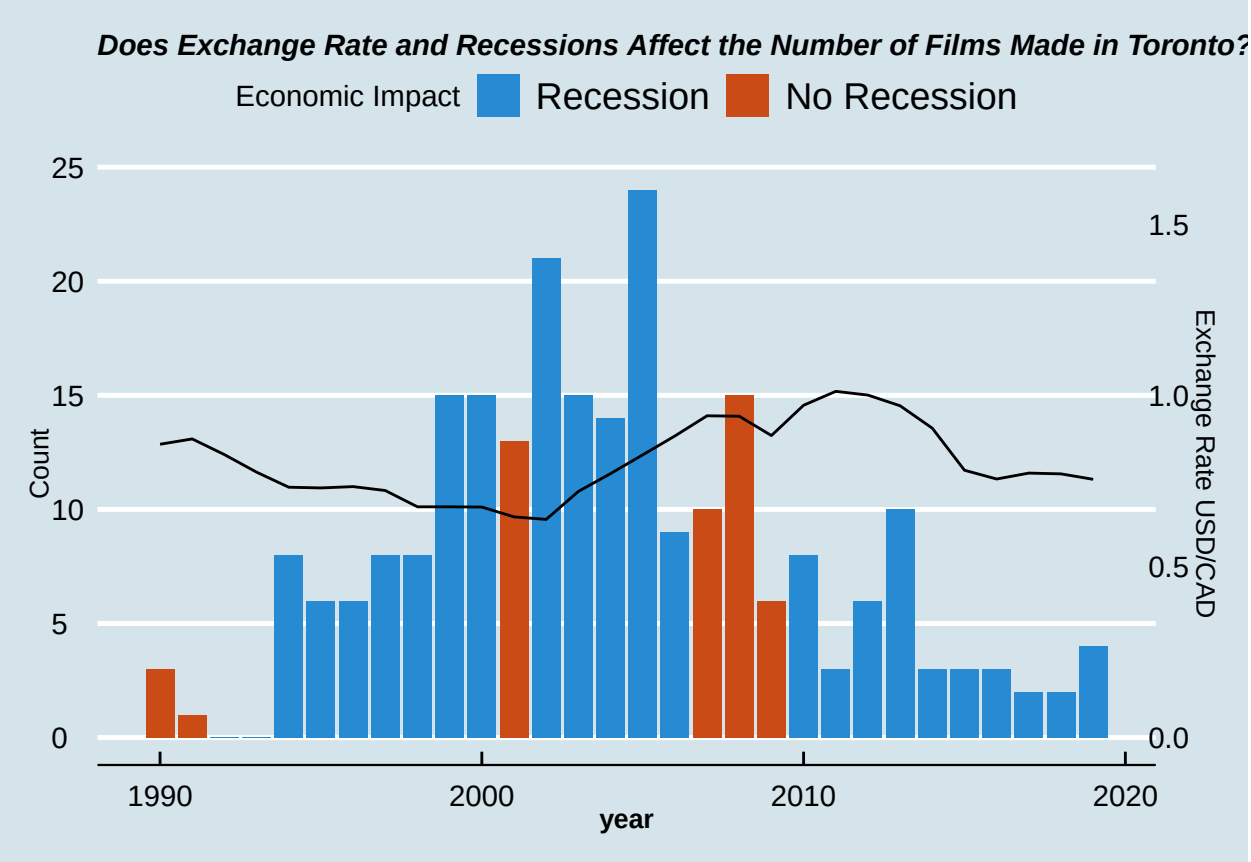
Visulization on Movies Shot in Toronto



Data Visualization Writeup

The purpose of my visualization graph is to understand whether the ratio of USD/CAD exchange rate have any effect to the number of film productions in Toronto. To better assist the viewers to understand the general economic condition in each year , I also highlighted the years that United States experienced recessions so the viewers can make better comparisons. According to our graph, we see that in the years where exchange rates are low (ex. 1998- 2002), the number of movies made in Toronto is the highest. On the other hand, we don't see a direct effect from the economic conditions from the visualization. This may due to the lag effect from the recessions however, since we haven't done much statistical analysis here, more study is needed before drawing any conclusions.

My data visualization is a combination of both a line chart and a bar chart. The line chart represents the exchange rate between US dollar(USD) and Canadian dollar(CAD). The bar chart is the number of movies filmed in Toronto, separated by years ranging from 1990-2019. The bar chart is separated by 2 types of economic conditions: years in recession (orange) and years not in recession (blue), and this would be a categorical attribute. The x-axis in the graph is measured by year, an ordinal, sequential data attribute. The y-axis is measured by 2 scales due to the combination of line and bar chart, and they are "the number

of movie productions made in Toronto" and "USD/CAD exchange rate". Both attributes are quantitative and sequential attribute types.

In the process of making this data visualization, I found the dataset also contains data points dated back in the 1930s. If included those points in the graph, it would stretch the x-axis out very long and create unnecessary blank spaces. Therefore, I focus only on the data points between 1990- 2019. Moreover, I imported extra data from https://ca.investing.com/currencies/cad-usd-historical-data for the historical exchange rate between USD to CAD. In the plotting process, I scaled the ratio up by 15 times so the line graph seems more obvious comparing to the number count of the movies.

The hues I chose to present the economic conditions for each year are blue and orange from the Discrete Solarize Colour Palette. The two hues are very distinctive from each other, since economic conditions are categorical variables. This way, viewers can easily spot the recession years that I highlighted on the graph.