

MICROSOFT MOVIE STUDIO

MODULE 1

Heather McLaren, Blake Samaha,
Saif Kasmani

Microsoft wants to start a movie studio and they need some analysis conducted to determine what the best business strategy is for them to start this venture. They want more insight about the film industry and what type of movies are the most profitable.

We decided to do an in-depth analysis on the sales trends of the movie industry and came up with three questions to explore in more detail to help shed more light into Microsoft's potential horizontal expansion project.



**WHAT IS THE MOST PROFITABLE
MOVIE GENRE TO EXPLORE?**

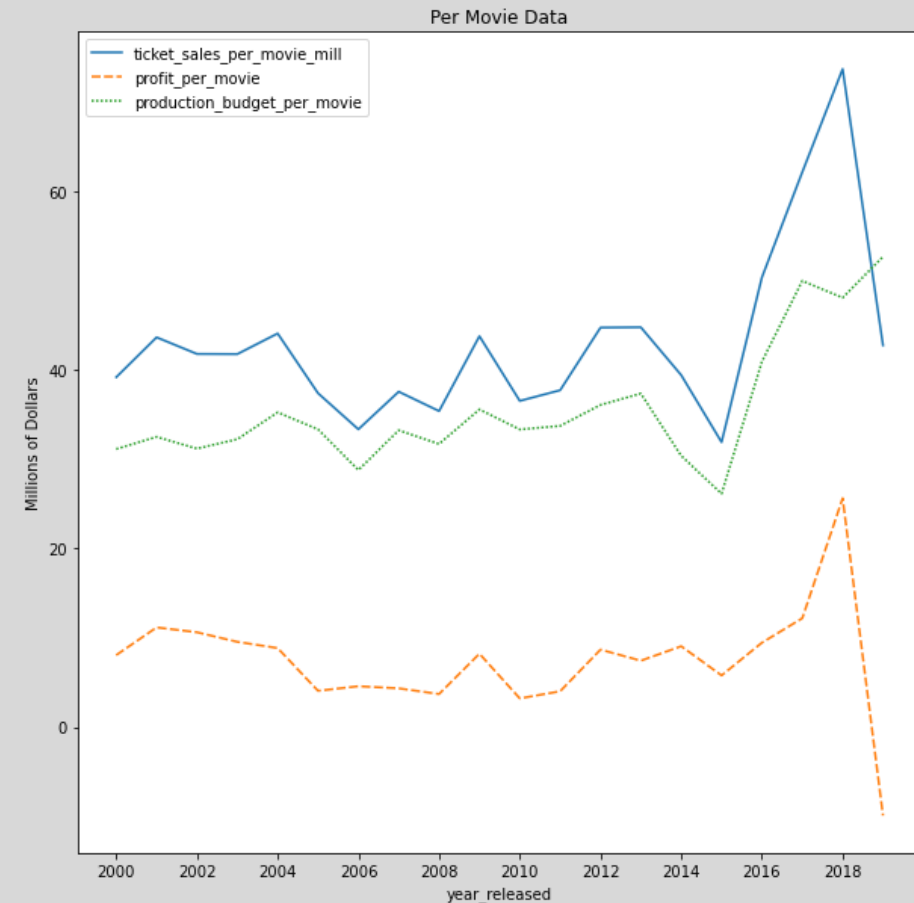
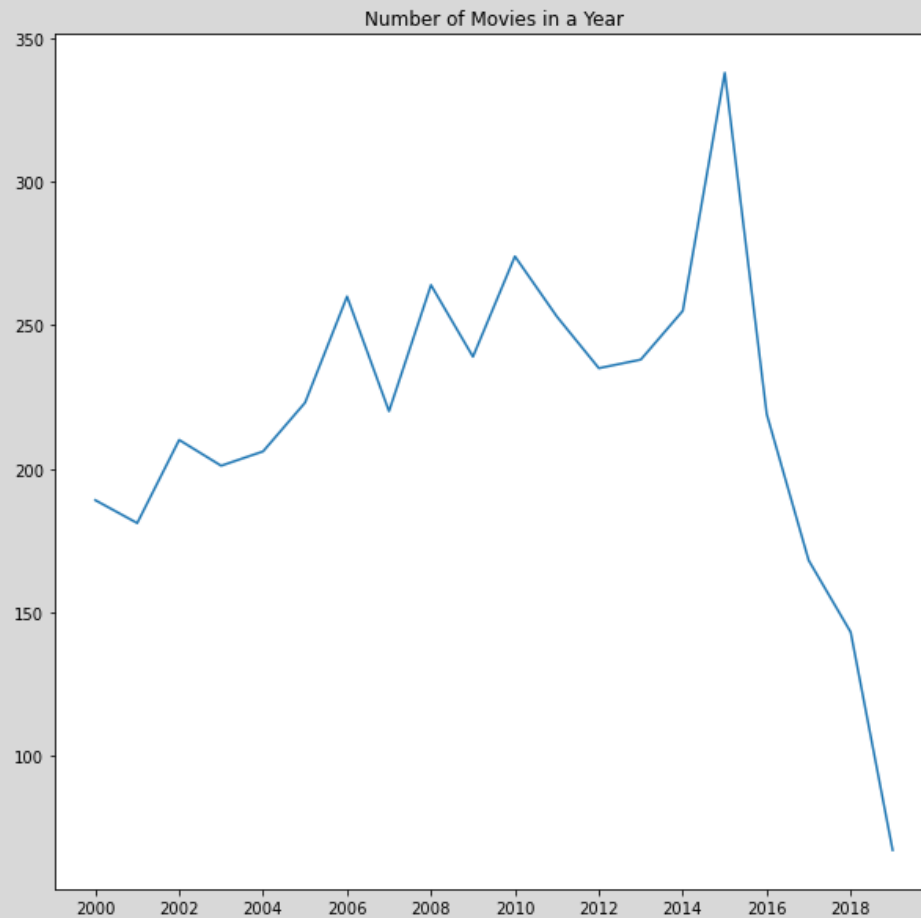


**IS THERE A CORRELATION BETWEEN
RUNTIME, BUDGET, AND SEASON
RELEASED?**

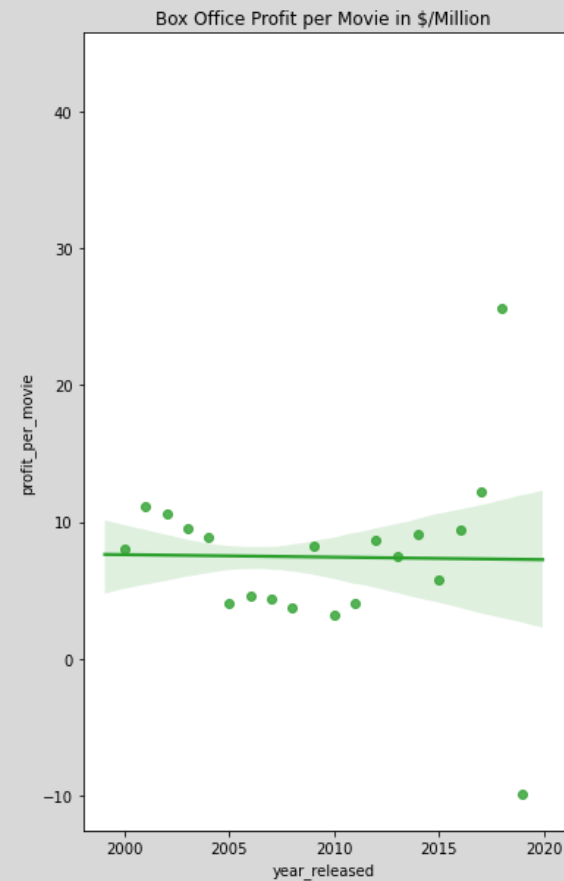
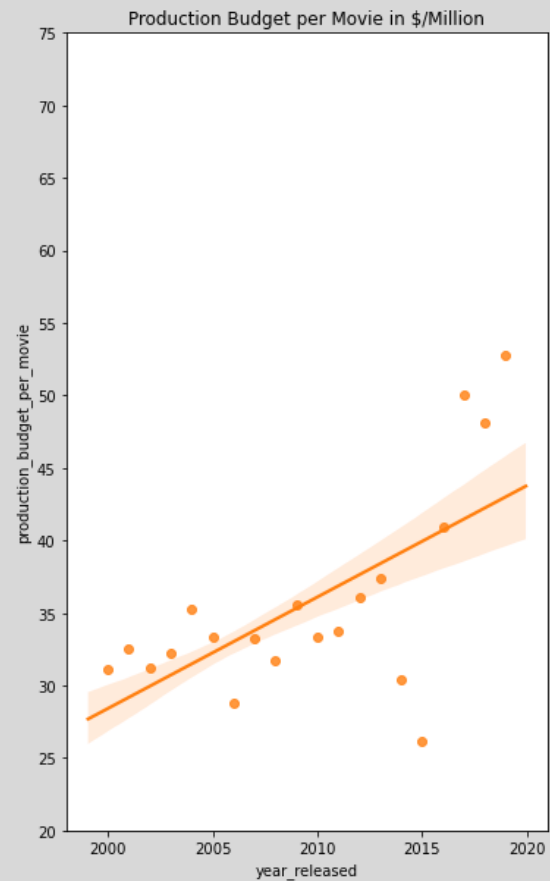
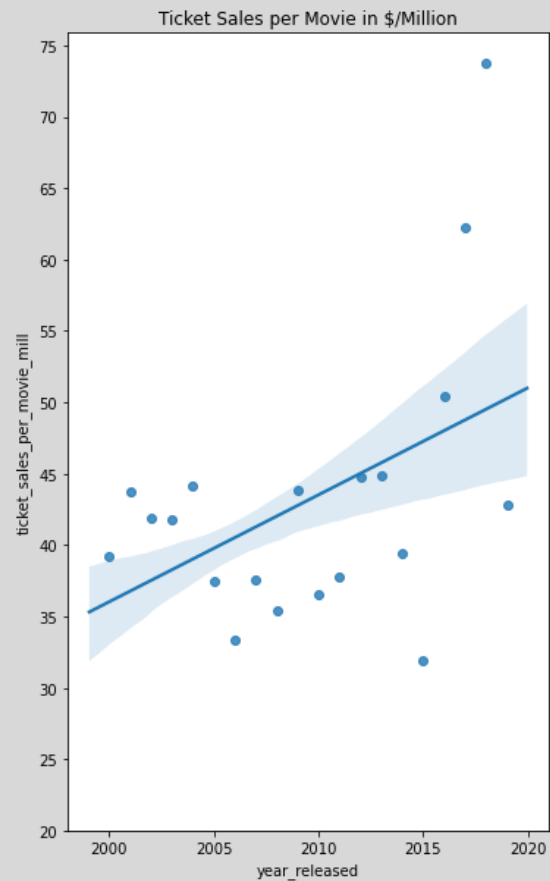


**IS THERE A TREND WITH WHO YOU
EMPLOY AND THE OUTCOME OF
THE MOVIE'S SUCCESS?**

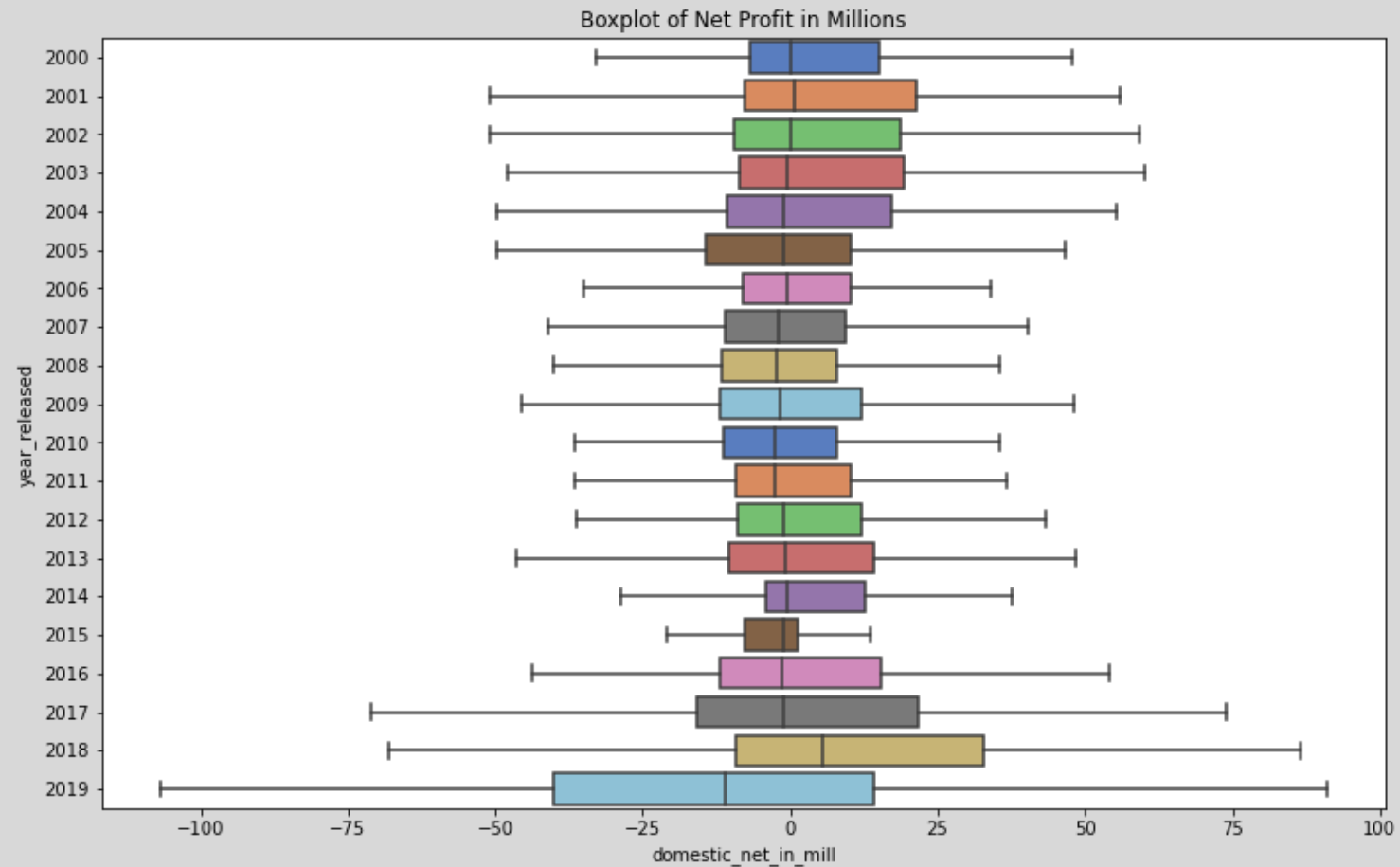
Is the demand for movies at the box office increasing over time?



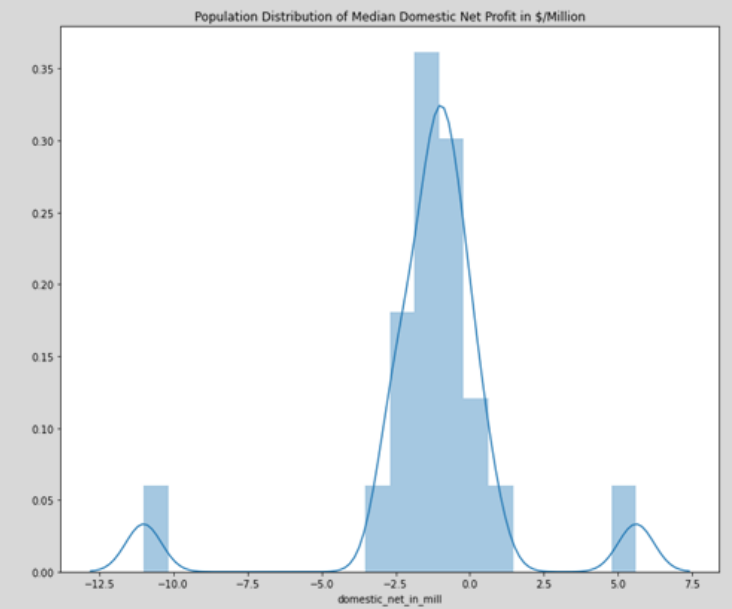
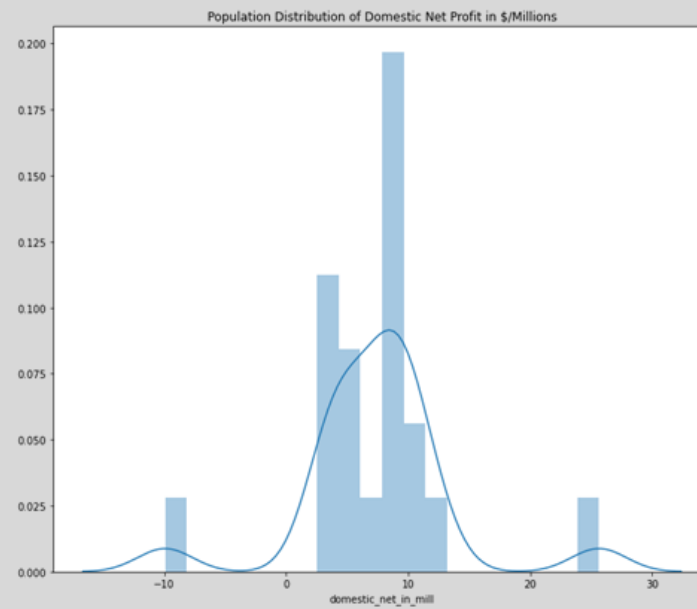
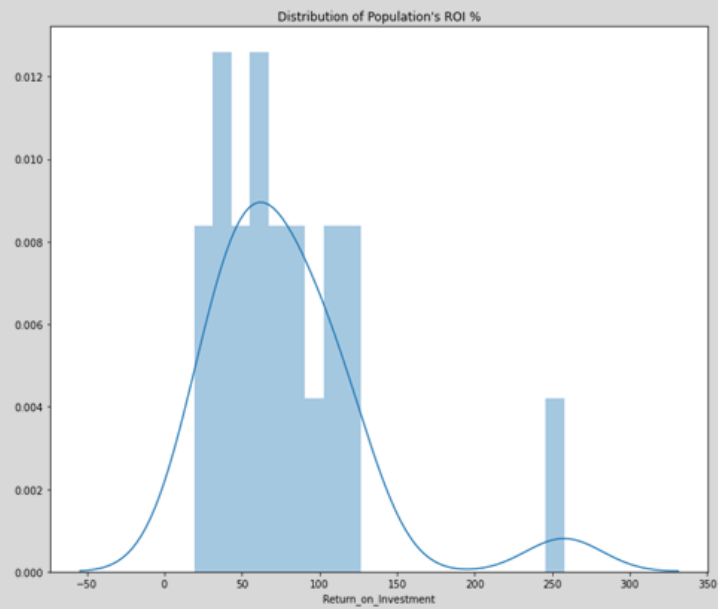
What are the trends in the movie industry in regards to ticket sales, production budget, and profitability?



Distribution of Outcomes

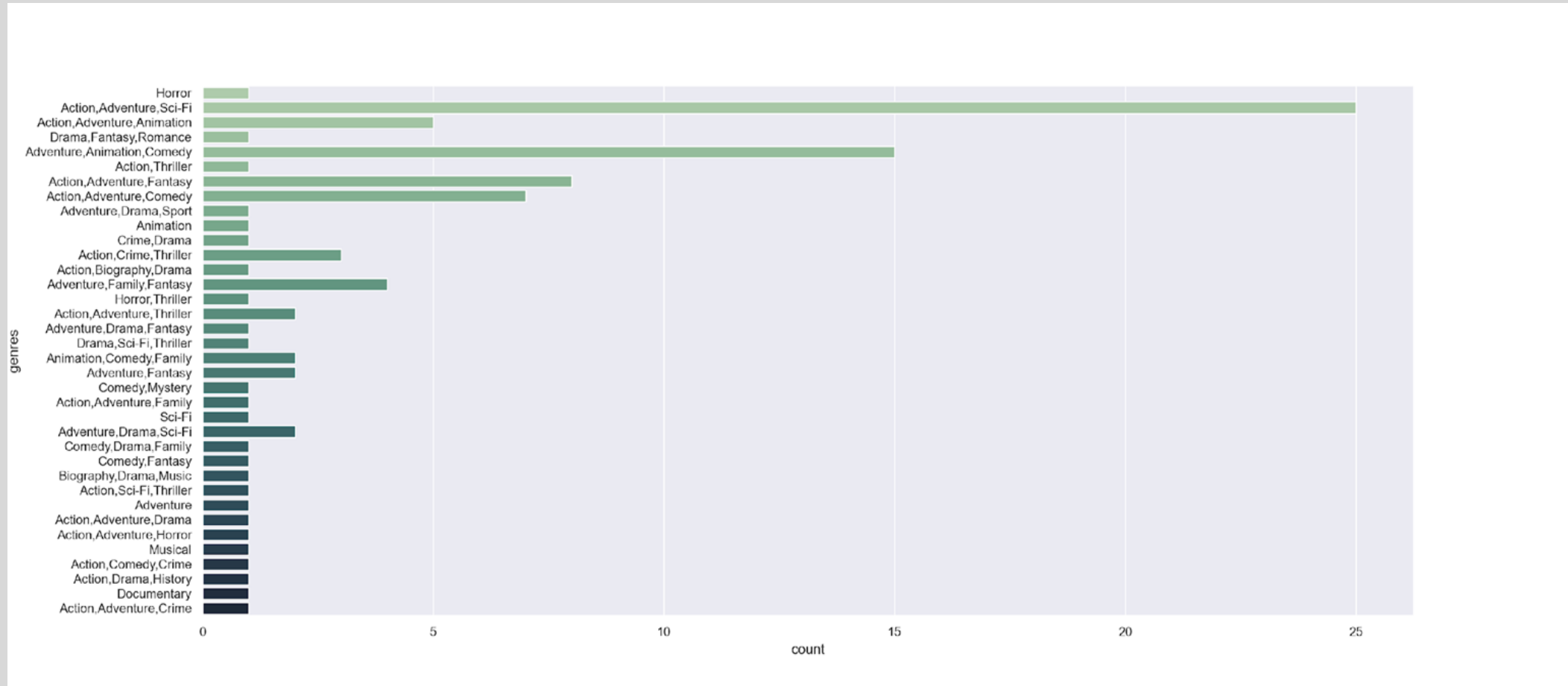


Distribution of Outcomes



Genre

What is the top overall movie genre?

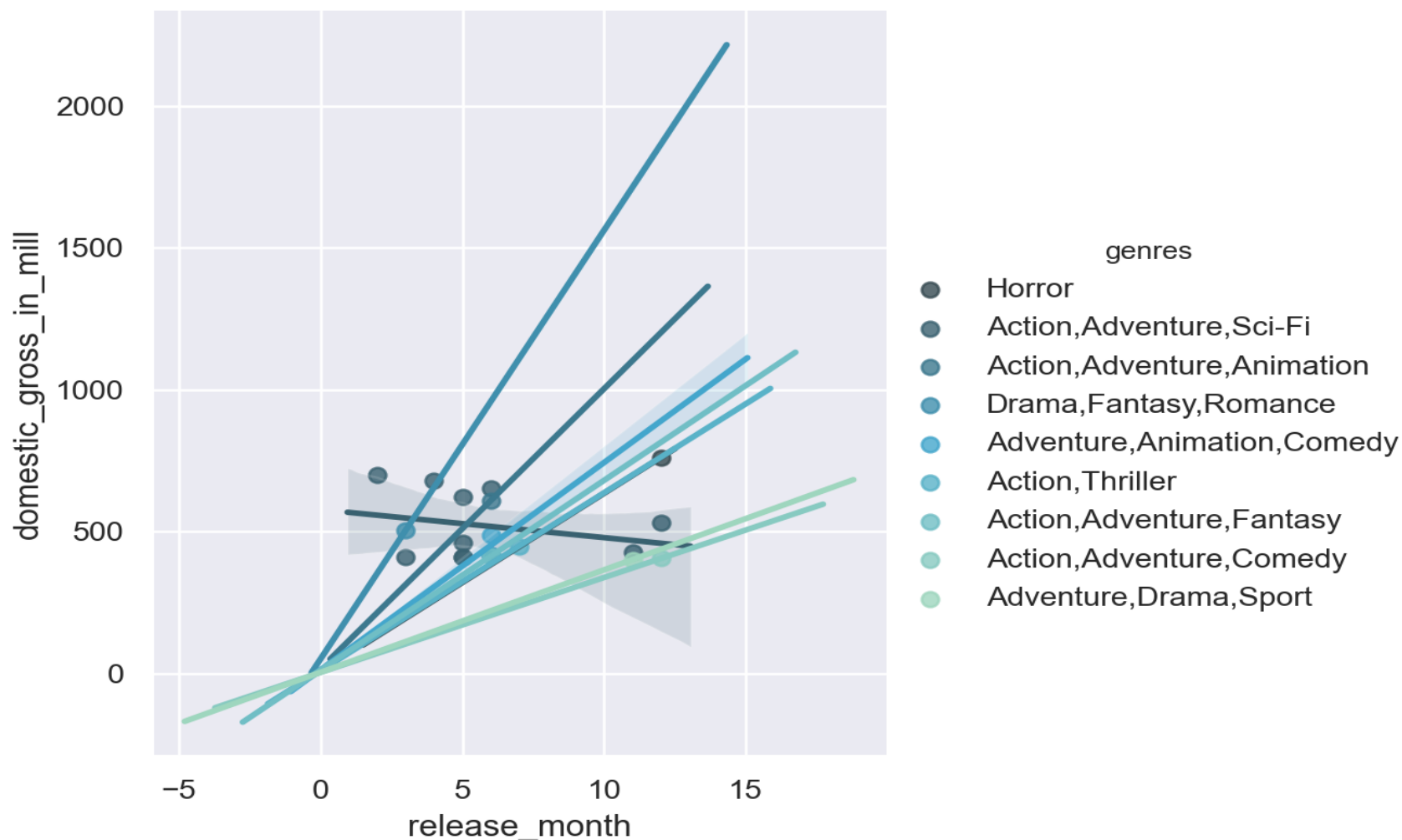


We wanted to take a deeper dive into exactly what the top movie genres were. We did a column count of the top 100 movies in the past 20 years being ranked by highest domestic gross revenues. The category 'Action, Adventure, Sci-Fi' was the top genre with 25 movies out of 100.

Genre

Is there a correlation between release month and higher profitability in that genre?

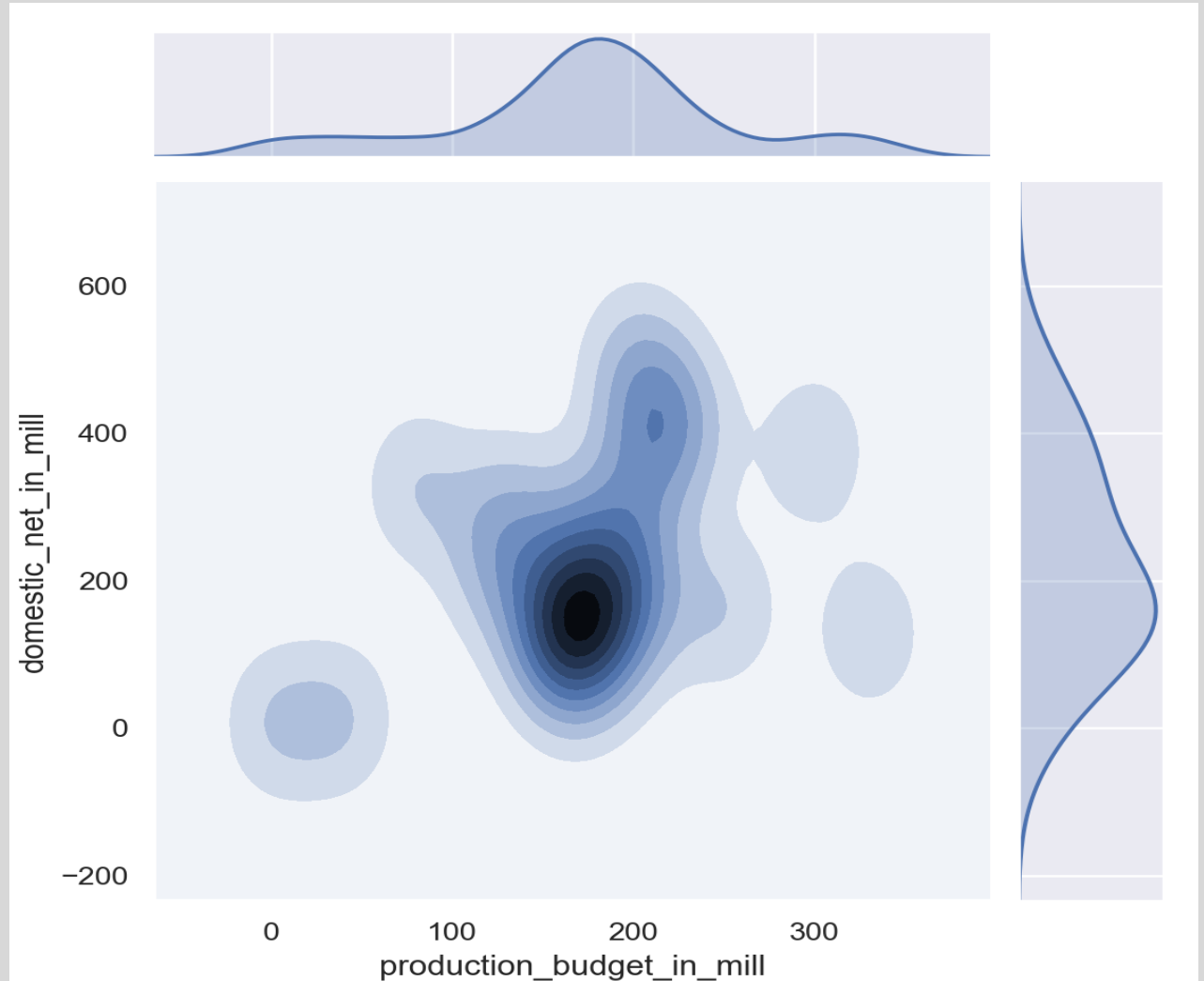
We extracted the top movies based on box office sales and compared that to release months and genre to see if there were any relationships. We decided to work with a smaller sampling size of 20 to get a better understanding of exactly how profitable the top movies of all time were. The best times to release a movie to receive the highest revenues were late Spring, early/mid Summer, the holidays, and heritage months.



Genre

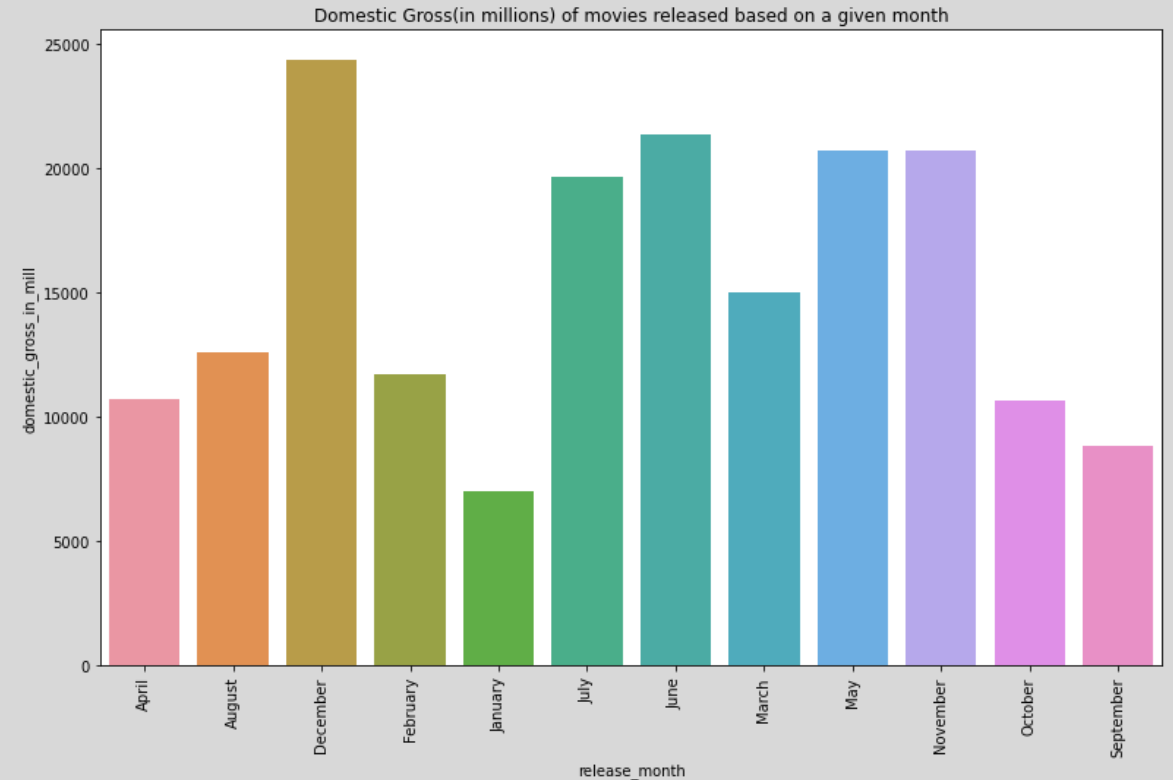
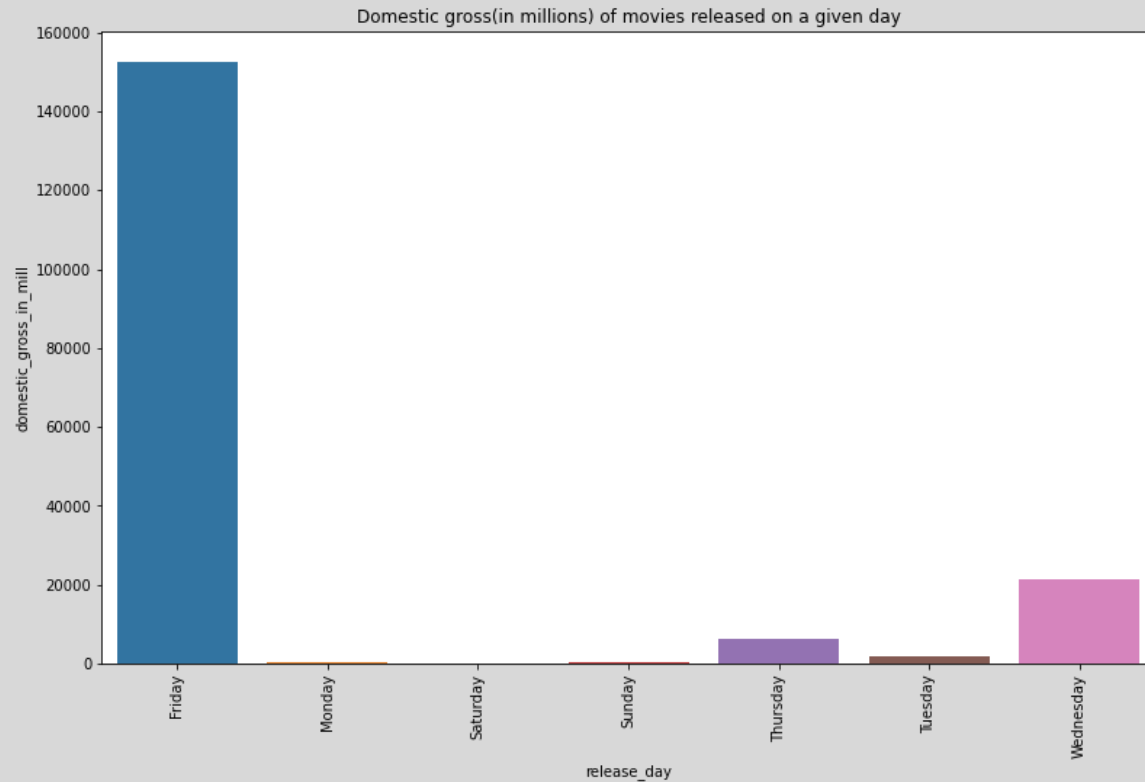
Is there a correlation between production budget and net profits in the that genre?

We used a hexbin marginal plot to show this correlation. This shows that the most successful 'Action, Adventure, Sci-Fi' movies had a production budget of around \$200 million dollars, and a domestic net gross between \$200-\$500 million dollars. Which is a mean net profit return of \$222.34 million dollars.



Release Day/Month

What is the best day/month to release a movie based on domestic gross

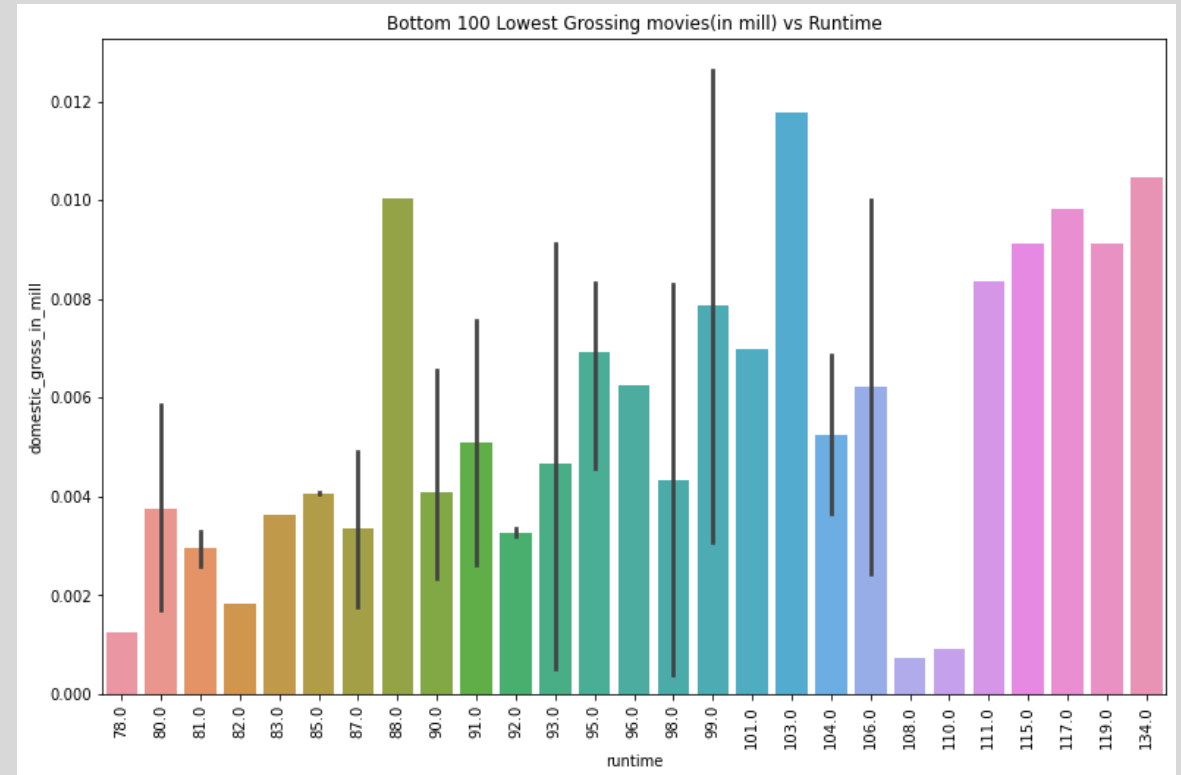
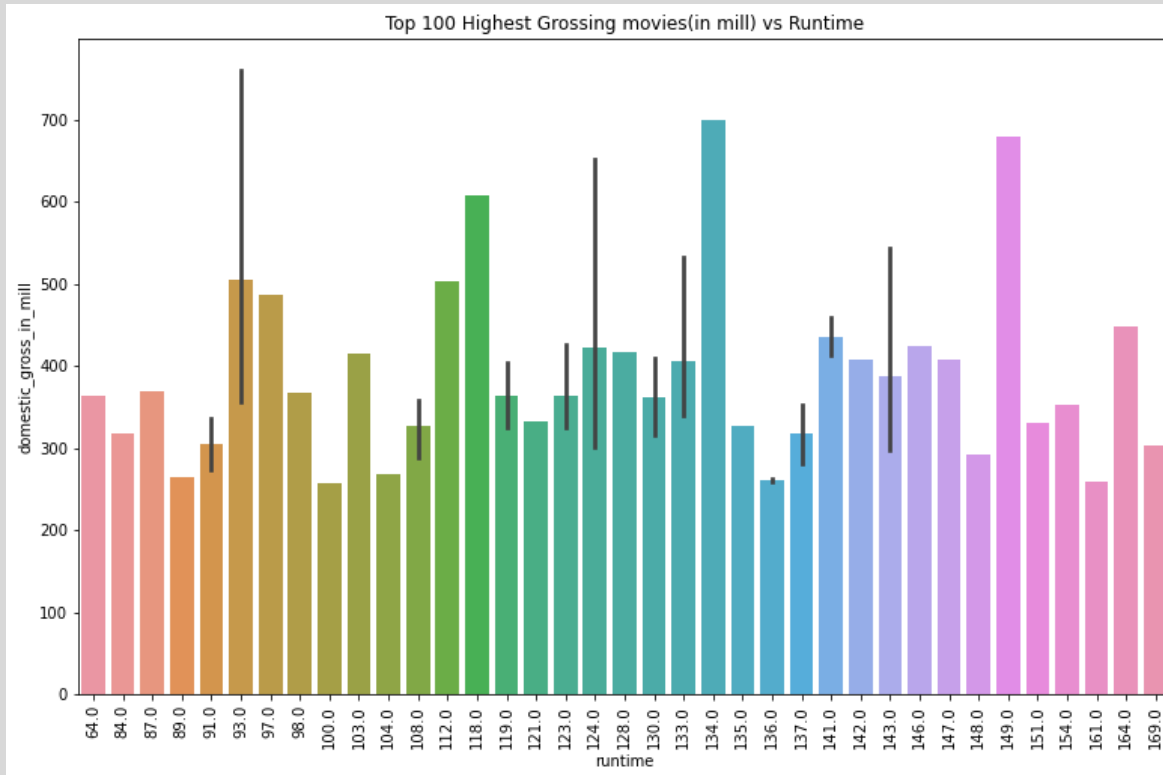


As we see here, the movies released on a **Friday** have the most ticket sales/gross.

December by far is the most profitable month for a movie to be released in.

Runtime

Is there a relation between runtime and domestic gross



It seems that the highest grossing movies average to be around **123 minutes** while the lowest grossing movies average around the **95 minute** mark. The most popular movies in the top 100 movies have a runtime of 149 minutes. If we take into consideration the most popular movies like Titanic, Avatar, All Marvel movies, this is what we would expect. As per our numbers, people normally like longer, more involved movies.

Runtime

Correlation of Runtime vs Production Budget

As we can see in the heatmap that the correlation coefficient of runtime to production budget is positively correlated and is **0.31** which is moderately strong. Keep in mind that one of the factors that will make production budget increase is the increase in movie runtime.

