## CS498 Data Visualization: Final Project

(I based the definition of scenes, annotations, parameters, and triggers based on week 9.1.4, slides 6 and 7 of Coursera lecture of the class)

Github: https://github.com/kangnamstyle/kangnamstyle.github.io

For the final project, I utilize a martini glass hybrid structure where the first part is author controlled, and there is a second user-controlled part. The project contains two area charts. The first chart shows an aggregate number of Internet users over the years. In this graph, the user has no control and can only look at the area graph to see the exponential grows of Internet users worldwide. The second graph is an inter-active graph where a user can select various regions and select two check boxes which shows significant two significant events that had contributed to accelerate the popularity of the Internet worldwide.

By providing ability to select various regions, users can view different scenes that eventually make up the aggregated area graph. There are seven different scenes, and the last scene brings back the users to the aggregated area graph. By viewing these different scenes, users can get a sense of which region has more users than other regions, and may even further attempt to explore why some regions have significantly less number of users than others on their own.

Two annotations can be viewed by utilizing two checkboxes with year labels on them. These are the creation of Google and AJAX programming which greatly helped to increase the usefulness of the Internet. The effect is apparent through the exponential growth shown in the graph after these two events.

The buttons double as parameters that filters the data for various regions. This helps to breaks down the data into chunks and allows users to gain additional insights for each region and their growth graph.

Some of the visualization elements can serve multiple purposes, and the buttons and check boxes used for annotations are also used as triggers, as indicated on Week 9.1.4 Lecture Slides 6 and 7. These are triggers since they change scenes and add or remove annotations as desired by users. These triggers are clearly marked and readily available for the users to utilize the visualization as they see fit.

There are many improvements that I would like to work on the project. For example, I have not done any Front-end programming using JavaScript, HTML, CSS, and d3.js, and trying to do this in two weeks of time was quite challenging. Most of my time was spent to learning the front-end materials. While I feel I have gained some knowledge, I realize that I have a lot more to learn. However, this project has made me realize that I want to delve deeper into data visualization using both Tableau and d3.js, and made me sign up for a community driven Flatiron bootcamp. I also wish I had more time to explore d3.js and its rich offerings, as my graphs do not do justice to what the package can do.

## References

<https://www.mattlayman.com/2015/d3js-area-chart.html>

<https://stackoverflow.com/questions/33699852/show-tick-positions-in-custom-range-input/50492336>

<https://en.wikipedia.org/wiki/Ajax_(programming)>

<https://www.coursera.org/learn/cs-498-dv/lecture/UqwFp/9-1-4-a-model-for-narrative-visualization>