Project: Visualizing Movie Data
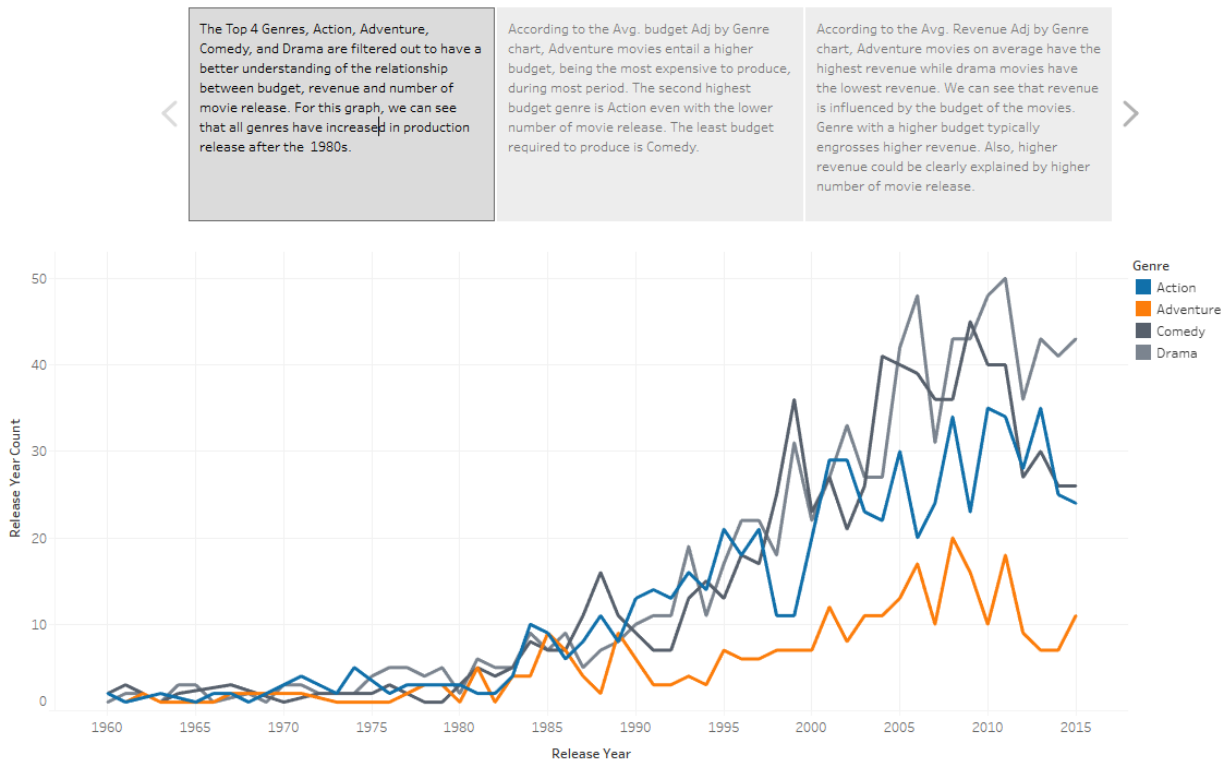
Data Cleanup and Attribute Selection

- The Attributes that will be selected for visualization of this project are genre, production company, popularity, release year, keywords, budget adj, revenue adj and gross margin
- For the data cleanup, movie data with 0 budget or revenue has been removed which leave us with 3855 rows of data out of 10866 rows. While many data have been eliminated, this elimination has helped the data investigation process as budget and revenue are the key attributes for visualizing.
- When sorted by *popularity*, movies with 0 budget or revenue has been eliminated due to poor ranking and skewing the data.
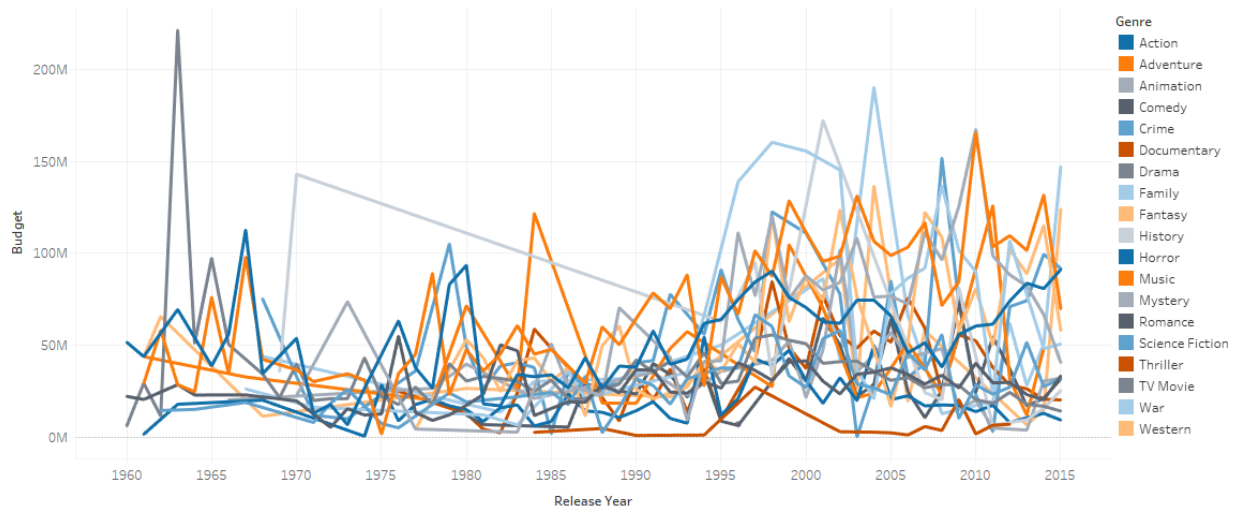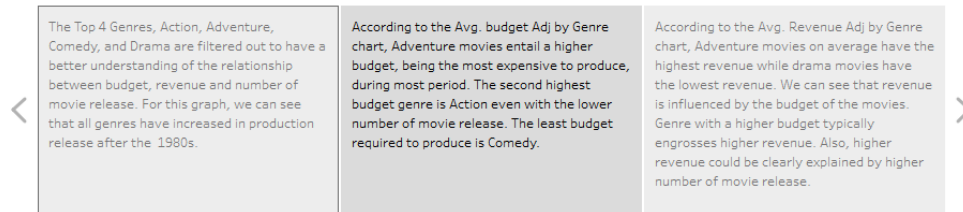
Tableau Visualizations

https://public.tableau.com/profile/dolly.yu#!/vizhome/VisualizeMovieData_27/
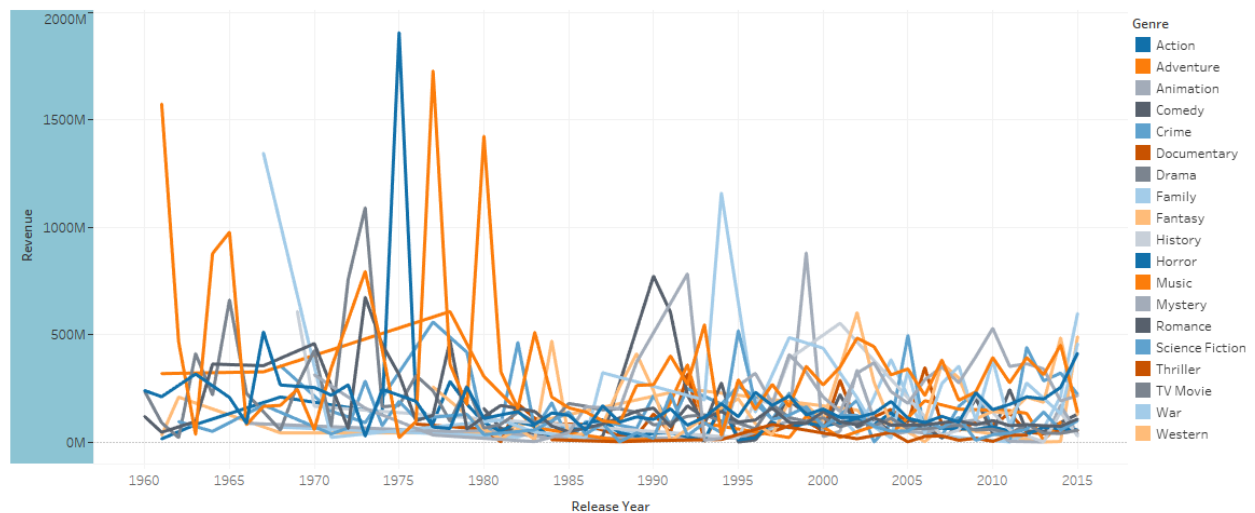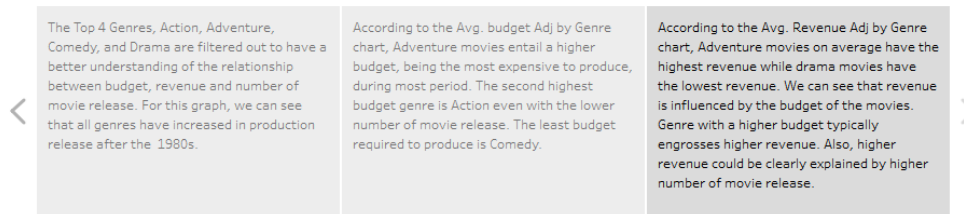
Questions

Question 1: How have movie genres changed over time?

The Top 4 Genres, Action, Adventure, Comedy, and Drama are filtered out to have a better understanding of the relationship between budget, revenue and number of movie release. For this graph, we can see that all genres have increased in production release after the 1980s.

According to the Avg. budget Adj by Genre chart, Adventure movies entail a higher budget, being the most expensive to produce, during most period. The second highest budget genre is Action even with the lower number of movie release. The least budget required to produce is Comedy.

According to the Avg. Revenue Adj by Genre chart, Adventure movies on average have the highest revenue while drama movies have the lowest revenue. We can see that revenue is influenced by the budget of the movies. Genre with a higher budget typically engrosses higher revenue. Also, higher revenue could be clearly explained by higher number of movie release.

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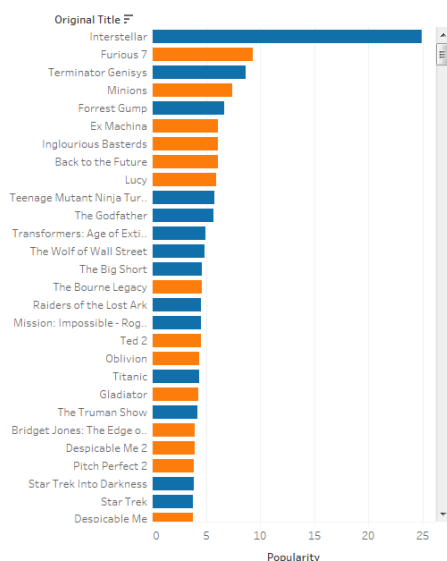
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Question 2: How do the attributes differ between Universal Pictures and Paramount Pictures?


Universal Pictures releases more movies every year when compared to Paramount Pictures.

Also, Universal Pictures has a higher revenue per movie. The chart for most popular movies of the two production companies shows that Universal Pictures movies has more movies ranked higher in popularity than Paramount Pictures movies. Although we could not be sure whether Universal Pictures' higher revenue is due to its higher number of movie release, Universal Pictures is certainly better than Paramount Pictures in performance.

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

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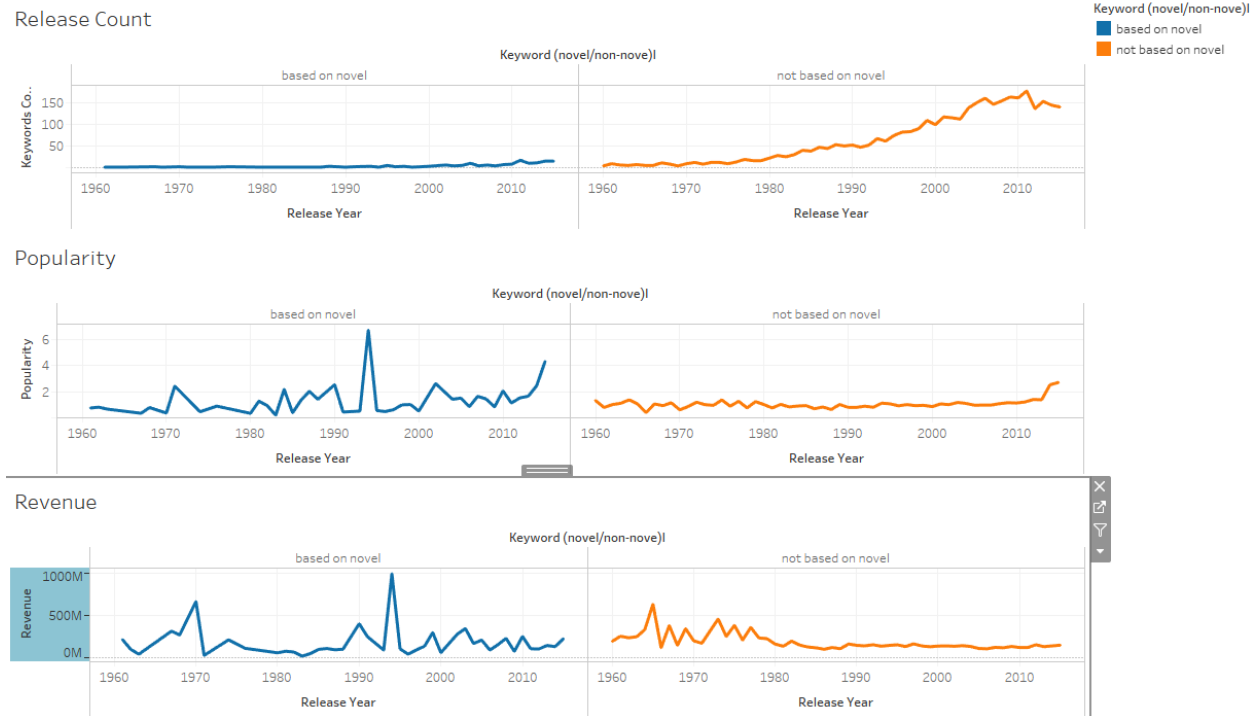

Although number of novel based movie release yearly was small relative to non-novel based, its average revenue has been higher after the late 1980s. Also, popularity for novel based movies has also increased and is eventually higher than non-novel based movies.

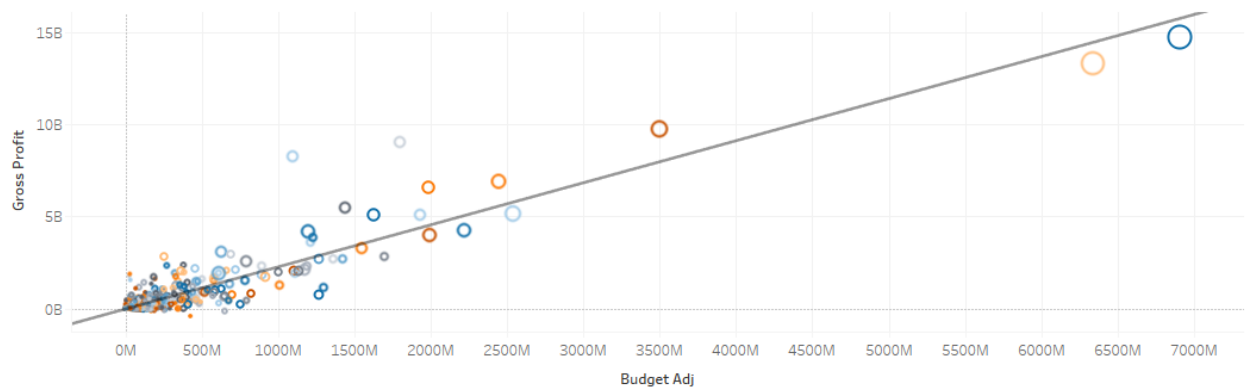**Question 4:** What is the association between gross profit and budget?

Gross Profit by Year
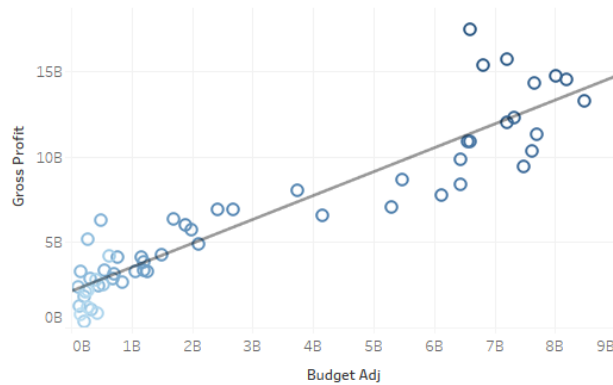
Gross Profit by Genre
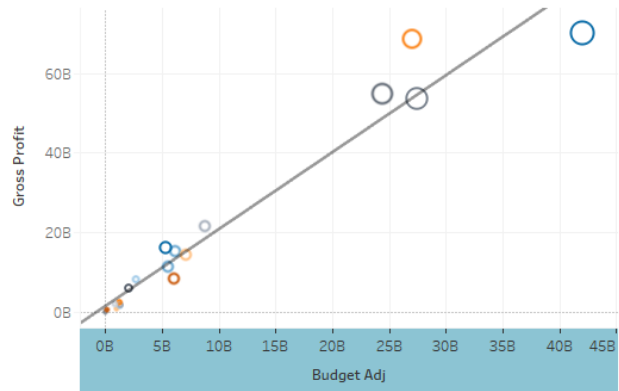
Gross Profit

This would be an appropriate question, since it would inform the new movie production company how much budget they should estimate within the market and how much profit can be projected. (For gross profit for this data, adjusted budget is subtracted from the adjusted revenue.)

When aggregating the data by genre and year, there is clearly a linear trend that shows that increased Budget leads to increased Gross Profit. The second graph, Gross Profit vs. Budget Adj (Genre & Popularity), evidently shows that Action movies, as a popular genre likewise, returns high profits with even high budget. While some risks might involve, the association between gross profit and budget suggests that new movie production company should set higher budgets for new movies.