NETFLIX AND CHILL

Netflix and Chill / Team Members

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Since the rise of COVID-19 in 2020, we have all faced the effects of a Global Pandemic. In many states across the United States a "Stay-At-Home Order", or other restrictions were put in place, ensuring many Americans were confined to the compounds of their homes. In a time where movie theaters were closed and social distancing was enforced, our means of quality entertainment was put to the test. Netflix was there to save the day, creating a "New Normal" for Americans to binge watch Netflix, and "Chill" in the comfort of their homes, in a capacity that has never been seen before.

The quest for answers!

Our team has chosen to analyze the effects of the 2020 Pandemic Era and its correlation to Netflix ratings, revenue, subscribers, and their changes over the last year. We took a deeper dive into looking at the number of movie releases by genre on Netflix, and of the North American countries; United States, Canada, and Mexico, which produced the most TV-MA rated TV Shows. To take things a step further, we took a look at the top 10 movies on Netflix in 2020 based on average overall IMDB ratings and examined the correlation between male and female average movie ratings. Lastly, we graphed a comparison of the number of Netflix TV Shows and Movies for 2020 to understand what selections Americans had to choose from.

How have our lives changed?

Based on our own lives we expected Netflix had capitalized on the opportunity to sell more subscriptions, and keep people watching with little else to do. We had all shared our own experiences from March of last year when it really started to affect our day to day life here in the United States. The stay at home orders, businesses closed, people losing their jobs, and simple tasks like getting groceries were more difficult, and a very different experience. We spent a lot of time watching tv, and utilizing streaming services. Most of us have Netflix, and most of us watched shows, or movies that maybe we wouldn't otherwise if we didn't have so much time to (NETFLIX, and Chill). 2020 was full of surprises, and we were curious to see what the data would show!

Were we satisfied with our results

It was discussed that maybe a different topic would offer better data, and maybe better data would produce a better project. That is most likely always going to be a question for a project like this.

Overall as a group we are satisfied with the outcome of this project, and our results.

Questions we had, and the Data that we utilized

1. What is the difference between 2019, and 2020 Membership subscriptions and Netflix revenue?
2. During the 12 Month span of th pandemic(January 2020 to January 2021) What has been the most released genre on Netflix?
3. Between Canada, Mexico, and the USA which country produced the most TV-MA rated TV shows in 2020?
4. What were the top 10 movies on netflix in 2020 according to IMDB?, and is there a correlation between movie duration, and rating?
5. Are there more TV shows, or movies available on Netflix?

Netflix_imbd_ratings.csv - IMBDpy, and Netflix titles merged into Data Frame

Netflix annual income statement excel spreadsheet

Netflix_titles.csv - Kaggle

Data collection, and the cleanup process

We found the data collection process to be more difficult than was anticipated. During this time we found out that Netflix got rid of their self operated API in 2014 and no other official API took its place.
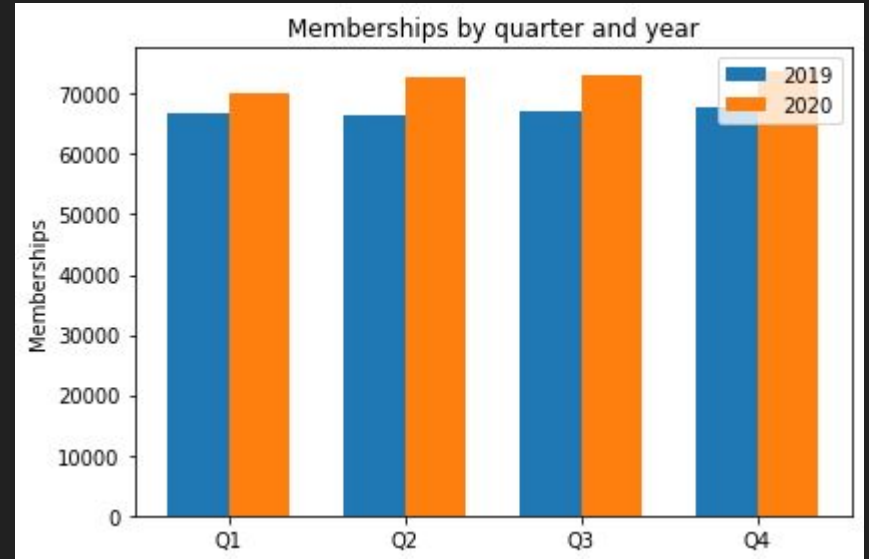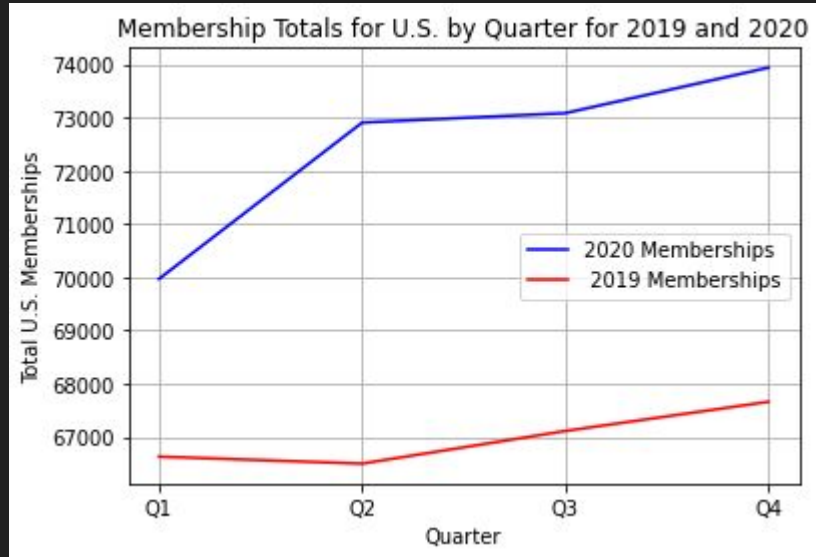
We had to find other sources to acquire our data. We pulled a csv file from Kaggle, we found annual shareholders report from the Netflix website, and also used the IMDB API to help us answer our questions.

What is the difference between 2019, and 2020 Membership Subscriptions, and Netflix revenue?
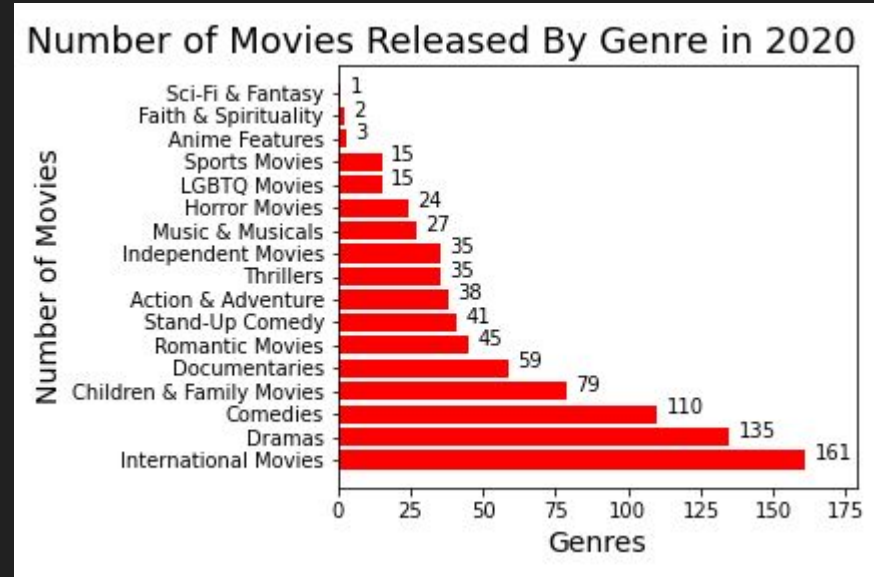
Summary
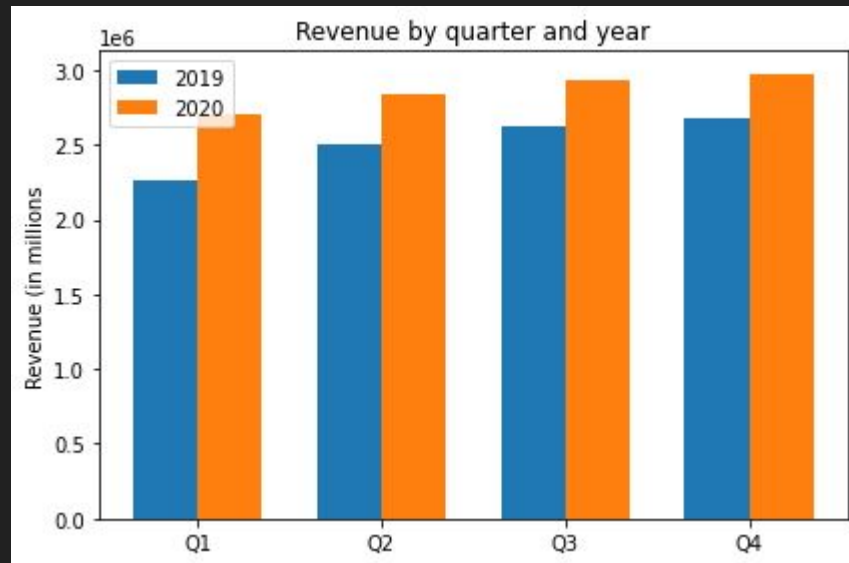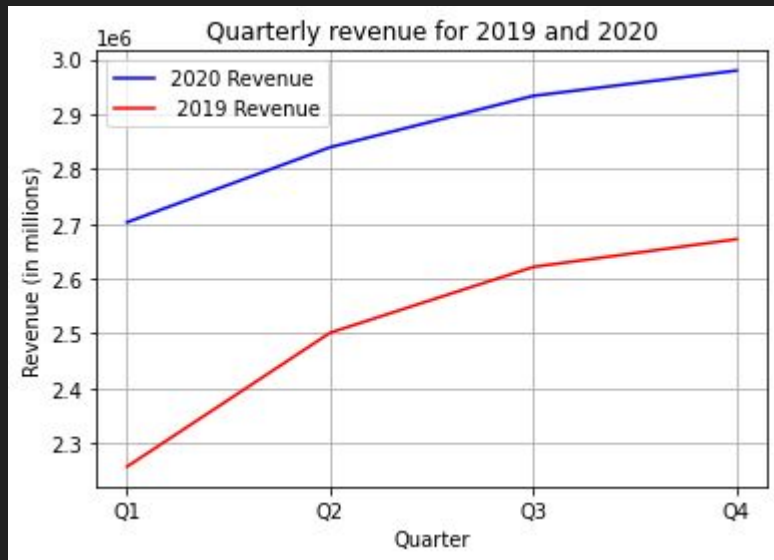
2019 and 2020 membership comparison

During a 12 month span of the pandemic (January 2020 to January 2021) What has been the most released genre on Netflix?

Summary: The genre with the most releases in 2020 was International Movies. This is followed by Dramas and Comedies.

Number of Movies Released By Genre in 2020

Statistical analysis of movies released per genre in the year 2020

Null Hypothesis: There is no statistical significance in the number of movies released per genre in the year 2020.

```
2 critical_value = stats.chi2.ppf(q = 0.95, df = 16)

1 critical_value

26.29622760486423

1 stats.chisquare(genre_df['observed'], genre_df['expected'])
Power_divergenceResult(statistic=720.4897959183675, pvalue=5.6218691783211365e-143)
```

Conclusion: Since the chi square value of 720.49 exceeds the critical value of 26.30, we conclude that the difference seen in the number of movies released per genre is statistically significant.

Between Canada, Mexico, and the USA which country produced the most TV-MA rated tv shows in 2020?
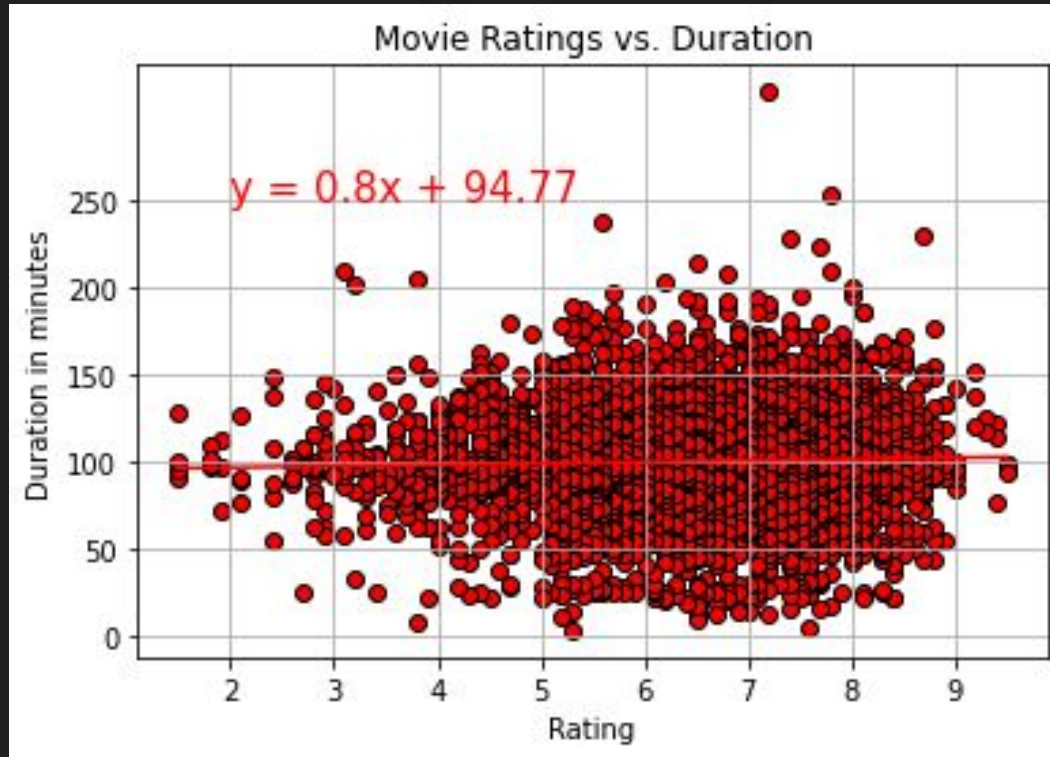
Summary- The country that produced the most

TV-MA rated show in ascending order was
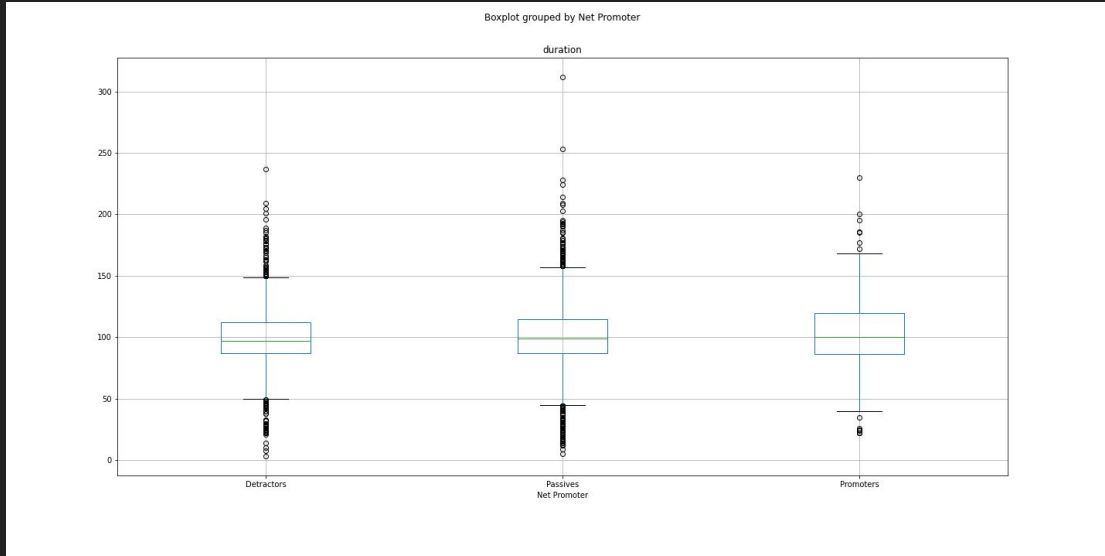
USA, Canada, & Mexico.

Netflix TV- Shows with TV-MA Ratings in 2020
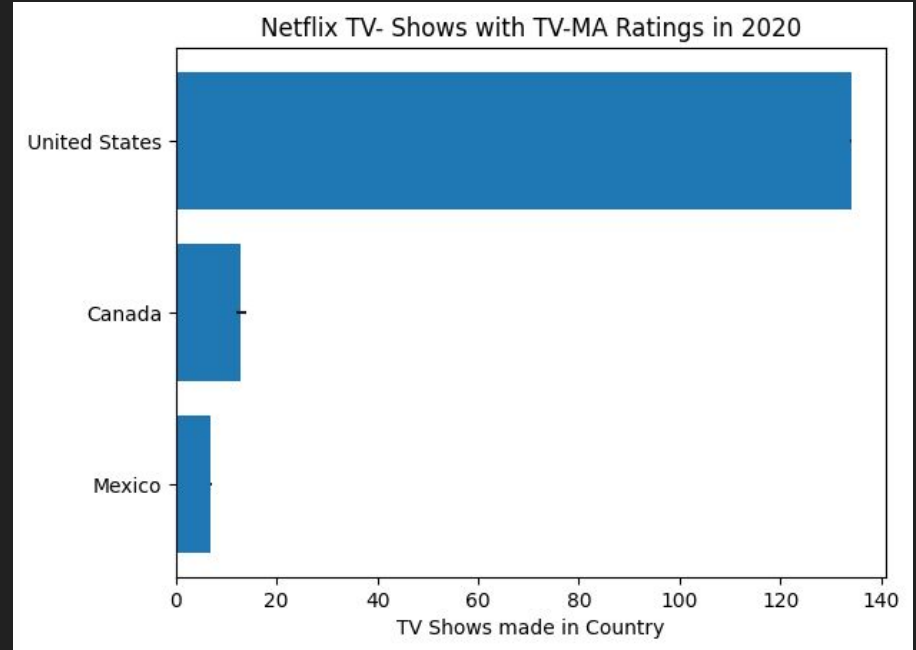
What were the top 10 movies on Netflix in 2020 according to IMDB?
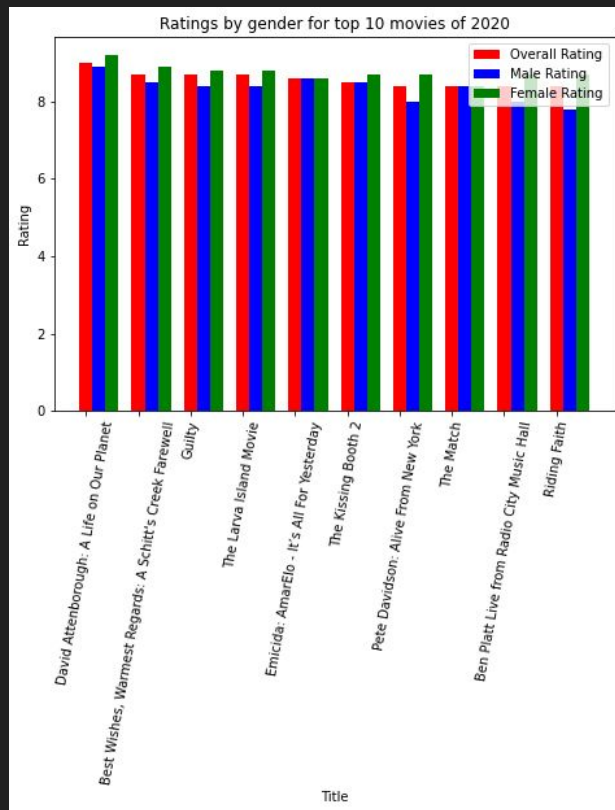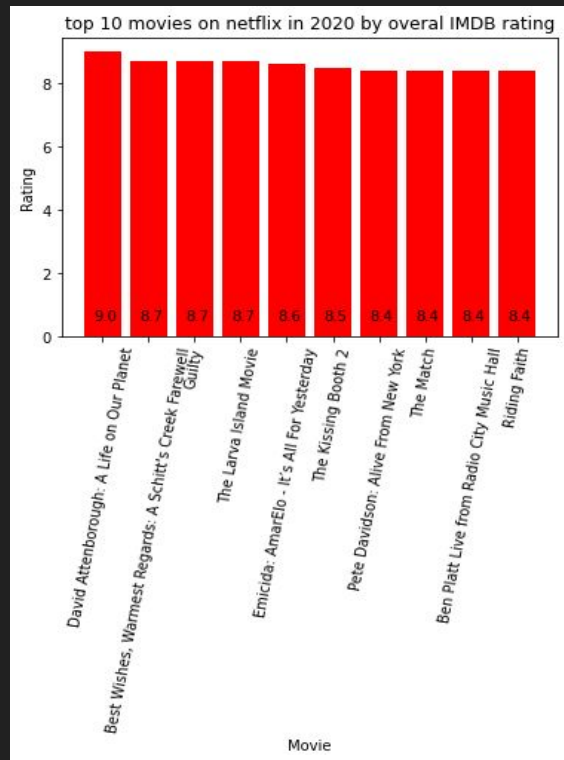
Is there a correlation between movie duration and rating?

# Ratings vs duration grouped by net promoter - ANOVA


```
[ ]    1 #ANOVA test to determine if there is any statistical significance between movie duration and rating
       2 stats.f_oneway(detractors, passives, promoters)

    F_onewayResult(statistic=2.1916488400658665, pvalue=0.11183610510245982)
```

Are there more TV shows, or movies available on Netflix

Summary: Netflix offers more Movie options, than TV show options. There are many speculations that could be made here. Netflix offers "Netflix Original Movies", and maybe the platform is designed to offer more movies then TV shows, but the data is proof if you like to watch Movies Netflix might be the right streaming service for you.
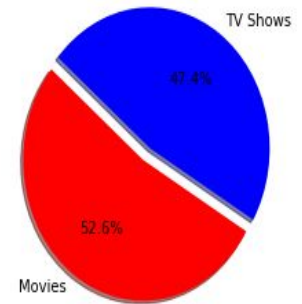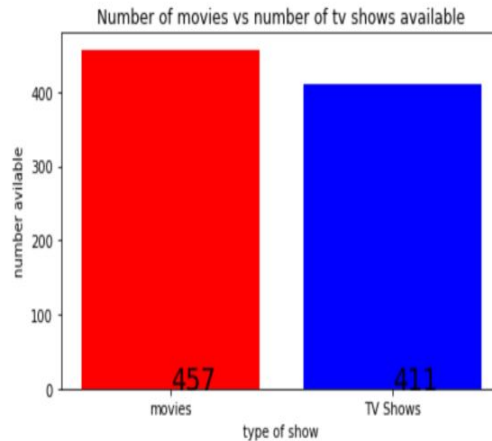
Discussions, and unexpected findings

Netflix no longer offers an API, and it was extremely challenging to find a dependable API to support the data that we were trying to find.

Challenges, and the questions that went unanswered?

Why does Netflix not offer a dependable API?

Will Netflix maintain their user base, or will people find other things to do with there time once some of the pandemic restrictions are lifted?

Questions?

This is the time to open it up to the class, and answer any questions about our project.

Let's take a poll from the class how many people watched Tiger King!!