

Movie Analysis and Prediction

Issues & Problems

One of the main challenges that production companies, film studios & investors face is predicting which movies will be successful at the box office. It is a risky business as making a movie involves a significant amount of investment and resources, and there is no guarantee that the movie will be a hit. To make informed decisions, they need to understand the latest trends in the industry, the types of movies that are in demand, and the factors that contribute to a movie's success. This is where a visualization tool like movie trend analysis can help. By analyzing data on box office performance, genre preferences, and other factors, the tool can provide valuable insights into what types of movies are likely to perform well in the current market.

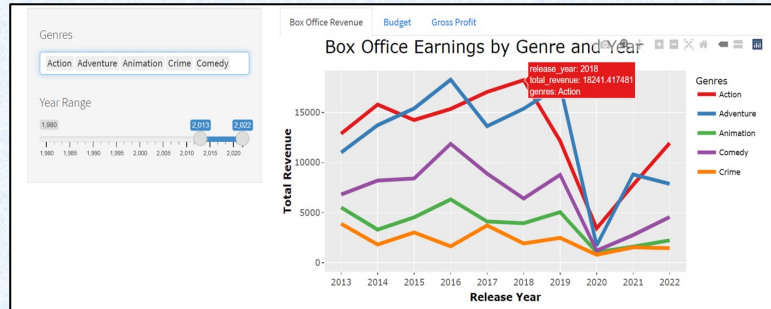
Motivation

Production companies, film studios, and investors are often baffled by the complexity and facets involved in decision-making. It requires a deep understanding of market trends and audience preferences that can affect the success or failure of a movie. With the help of the right data analysis and visualization tools, these problems can be addressed and even potentially solved. By leveraging the power of data science and machine learning, informed decisions can be made to significantly increase the chances of producing successful movies. Investors can minimize the risk of losing money by smartly investing in movies that have a higher likelihood of success. The movie trend analysis tool will serve as an asset for sound decision-making and thereby result in increased profits.

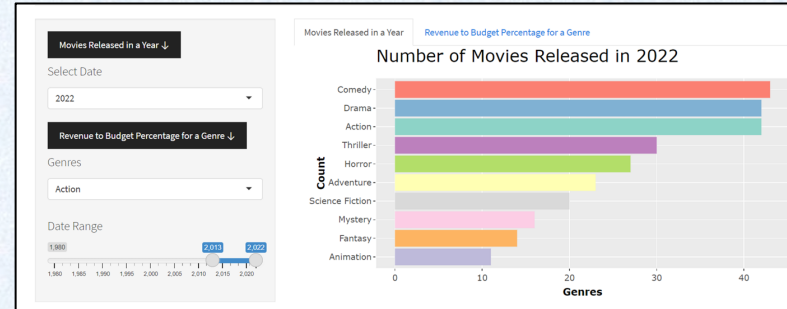
Approach

For this project, we have focused on the visualization of the performance of different genres of movies using R Shiny. R Shiny is a web application framework for R programming language that allows developers to create interactive web applications directly from R. We have used Exploratory Interactive Visualization, Visual Statistical Analysis, and Predictive Analysis in this project.

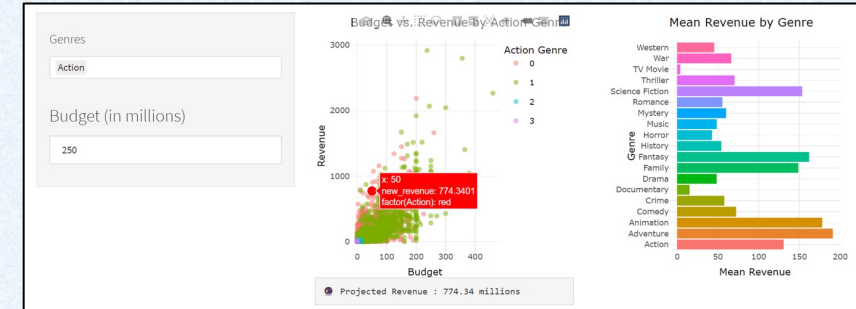
Results



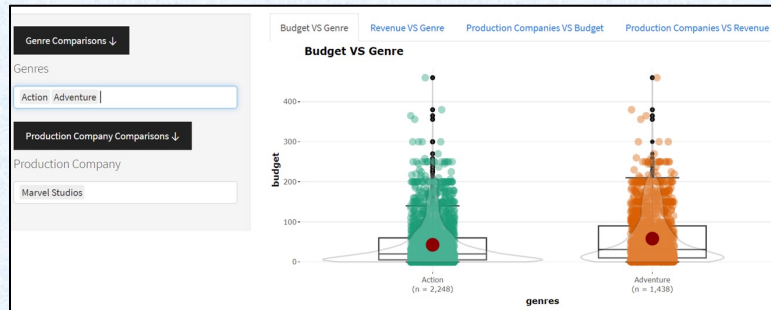
Which genre performs best at the box office?
Action movies perform the best.



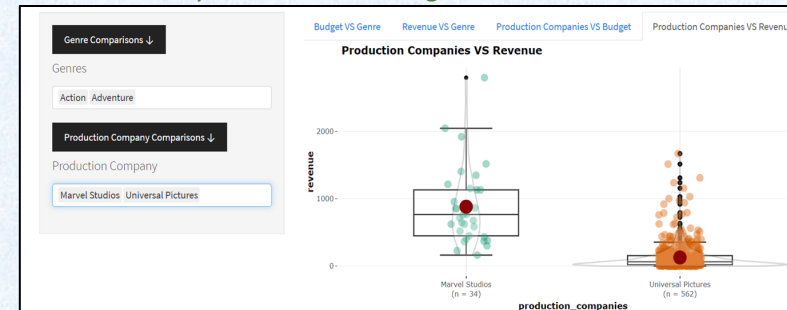
Which genre had the highest release in 2022?
Comedy movies had the highest number of releases.



What is the predicted revenue for a fixed genre and budget?
Action genre with a \$250M budget, the predicted revenue is \$775M.



Between the two genres which account higher budget?
Adventure accounts higher budget than Action movies.



Between two genres which generates higher revenue?
Marvel studios generate a higher revenue than Universal Pictures.

Future Work

The project would further focus on extending the visualization tool to include the movie cast to help the production companies and investors to understand who are the most trustworthy actors and technicians in the movie industry. This will help to understand the best combination of genre, production companies, and the cast involved to increase public interest in the movie.