

Flicking Through

NETFLIX

A Project By:



ADMIN

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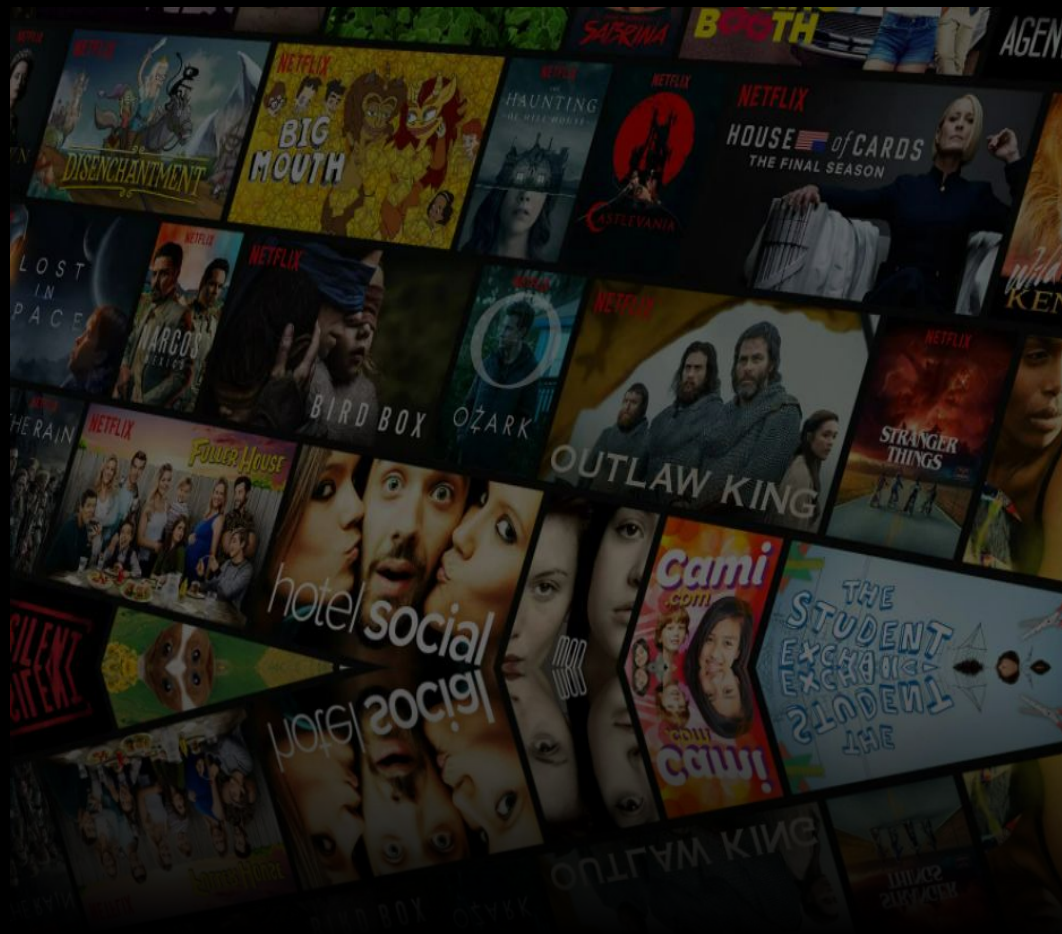


Mini
Yadav

NETFLIX

Project Outline

- Why Netflix?
- Explore Netflix metrics of success:
Subscribers & Revenue
- Explore Viewer experience with Netflix:
Average reception of Netflix exclusive specials.



QUESTIONS that we tried to answer:

1. Whether regions growth follows similar patterns - or if different regions behave more independently?

Elena - James - Sam

2. Does runtime affect how well a show is received?

Isha

3. Is runtime affected by genre and how has runtime changed over time?

Mini - Emanuela



DATA EXPLORATION and clean-up process:

Our Data

- 'Netflix subscribers and revenue by country'

Kaggle Dataset

- 'Netflix Original Films & IMDB Scores'

Kaggle Dataset

- OMDB API

```
In [ ]: base_url = "http://www.omdbapi.com/?"

for index, row in originals_df.iterrows():
    nfspecial = row["title"]
    url = base_url + keyomdb + "&t=" + nfspecial
    response = requests.get(url)
    data = response.json()
    try:
        originals_df.loc[index, "Ombd Review Score"] = data["imdbRating"]
        originals_df.loc[index, "Ombd Review Count"] = data["imdbVotes"]
    except (KeyError, IndexError):
        print(f'{nfspecial} not found, skipping')

originals_df

Leyla Everlasting not found, skipping
The Misadventures of Hedi and Cokeman not found, skipping
5 Star Christmas not found, skipping
Paris Is Us not found, skipping
Porta dos Fundos: The First Temptation of Christ not found, skipping
Christmas Crossfire not found, skipping
Nobody Sleeps in the Woods Tonight not found, skipping
Earth and Blood not found, skipping
Love Like the Falling Rain not found, skipping
Squared Love not found, skipping
#REALITYHIGH not found, skipping
Dolly Parton's Christmas on the Square not found, skipping
The Most Assassinated Woman in the World not found, skipping
Who Would You Take to a Deserted Island? not found, skipping
Despite Everything not found, skipping
Dolly Kitty and Those Twinkling Stars not found, skipping
Under the Riccione Sun not found, skipping
❖❖❖ not found, skipping
```

```
In [10]: #return month of each premiere
netflix_ombd_df["Month"] = netflix_ombd_df["Premiere"].str.split().str[0].str.strip()
netflix_ombd_df["Year"] = netflix_ombd_df["Premiere"].str.split().str[-1].str.strip()

#List financial quarters to sort to
q1 = ["January", "February", "March"]
q2 = ["April", "May", "June"]
q3 = ["July", "August", "September"]
q4 = ["October", "November", "December"]

#Add New Column
netflix_ombd_df["Financial Quarter"] = np.nan

for index, row in netflix_ombd_df.iterrows():
    key = row["Month"]
    if key in q1:
        netflix_ombd_df.loc[index, "Financial Quarter"] = "1"
    elif key in q2:
        netflix_ombd_df.loc[index, "Financial Quarter"] = "2"
    elif key in q3:
        netflix_ombd_df.loc[index, "Financial Quarter"] = "3"
    elif key in q4:
        netflix_ombd_df.loc[index, "Financial Quarter"] = "4"

netflix_ombd_df
```



RAW DATA from the
Omdb Api converted
to a data frame



**Formatted & filtered
dataframe
and removing null
(NaN) values**

	Title	Genre	Premiere	Runtime	IMDB Score	Language	Omdb Review Score	Omdb Review Count
0	Enter the Anime	Documentary	August 5, 2019	58	2.5	English/Japanese	2.5	1,515
1	Dark Forces	Thriller	August 21, 2020	81	2.6	Spanish	3.9	31
2	The App	Science fiction/Drama	December 26, 2019	79	2.6	Italian	2.6	1,201
3	The Open House	Horror thriller	January 19, 2018	94	3.2	English	3.2	32,162
4	Kaali Khuhi	Mystery	October 30, 2020	90	3.4	Hindi	3.4	1,048
...
579	Taylor Swift: Reputation Stadium Tour	Concert Film	December 31, 2018	125	8.4	English	8.4	4,349
580	Winter on Fire: Ukraine's Fight for Freedom	Documentary	October 9, 2015	91	8.4	English/Ukrainian/Russian	8.4	13,353
581	Springsteen on Broadway	One-man show	December 16, 2018	153	8.5	English	8.5	2,001
582	Emicida: AmarElo - It's All For Yesterday	Documentary	December 8, 2020	89	8.6	Portuguese	8.6	1,136
583	David Attenborough: A Life on Our Planet	Documentary	October 4, 2020	83	9.0	English	9.0	28,028

	Title	Genre	Premiere	Runtime	IMDB Score	Language	Omdb Review Score	Omdb Review Count	Month	Year	Financial Quarter
6	Leyla Everlasting	Comedy	December 4, 2020	112	3.7	Turkish	NaN	NaN	December	2020	4
28	The Misadventures of Hedi and Cokeman	Comedy	February 10, 2021	99	4.5	French	NaN	NaN	February	2021	1
29	5 Star Christmas	Comedy	December 7, 2018	95	4.6	Italian	NaN	NaN	December	2018	4
32	Paris Is Us	Romance drama	February 22, 2019	83	4.6	French	NaN	NaN	February	2019	1
33	Porta dos Fundos: The First Temptation of Christ	Comedy	December 3, 2019	46	4.6	Portuguese	NaN	NaN	December	2019	4
...
545	Rolling Thunder Revue: A Bob Dylan Story by Ma...	Documentary	June 12, 2019	144	7.6	English	NaN	NaN	June	2019	2
555	Crip Camp: A Disability Revolution	Documentary	March 25, 2020	108	7.7	English	NaN	NaN	March	2020	1
558	Road to Roma	Making-of	February 11, 2020	72	7.7	Spanish	NaN	NaN	February	2020	1
567	Struggle: The Life and Lost Art of Szukalski	Documentary	December 21, 2018	105	8.0	English	NaN	NaN	December	2018	4
575	The Three Deaths of Marisela Escobedo	Documentary	October 14, 2020	109	8.2	Spanish	NaN	NaN	October	2020	4

82 rows x 11 columns

FINAL dataframes

	Area	Years	Subscribers
0	United States and Canada	Q1 - 2018	60.91
1	Europe, Middle East and Africa	Q1 - 2018	29.34
2	Latin America	Q1 - 2018	21.26
3	Asia-Pacific	Q1 - 2018	7.39
4	United States and Canada	Q2 - 2018	61.87

	Area	Years	Revenue
0	United States and Canada	Q1 - 2018	1.98
1	Europe, Middle East and Africa	Q1 - 2018	0.89
2	Latin America	Q1 - 2018	0.54
3	Asia-Pacific	Q1 - 2018	0.20
4	United States and Canada	Q2 - 2018	2.05

	Years	Revenue
0	Q1 - 2018	\$3.61
1	Q2 - 2018	\$3.82
2	Q3 - 2018	\$3.90
3	Q4 - 2018	\$4.11
4	Q1 - 2019	\$4.44
5	Q2 - 2019	\$4.85
6	Q3 - 2019	\$5.17
7	Q4 - 2019	\$5.40
8	Q1 - 2020	\$5.69
9	Q2 - 2020	\$6.09

	Title	Genre	Premiere	Runtime	IMDB Score	Language	Omdb Review Score	Omdb Review Count	Month	Year	Financial Quarter
35	Sol Levante	Anime / Short	April 2, 2020	4	4.7	English	4.7	422	April	2020	2
53	Cops and Robbers	Animation / Short	December 28, 2020	7	6.9	English	6.3	701	December	2020	4
74	Canvas	Animation / Short	December 11, 2020	9	6.5	English	6.5	2,012	December	2020	4
54	American Factory: A Conversation with the Obamas	Aftershow / Interview	August 21, 2019	10	5.2	English	5.2	247	August	2019	3
23	Zion	Documentary	August 10, 2018	11	7.2	English	7.2	1,072	August	2018	3
...
212	Citation	Drama	November 6, 2020	151	6.2	English	6.2	866	November	2020	4
240	The Forest of Love	Drama	October 11, 2019	151	6.3	Japanese	6.8	300	October	2019	4
399	Springsteen on Broadway	One-man show	December 16, 2018	153	8.5	English	8.5	2,001	December	2018	4
276	Da 5 Bloods	War drama	June 12, 2020	155	6.5	English	6.5	46,333	June	2020	2
81	The Irishman	Crime drama	November 27, 2019	209	7.8	English	7.8	342,106	November	2019	4

02 rows × 11 columns

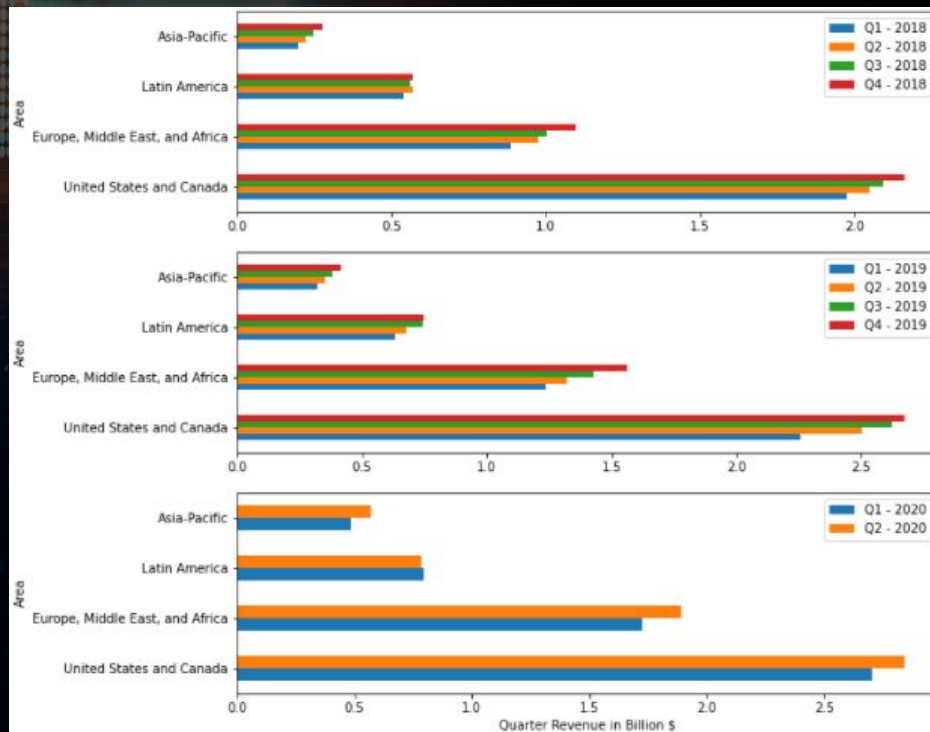
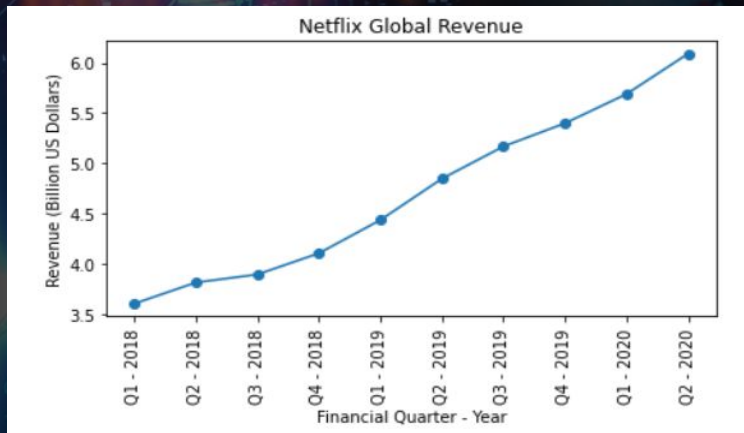


ANALYSIS Process



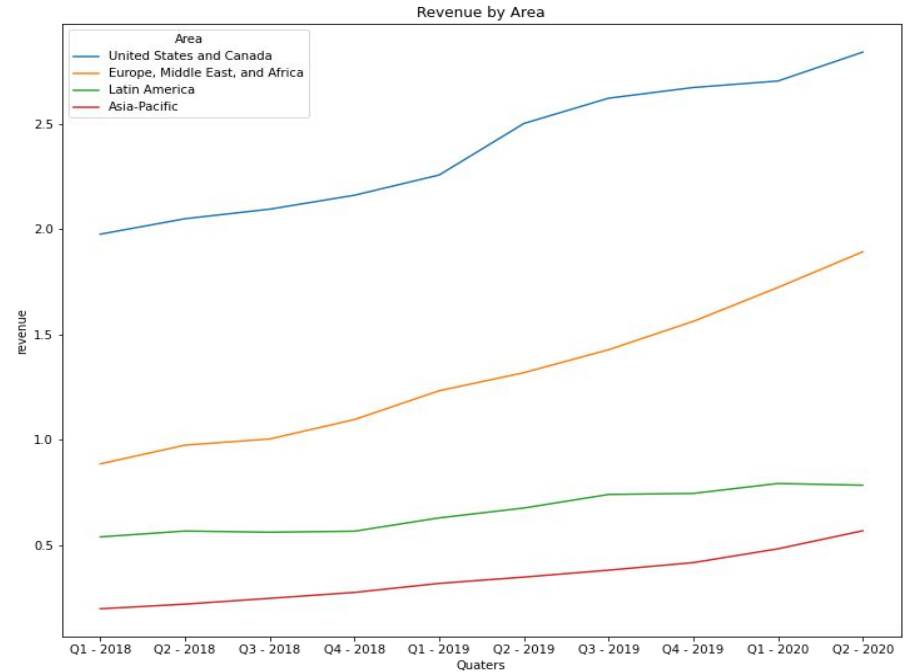
1. Whether regions growth follows similar patterns - or if different regions behave more independently:

Data shows that Netflix's global revenue reached just shy of \$6.1 billion in 2020, growing year on year.



1. Whether regions growth follows similar patterns - or if different regions behave more independently:

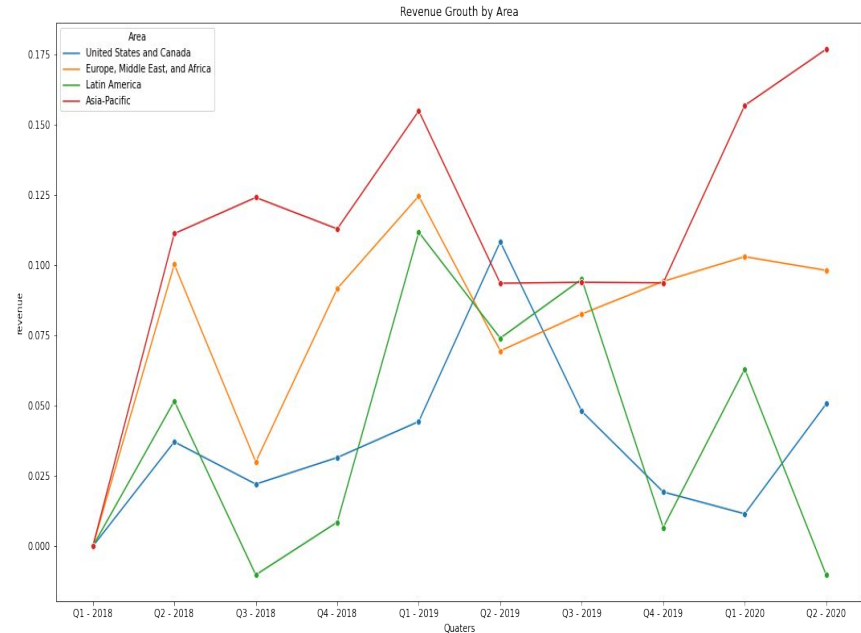
We explored the revenue and the subscriber growth and we compared the four regions against each other.



1. Whether regions growth follows similar patterns - or if different regions behave more independently:

All regions were steadily increasing in revenue and size - but at no point did one region ever go above or below the progress of another.

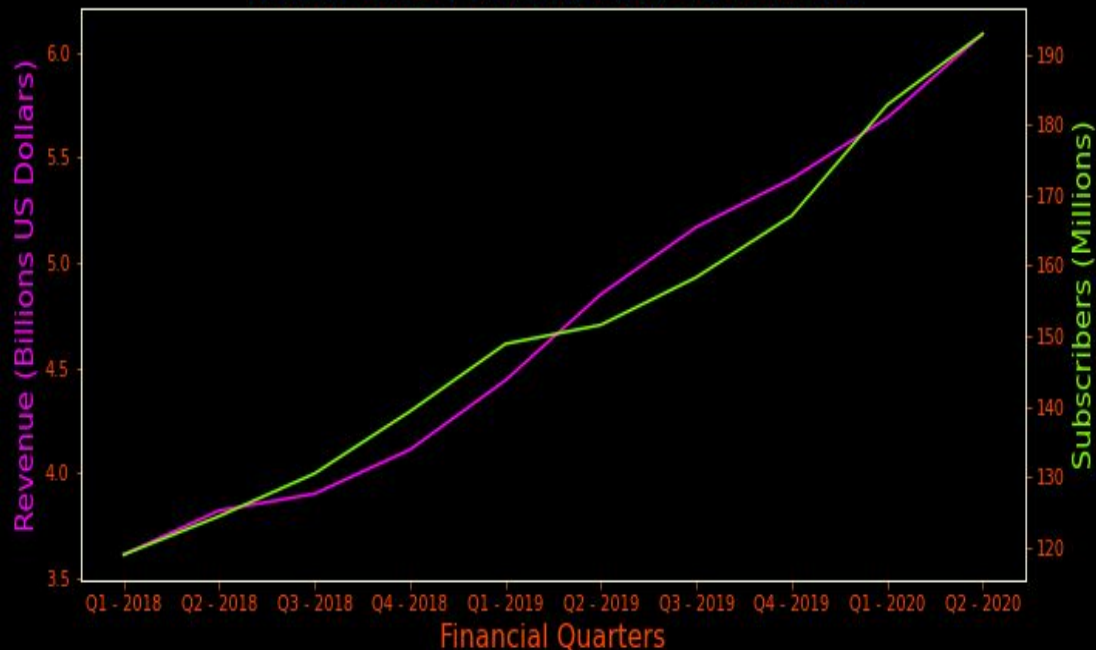
The growth of each region in revenue was more volatile than anticipated. However, it also confirms Netflix's upward trajectory, displaying only two declines in revenue growth in one region (Latin America, Q3 - 2018 and Q2 2020).



1. Whether regions growth follows similar patterns - or if different regions behave more independently:

The following image shows strong revenue figures and high subscriber counts as tens of millions of people joined the streaming service in search of entertainment

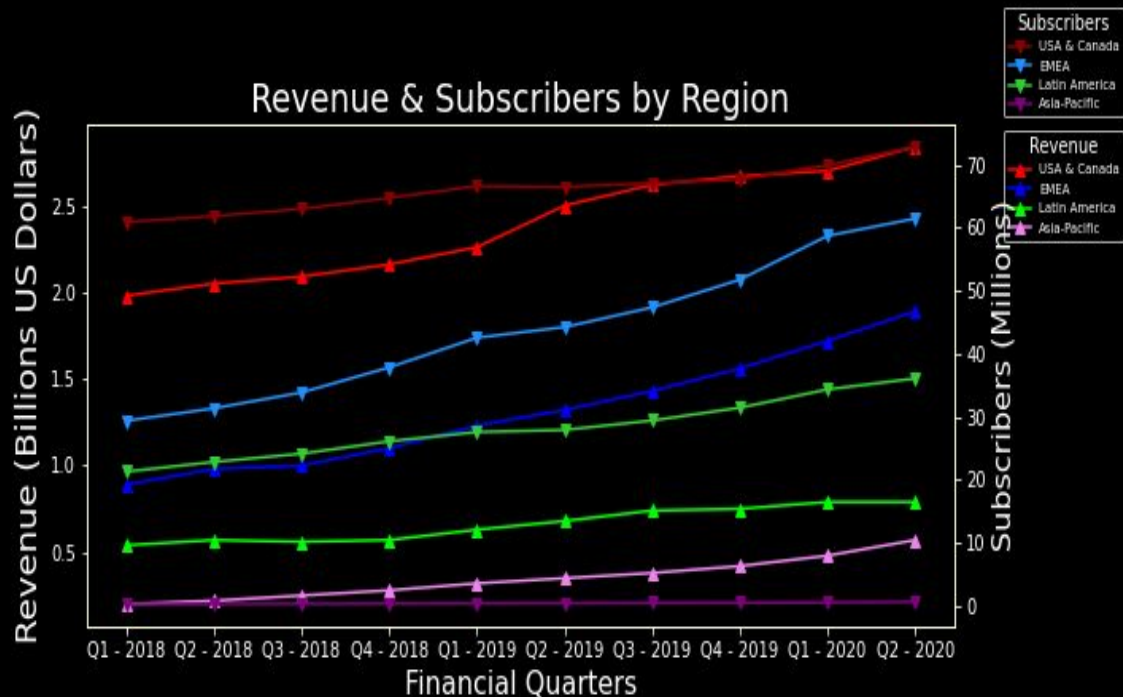
Netflix Global Revenue and Subscribers



1. Whether regions growth follows similar patterns - or if different regions behave more independently:

When comparing the two metrics of growth, subscribers and revenue, we can see that Netflix has been working hard to make their revenue in each region improve - irrespective of subscribers.

We can see for example in Asia, despite minimal change in subscribers, revenue increases consistently year on year. In the United States and Canada, we see a dramatic influx in revenue when compared to their consistent subscriber growth.

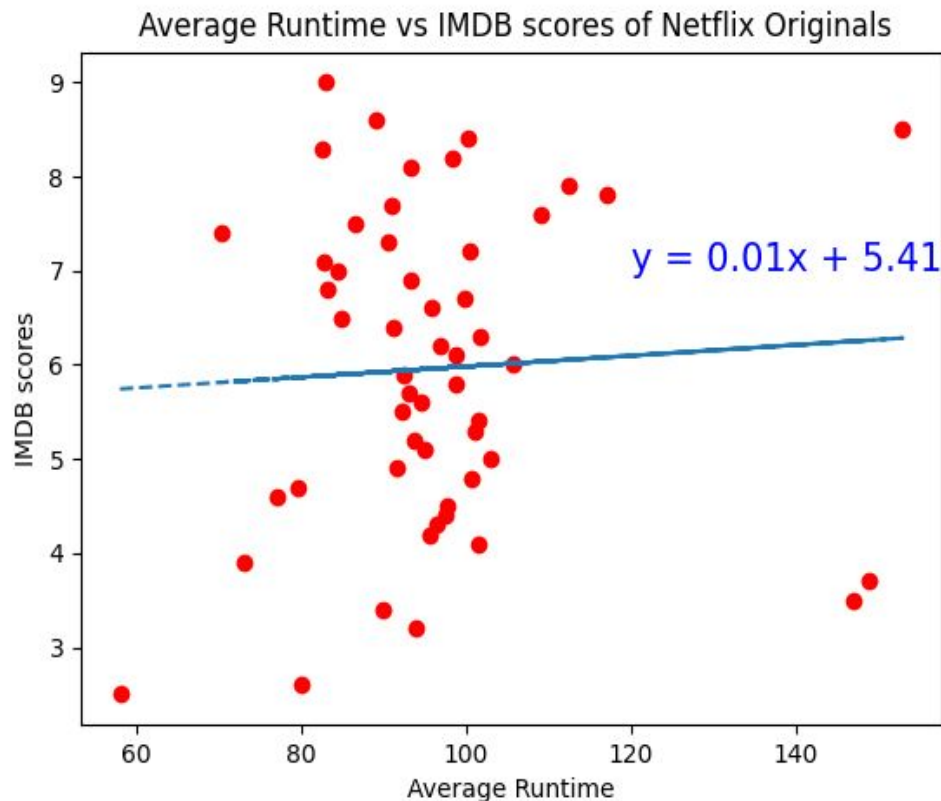


2. Does Runtime affect how well a show is received?

In this part we wanted to explore the idea that if runtime affected the IMDB score of Netflix original shows

When looking at all shows individually, we can see that show length has a weak, positive correlation with imdb scores of 0.05723.

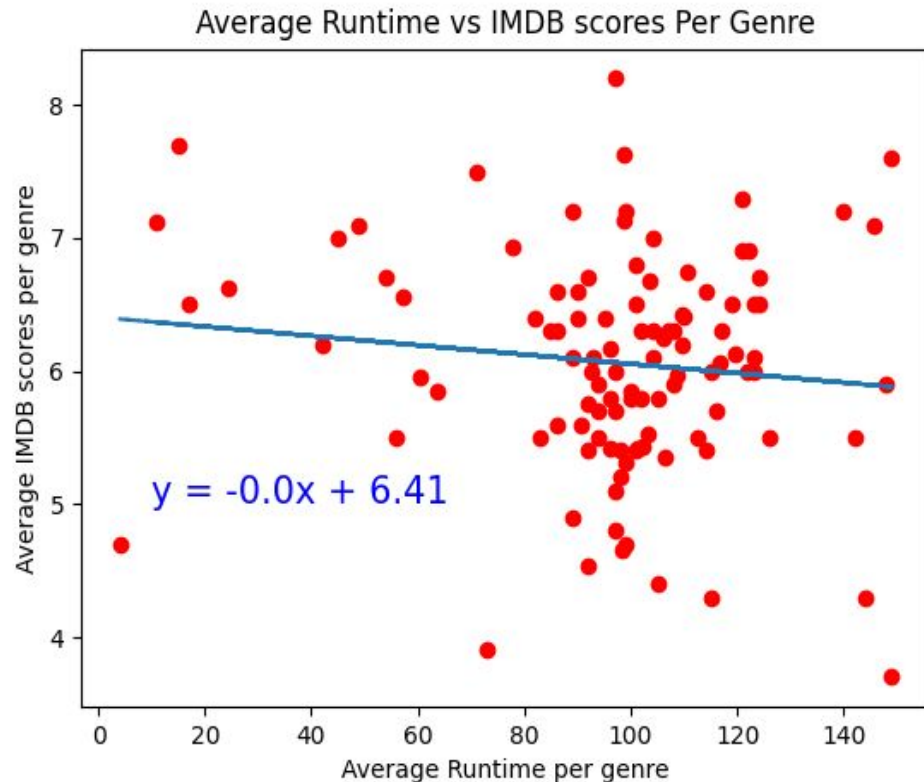
We can infer from this that potentially people give longer shows a higher review as they are enjoying them for a longer time - and thus view their time spent more positively than a shorter, equally enjoyable show.



2. Does Runtime affect how well a show is received?

When we compare the scores within a given genre, there is a weak negative correlation of -0.1171.

This could suggest that, as genres get saturated with longer, less entertaining content, negative reviews will begin to weigh down the overall score of the genre.

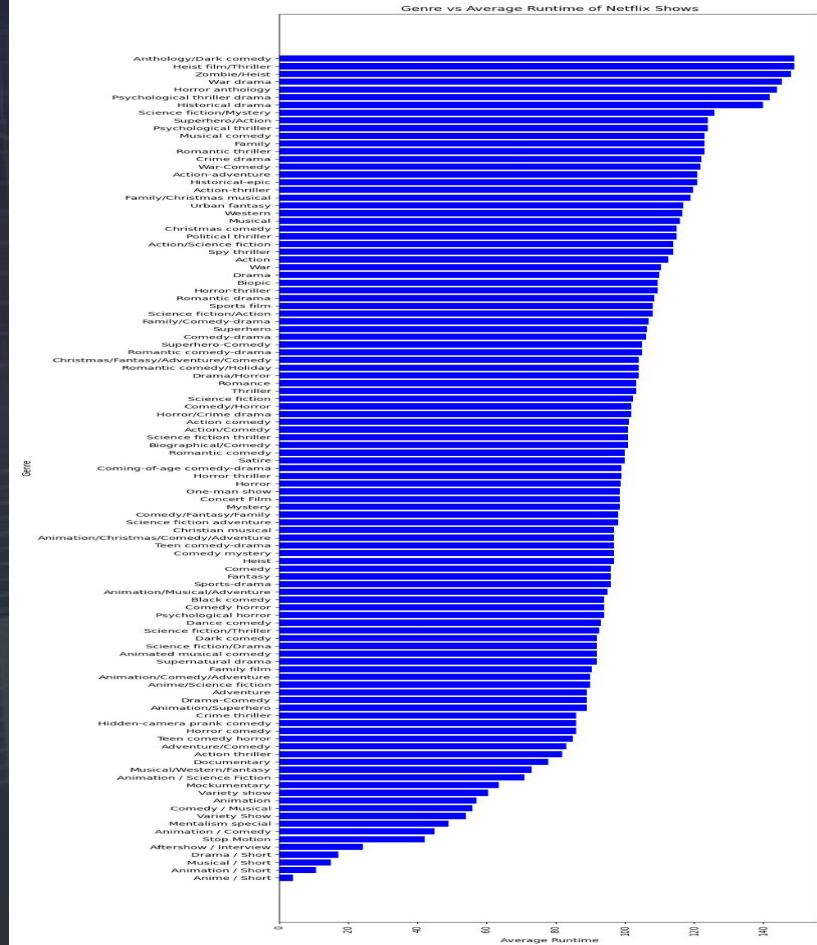


3. Is runtime affected by genre and how has runtime changed over time?

At first, we looked at each of the genres' average runtime. This was useful for indicating high variance between each genre.

It also highlights that the genres shown have not been refined. Many genres have overlapping themes which could be lumped into larger categories to better categorise our data. It shows a limitation of our dataset as such.

Refining our results in categories such as “Horror”, “Action”, “Comedy”, etc. may lead to subjective judgement. But could create a more emotive dataset to analyse.



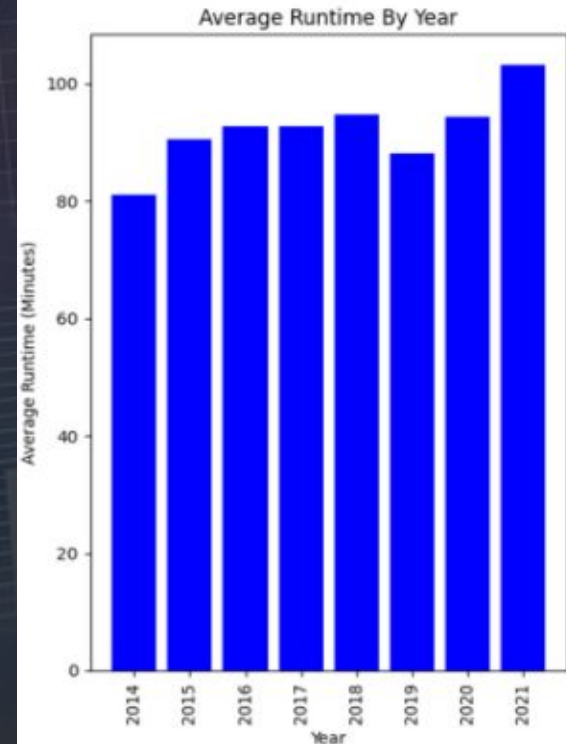
3. Is runtime affected by genre and how has runtime changed over time?

In this part we wanted to explore how runtime has changed throughout the years.

The graph shows a steady and moderate increase from the years 2014 to 2018.

The year 2019 is characterized by a not so drastic but noticeable decrease, which is then revived in the year 2020.

Netflix's runtime is at its peak this year, as it is shown in the graph.



CONCLUSIONS AND IMPLICATIONS

1. **Whether regions growth follows similar patterns - or if different regions behave more independently?**
 - All regions were steadily increasing in revenue and size;
 - The regions that seem to generate the most revenue by subscriber are the USA + Canada and Europe-Middle East-Africa.
2. **Does runtime affect how well a show is received?**
 - When looking at all shows individually, we can see that show length has a weak, positive correlation with IMDB scores suggesting that viewers give longer shows a higher review as they are enjoying them for a longer time
 - When we compare the scores within a given genre, there is a weak negative correlation of -0.1171 , suggesting that negative reviews impact on the overall score of the genre.
3. **Is runtime affected by genre, and how has runtime changed over time?**
 - We have looked at genres' average runtime and discovered a high variance between each genre.
 - We were able to learn from our data that the average length of shows increased year on year.



THANK YOU !

ANY QUESTIONS ?

Continue watching

Exit

