In-Lab assignment: Data Preprocessing and visualization

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In this assignment, we shall explore a sample dataset using pandas and matplotlib.

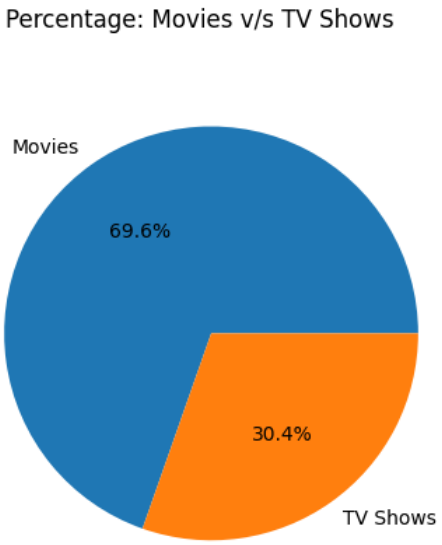
About this Dataset: *Netflix is one of the most popular media and video streaming platforms. They have over 8000 movies and tv shows available on their platform, and as of mid-2021, they have over 200M Subscribers globally. This tabular dataset consists of listings of all the movies and tv shows available on Netflix, along with details such as - cast, directors, ratings, release year, duration, etc.*

Information about database:

- **Show_id**: Unique ID for every Movie / Tv Show
- **Type**: Identifier - A Movie or TV Show
- **Title**: Title of the Movie / Tv Show
- **Director**: Director of the Movie
- **Cast**: Actors involved in the movie/show
- **Country**: Country where the movie/show was produced
- **Date_added**: Date it was added on Netflix
- **Release_year**: Actual Release year of the movie/show
- **Rating**: TV Rating of the movie/show
- **Duration**: Total Duration - in minutes or number of seasons
- **Listed_in**: Genre
- **Description**: The summary description

Q1. Using a pie chart, find the percentage share of TV shows and Movies.
Instructions:- Upload pie chart (correctly labeled and the respective percentage values)

Ans: Movies – 69.6%
TV Shows – 30.4%



Q2.Plot a bar chart showing top 5 regions having the highest number of shows(both TV Shows and Movies)

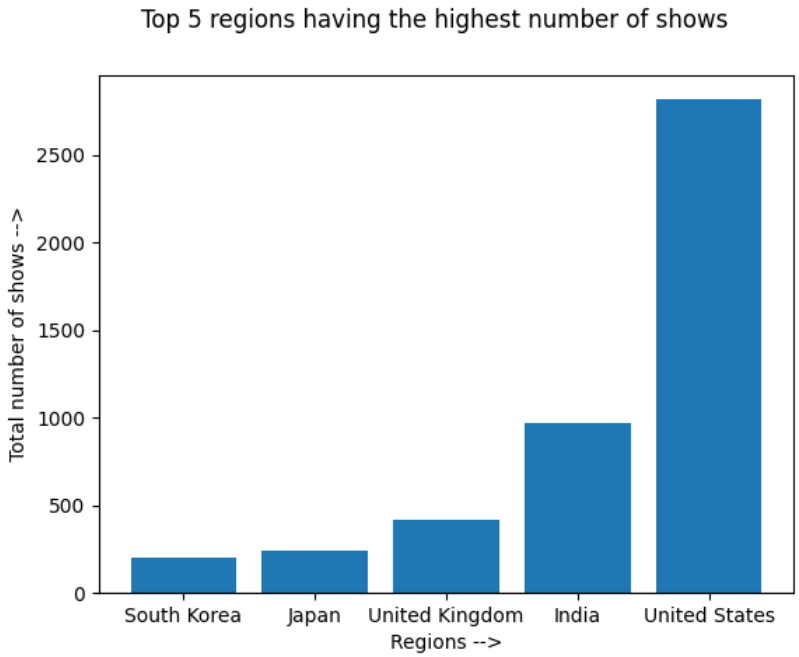
Instructions:

x-axis: Regions.

y-axis: Total number of shows.

The bar chart should be sorted in ascending order and should contain only top 5 countries with proper labels. Upload your bar chart.

Ans:



Q3. Using a heatmap answer the following questions.

Do for both Movies and TV shows separately:

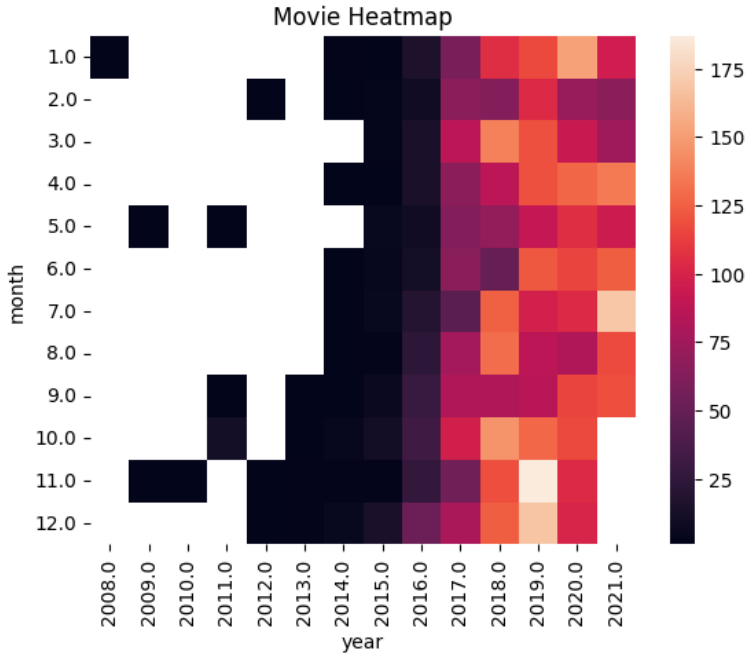
a. After which year do the shows start appearing on Netflix?

b. In 2021, in which month were most shows added?

Note:- Make two separate heatmaps, one for TV shows and one for Movies and answer the two questions in the context of both the types

Heatmap should have the y-axis as months and the x-axis as years.

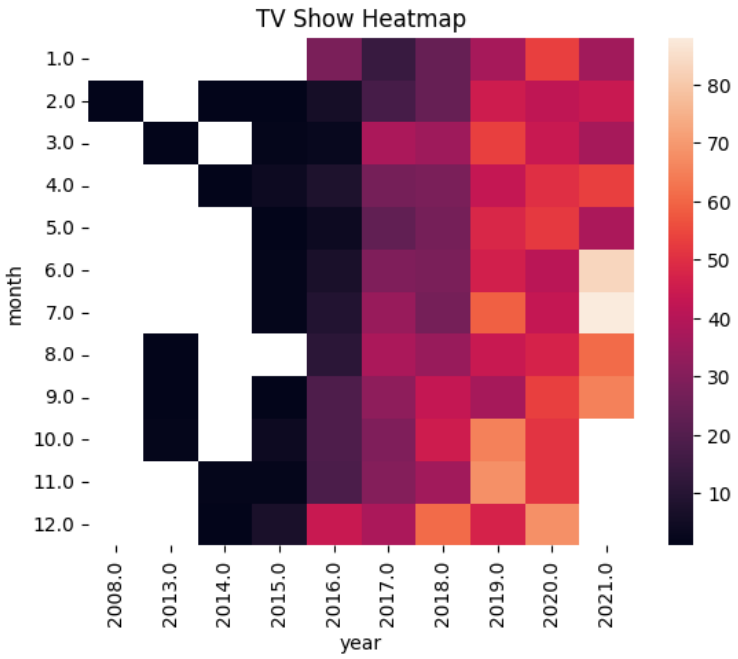
Ans: Movies



a) The movies start appearing in 2008. However, there is a significant increase after 2015, i.e., 2016. There is an increase of 450% in the number of movies.

b) In 2021, most movies were added in the month of July (no. 7).

TV Shows



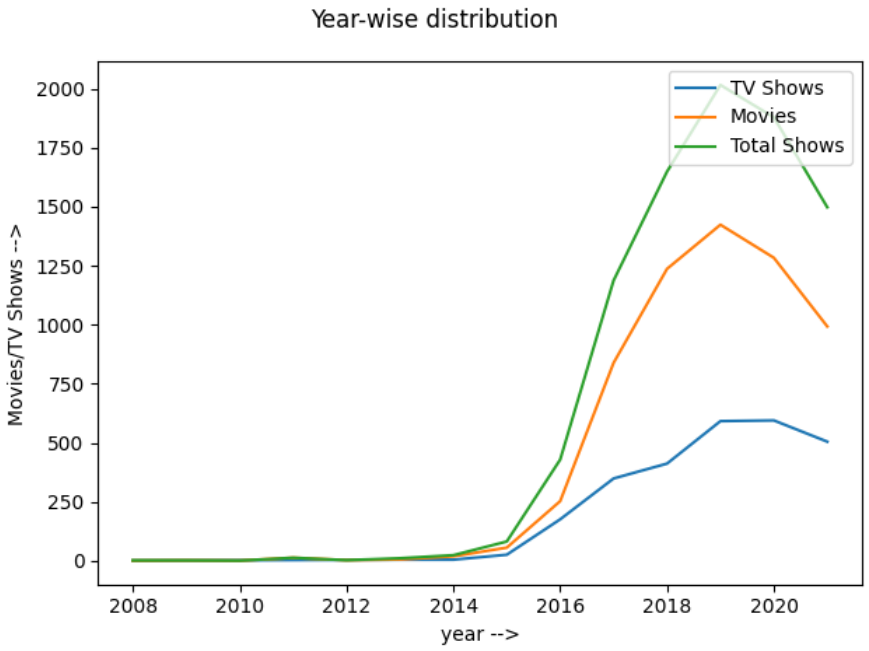
a) The TV Shows start appearing in 2008, however there is a brief silence for 5 years until 2013. There is a significant increase in the number of shows in the year 2016.
b) In 2021, most TV Shows were added in the month of July (no. 7).

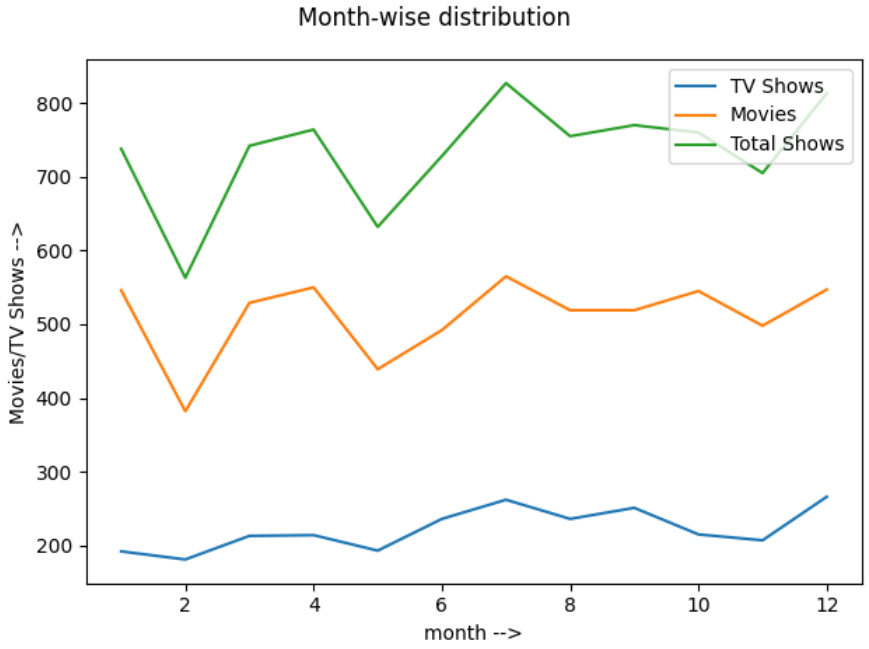
Q4. Using a line graph, tell which year and which month has the highest:

a. TV Shows
b. Movies
c. Total shows (TV shows + Movies)

Note:- 2 separate plots 1 for year-wise distribution and one for monthly distribution (three different data in the same plot:- Movies, TV shows and Total; each with a different color)

Ans:





Q5. Does Netflix have more focus on TV Shows than movies in recent years? Backup your answer using some plot/graph and upload it.

Ans: No, Netflix does not have more focus on TV Shows than movies in the recent years. This can be infered from the graph 'Year-wise distribution'. Infact, after 2016, the number of movies shot up, and has been much more than the number of TV Shows.