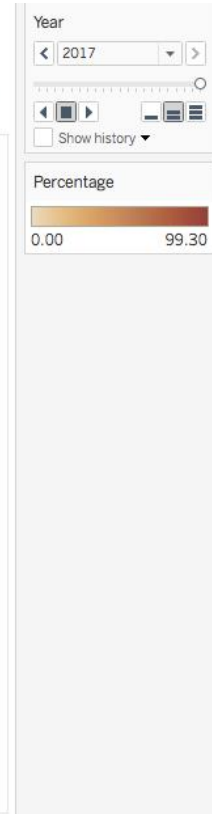
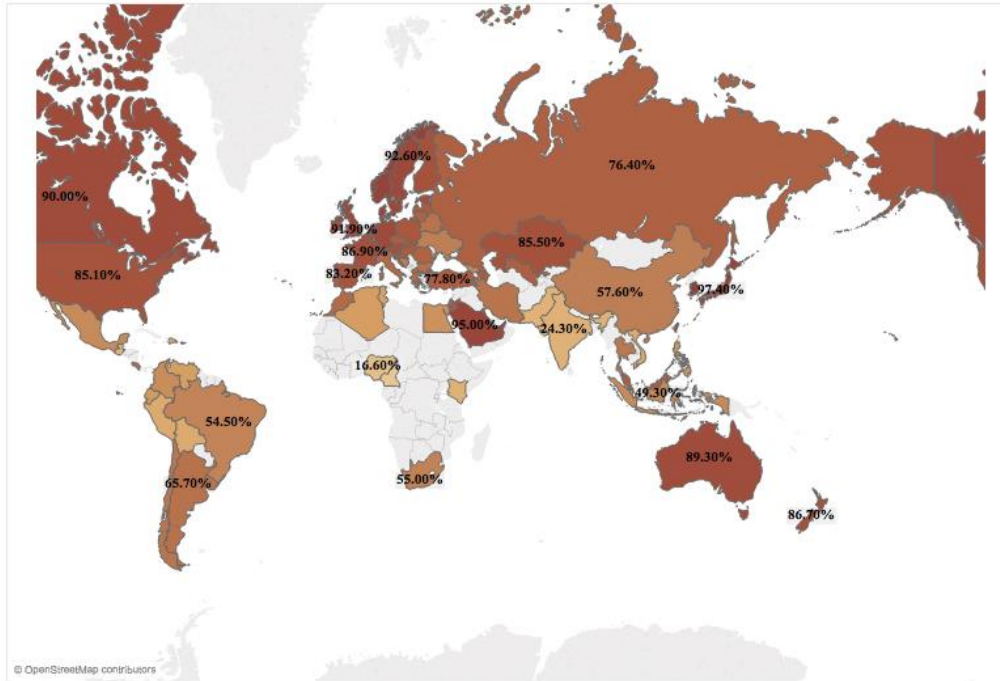


## Assignment 3 – Data Visualization

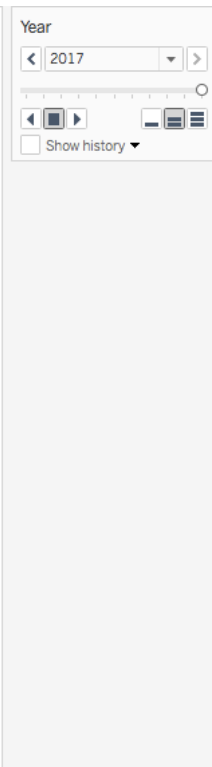
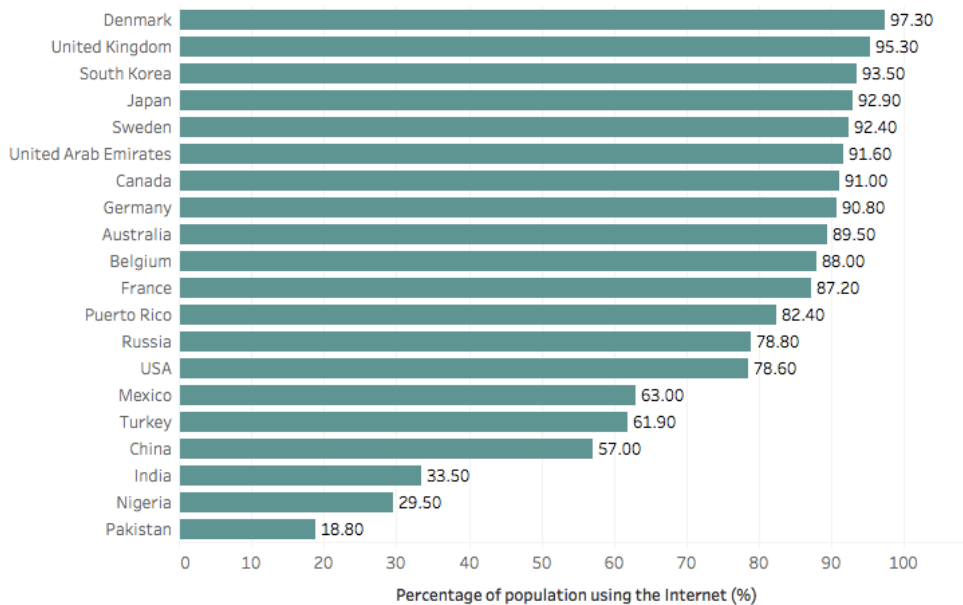
### Percentage of Households with Access to Internet in 2017

**Growing Internet access globally!** The maps show the changing internet access in the past 20 years (1997 - 2017) from 83 countries. Access to the Internet is almost universal in developed countries and although usage rates are much lower in the developing world, they are increasing.



### Percentage of Population Using the Internet in 2017

The bar charts show the growing Internet users of 20 countries in the past 10 years (2007 - 2017). Among the 20 countries, **Denmark** has the highest percentage of population using the Internet (97.3%) in 2017; **Russia** has the largest growth of Internet users in the past 10 years.



### **Overall story:**

My animated data visualizations consist of two parts. The first animated visualization, the animated maps illustrate the changes of percentage of household with access to Internet from 83 countries in the past 20 years. From the animated visualization, we can tell that Internet access is constantly growing all over the world. While Internet access is almost universal in the developed countries and relatively much lower in the developing countries. The second animated visualization, the animated bar charts represent of the change of percentage of population using the Internet from 20 countries in the past 10 years. Here, we can tell the growth of Internet users in specific country. Denmark, UK, South Korea are on the top of the list in 2017. US have a relatively stable percent of Internet users in the past 10 years.

### **Design of animated map:**

Since I'd like to show the changes of Internet access globally, I used world maps. I used monochromatic color palette brown to show the percentage of households with Internet access. The darker the color is, the higher the percentage of households with Internet access. I used font Times New Roman (serifs) because of the readability. For the main title, I highlighted it used bold and font size 18, with year in color red (make it easier for people to notice the time change). The subtitle uses font size 12; Color green is a complementary color of red, emphasizing the message. On the graph, I marked the percentage on certain countries with bold text to make it more readable. The data is exported from Passport, the Goizueta Business library data source. Research source: *Euromonitor International from national statistics/International Telecommunications Union (ITU)*

### **Design of animated bar chart:**

For the bar chart, I choose 20 countries to show the changes of Internet usage in the past 10 years. Animated bar chart is good for showing changes with one numerical and one categorical variable. I used similar color combination (green and brown/red) of first animated graph. However, here I switch the color usage with green as the main color and red as the highlight color in the subtitle. The font choices are similar to the animate map. I manually displayed bar chart in descending order. The data is exported from Passport, the Goizueta Business library data source. Research source: *Euromonitor International from International Telecommunications Union/OECD/national statistics*

**YouTube Link:** [https://www.youtube.com/watch?v=x\\_s\\_I1oWmls](https://www.youtube.com/watch?v=x_s_I1oWmls)