Week 10 Tutorial Worksheet

AY23/24 Semester 2

No submission required

Question 1 Olympics data

In this question, we will work with data on the Olympics from 1896 to 2016 from a `TidyTuesday` project. You can read the data description here.

1. Read in `olympics.csv` from the `TidyTuesday` repository as `olympics`. Create a data frame named `summer_games` that contains the number of nations (represented by `noc` in the data) and the number of events per summer game.

   The columns of `summer_games` should follow this structure.

```
str(summer_games)
```

```
## tibble [29 x 3] (S3: tbl_df/tbl/data.frame)
##  $ year     : num [1:29] 1896 1900 1904 1906 1908 ...
##  $ n_nations: int [1:29] 12 31 15 21 22 29 29 45 46 47 ...
##  $ n_events : int [1:29] 43 90 95 74 109 107 158 131 122 131 ...
```

2. Typically, the Olympics are held every four years. Explore the data set and find out the shortest and longest gaps between consecutive summer Olympics.

   - The shortest gap between summer Olympics is _____ years.
   - The longest gap between summer Olympics is _____ years.

3. For each country, compute the number of medals received (gold, silver, bronze, and the total) in each summer game since 1980.

   Sort the table in descending order of **golds received**. If there is a tie in gold medals, sort by the number of silver medals. If there is still a tie, break it with the number of bronze medals. Name the final table as `medals`.

   The first ten rows of the table should look like the following.

```
head(medals, 10)
```

```
## # A tibble: 10 x 6
##    Country  Year  Gold Silver Bronze Total
##    <chr>   <dbl> <int>  <int>  <int> <int>
```

```
##  1 USA      1984    82      61      30    173
##  2 URS      1980    80      69      46    195
##  3 URS      1988    54      31      46    131
##  4 CHN      2008    51      21      28    100
##  5 GDR      1980    47      37      42    126
##  6 USA      2016    46      37      38    121
##  7 USA      2012    46      28      29    103
##  8 EUN      1992    45      38      29    112
##  9 USA      1996    44      32      25    101
## 10 CHN      2012    38      27      23     88
```

Question 2

During lecture, we covered some principles behind visualization of data. In this question, your task is to **choose ONE** of the graphs below. Comment on its quality/potential problems using the ideas and terminologies covered in class to discuss:

- What does the visualization describe?

  Begin by describing what the chosen visualization represents. What data is being conveyed by the graph, and what is the intended message or information?

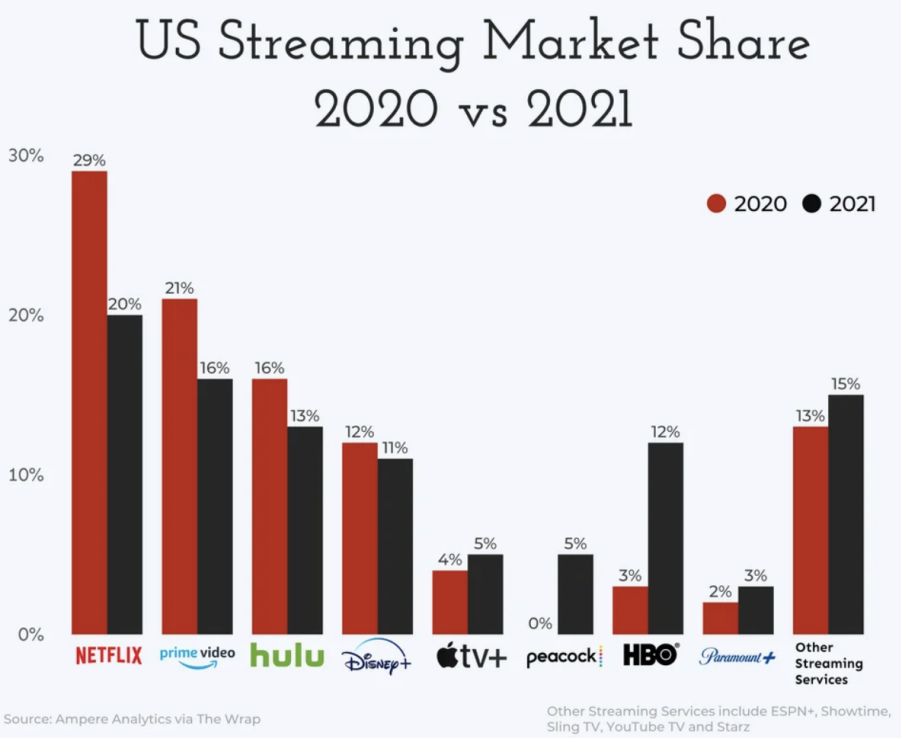
- What do you like/not like about it?

  Share your opinions on what you like and dislike about the visualization. This could include aspects like the choice of colors, labels, clarity, and any other visual elements.

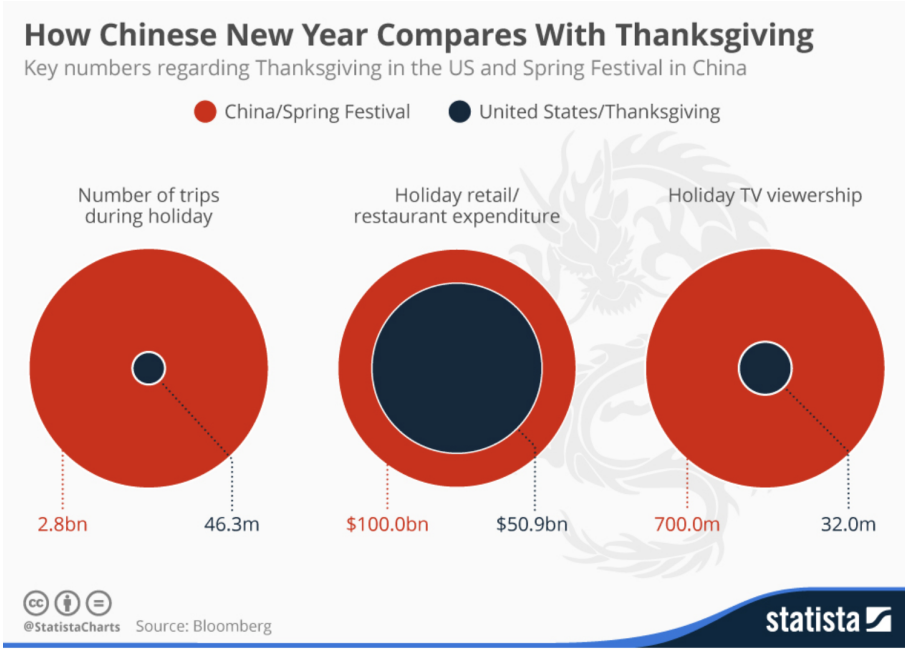
The goal of this question is for you to be able to discuss visualizations intelligently and evaluate others' graphs. Most of the charts are self-explanatory. Comment on the chart based on presented information only. If you find that something is not clear, include it in your comments.

There is no `R` code needed for this question.

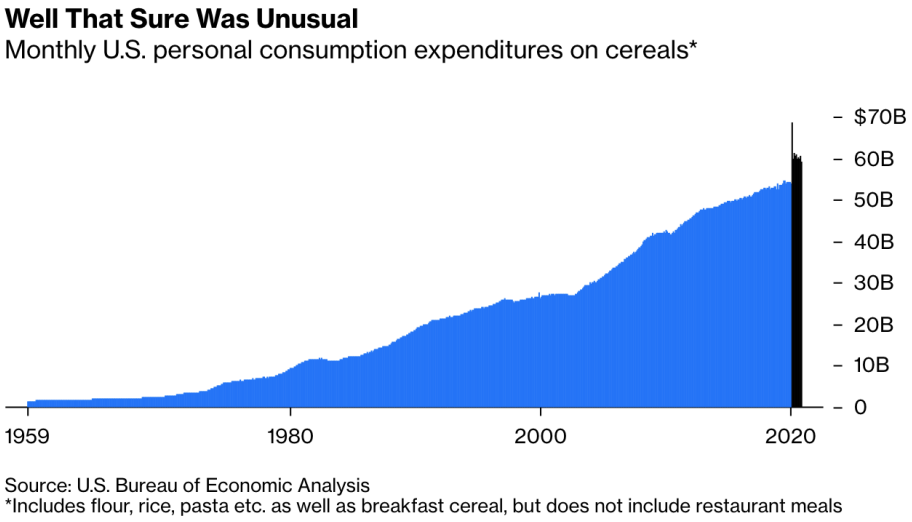
1. **Top streaming services in the US, from Reddit.**



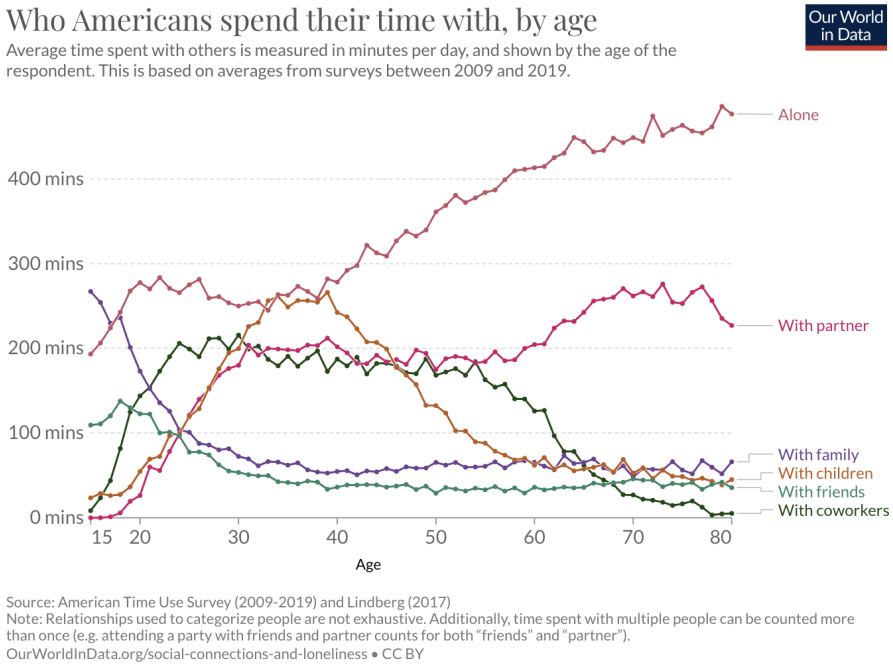
2. **How Chinese New Year compares with Thanksgiving, from Bloomberg via Statista.**



3. **Monthly cereal consumption, covered in Bloomberg.**



4. **Who do we spent time with in our life, from Our World in Data.**



Requirements

- The code in your `Rmd` file should create the following objects: `olympics`, `summer_games`, and `medals`.
- No `R` code is needed for Question 2.