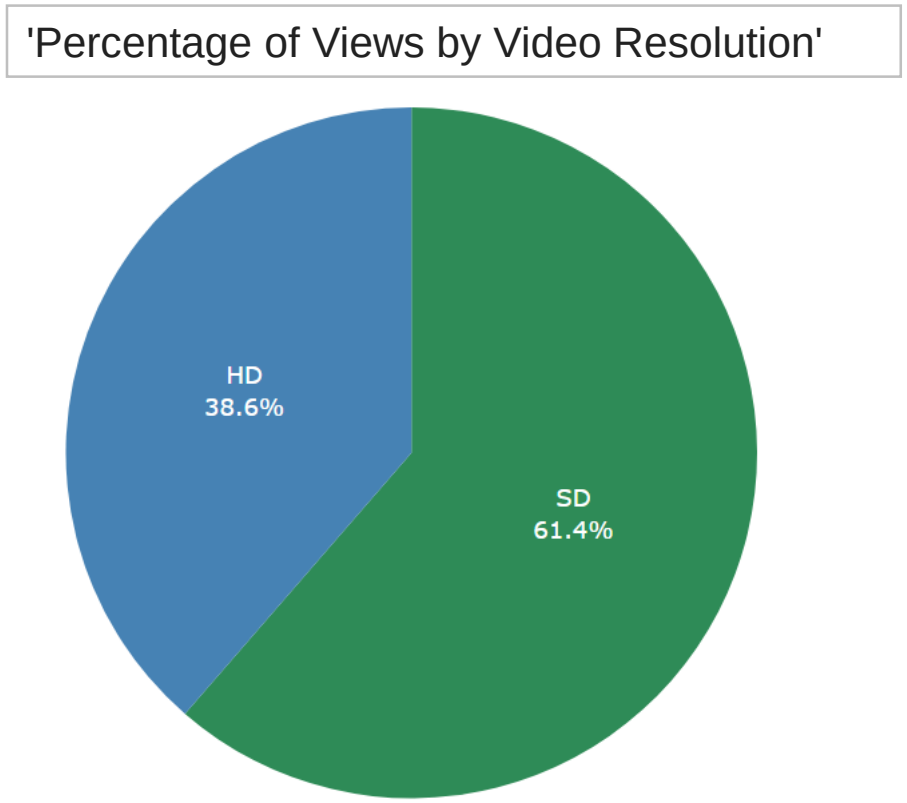
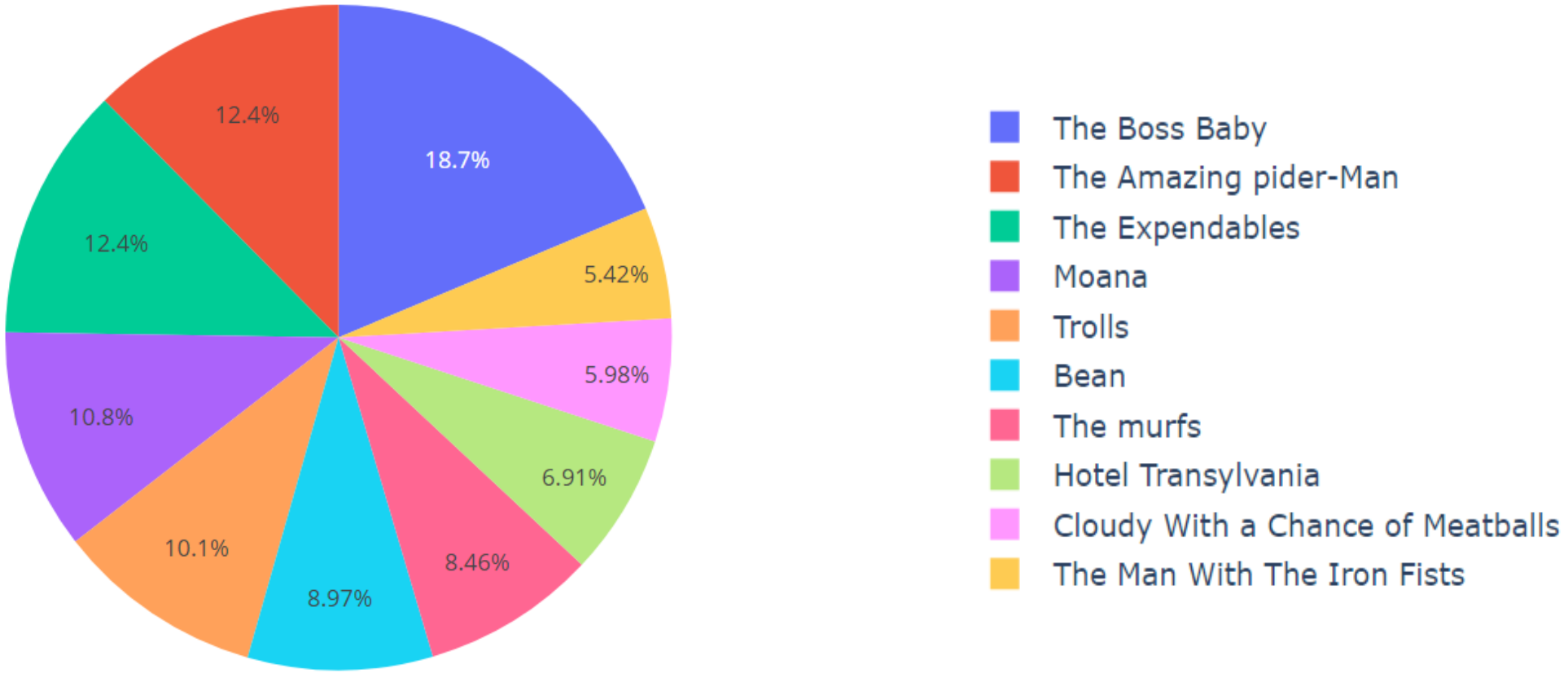
Data Analysis (Jawwy Dataset)

The dataset consists of meta details about the movies and TV shows as genre. Also details about Users activities, spent duration and if watching in High definition or standard definition.

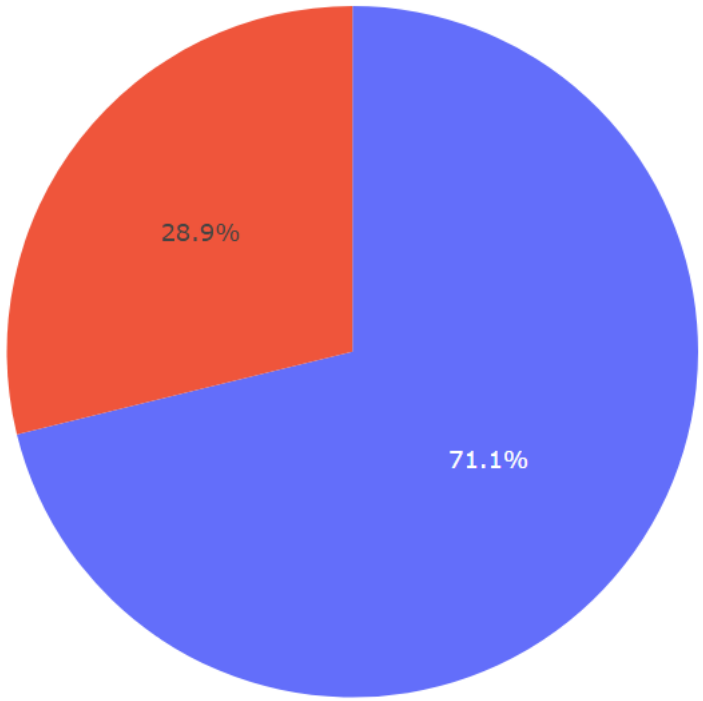


This visualization shows that the majority of video views were in SD resolution, accounting for 61.4% of total views. Meanwhile, views in HD resolution accounted for 38.6% of the total. This may indicate that users prefer watching videos in SD resolution more than HD, possibly due to preferences for video quality or limitations related to internet speeds or devices used.

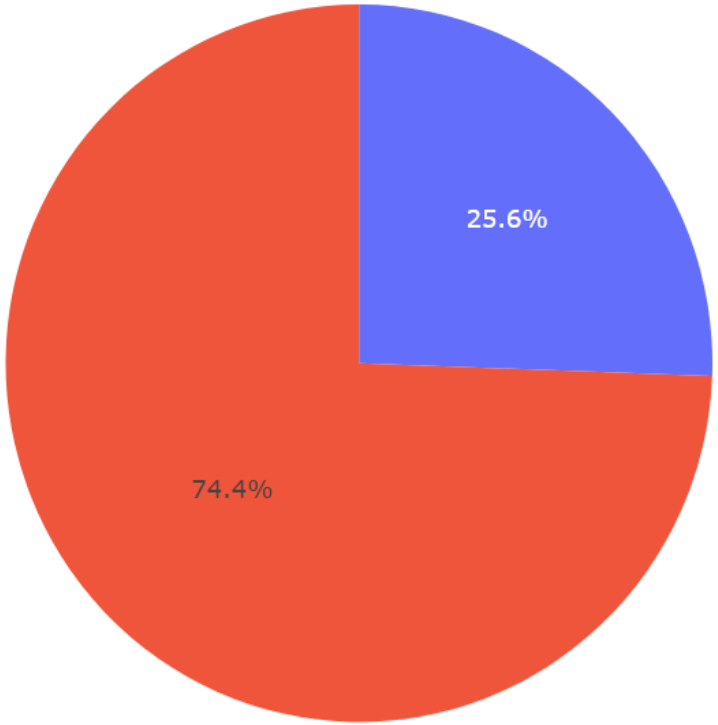


Here are the top 10 shows by total viewing time in hours.

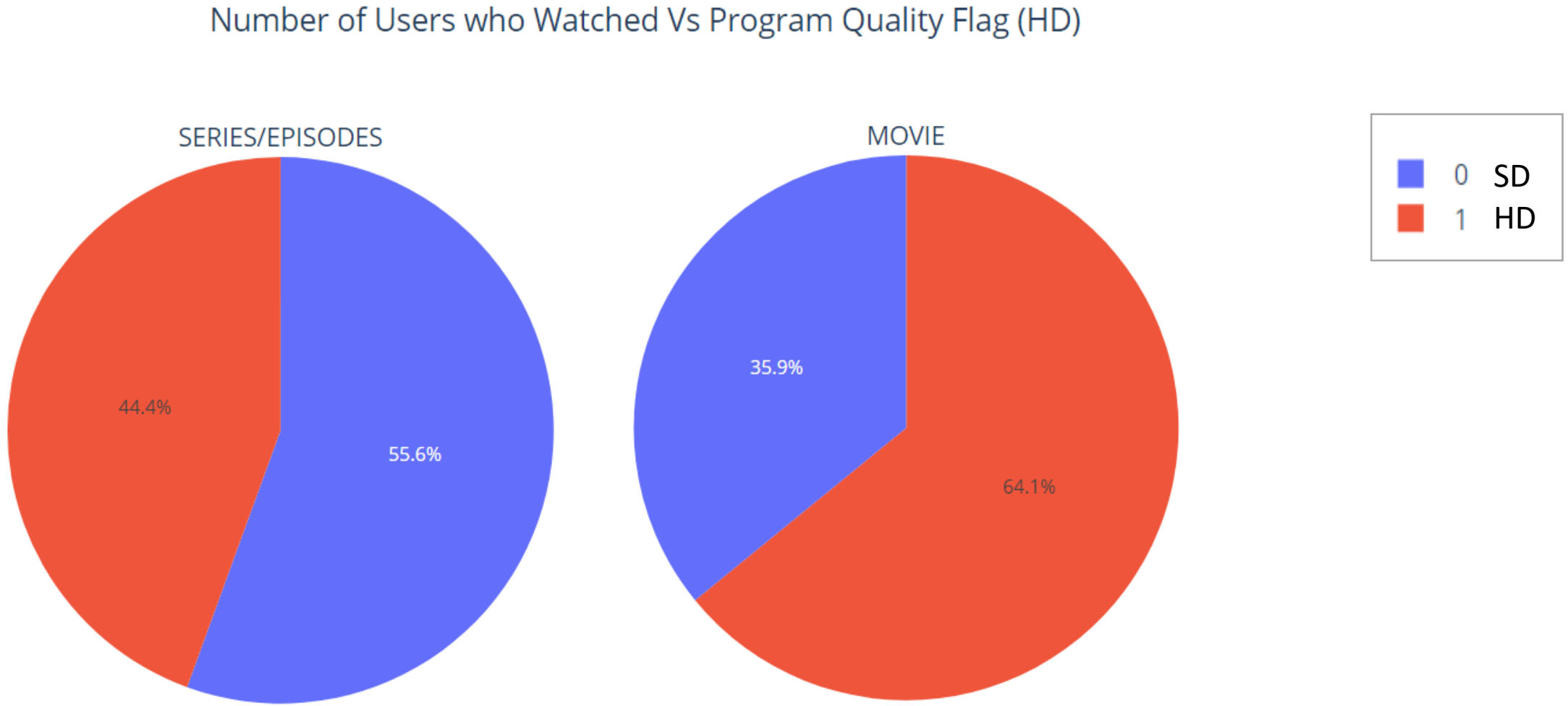
Total duration spent by program_class



Total Users watching by program_class



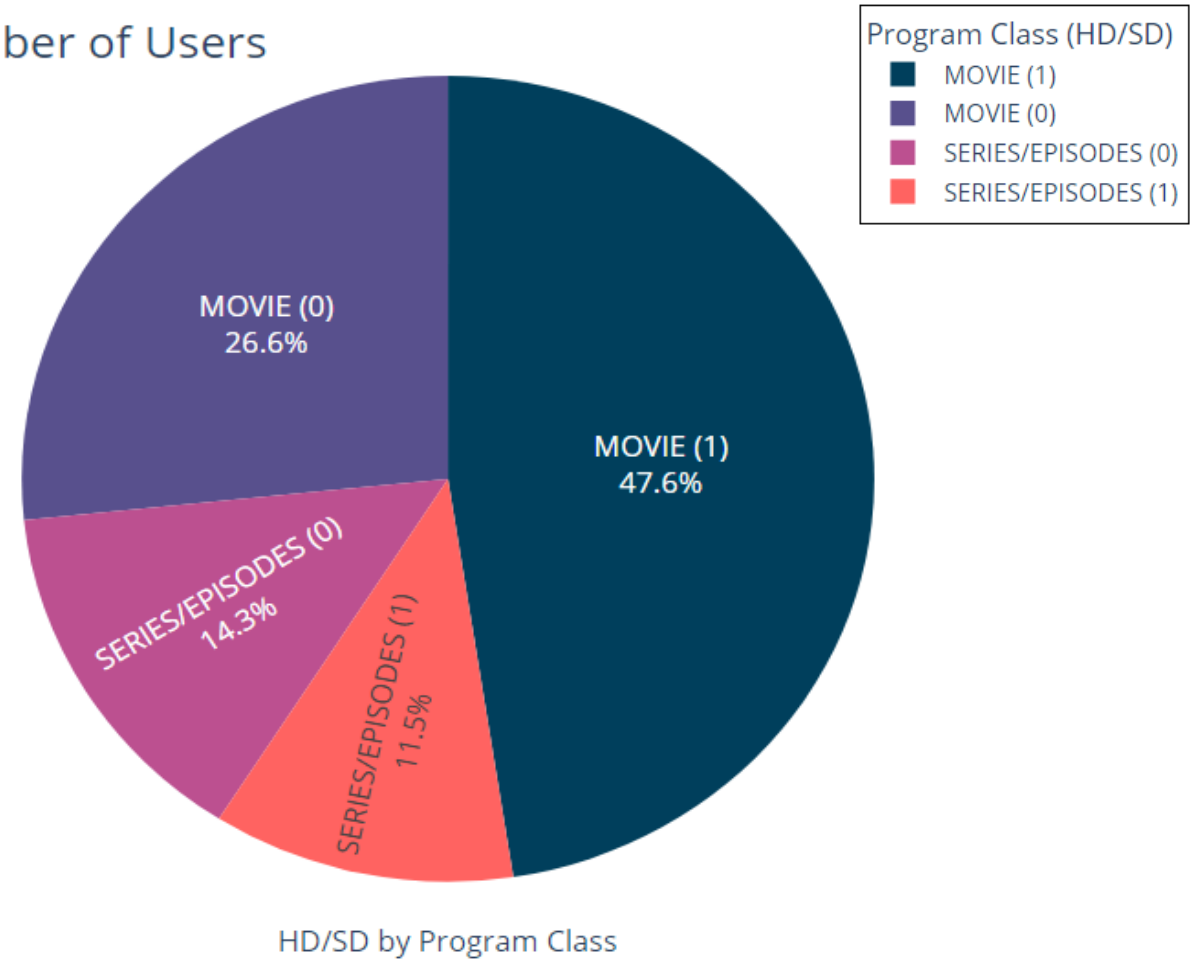
- **Most users prefer watching movies, they also spend more time watching TV series.**



- **It is clear that HD users prefer to watch movies more. Although the percentage of watching TV series is close, SD users are higher.**

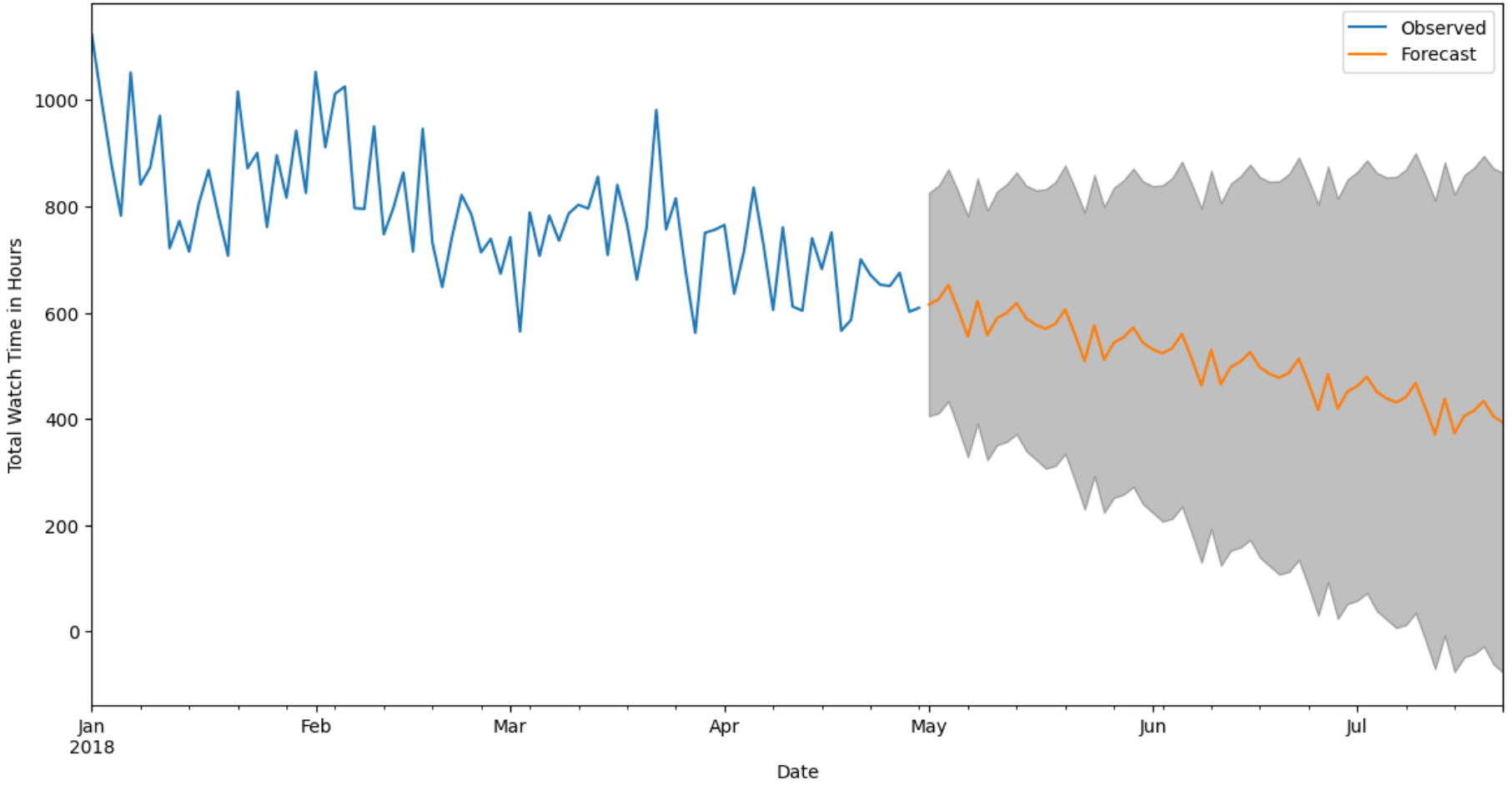
HD vs SD by Program Class: Number of Users

Metric	Movies	Series/Episodes
Total Users Watching (SD Resolution)	65%	35%
Total Watch Time (SD Resolution)	14.4%	85.6%
Total Users Watching (HD Resolution)	74.4%	25.6%
Total Watch Time (HD Resolution)	28.9%	71.1%



The data reveals that Movies are significantly more preferred in HD quality, with 47.6% of viewers choosing HD for Movies compared to only 11.5% for Series/Episodes. Series/Episodes are more frequently watched in SD quality, with 14.3% for Series/Episodes vs. 26.6% for Movies. This suggests that high-definition quality is more important for Movies, while Series/Episodes are less impacted by the quality difference.

build a prediction model to predict the expected watch time for the next two months



The graph shows that there is a general trend towards a decrease in total watch time. This can be attributed to several factors that may affect audience engagement with content. Increasing width of shaded areas in the graph indicates that there is increasing uncertainty around the viewing time forecast. Understanding this trend is an important part of making strategic decisions.

build your Recommender system to Highlight Programs that users might be interested in , and show the recommendations (top 5) for the people who watched "Moana" movie

Recommendations for 'Moana':

- Trolls, Distance: 0.43
- Surf's Up : WaveMania, Distance: 0.47
- The Mermaid Princess, Distance: 0.51
- The Boss Baby, Distance: 0.55
- The Jetsons & WWE: Robo-WrestleMania!, Distance: 0.56

Conclusion:

- **Resolution Preferences:** The data highlights a clear preference for SD resolution, accounting for 61.4% of total views. **Recommendation:** To enhance user experience, consider optimizing video delivery for SD resolution, ensuring that streaming is smooth and responsive. Additionally, gather user feedback on their video quality preferences to further refine offerings.

- **Content Preferences:** While users generally prefer watching movies, they tend to spend more time watching TV series. **Strategic Action:** Develop targeted marketing campaigns that emphasize both movie releases and popular series. Consider bundling content types to encourage viewers to explore both categories, maximizing engagement across the platform.

- **resolution vs. Content Type:** HD users show a marked preference for movies, with a significant gap in viewing habits compared to TV series. **Recommendation:** Invest in producing high-quality movies and exclusive content in HD to cater to this audience. For TV series, maintain a balance by ensuring good SD quality without over-investing in HD for content that doesn’t require it.

- **Quality Impact:** Movies are significantly more popular in HD, with 47.6% of viewers opting for HD when watching movies. **Strategic Action:** Highlight the availability of HD movies in promotional materials. Additionally, consider creating a library of classic or high-profile films available exclusively in HD to attract more viewers.

❖ **Watch Time Trends:** A downward trend in total watch time is evident, with increasing uncertainty about future forecasts. **Recommendation:** Analyze user engagement data to identify potential causes for declining watch time, such as content fatigue or external competition. Explore strategies such as personalized recommendations, improved content discovery features, and enhanced user engagement through community-building initiatives (e.g., watch parties, discussion forums).

Overall Strategic Approach:

- **Data-Driven Decisions:** Continuously monitor viewing habits and preferences to adapt content offerings. Use analytics tools to track performance metrics, and adjust strategies based on user behavior trends.
- **User Engagement:** Implement feedback mechanisms (surveys, focus groups) to understand viewer preferences better and refine content strategies accordingly.
- **Marketing & Promotion:** Leverage insights from this analysis to develop targeted marketing strategies that focus on promoting HD content and new movie releases while nurturing the existing user base with engaging series.