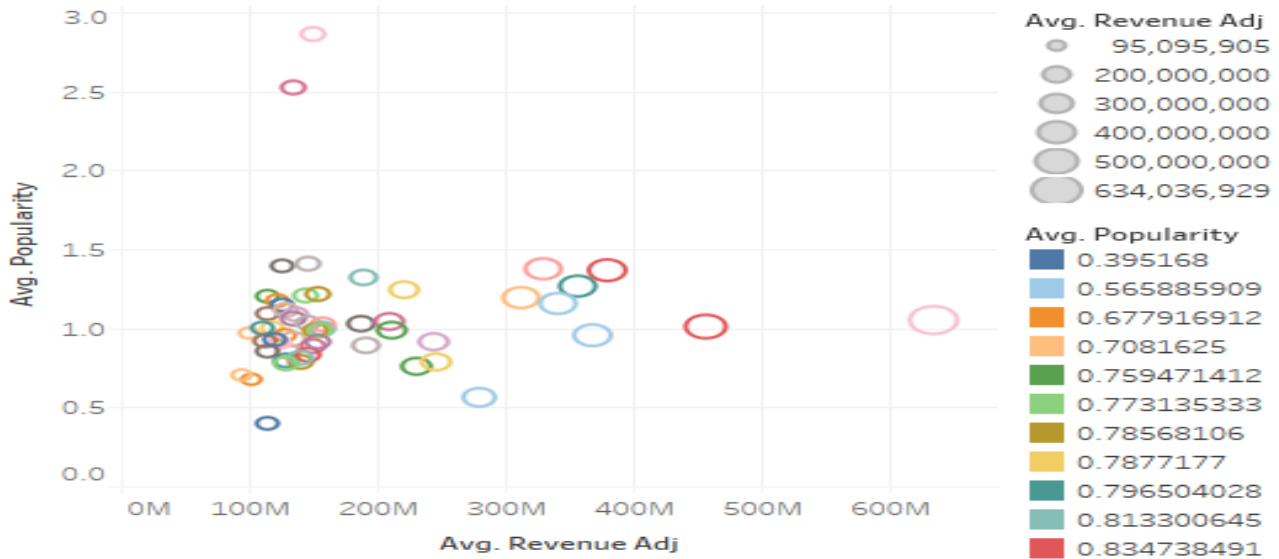
As the number of movies have increased, they have started to become bigger in budgets. With increasing budgets, the quality has improved. This is reflected in increased popularity of movies over time which reflects in the increased revenue collected which is reflected in the charts below.

Movie Popularity and Financial aspects



The trends of Popularity, Popularity, Budget Adj and Revenue Adj for Year. Color shows details about Popularity, Budget Adj and Revenue Adj.

Avg Popularity vs Avg Revenue Adj



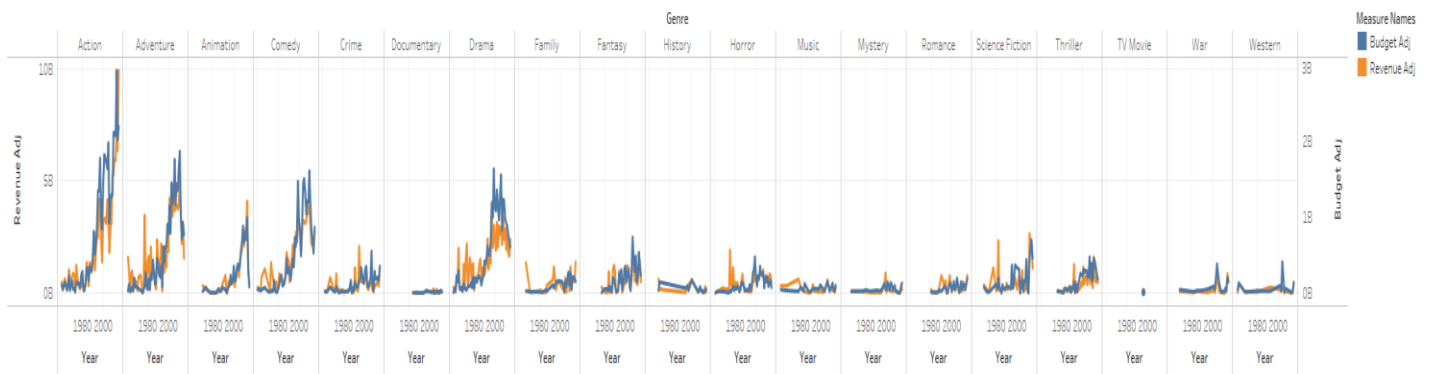
Average of Revenue Adj vs. average of Popularity. Color shows details about average of Popularity. Size shows average of Revenue Adj. Details are shown for Year.

Step 3: Questions

- Answer the following questions. Refer to your online visualizations to back up your answers:
 - **Question 1:** How have movie genres changed over time?

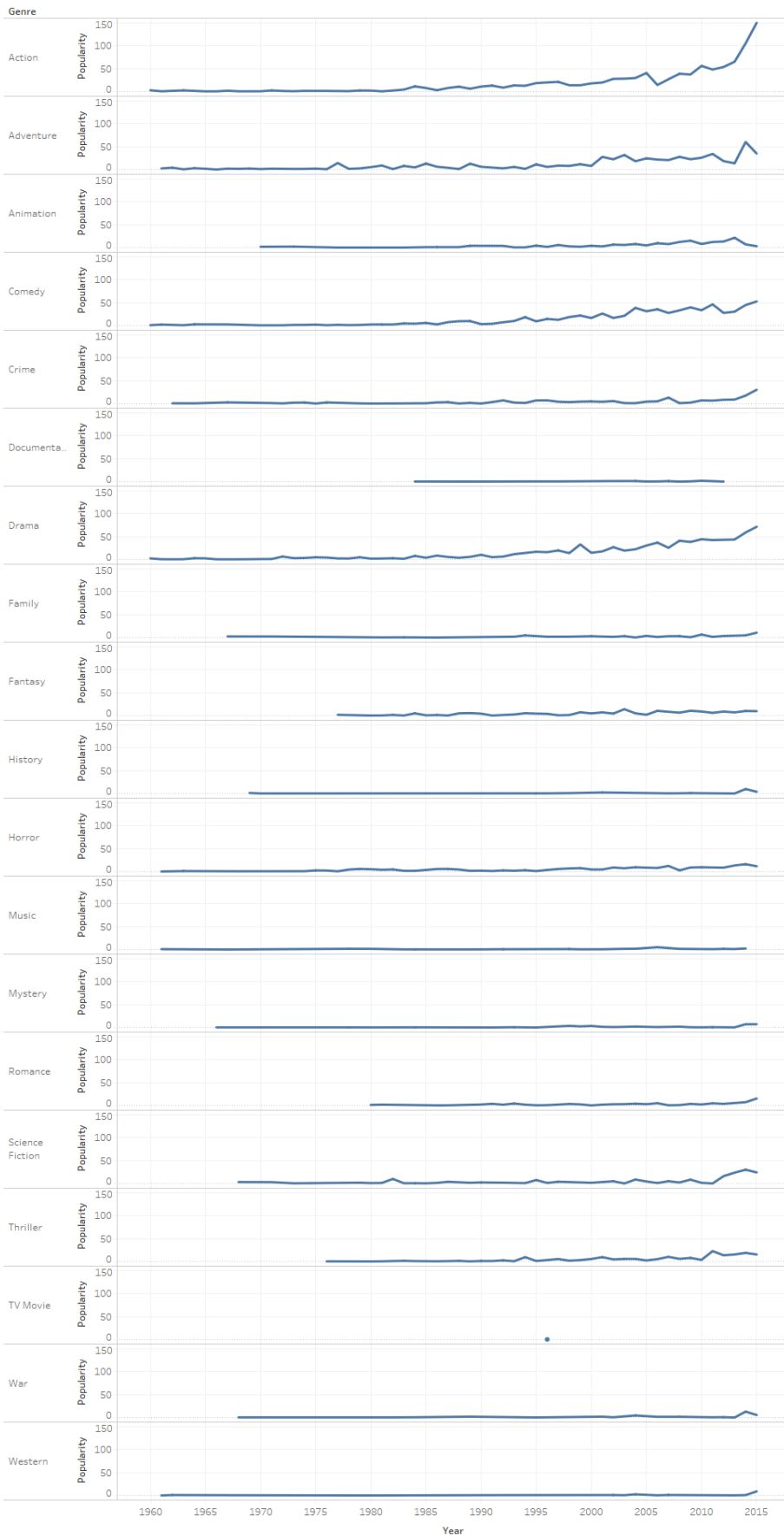
We first looked to determine how the genres popularity behaved over time. From the graph it is clear that The genre action has grown in popularity the greatest. Other genres with significant uptrend are Adventure, Comedy, Crime, Drama and Science fiction. Similar to this trend, we find similar pattern with both budgets and revenues for these genres increasing over time. All show rapid increase in the last decade.

Genre budgets and revenue trends over time



The trends of Revenue Adj and Budget Adj for Year broken down by Genre. Color shows details about Revenue Adj and Budget Adj. The view is filtered on Genre, which keeps 19 of 19 members.

Genre Popularity

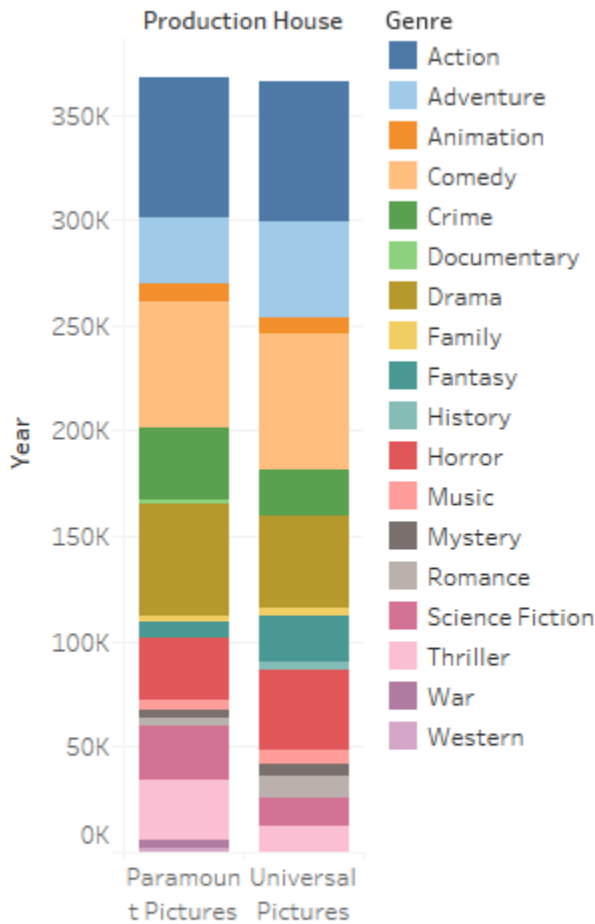


The trend of sum of Popularity for Year broken down by Genre.

Question 2: How do the attributes differ between Universal Pictures and Paramount Pictures?

It can be observed that the two production houses differ in the genres of movies produced by them over the years as seen below.

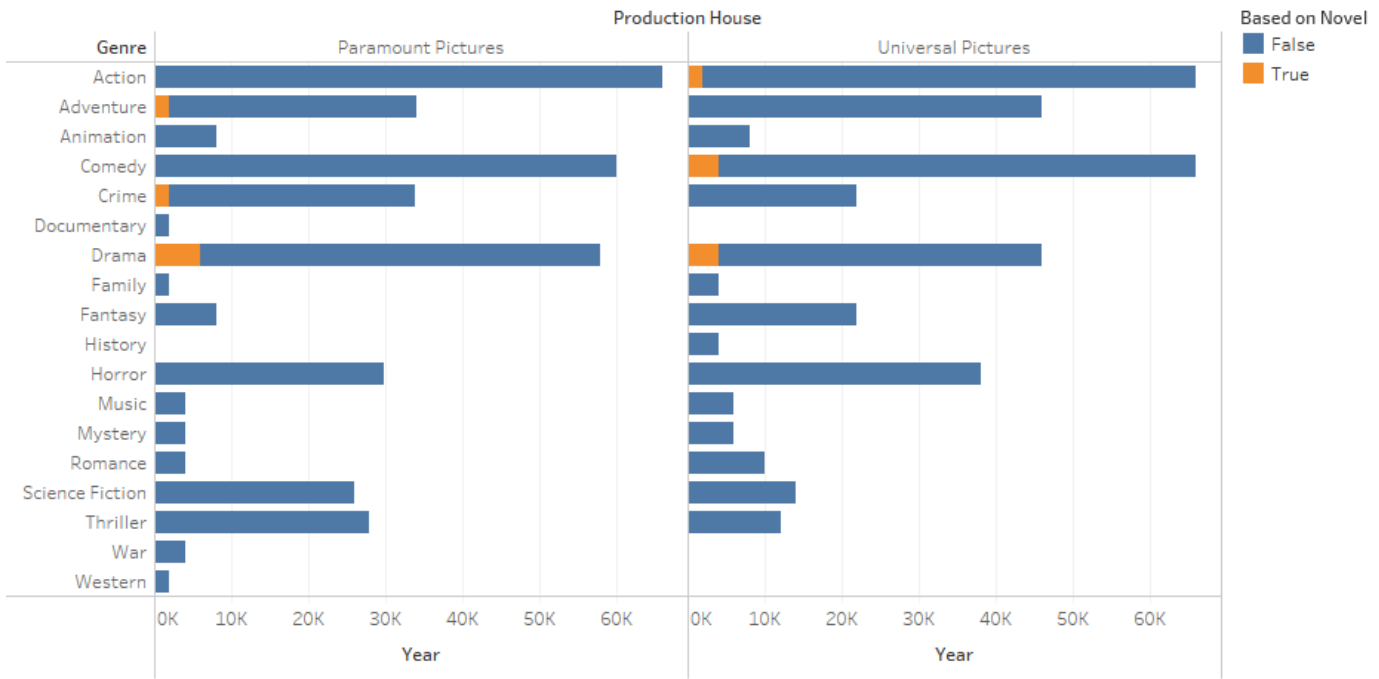
Genres in PP vs UP



Year for each Production House.
Color shows details about Genre.
The view is filtered on
Production House, which keeps
Paramount Pictures and
Universal Pictures.

Universal Pictures produces more movies based on novels compared to Paramount Pictures. They also use the novels as source in a different set of genres. Overall, Paramount pictures has dabbled in more genres than Universal Pictures. (17 vs 15)

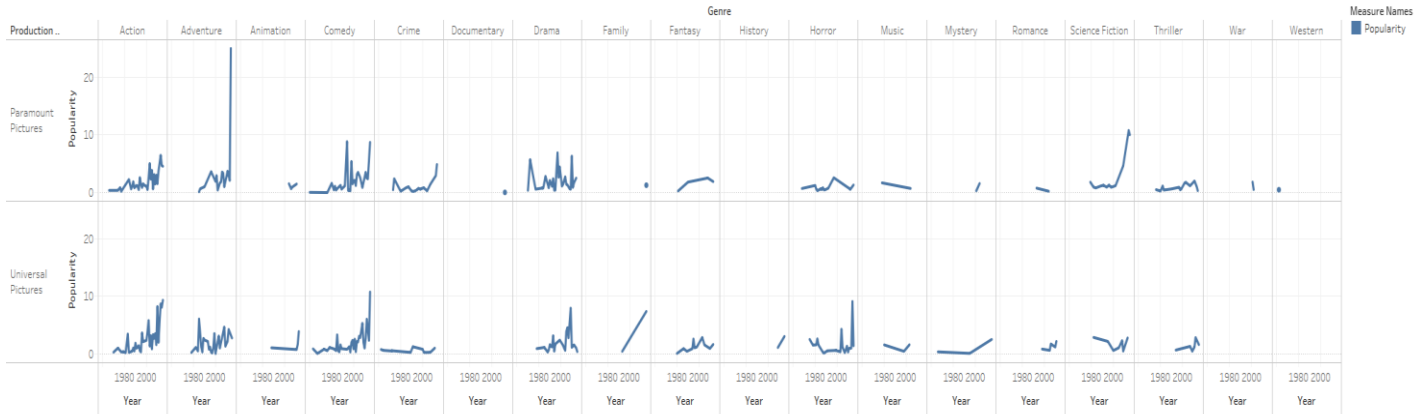
Based on Novel- PP Vs UP



Year for each Genre broken down by Production House. Color shows details about Based on Novel. The view is filtered on Production House, which keeps Paramount Pictures and Universal Pictures.

The popularity chart across the genres shows distinct differences. For Paramount Pictures, Adventure and Science fiction show highest increasing trend in popularity while for Universal Pictures, Action, Comedy, Family and Horror show greatest uptrends.

Popularity across genres in PP & UP

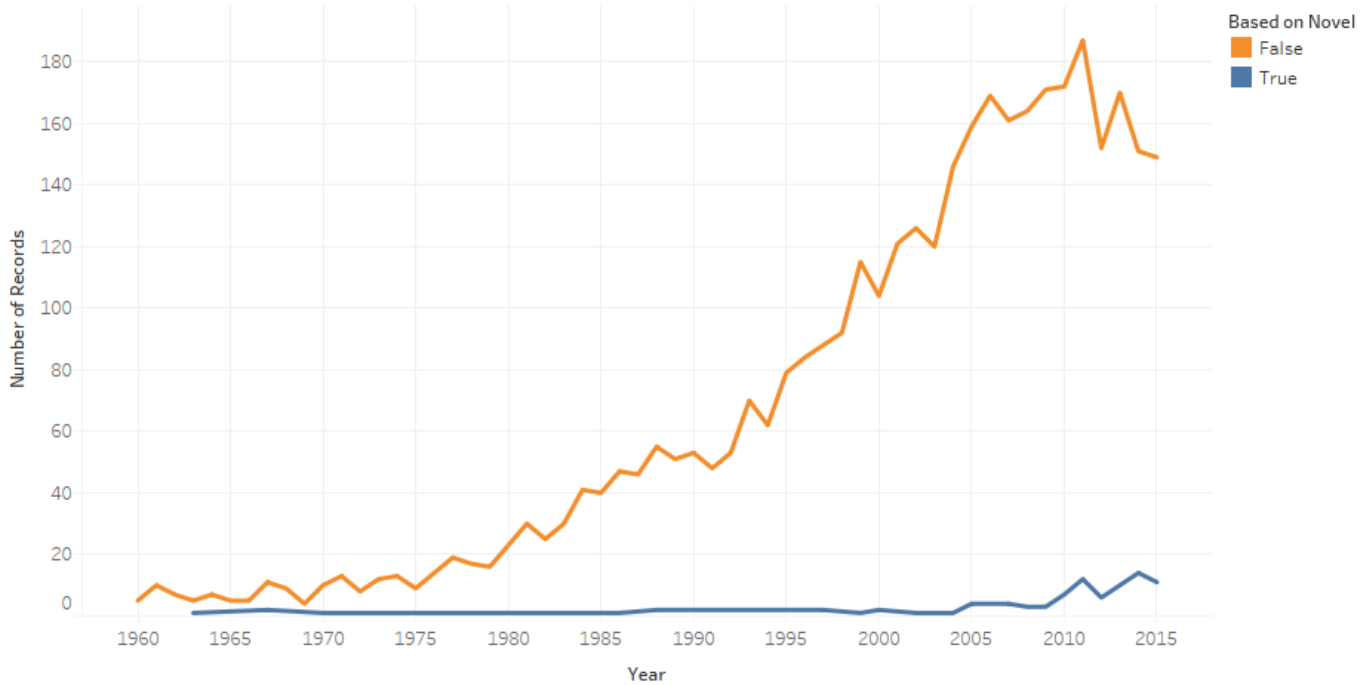


The trend of Popularity for Year broken down by Genre vs. Production House. Color shows details about Popularity. The view is filtered on Genre and Production House. The Genre filter keeps 19 of 19 members. The Production House filter keeps Paramount Pictures and Universal Pictures.

- **Question 3:** How have movies based on novels performed relative to movies not based on novels?

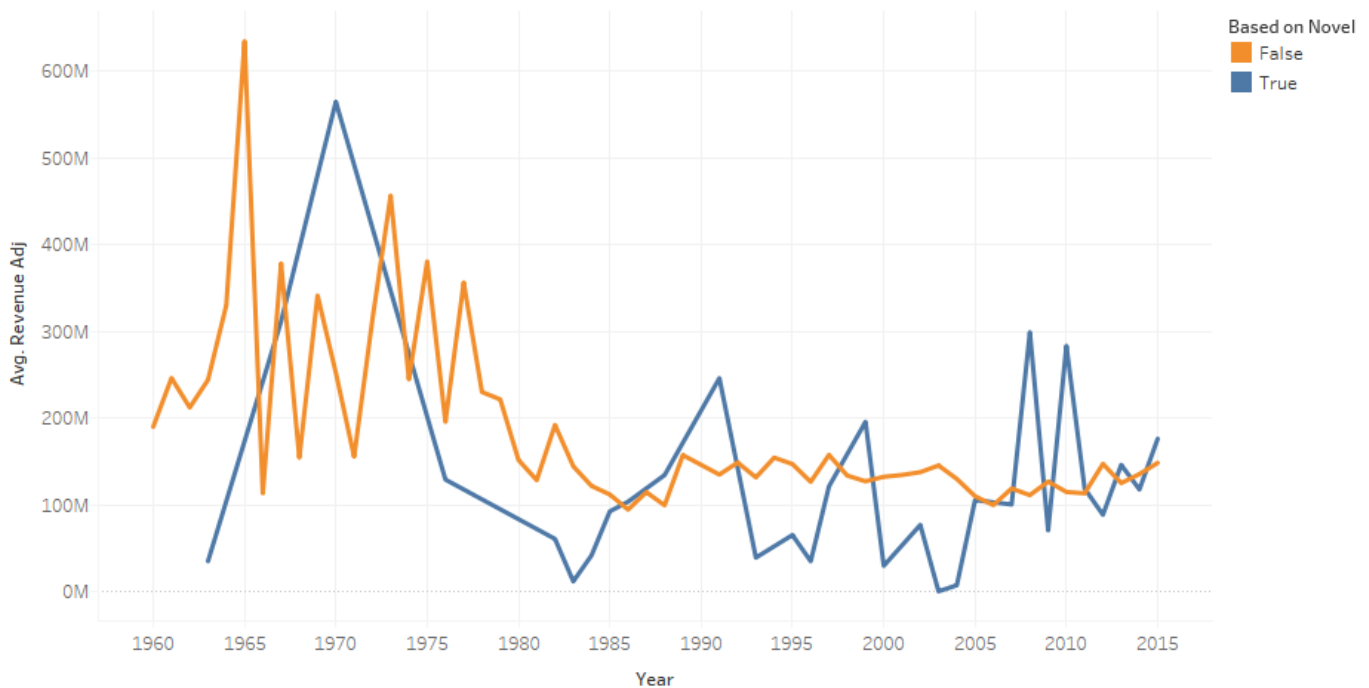
Movies based on novels have been produced at much lesser numbers. So, we must compare them using average values. Average revenue earned graph shows that movies based on novels have been more successful commercially across genres and also over time.

Number of movies based on novels



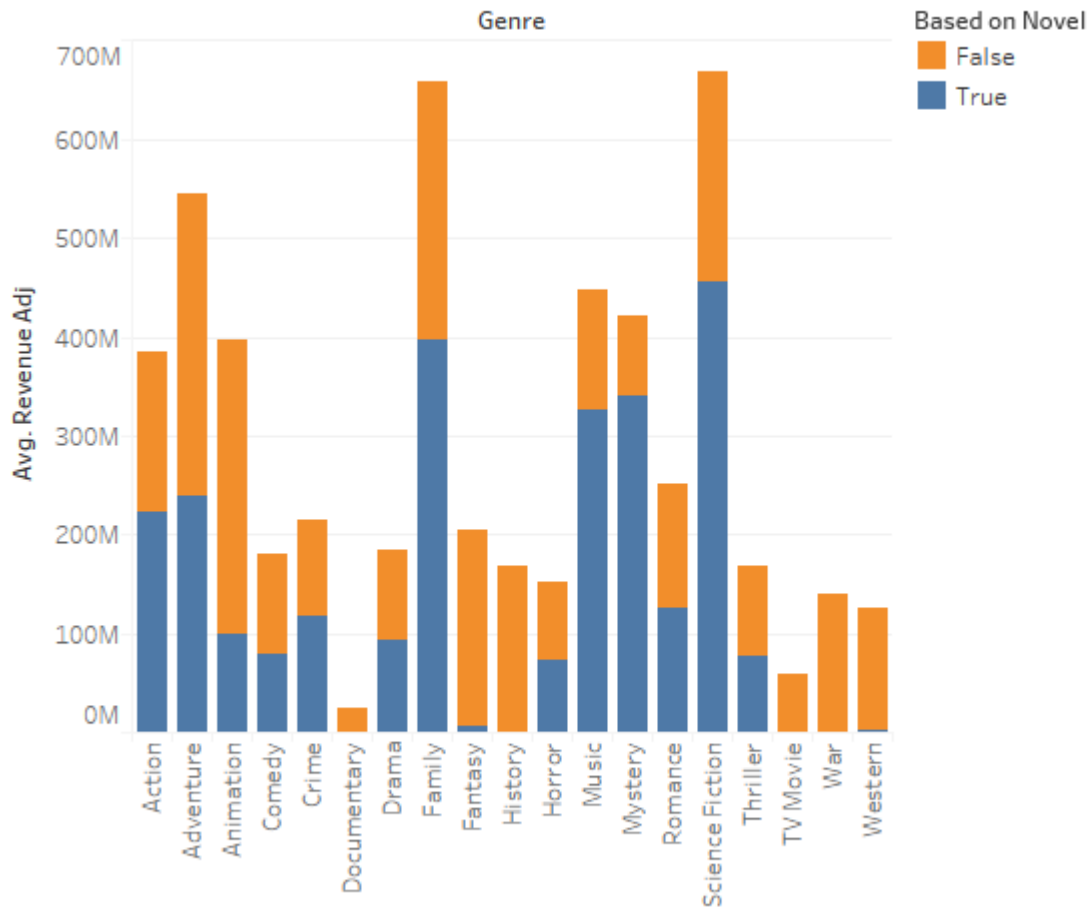
The trend of sum of Number of Records for Year. Color shows details about Based on Novel.

Avg Revenue of Movies based on novels



The trend of average of Revenue Adj for Year. Color shows details about Based on Novel.

Genres based on Novels



Average of Revenue Adj for each Genre. Color shows details about Based on Novel.

https://public.tableau.com/profile/homagni.bhattacharjee#!/vizhome/P_3_Q3/Performanceofmoviesbasedonnovels

- What is your additional question that you proposed? What is the answer? How did you come up with this question?

The additional question proposed is:

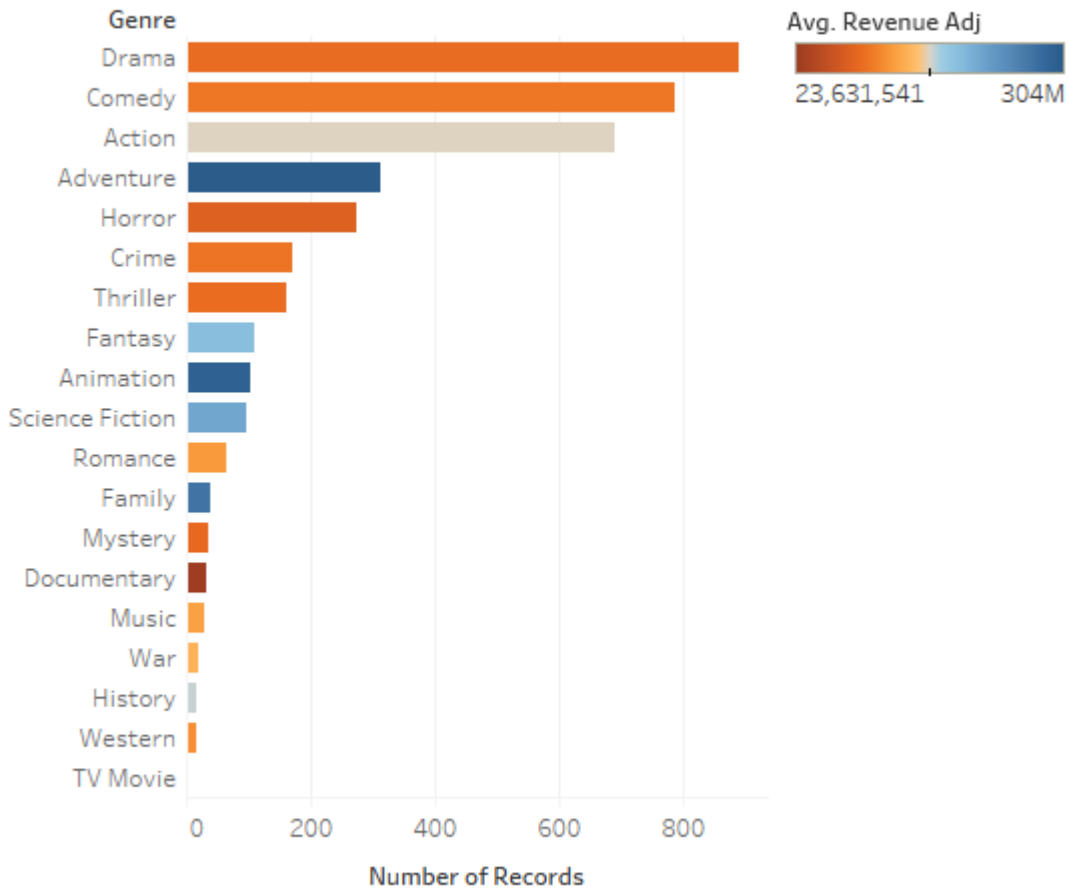
Which genre of movies should a new producer make based on historical trends?

The question cropped out from the desire to dive deep into the data and make profitable predictions.

To answer this question the following steps were followed:

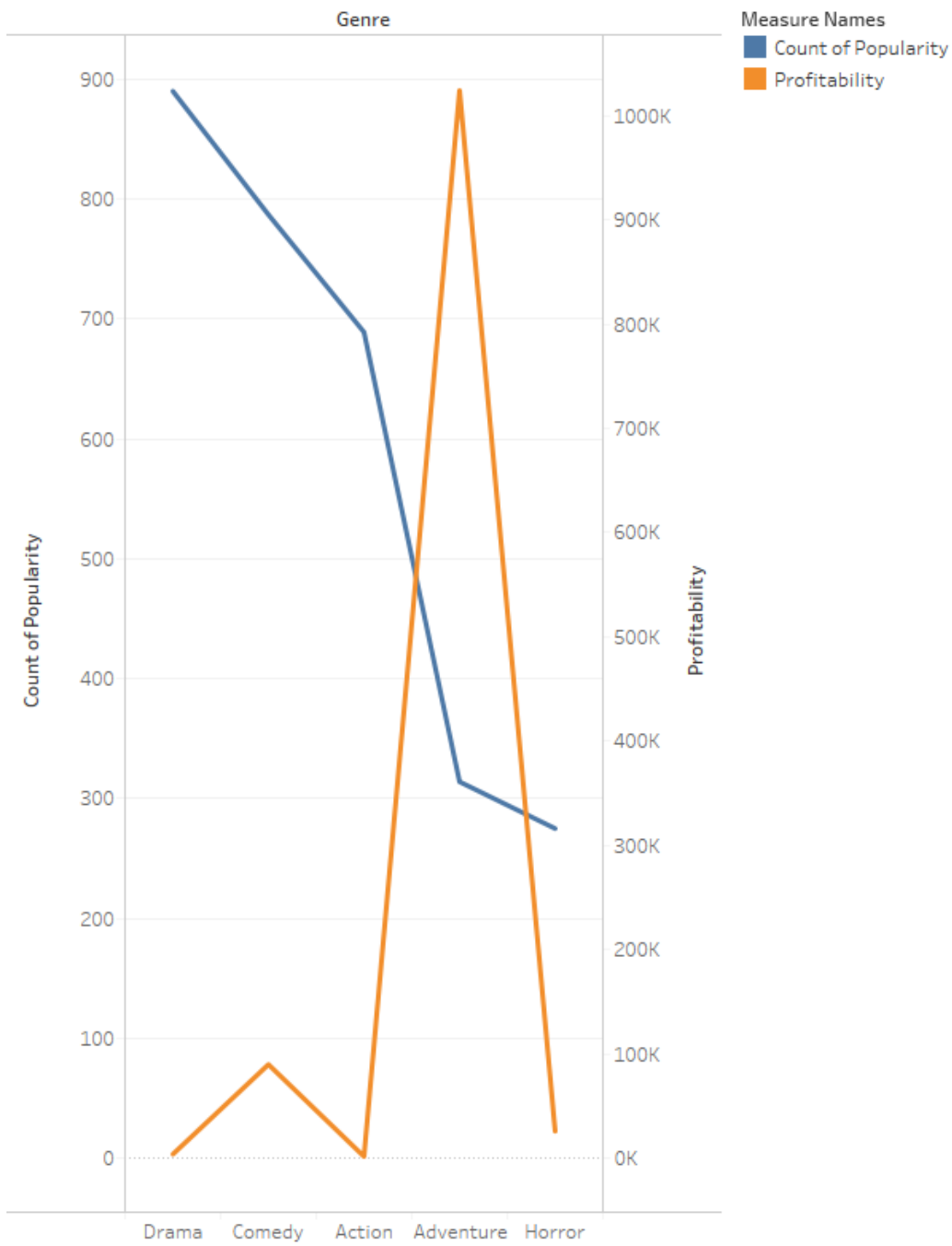
- Identify the top genres in terms of number.
- The top five were chosen as it will offer a data dense background.
- The profitability and popularity of these five genres were compared against each other.
- Based on this analysis, the genre 'Adventure was found suitable' as it was fourth in terms of total number of movies made over time and the most profitable (Revenue_adj/Budget_adj)
- Thus it provides a good bang for the buck and would be most suitable for a new producer.

Genre by numbers and avg revenue earned



Sum of Number of Records for each Genre. Color shows average of Revenue Adj.

Sheet 3



The trends of count of Popularity and Profitability for Genre.
Color shows details about count of Popularity and Profitability.
The view is filtered on Genre, which keeps Action, Adventure,
Comedy, Drama and Horror.

https://public.tableau.com/profile/homagni.bhattacharjee#!/vizhome/P_3_Q4/NewMoviereco