**Week 1: Warm up**

Articles to read:

1. [Big data visualization](http://www.cse.ust.hk/~huamin/bigdata_vis_chinese.pdf). Huamin Qu
2. [Visualization](http://www.cs.ubc.ca/labs/imager/tr/2009/VisChapter/akp-vischapter.pdf). Tamara Munzner. Chapter 27, p 675-707, of Fundamentals of Graphics, Third Edition, by Peter Shirley et al. AK Peters, 2009.
3. [A Tour through the Visualization Zoo](http://cacm.acm.org/magazines/2010/6/92482-a-tour-through-the-visualization-zoo/pdf). Jeffrey Heer, Michael Bostock, Vadim Ogievetsky. Communications of the ACM, 53(6), pp. 59-67, Jun 2010.
4. [A brief history of data visualisation](http://hci.stanford.edu/courses/cs547/abstracts/08-09/090213-heer.html). Jeffrey Heer

HTML, JavaScript, JQuery

1. W3C tutorials: <http://www.w3school.com.cn/>
2. Coding Convention:

<http://javascript.crockford.com/code.html>

<http://www.w3schools.com/js/js_conventions.asp>

Create a [GitHub](https://github.com) account and learn how to use Git. You will put all your code in the next following weeks to GitHub

**Week 2: Graph, Word Cloud, and Stacked Graph (without using D3)**

1. [A force-directed graph visualization](http://bl.ocks.org/mbostock/4062045)

Wiki: <http://en.wikipedia.org/wiki/Force-directed_graph_drawing>

An article about force-directed layout drawing:

<http://www.brad-smith.info/blog/archives/129>

A classic paper about graph drawing

<http://wenku.baidu.com/view/9607a85cf7ec4afe04a1dfd6.html>

1. [A word cloud visualization](http://www.jasondavies.com/wordcloud/)

Paper: <http://cs.smith.edu/classwiki/images/f/f2/PartcipatoryVisualizatioWithWordle.pdf>

1. [Stacked graph](http://bl.ocks.org/mbostock/4060954)

Paper: <http://leebyron.com/streamgraph/stackedgraphs_byron_wattenberg.pdf>

**Week 3: TreeMaps, Tree Visualization, Hierarchical edge bundling (without using D3)**

1. TreeMaps: <http://bl.ocks.org/mbostock/4063582>
2. Hierarchical edge bundling: <http://bl.ocks.org/mbostock/7607999>

The paper of Hierarchical edge bundling:

<http://www.cs.jhu.edu/~misha/ReadingSeminar/Papers/Holten06.pdf>

1. Collapsible Tree: <http://bl.ocks.org/mbostock/4339083>

**Week 4: Parallel Coordinates and scatterplot matrix (without using D3)**

1. Parallel Coordinates

<http://exposedata.com/parallel/>

1. Scatterplot Matrix

<http://mbostock.github.io/d3/talk/20111116/iris-splom.html>

**Week 5: Interaction and Animation (without using D3)**

1. Epicyclic Gearing

<http://bl.ocks.org/mbostock/1353700>

1. EventDrops

<https://github.com/marmelab/EventDrops>

1. Draggable scatterplot with motion trails

<http://romsson.github.io/dragit/example/nations.htm>

**Week 6 – 7: Implement the previous visualizations by D3JS.**

You can use other interesting data for the visualizations.

D3 Book:

<http://chimera.labs.oreilly.com/books/1230000000345/index.html>

More D3 examples can be found:

<http://d3js.org/>