

Data Visualization

Assignment - 2

Dataset: Game of Thrones

Submitted by

Sivaram S
23PGAI0082

Dataset: Game of Thrones

Game of Thrones is a very famous TV series created by HBO. It has total 73 episodes in 8 seasons. This dataset contains important info of every episode of this tv series like Season, No. of Episode (Season), No. of Episode (Overall), Title of the Episode, Running Time (Minutes), Directed by, Written by, Original Air Date, U.S. Viewers (Millions), Music by, Cinematography by, Editing by, IMDb Rating, Rotten Tomatoes, Rating (Percentage), Metacritic Ratings, Ordered, Filming Duration, Novel(s) Adapted, Synopsis. When analyzing the data set before importing investigated for any null values and requirement of data cleaning. Here no null values are found. Data set used is from Kaggle.

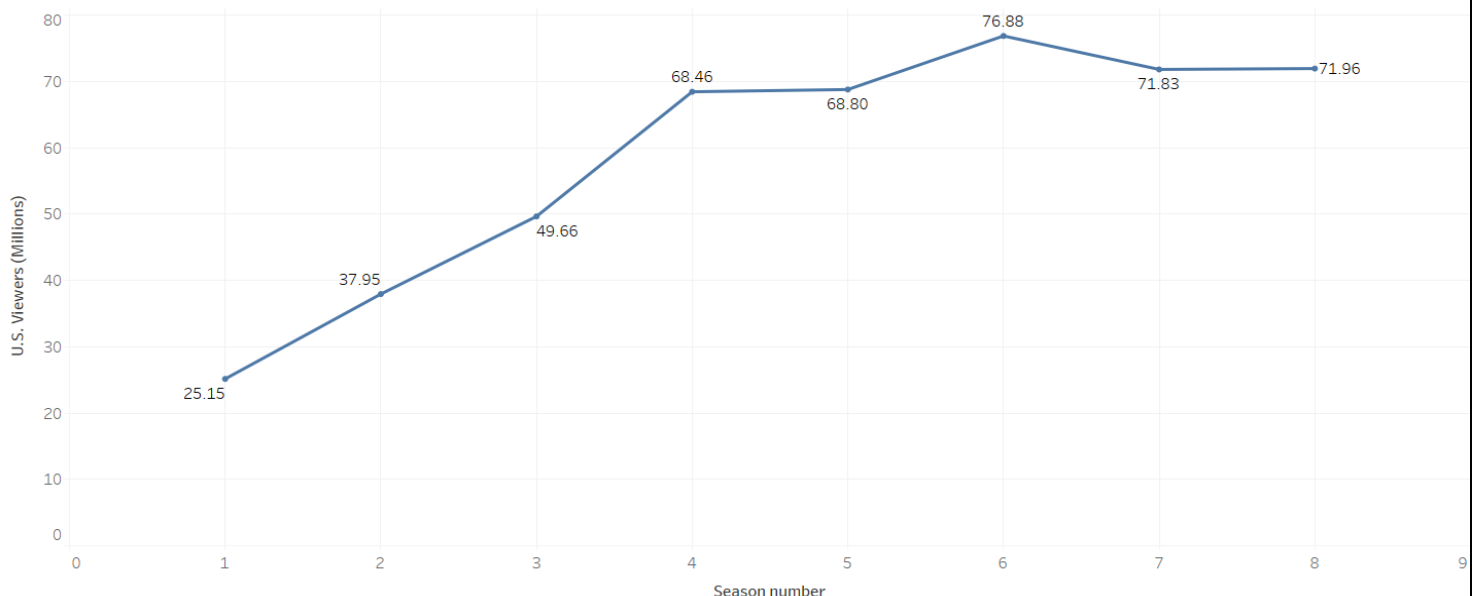
Dataset link <https://www.kaggle.com/datasets/iamsouravbanerjee/game-of-thrones-dataset>

Initial Analysis Questions

1. Which is the first Season and Episode impacted U.S. viewers count to get reduce and didn't go well among U.S viewers?
2. Who are all the directors of this series performed well after considering the critics ratings?
3. Which directors made delay in 7th & 8th season film completion?

Our analysis starts with this line graph for the U.S viewers(million) with season numbers.

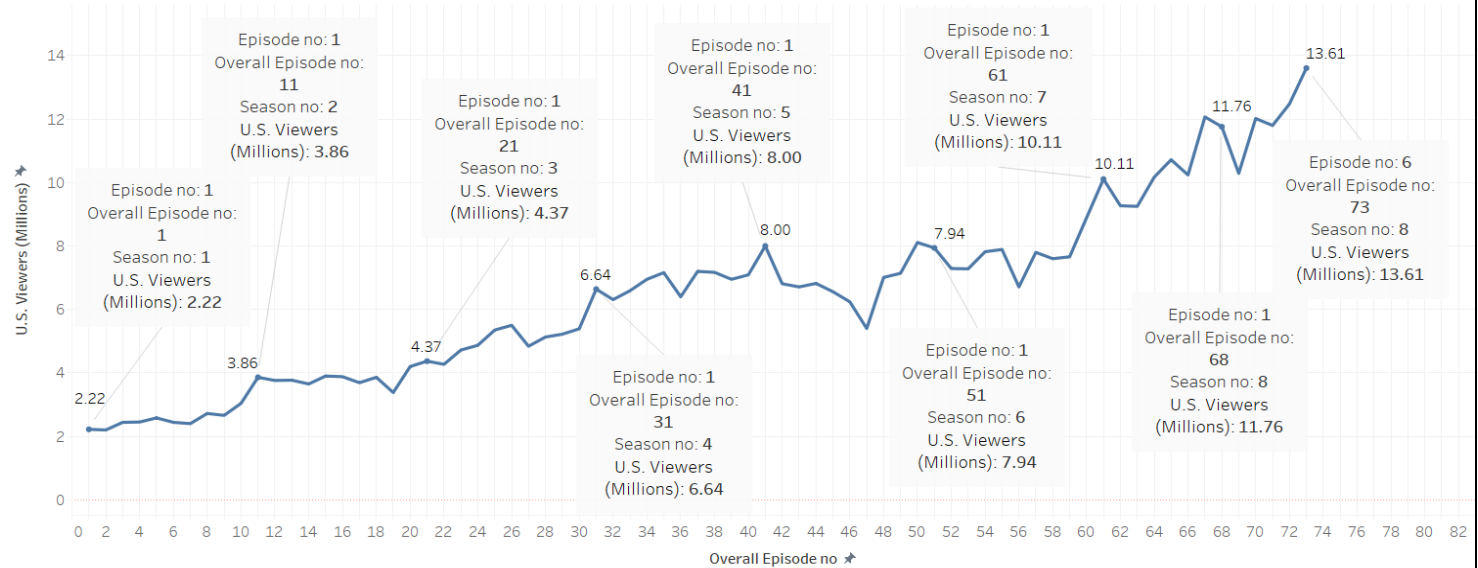
Viewers vs Seasons



The trend of U.S. Viewers (Millions) for Season.

It shows that from season 5 to 6 there is increase in viewers count and which embarks the all-time high viewers count of the entire seasons. But it is always better to deep analysis the data to get better insight. So, in the following visualization graph let's see how the episode's viewer count(millions) is changing

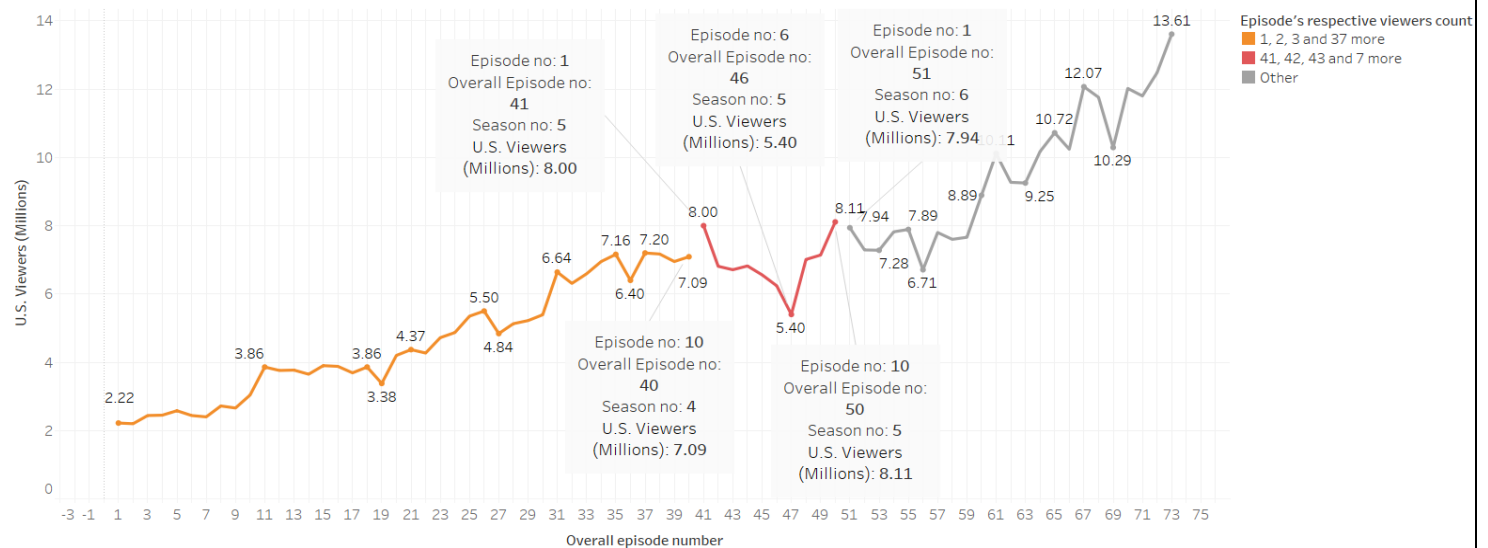
U.S viewers analysis



The trend of U.S. Viewers (Millions) for episodes (Overall number)

From this line graph we can see that every time the viewer count increased on start of all the season's first episode also and observed that in start of 6th season i.e., 51st episode alone the viewers count decreased. So, let's even more deep analysis the graph in segmented way to get which episode and when the viewers count fluctuation are started in greater amount.

Final conclusion - U.S viewers

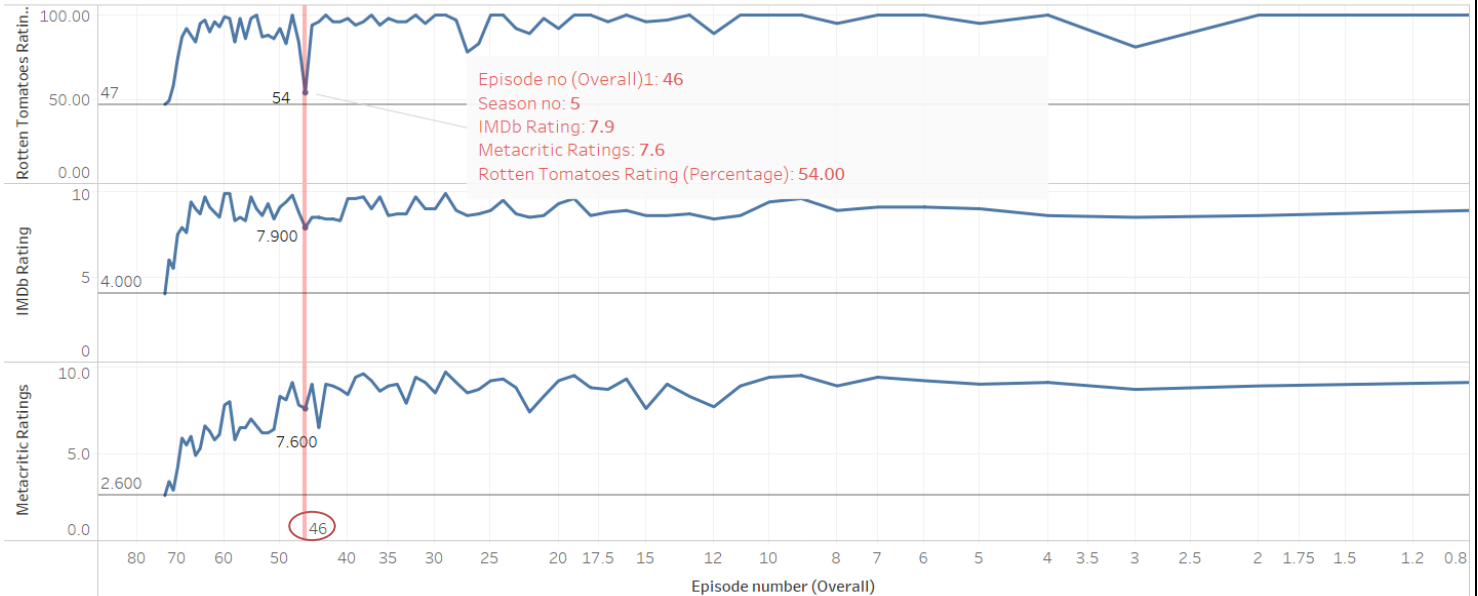


The trend of U.S. Viewers (Millions) for episodes (Overall number). Colour shows details about episode's respective viewers count

Here it vividly shows that till end of 4th season the viewers count increased constantly with very mere downstream changes. From the start of the 5th season 1st episode the viewer count got decreased drastically from 8 million to 5.40 million then it increased to same around 8.11 million counts. This huge fluctuation caused the further inconsistent increase in viewer count on all episodes. Moreover, even 5th season reduced the anticipation for the viewers to continue with next season as we could see reduced viewers count for the next season i.e., 6th season 1st episode of 7.94 million though the previous episode count is higher than this count. It is observed that 5th season last episode made this

impact among the viewers and 46th i.e., 6th episode of the 5th season caused huge impact in viewers disinclination towards the series. As mentioned earlier after the 5th season the variation on viewers count got increased and decreased sporadically and tended more inconsistent.

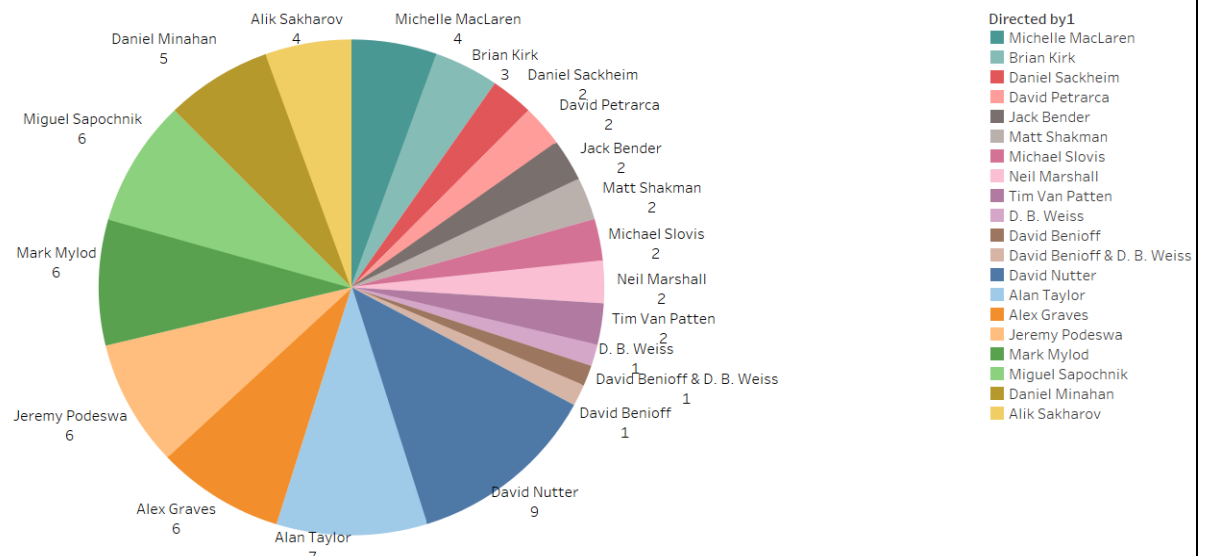
Episode Impact



The trends of Rotten Tomatoes Rating (Percentage), IMDb Rating and Metacritic Ratings for episodes (overall no).

From the above graph with use of logarithmic function the plot of Rotten tomatoes rating, IMBD rating, Metacritic rating and with overall episode number, we can conclude that 46th season i.e., 5th season 6th episode is the impactful episode which created the huge deviation in viewers count.

Director vs No of Episode



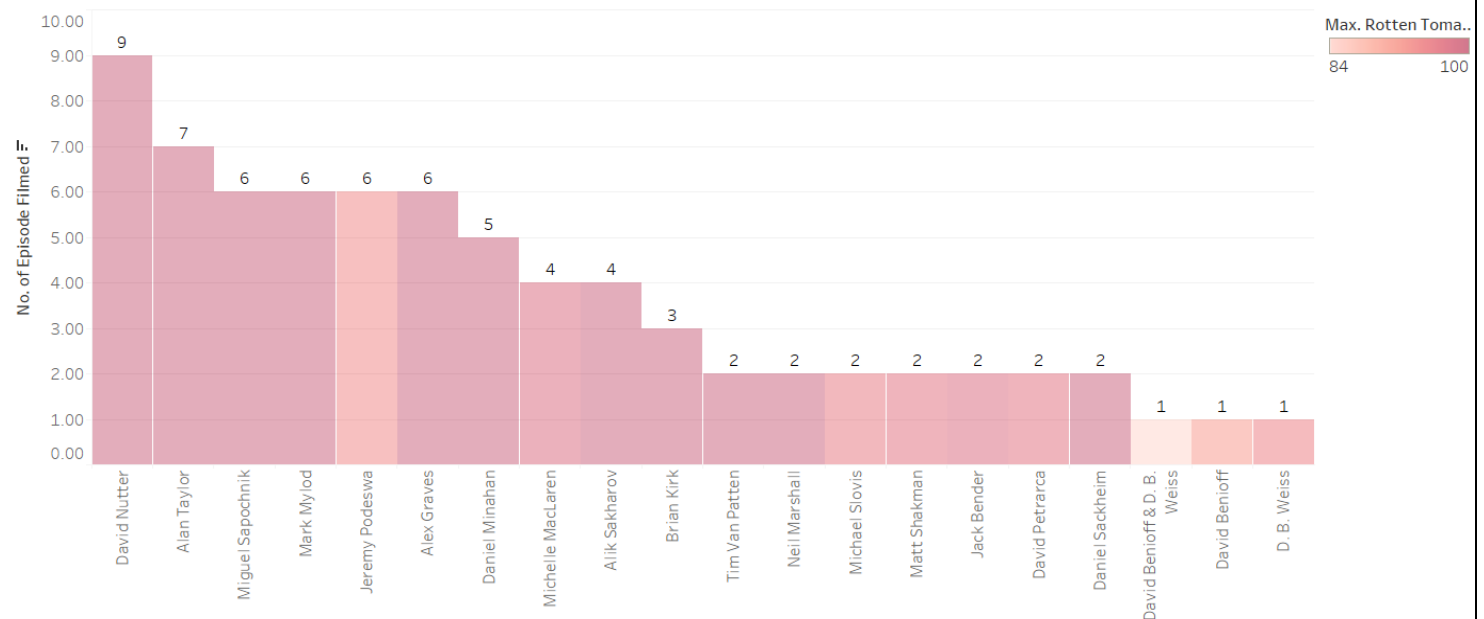
Directors directed no. of Episode (Overall). Colour shows details about directors names

The above pie chart shows us the number of episodes directed by the directors. It is arranged sequentially with no of episodes count with respective director name for better visualization. David Nutter directed highest number of episodes and David Benioff, David Benioff & D. B Weiss and

D. B. Weiss directed least number of episodes. Now let's see whether these directors really directed better episodes with different visualization.

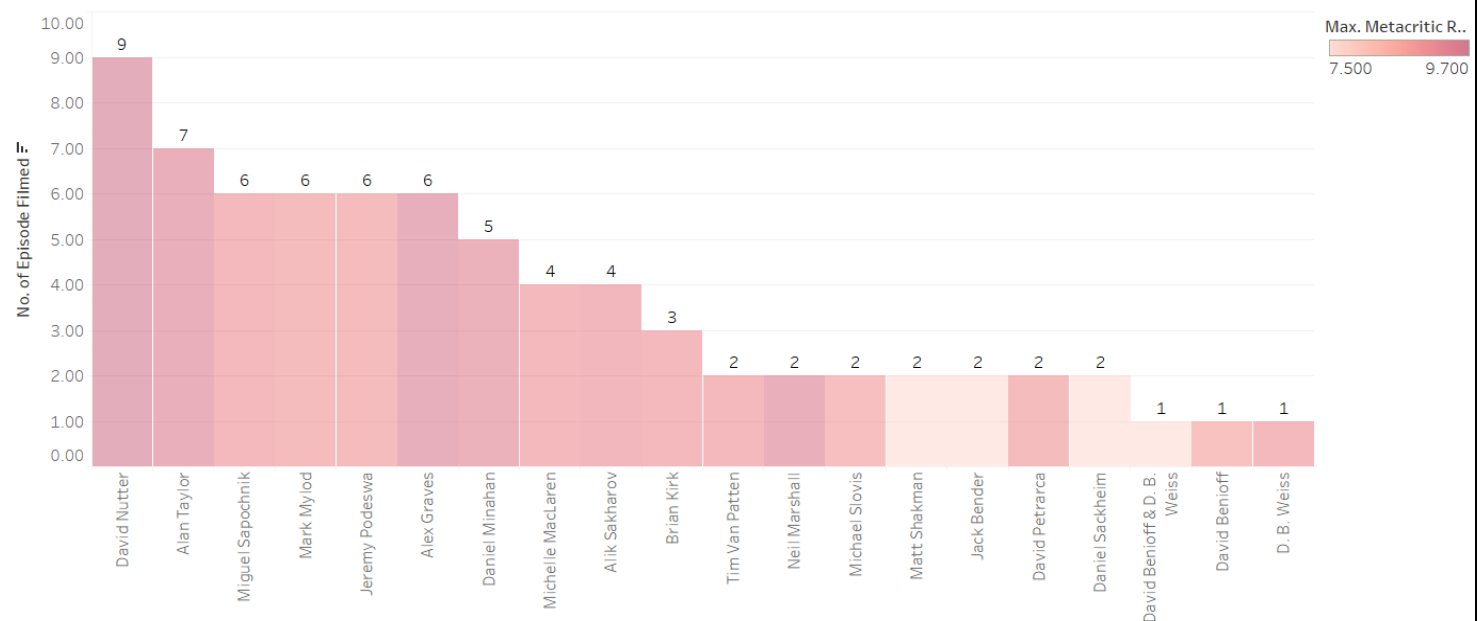
The below graphs are plotted with directors with no of episodes filmed. The color density measure is with respect to the maximum rating given by the critic's review. It is plotted to analysis whether there is presence of huge change in review among critics for the directors. Maximum rating for the director's directed episodes which is taken here as example to analysis is there a huge difference in rating among critics.

Rotten Tomatoes vs Director



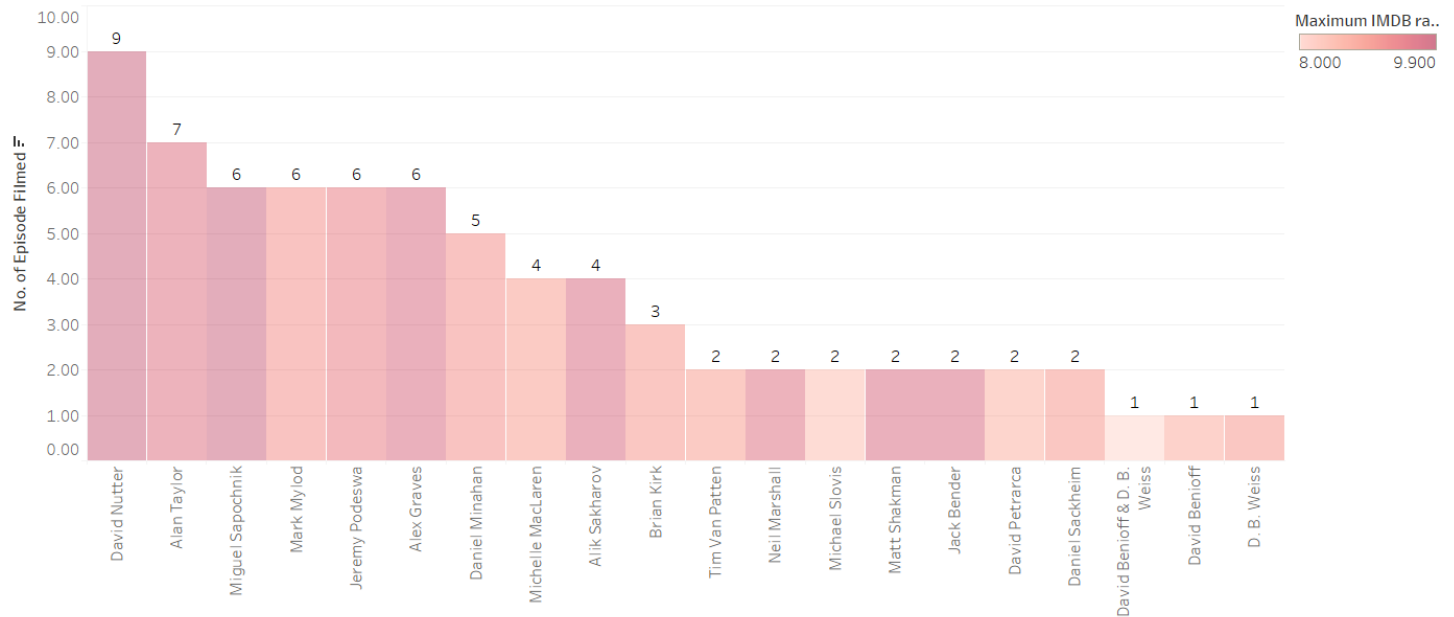
No. of Episode (Overall) directed by the directors with their highest Rotten Tomatoes Rating. Colour shows the directors with their highest Rotten Tomatoes directed episodes rating.

Metacritic vs Director



No. of Episode (Overall) directed by the directors with their highest Metacritic Rating. Colour shows the directors with their highest Metacritic directed episodes rating.

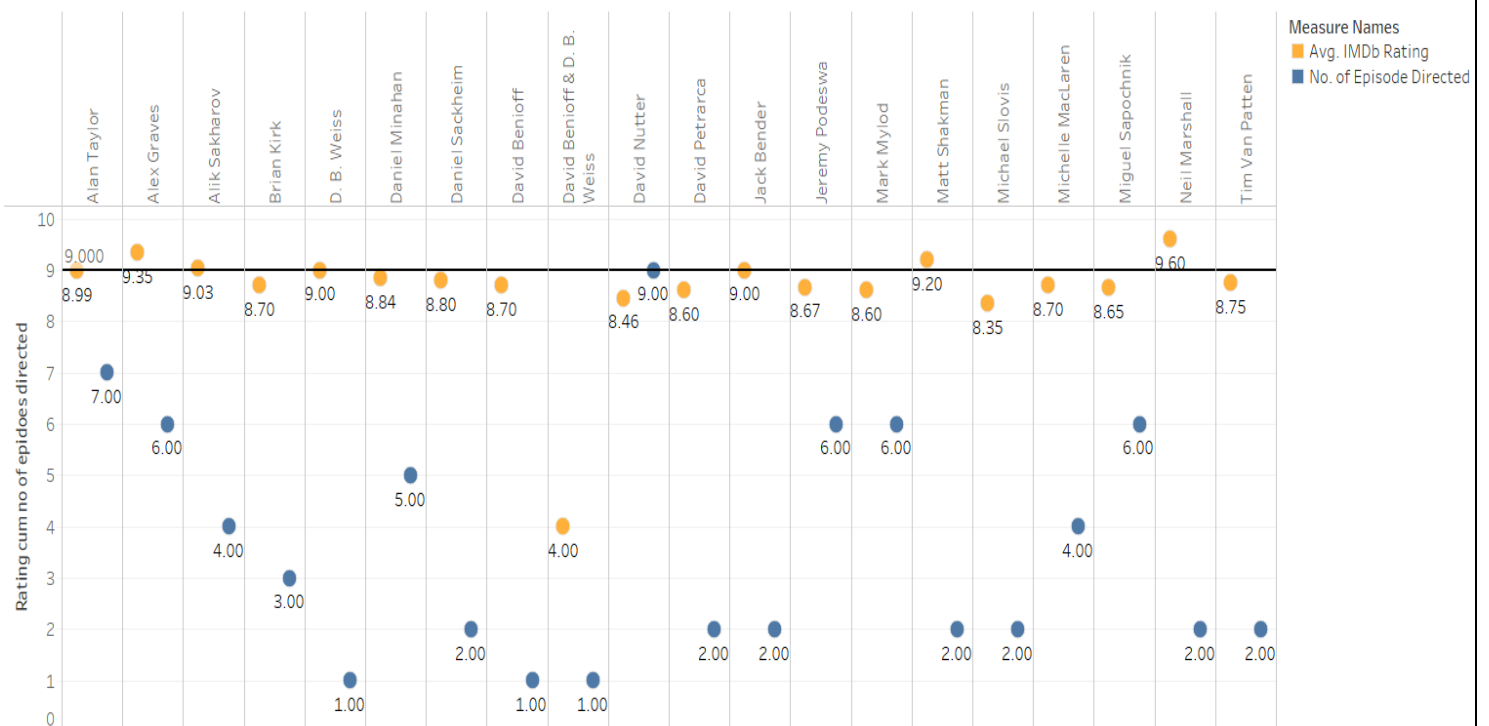
IMDB vs Director



No. of Episode (Overall) directed by the directors with their highest IMDB Rating. Colour shows the directors with their highest IMDB directed episodes rating.

From the above bar color variance graph it is observed that there is no huge difference in review among the critics for the directors. To find the better directors among all the directors of this series, the below plots are plotted with avg reviewer rating of director's directed episodes along with number of episodes directed.

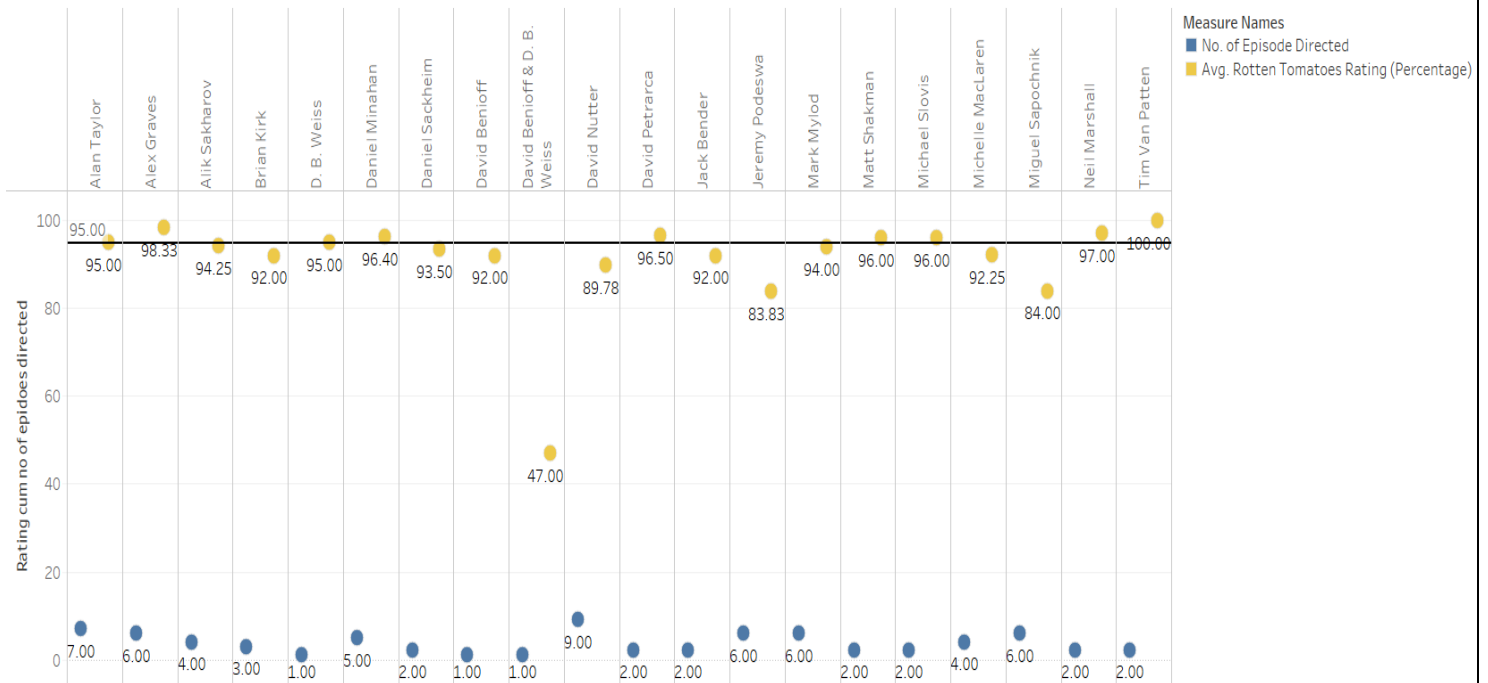
IMBD rating vs director



No. of Episode directed and Avg. IMDB Rating for each director. Colour shows details about No. of Episode Directed and Avg. IMDB Rating. The view is filtered on Director name.

It shows that Alan Taylor, Alex Graves, Alik Sakharov, D. B. Weiss, Jack Bender, Matt Shakman, Neil Marshall have better rating among others from IMBD reviews.

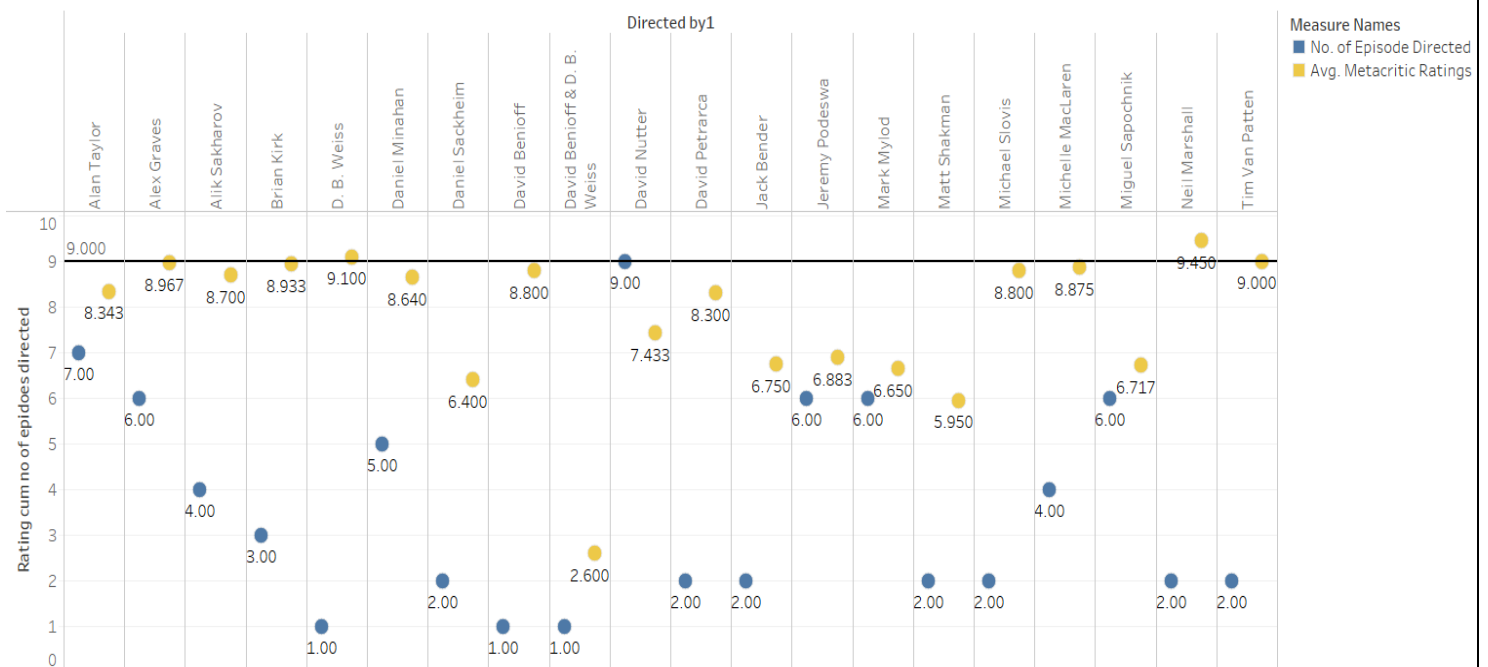
Rotten tomatoes rating vs director



No. of Episode directed and Avg. Rotten Tomatoes Rating (Percentage) for each director. Colour shows details about No. of Episode Directed and Avg. Rotten Tomatoes Rating (Percentage). The view is filtered on Director name.

Its shows that Alan Taylor, Alex Graves, Daniel Minahan, David Petrarca, Matt Shakman, Matt Slovis, Neil Marshall, Tim Van Patten have better rating among others from Rotten tomatoes reviews.

Metacritic rating vs director



No. of Episode directed and Avg. Metacritic Rating for each director. Colour shows details about No. of Episode Directed and Avg. Metacritic Rating. The view is filtered on Director name.

It shows that Alex Graves, Brian Kirik, D. B. Weiss, Neil Marshall, Tim Van Patten have better rating among others from Metacritic reviews.

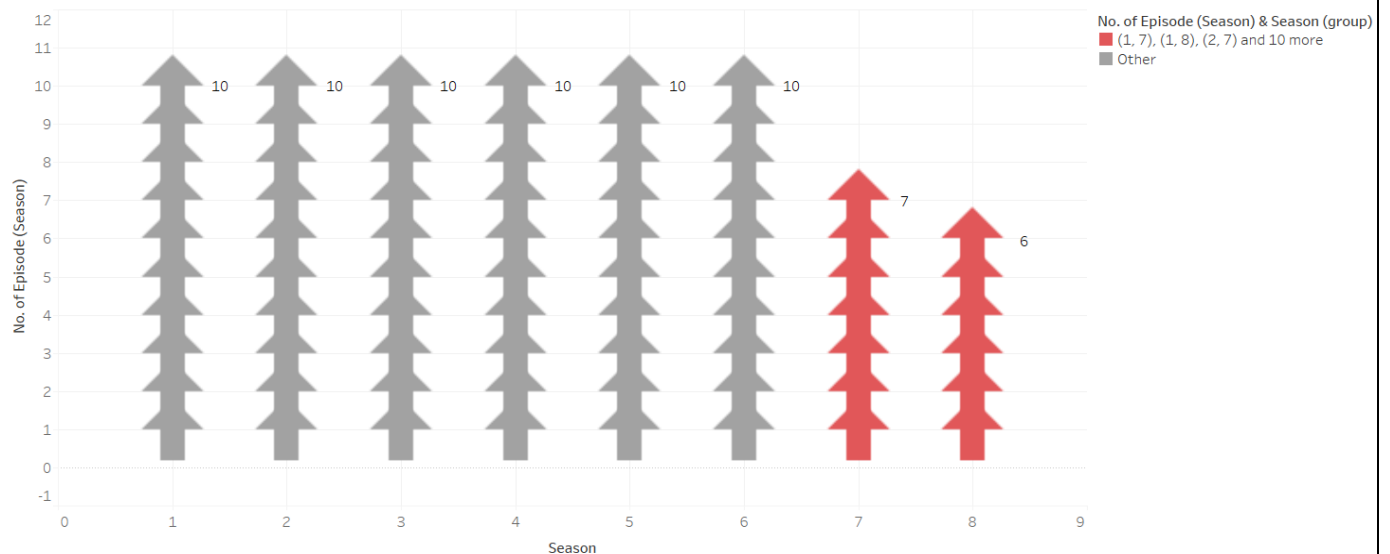
The set bar in all the above graph for considering the directors as better among others is fixed after average calculation. So, for IMBD it is 9, Rotten tomatoes it is 95.00 and Metacritic it is 9.000.

In order to arrive conclusion based on the above data. The below frequency table made which helps us to get the director names.

Alex Graves	3
Neil Marshall	3
Alan Taylor	2
D. B. Weiss	2
Matt Shakman	2
Tim Van Patten	2
Alik Sakharov	1
Brian Kirik	1
Daniel Minahan	1
David Petrarca	1
Jack Bender	1
Matt Slovis	1

High frequency names Alex Graves, Neil Marshall, Alan Taylor, D.B.Weiss, Matt Shakman, Tim Van Patten are considered to be the better directors.

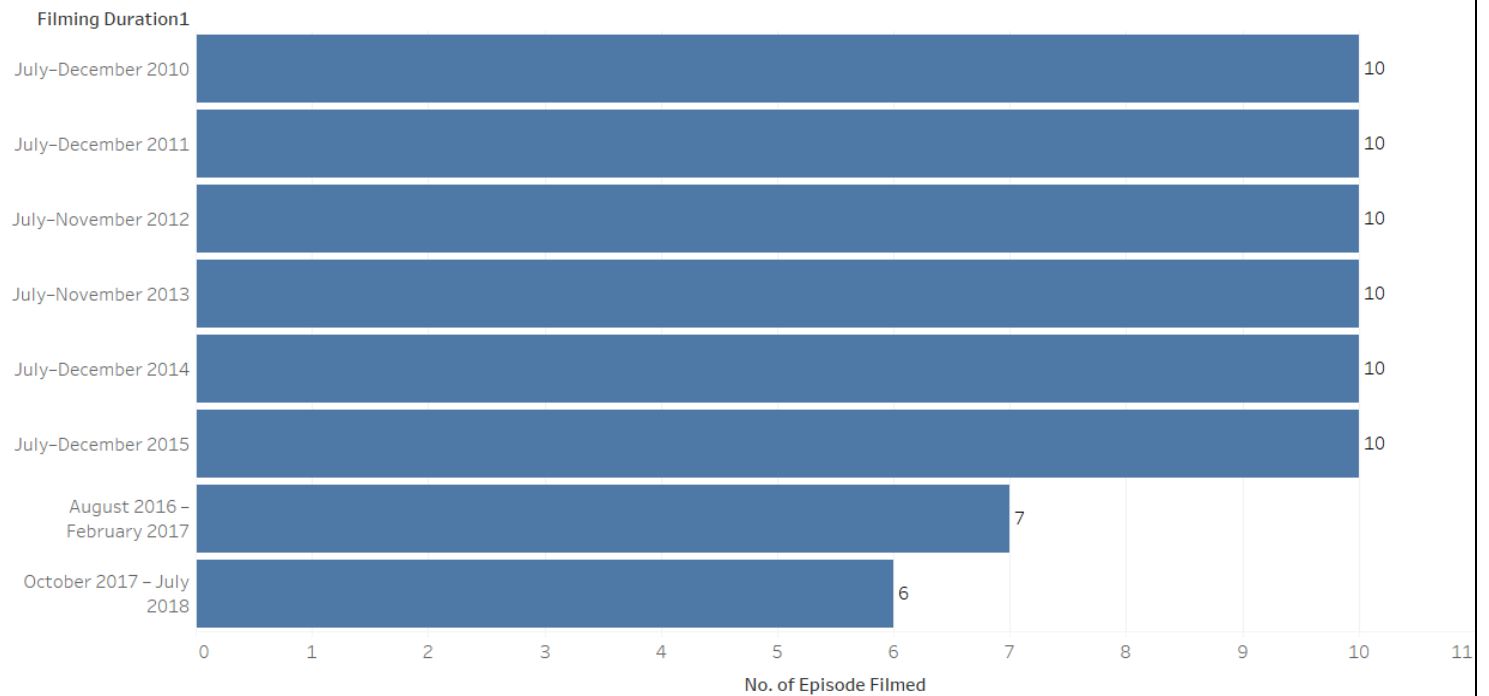
No of Episode in season vs Season number



Season vs. No. of Episode (Season). Colour shows details about No. of Episode (Season) & Season (group).

To explore the data the above graph plotted which helps us to interpret that 7th and 8th season has only 7 and 6 episodes respectively rather than 10 episodes let's find then how long these seasons are filmed?

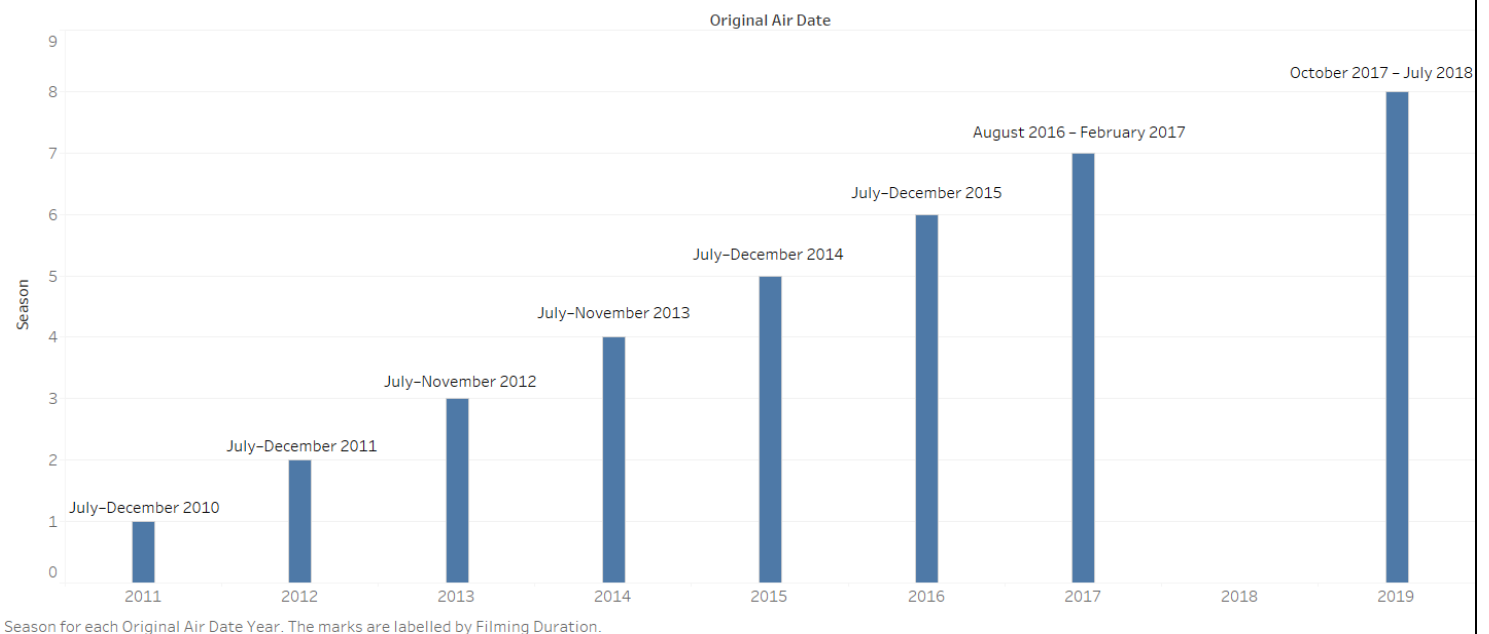
Filming Duration vs No of Episode



No. of Episode filmed for each Filming Duration. The view is filtered on Filming Duration

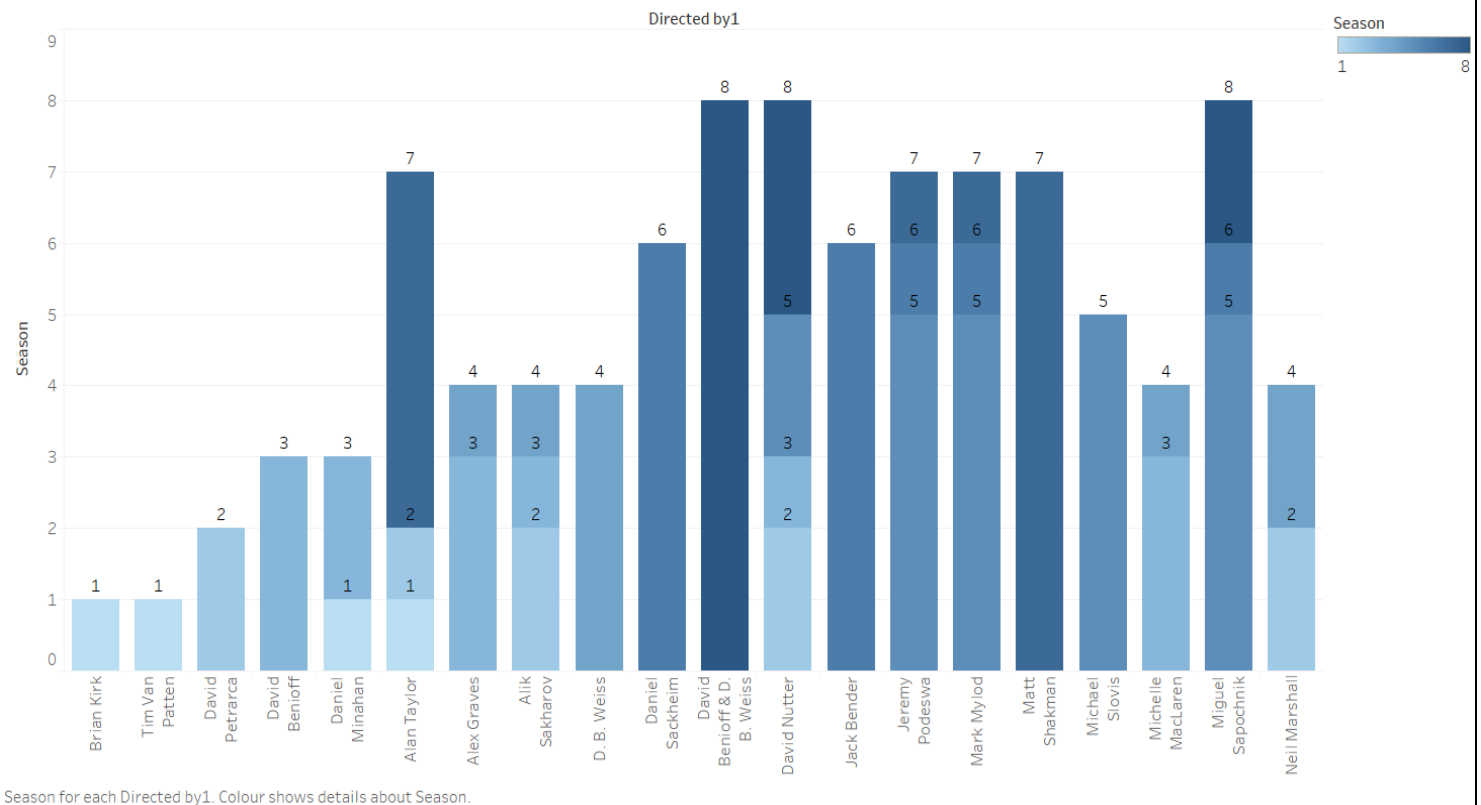
This bar graph tells us no of episode taken during that above particular period. It confirms again that Aug 2016- Feb 2017 (7 months) period season 7 was filmed and Oct 2017 – July 2018 (10 months) period season 6 was filmed. It seems that there is delay in filming on these two seasons when compared with other seasons.

Film taken duration with Season vs Original air date



Now from this bar graph we come to know that in the year 2018 there is no season episode release which is surprising because there was delay in film completion.

Directors with Season no



So from the above color variation bar graph we can interpret the directors name who delayed the film completion. Though there may be possibility for other factors for delaying, this is here taken as one of the possibility with the provided dataset.

Hence for season 7 - Jeremy Podeswa, Mark Mylod, Matt Shakman, Alan Taylor, Jeremy Podeswa for season 8 - David Nutter, Miguel Sapochnik, David Benioff & D. B. Weiss.

Summary

The visualization in the report gives the basic idea of this series from which episode the viewers count got deviated, which directors are better than others, why there is a delay in filming in 7th & 8th season and if the reason was because of directors then directors are identified. So many follow-up questions encountered from each visualization, and it made me to arrive the conclusion. Many conclusions are interdependent on others, so it was requiring deep analysis of each related data. 5th season created a major impact on viewers end and to be precise it is 46th episode i.e., 5th season 6th episode. Added to this conclusion the delay in filming if it was because of directors then director names are Jeremy Podeswa, Mark Mylod, Matt Shakman, Alan Taylor, Jeremy Podeswa for season 7 and David Nutter, Miguel Sapochnik, David Benioff & D. B. Weiss for season 8 and also directors who performed well when considering the critics ratings.