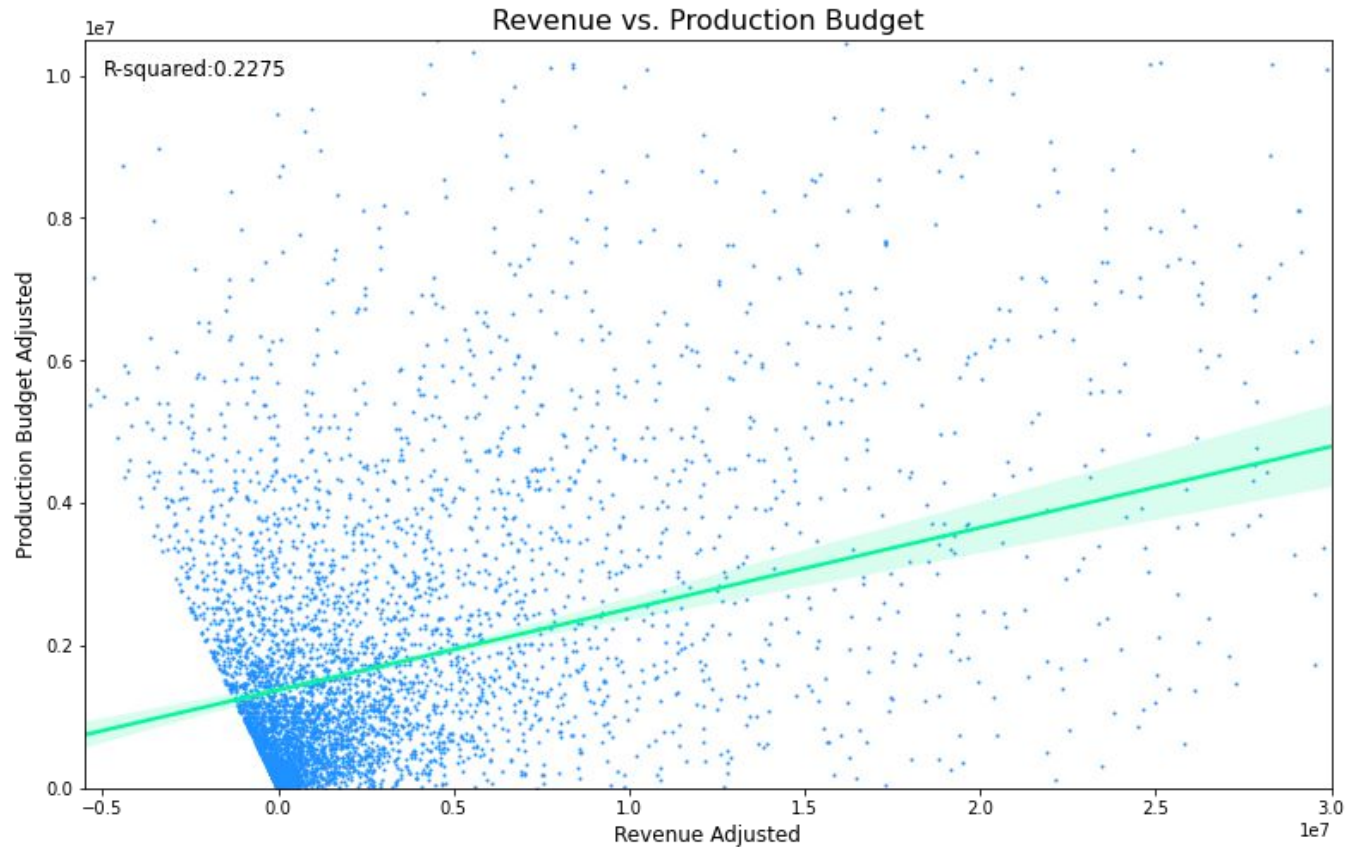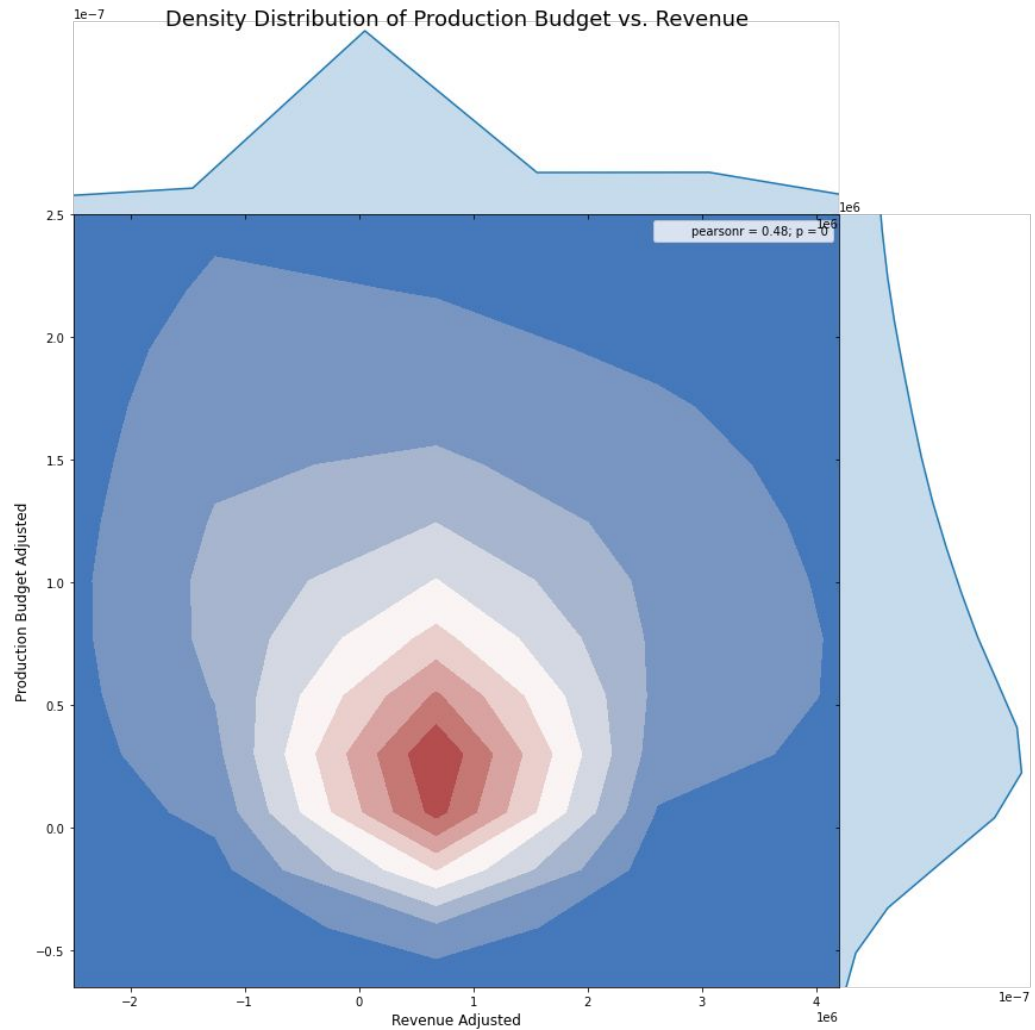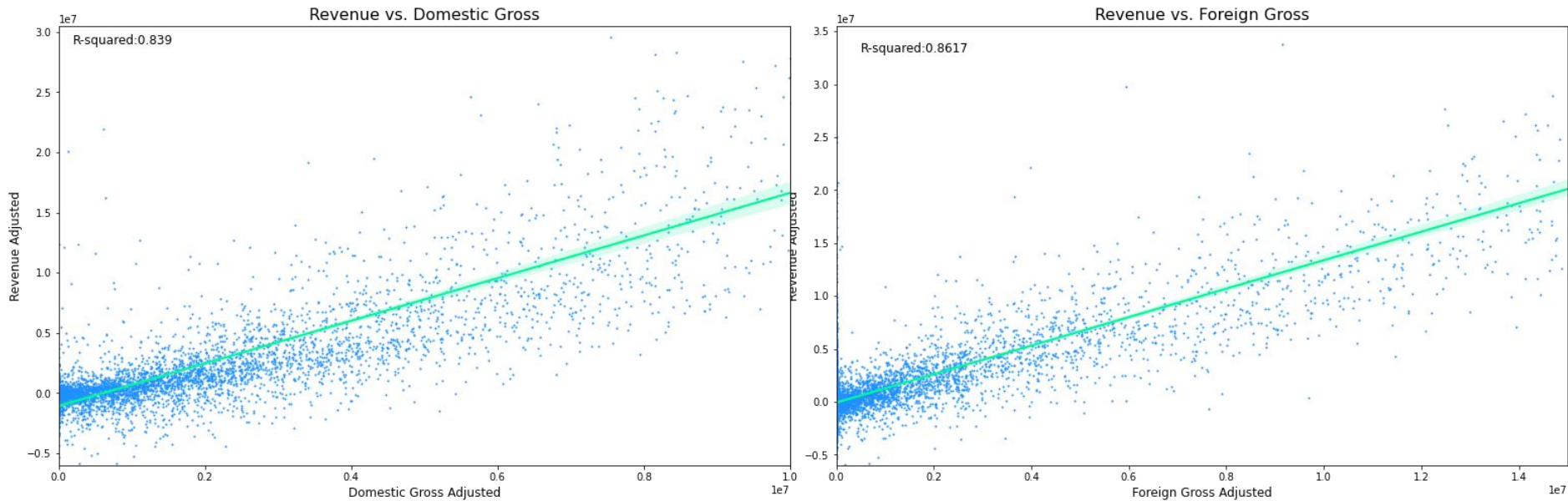# In-Depth Movie Examination

By: Nick Kolowich

Question 1 : Is there a correlation between the revenue of a movie and its budget?

Revenue vs. Production Budget

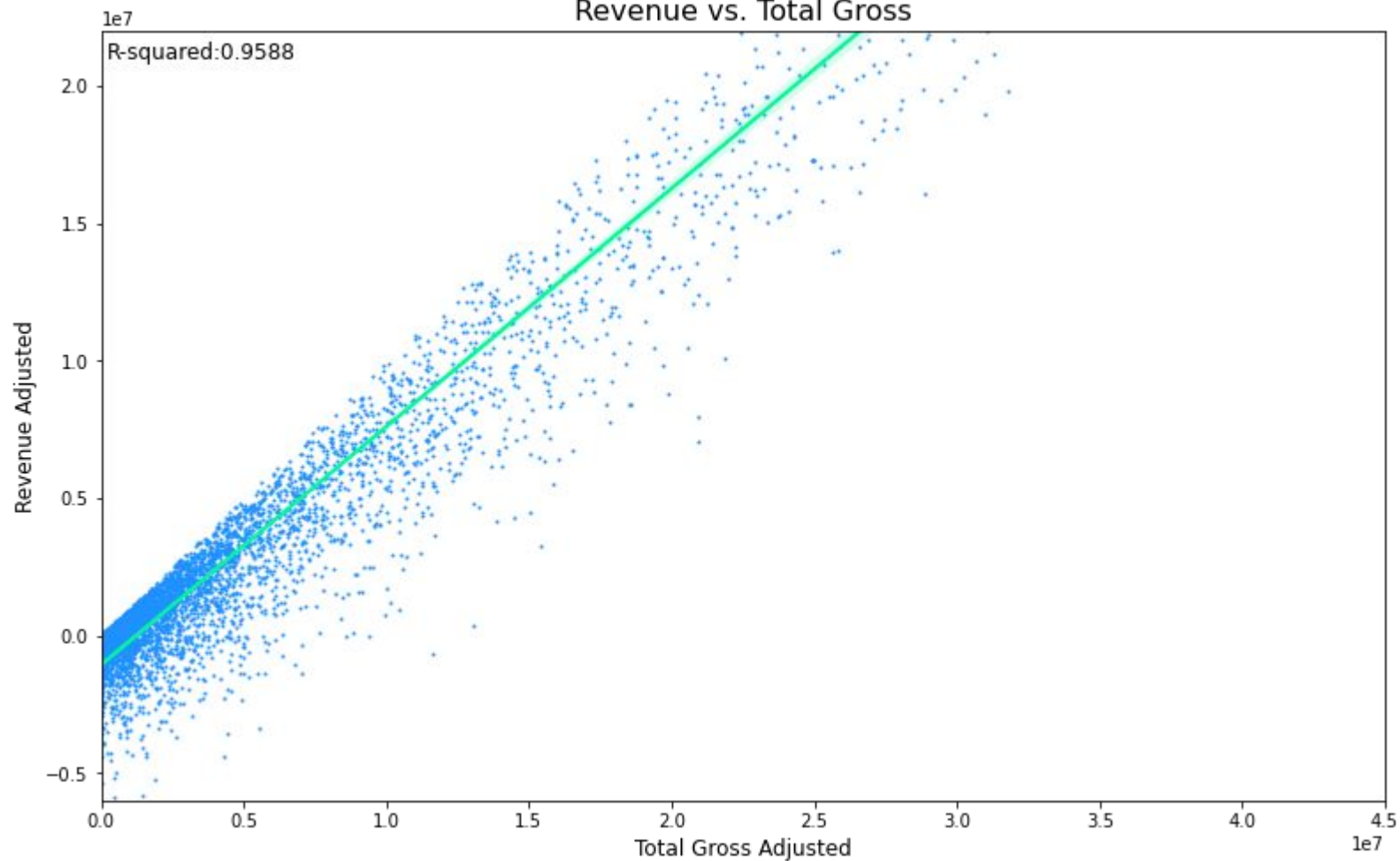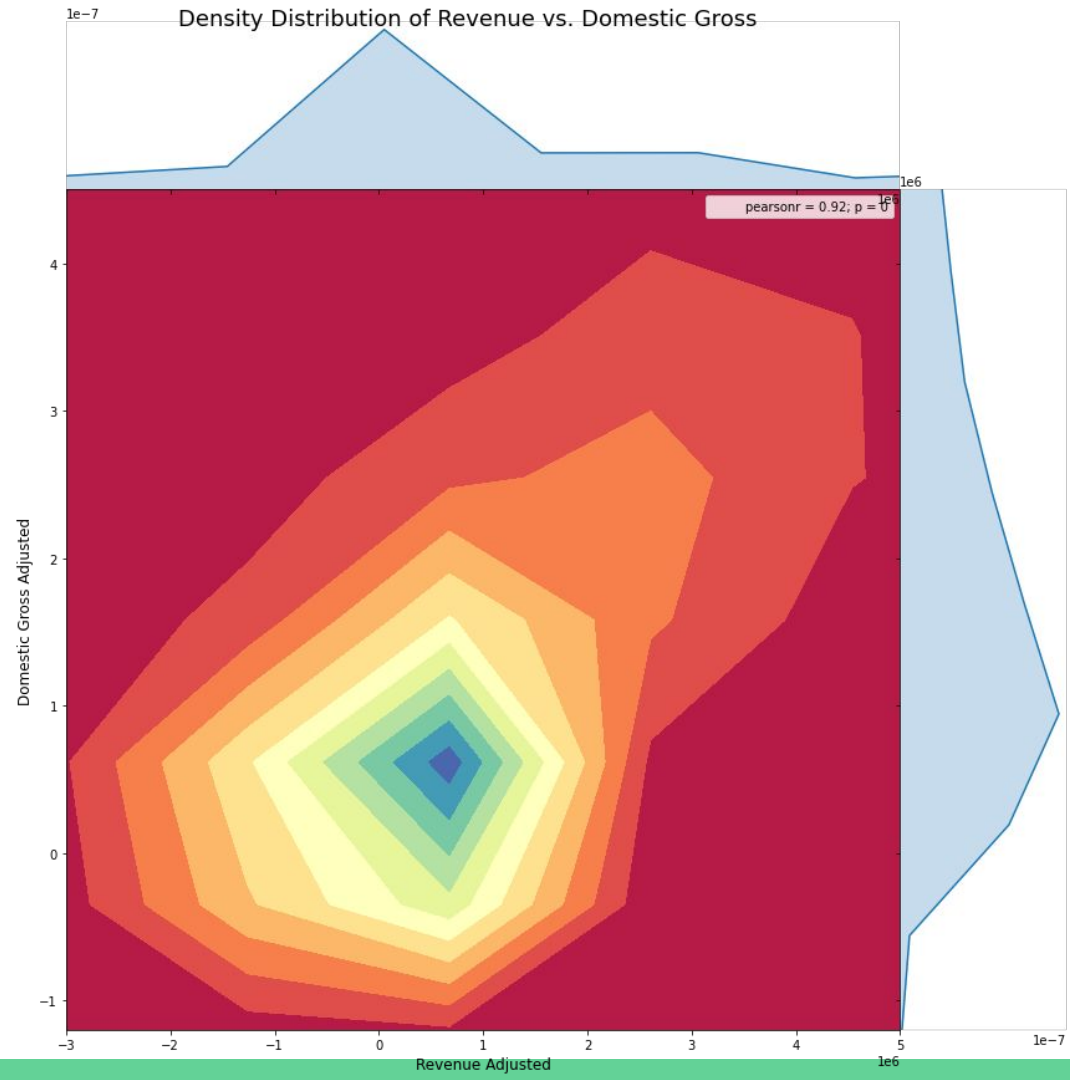Density Distribution of Production Budget vs. Revenue

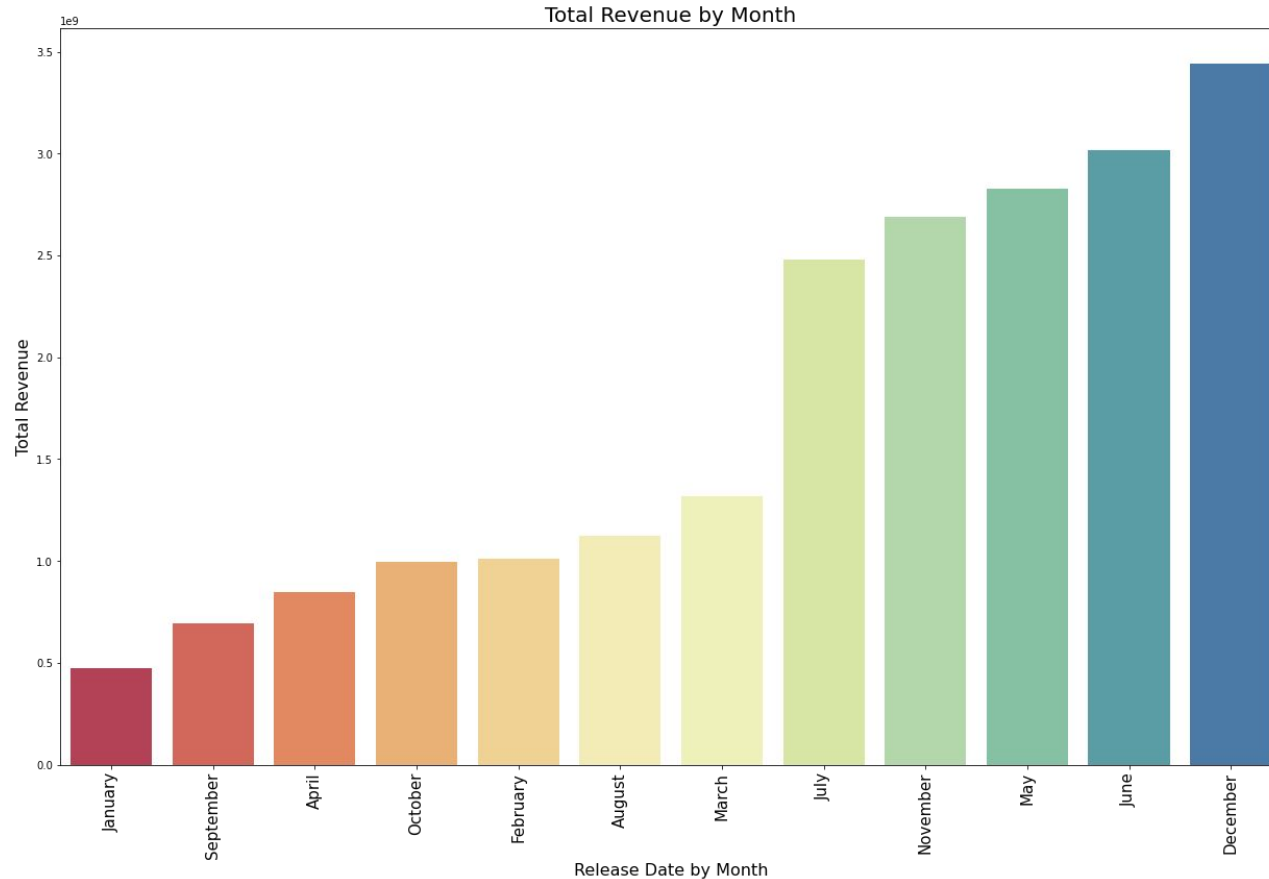# Question 2 : Do movies generate more revenue domestically or abroad?

Revenue vs. Domestic Gross

R-squared:0.839

Revenue Adjusted vs. Domestic Gross Adjusted

Revenue vs. Foreign Gross

R-squared:0.8617

Revenue Adjusted vs. Foreign Gross Adjusted

Revenue vs. Total Gross

R-squared:0.9588

Density Distribution of Revenue vs. Domestic Gross

Density Distribution of Revenue vs. Foreign Gross

pearsonr = 0.93; p = 0
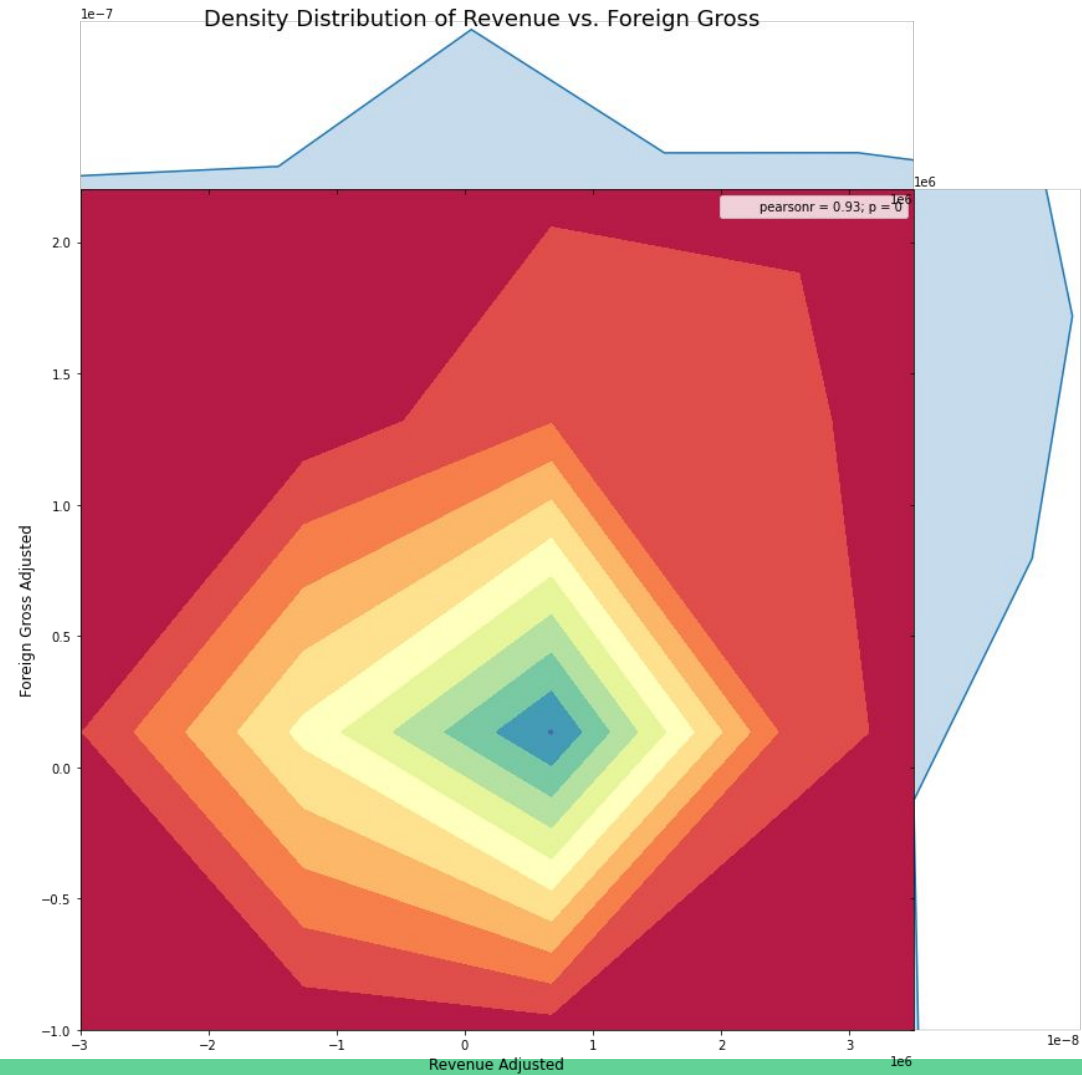
Question 3 : Does the release month of a movie affect its revenue?

Total Revenue by Month
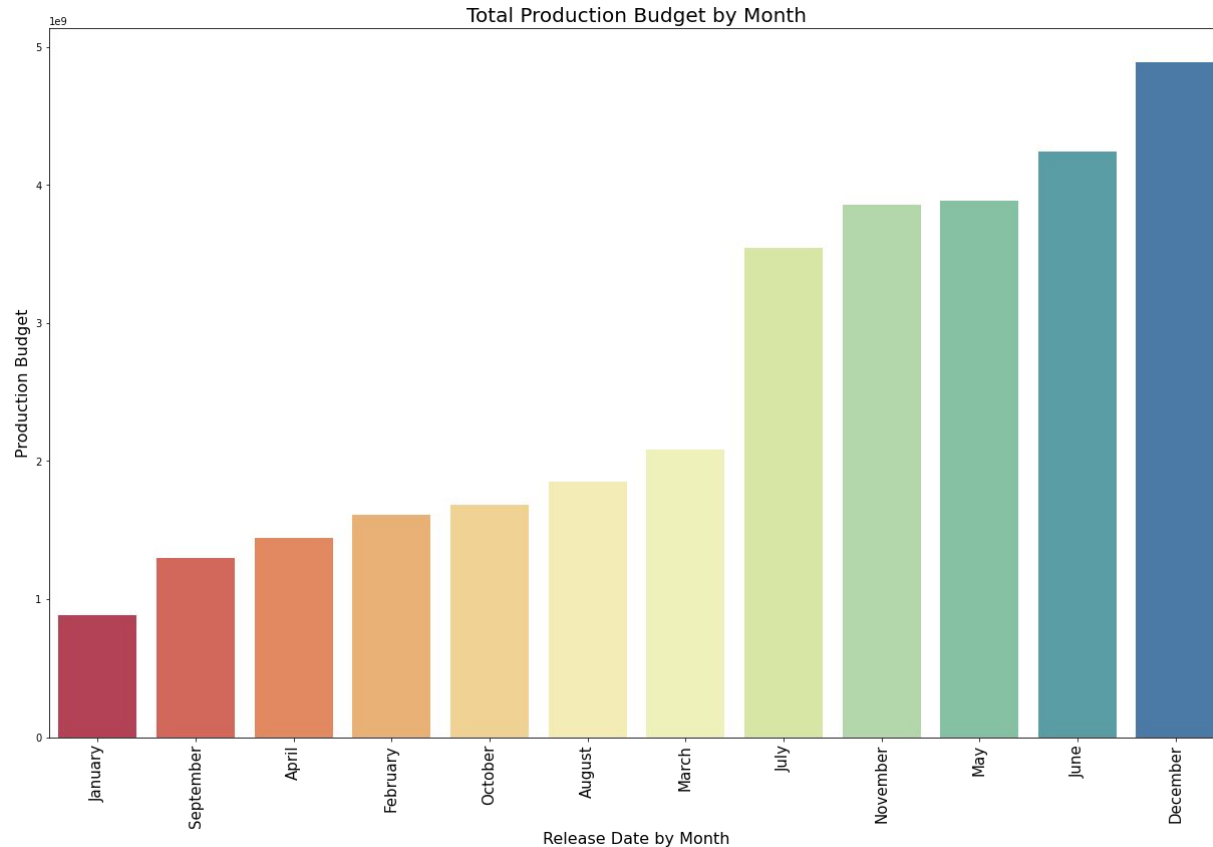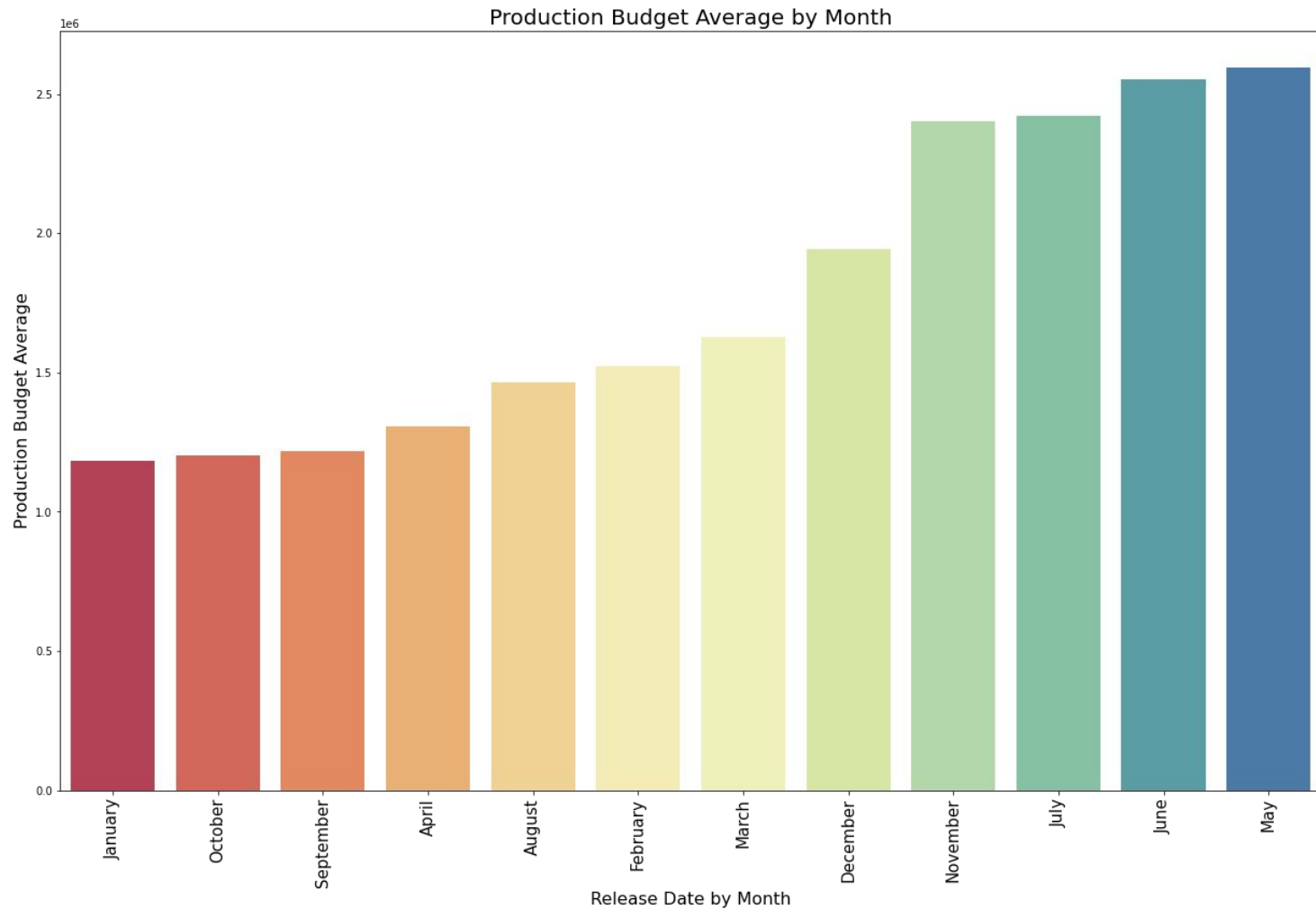
Number of movies released by month

```
release_date
January      347
February     392
May          407
July         440
April        454
March        470
June         479
November     486
September    493
August       496
October      573
December     745
Name: movie, dtype: int64
```
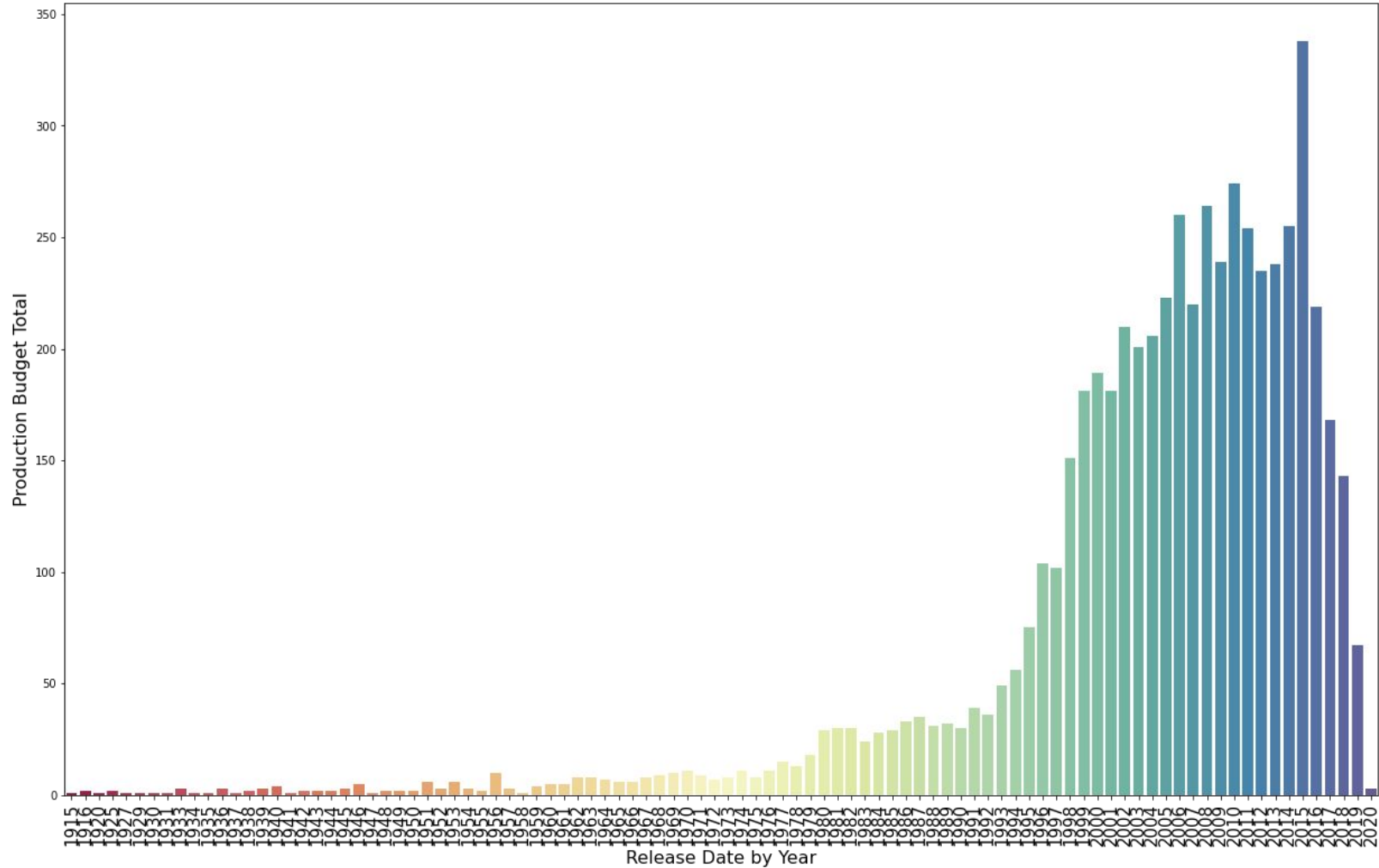
Average Revenue by Month
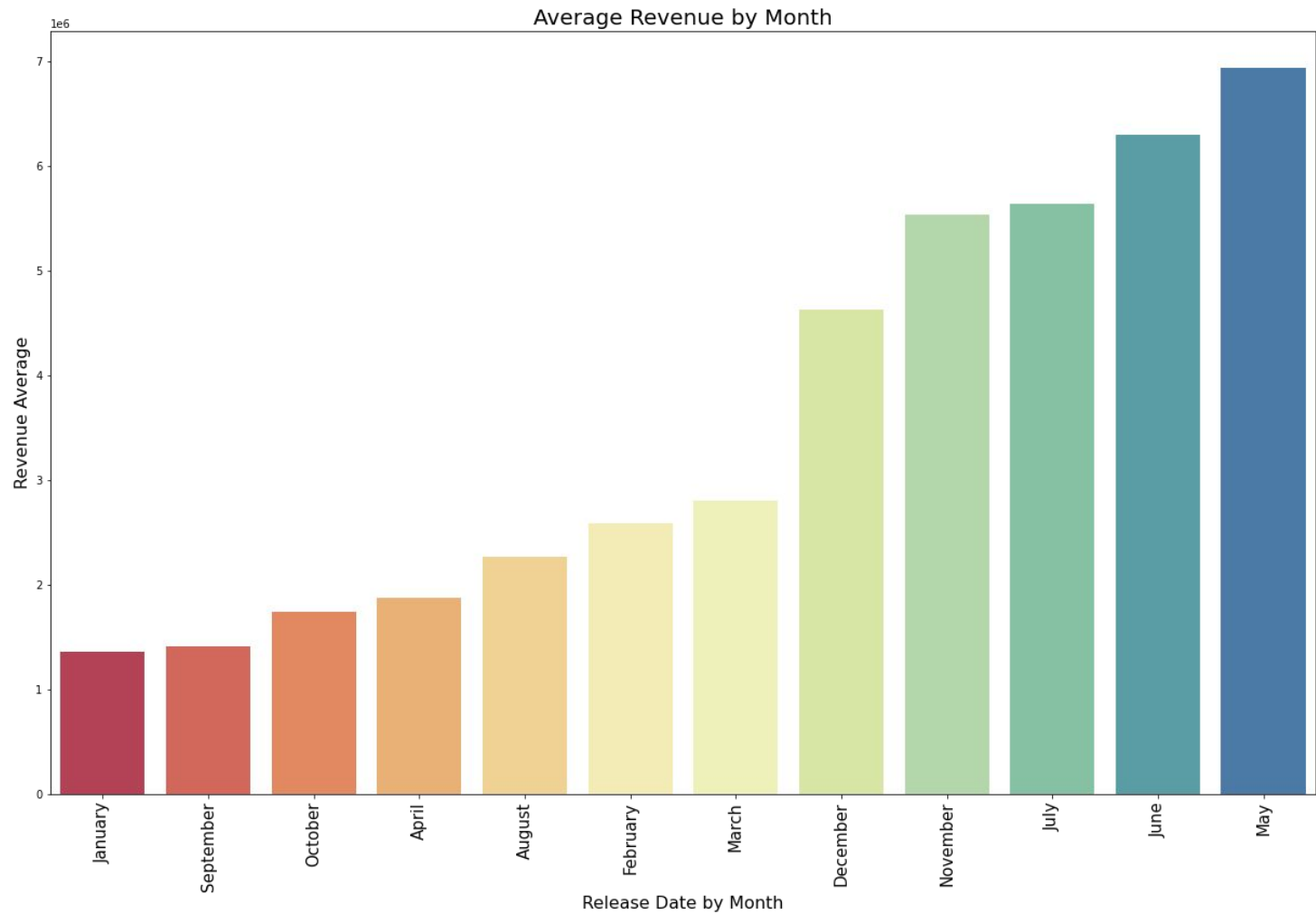
Question 4 : Which months had the most expensive to produce films?

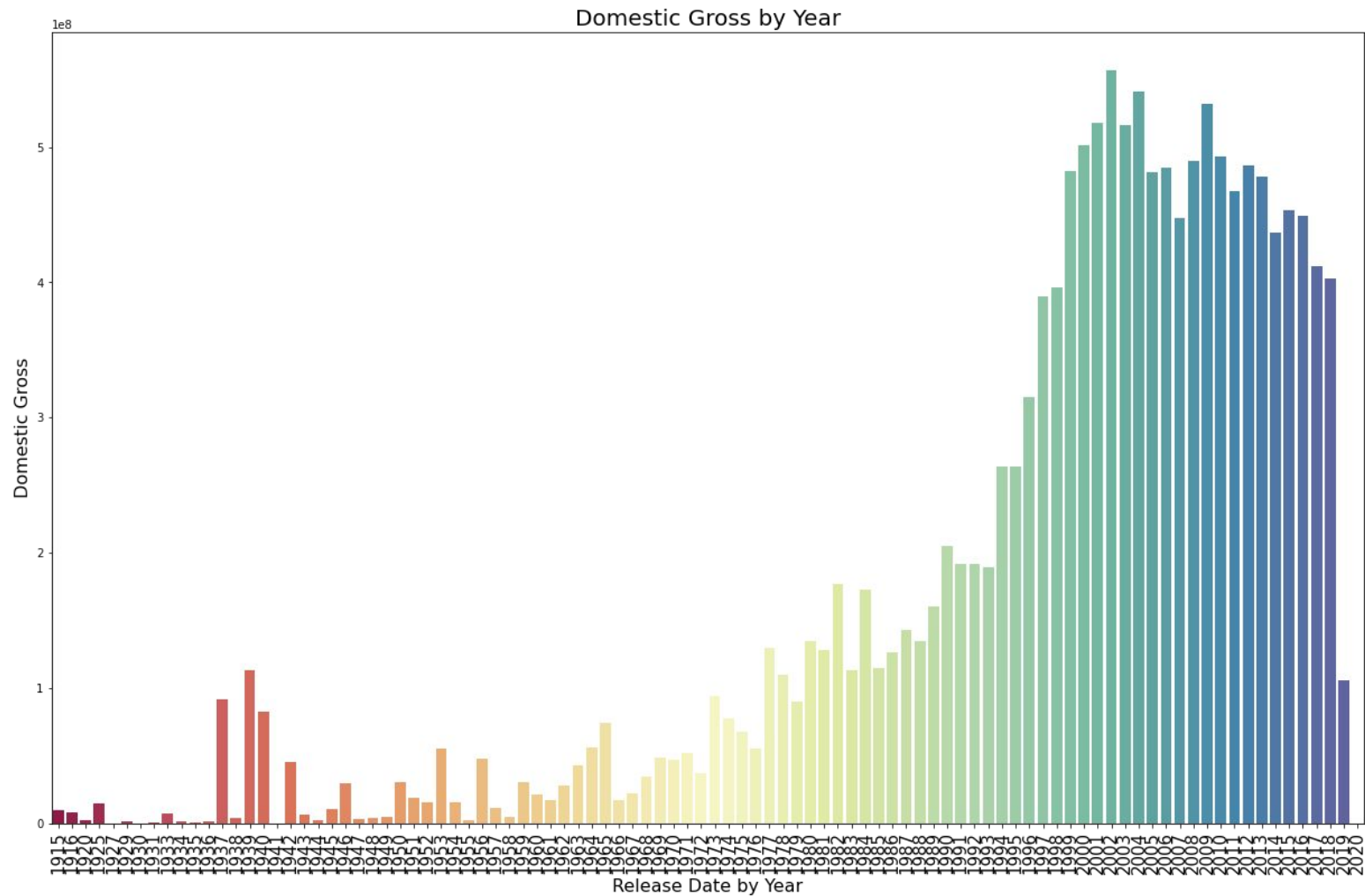Total Production Budget by Month

Production Budget Average by Month

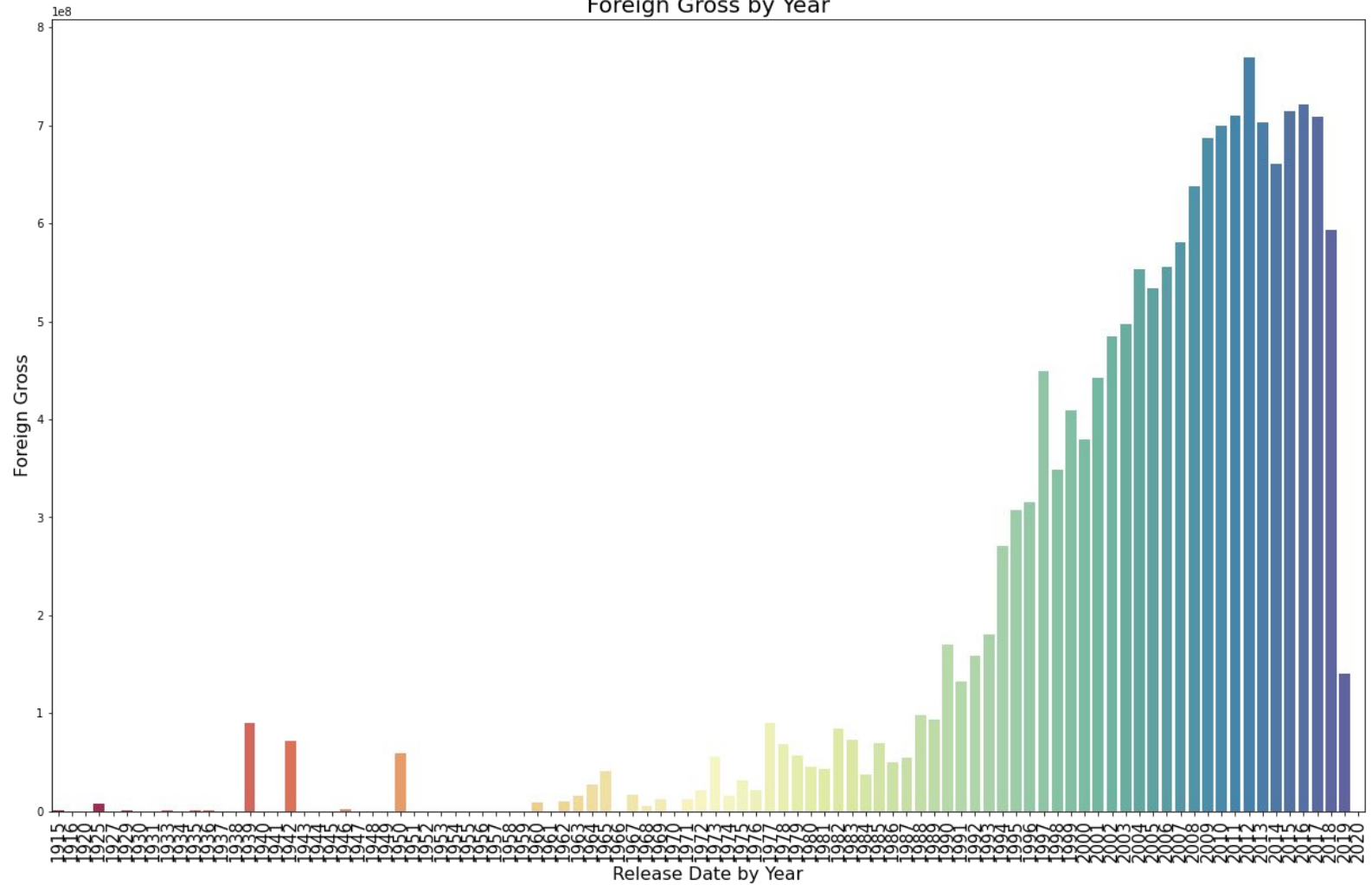Question 4 : Which years had the highest grossing films?
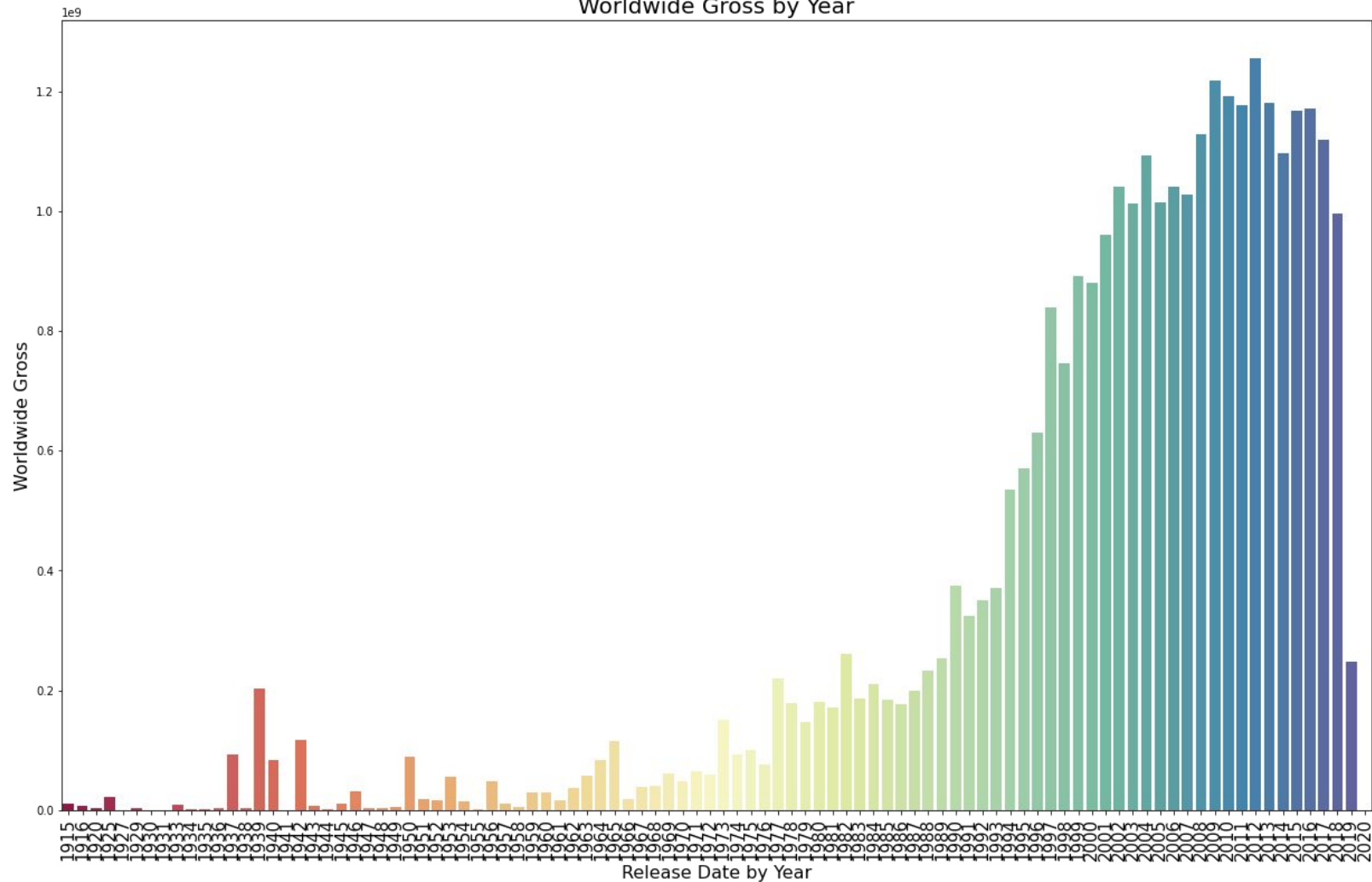
Number of Movies Per Year
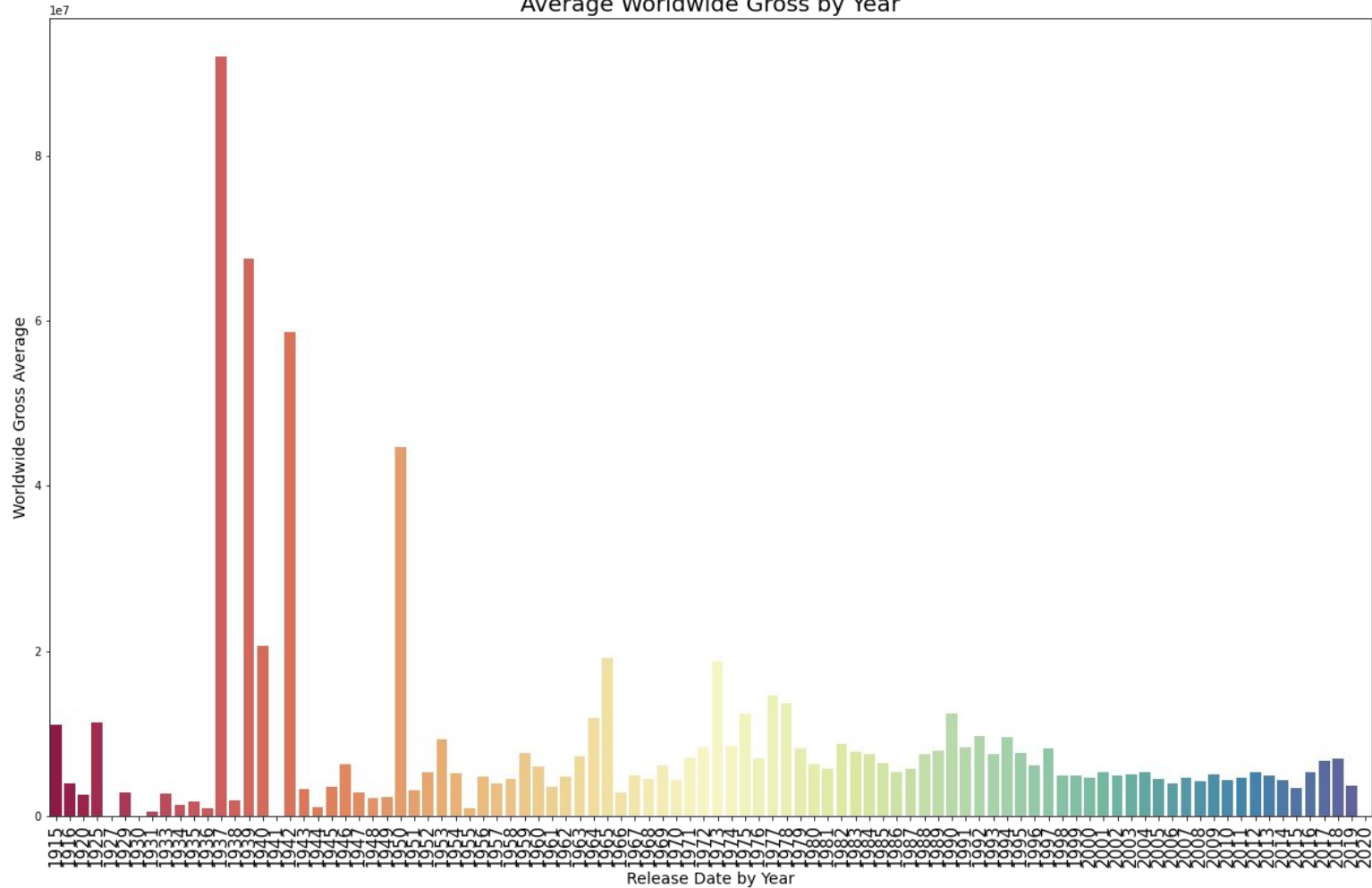
Domestic Gross by Year

Foreign Gross by Year

Worldwide Gross by Year

Average Worldwide Gross by Year

Why were the early 1900's so highly grossing on average?

- Only a few movies were released a year this early in the history of cinema
- Widely popular films were released during this time, which have continued viewing even today.
- Titles such as:
    - Snow White and the Seven Dwarves
    - The Wizard of Oz
    - Pinocchio
    - Bambi
    - Gone With The Wind
    - Cinderella
    - Peter Pan
    - Alice in Wonderland

Question 5 : What is the trend in production budgets?

Production Budget Total by Year
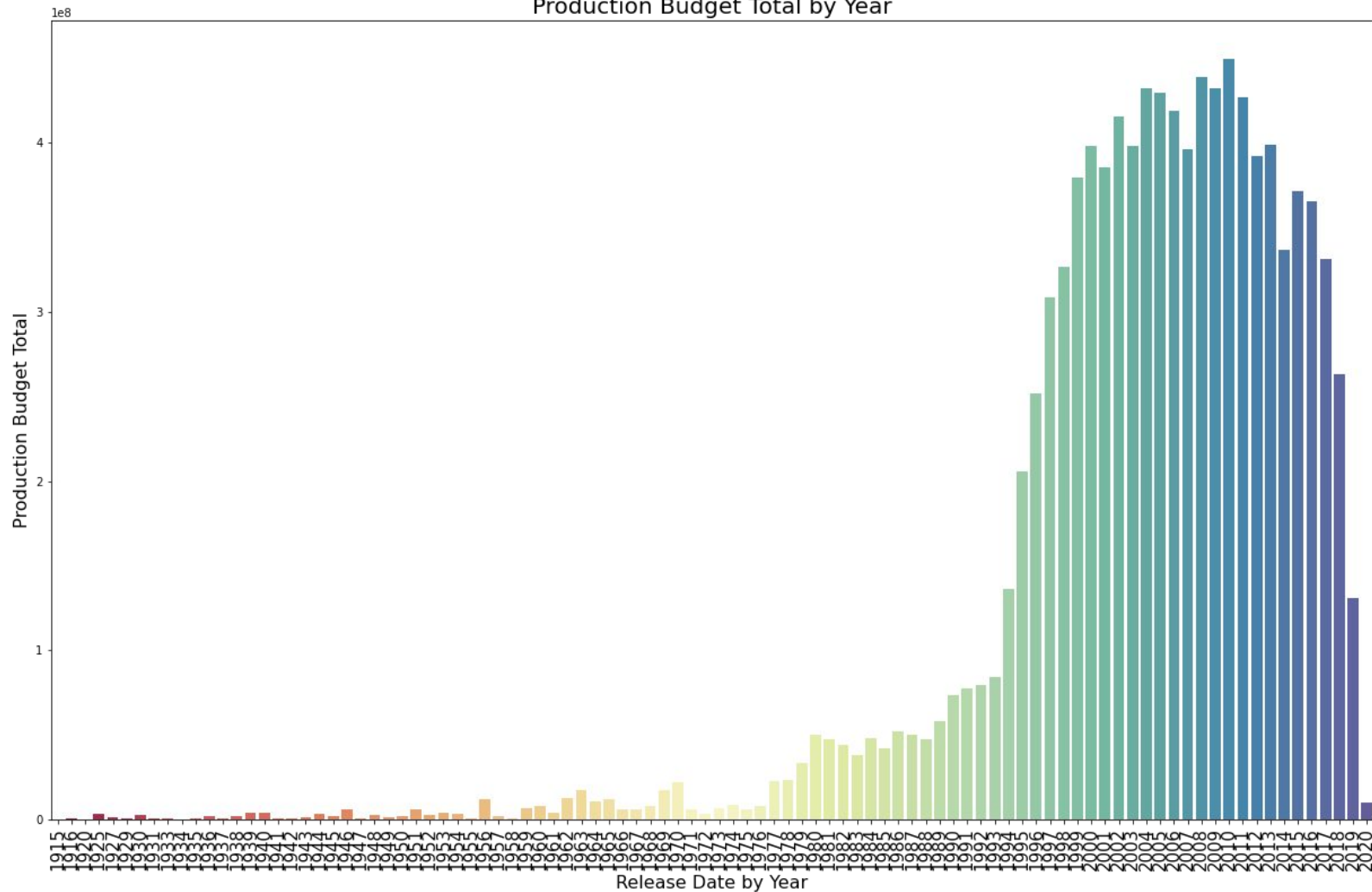
Production Budget Trends

- Production budgets began to ramp up in the 1990's
- After peaking sharply in 2010, there has been a steady decline in production budgets
    - Are actors/actresses taking lower salaries due to increased competition?
    - Is CGI replacing the need for expensive sets and special effects?
    - Is the art of cinematography becoming decentralized, as even film students can make high quality films relatively inexpensively?

Production Budget Average by Year
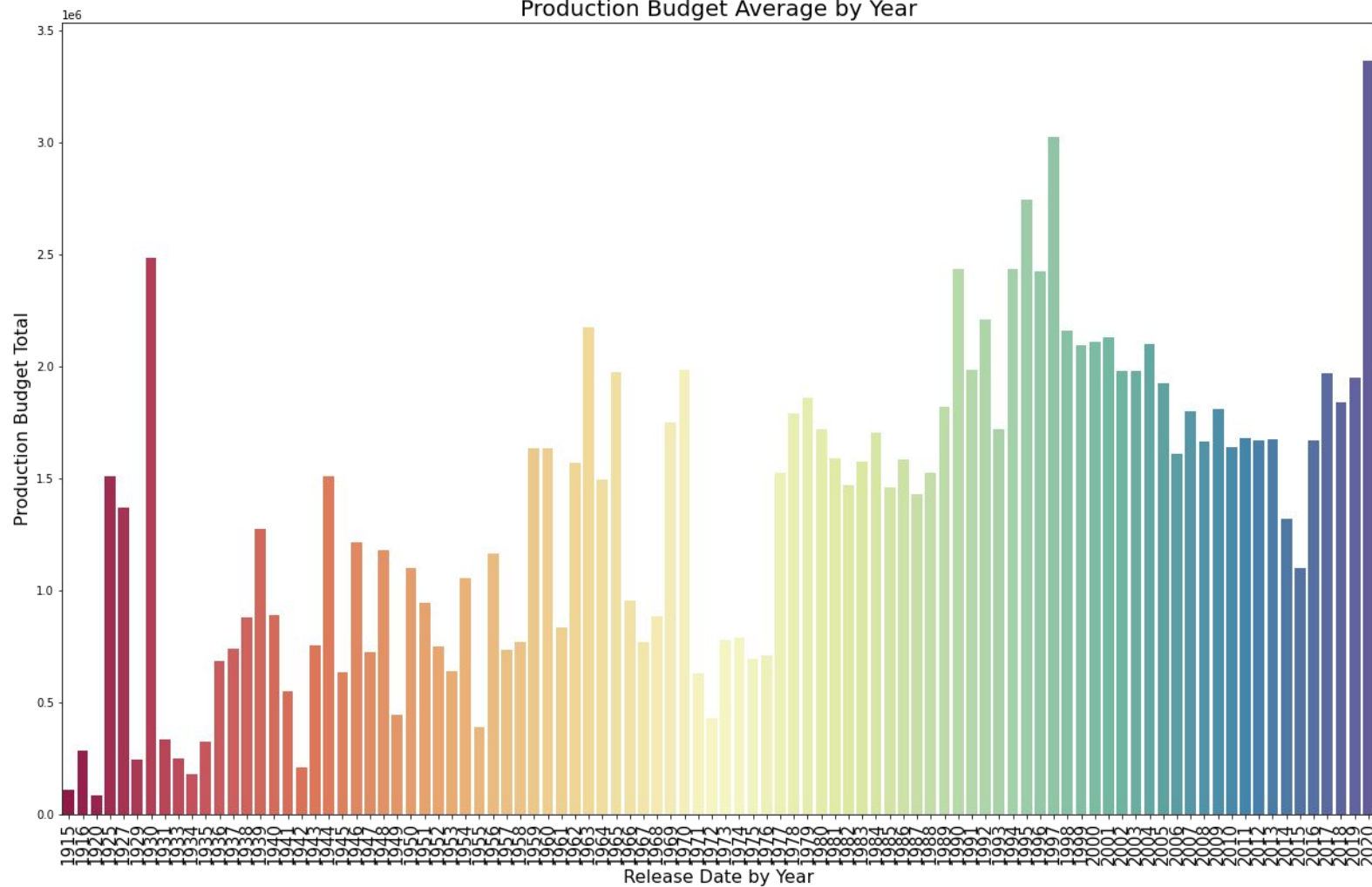
Thank You!

Data collection, cleaning, and visualizations

By Nick Kolowich