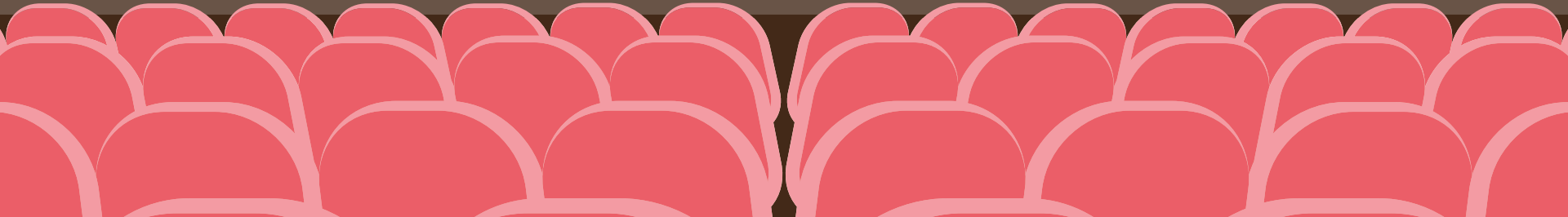


# ***TV SHOWS ON NETFLIX, PRIME VIDEO, HULU, AND DISNEY +***

Comparing Streaming Services Through Statistical Analysis

By Alexandra Wells



# ***OBJECTIVE***

With multiple streaming services with seemingly endless content, which streaming service is right for you?

By identifying which streaming service has the most content with the best quality, we can find potential subscribers' most attractive service.

# ***WHICH STREAMING SERVICE IS RIGHT FOR YOU?***

As COVID-19 cases rise and the weather gets colder, what is a better thing to do than snuggle up and watch some TV? With multiple streaming services with seemingly endless content, which streaming service is right for you?

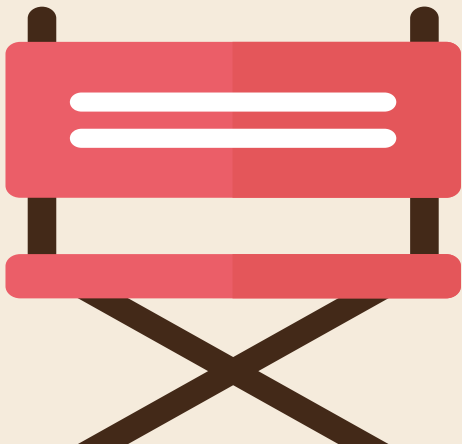


# ABOUT THE DATA

(Data Source: <https://www.kaggle.com/ruchi798/tv-shows-on-netflix-prime-video-hulu-and-disney> )

## *TV shows on Netflix, Prime Video, Hulu, and Disney Plus*

is a comprehensive data set of TV series available on the various streaming platforms.



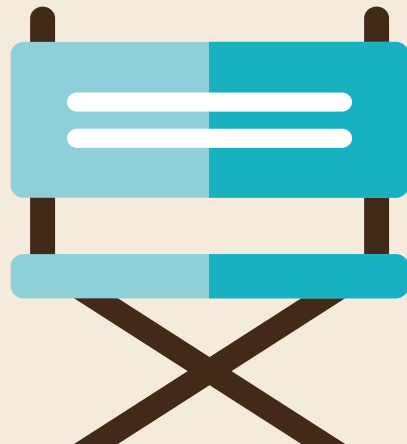
## Data Set

The dataset has **11 columns** and **5612 rows** that include the TV series ID, TV series title, year TV series were produced, target age group, IMDb rating, Rotten Tomatoes %, and whether the show is available on Netflix, Prime Video, Hulu, or Disney+.



## The Data

The data set contains both **categorical** and **quantitative** data types. The only **categorical** data is **nominal** (the titles of the TV series). The rest of the data is **quantitative**, all of which are **discrete** except the year TV series were produced which is **continuous**.



# STREAMING SERVICES



## Netflix

Netflix is a subscription-based streaming service that allows members to watch a wide variety of award-winning TV shows, movies, documentaries, and more on thousands of internet-connected devices.



## Disney+

Disney+ is the exclusive home for movies and TV shows from Disney, Pixar, Marvel, Star Wars, and National Geographic.



## Prime Video

Prime Video is a video streaming service available for Amazon Prime members. With an eligible Amazon Prime membership, you have access to thousands of Prime Video titles at no additional cost.



## Hulu

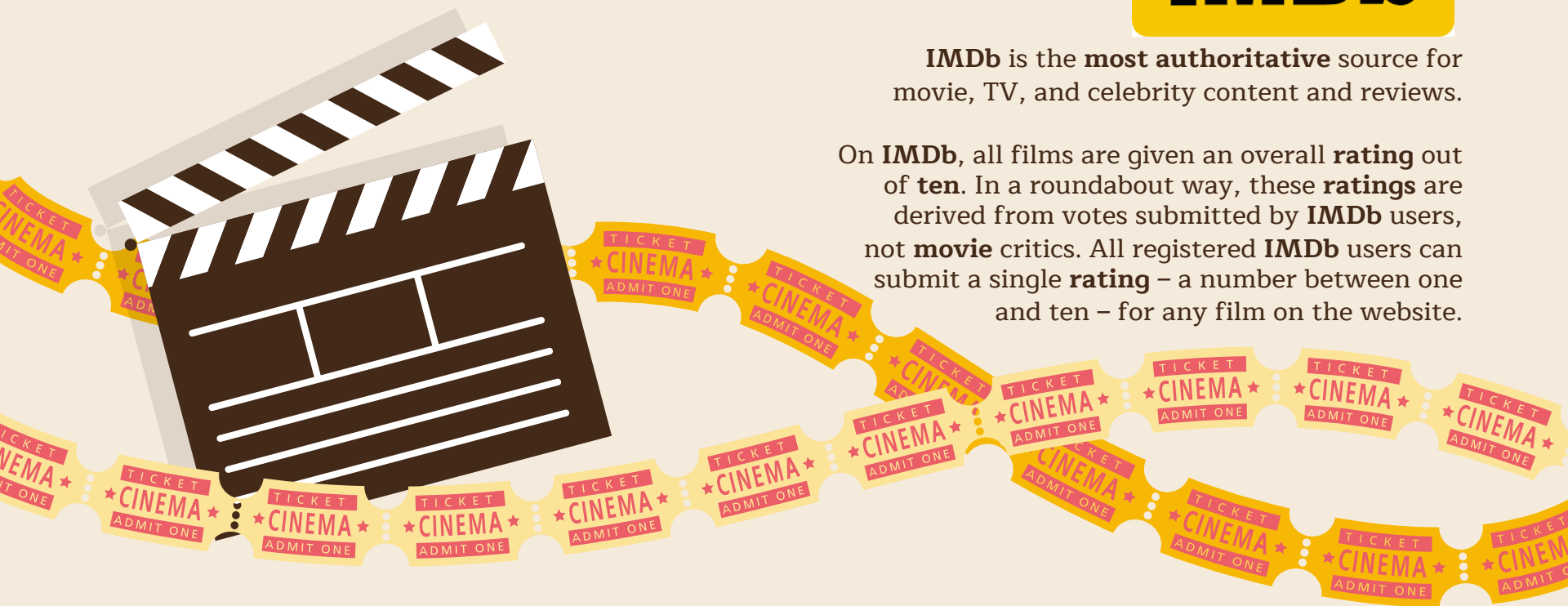
Hulu is the leading premium streaming service offering live and on-demand TV and movies, with and without commercials, both in and outside the home.

*(Images and text provided by streaming services)*

# IMDb

**IMDb** is the **most authoritative** source for movie, TV, and celebrity content and reviews.

On **IMDb**, all films are given an overall **rating** out of **ten**. In a roundabout way, these **ratings** are derived from votes submitted by **IMDb** users, not **movie** critics. All registered **IMDb** users can submit a single **rating** – a number between one and ten – for any film on the website.



*(Image and text provided by IMDb)*

# ***WHICH STREAMING SERVICE HAS THE HIGHEST NUMBER OF TV SERIES AVAILABLE?***



**Prime Video**

2144 available TV series



**Netflix**

1931 available TV series



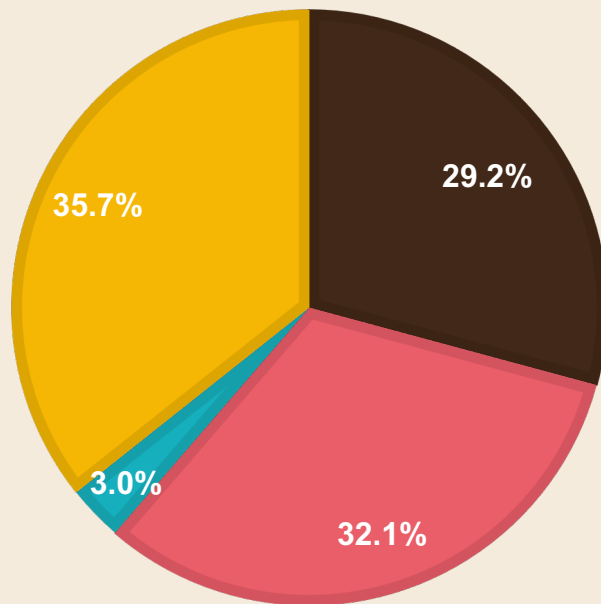
**Hulu**

1754 available TV series



**Disney+**

180 available TV series



# ***WHICH STREAMING SERVICE HAS THE HIGHEST AVERAGE IMBD RATING?***



**Prime Video**

7.17/10



**Netflix**

7.16/10



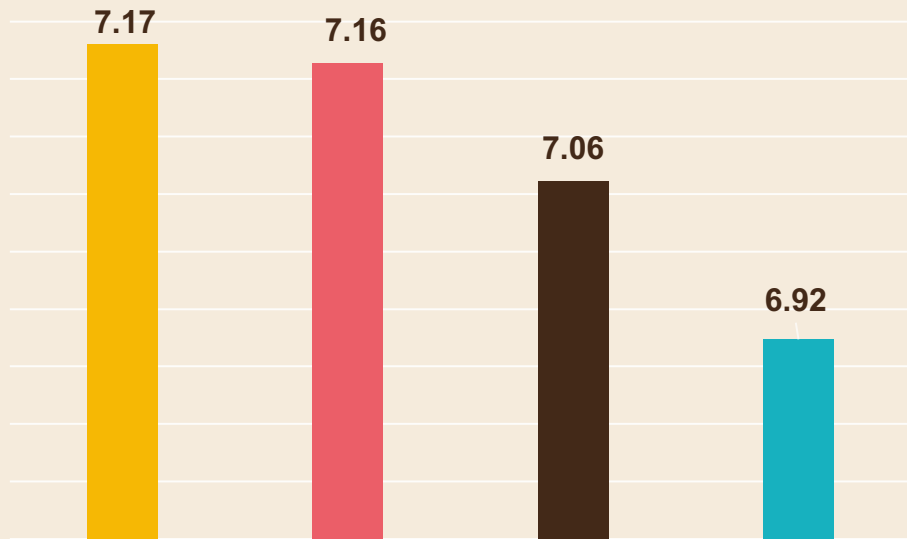
**Hulu**

7.06/10



**Disney+**

6.92/10



IMDb rating range on a scale of 1-10



# ***WHICH STREAMING SERVICE HAS THE MOST AMOUNT OF HIGHLY-RATED TV SERIES?***



**Prime Video**

293 TV series



**Netflix**

383 TV series



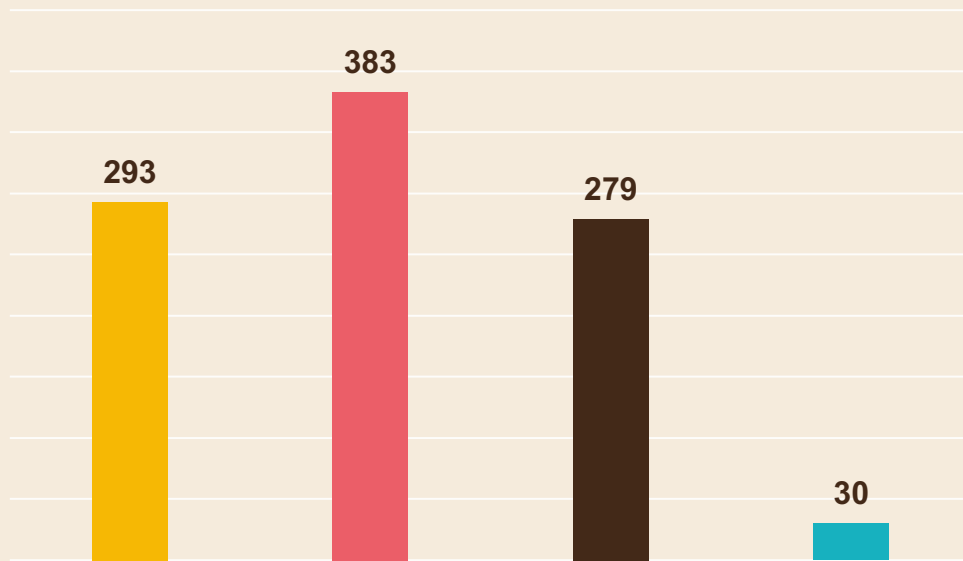
**Hulu**

279 TV series



**Disney+**

30 TV series



TV Series with a >8 IMDb score

# WHICH STREAMING SERVICE ARE THE TOP 10 HIGHEST-RATED TV SERIES ON?



## Prime Video

4 TV series in Top 10



## Netflix

3 TV series in Top 10



## Hulu

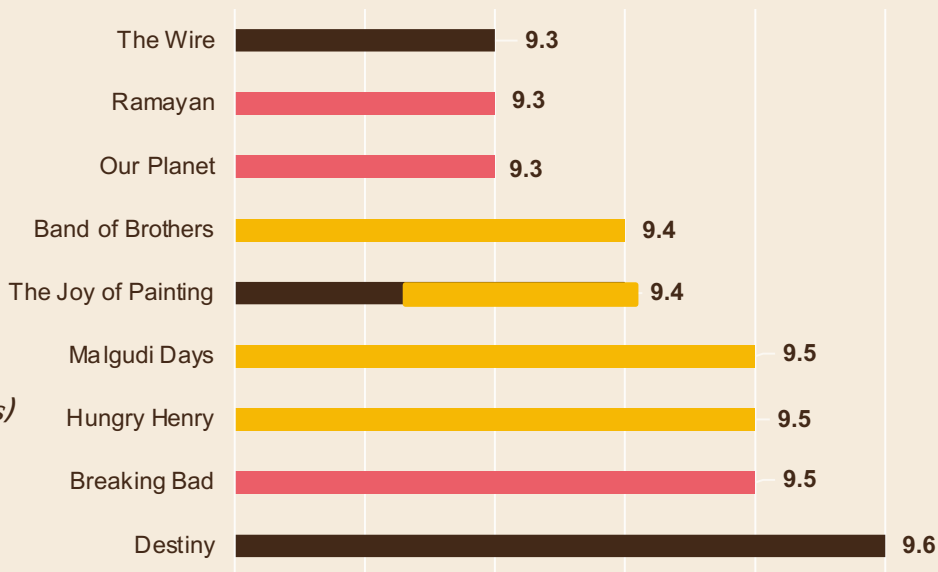
3 TV series in Top 10

*(including the #1 top-rated TV series)*



## Disney+

0 TV series in Top 10



# ***STATISTICAL ANALYSIS***

Question:

**Is there a statistically significant difference in the mean IMBd rating of TV series on Prime Video vs. Netflix?**

Hypothesis:

**Prime Video has the higher mean IMBd rating.**



# DESCRIPTIVE STATISTICS

## IMDb Ratings

**Netflix**

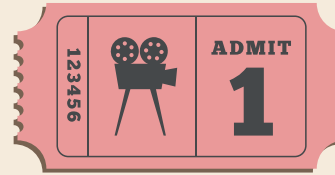
**Max:** 9.5

**Min:** 1.0

**Mode:** 7.4

**Median:** 7.4

**Mean:** 7.16



**Prime Video**

**Max:** 9.5

**Min:** 1.8

**Mode:** 7.4

**Median:** 7.4

**Mean:** 7.17



# OUR FINDINGS

After performing a **t-test** between the two, we were able to conclude:

Standard Deviation

**1.73**

There is a difference of 1.73 standard deviations between these two means.

p-value

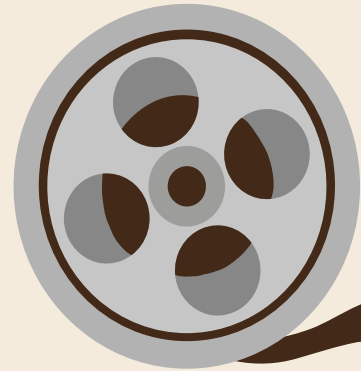
**0.082**

The p-value is **extremely small**, implying that this is a real difference. These results lead us to **reject the null hypothesis** that there is no difference between Netflix's and Prime Video's IMDb mean.

Confidence Interval

**- 0.051 - 0.084**

The difference in means at the **95%** confidence interval is between **-0.051** and **0.084**.



# CONCLUSION



## Prime Video

- Through thorough analysis, the **t-test** concluded that there **is a difference** between Netflix's and Prime Video's IMDb mean. We can **reject the null hypothesis**.
- The hypothesis of Prime Video's higher IMDb mean is true.
- While comparing the different streaming services, **Prime Video is the leader in almost every category** except the quantity of highly-rated TV series, where Netflix leads by 90 more TV series with an IMDb score >8.
- In all categories **Netflix is the 2<sup>nd</sup>** top streaming service, **Hulu is the 3<sup>rd</sup>** top streaming service (except the tie in which platform the top 10 highest-rated TV series are streaming as Hulu ties Netflix), and **Disney+ is significantly the last**.

# ***RECOMMENDATIONS***

## **Which streaming service is right for you?**

When looking for the right streaming service to binge-watch over these cold winter months, the two most important factors are **content quality** and **amount of content**.

As **Prime Video** leads both categories, we recommend it as the top streaming service.

## **Our Findings:**

These findings will be valuable for consumers, helping new subscribers see which streaming service has the most value and assisting current subscribers to decide whether to stick to their streaming service, change services, or even subscribe to additional services. These findings will also help the streaming services determine if they should acquire higher-rated TV shows, create or acquire more highly-rated content to their services. Additionally, these findings would benefit advertising and marketing teams and producers contemplating which service to work with.



# ***THANK YOU***

Do you have any  
questions?

[Alexandra.browne.wells@gmail.com](mailto:Alexandra.browne.wells@gmail.com)

+1 443 621 2338

[linkedin.com/in/alexandra-wells2019](https://www.linkedin.com/in/alexandra-wells2019)

