Theaters and Movies during Covid

Alex Stake

Intro

Covid has hit theaters particularly hard
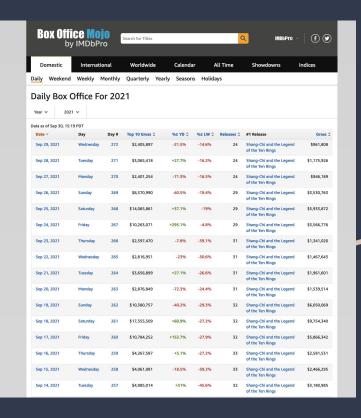
I aim to demonstrate that theaters are recovering as vaccinations increase

Methodology

- The Question: Can we predict total domestic box office gross based on the timing of release and covid vaccinations?

- Linear Regression as the core model
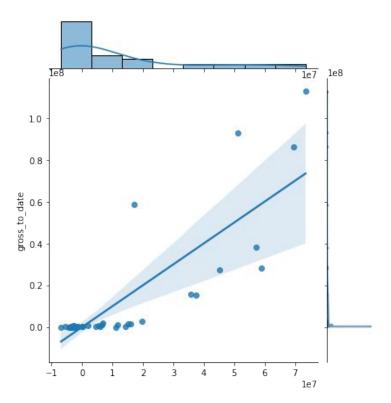
The Data

- Scraped from Boxofficemojo.com
- 2 years: 2020 and 2021
  - Each Days' top 30 movies' performance, days in release, gross to date
- CDC Vaccine data from CDC.gov
  - Covers December 2020 to September 2021
  - Number of distributed, administered, and fully vaccinated people by location

Results

- R^2 = 0.6918843924735739
- MAE = 9,606,285.61840231

Performs well on much smaller scales, but even with LASSO it is still overfitting

Conclusion

- **Something more is going on here**

- No, you cannot predict the Total Domestic Gross from the numbers of releases and covid vaccinations using linear regression

Future work

- Add more data per each movie (budget, runtime, etc.)

- Create a time series using the date of vaccination

- Gather data to the end of 2021 to better predict 2022