Assignment #1: Interactive Social Visualization / Web Application

Task:
Explore the provided **StackOverflow searching log data**. Design an interactive social visualization or web application to explore and discover facts and patterns. You are free to transform the data and/or import external data. You are free to use any scripting language any tools. You are **not** required to include all the variables provided in the dataset. After implementation, you should interact with your app or visualization to explore the data and attempt to find patterns. List your analysis results and findings in the same web page of your visualization/app.
Hint: You may not need all the variables.

Suggested tools:
(1) R with Shiny (http://shiny.rstudio.com);
(2) Python with matplotlib & javascripts (https://plot.ly/python/),
(3) HTML with d3 (https://github.com/mbostock/d3/wiki/Gallery)

Data set: (4 log data files)
class_query.csv (logs user's queries)

```
intention {KS: knowledge seeking, PS: problem solving, ML: method
learning, NA: others}
query (query terms)
```

class_operation.csv (logs user's operations)

```
timestamp
operation {target_clicked, scroll_down, scroll_up, select}
url
u_id
```

class_select.csv (logs user's interest after query: reading behavior)

```
operation (select)
url (same as class_operation.csv operation='select')
text (highlighted text)
```

class_click.csv (logs user's interest after query: reading content)

```
operation (target_clicked)
url(same as class_operation.csv operation='target_clicked')
target (url of the selected article after query)
text(content text of the selected article after query)
```

Data is ready for download on Blackboard. All the data sets provided by the instructor are only used to fulfill and to demonstrate this course's educational purposes. They are prohibited to distribute or to share.

Evaluation: (105/100)

- *Interactive Social Visualization or Web app (40%):* {-40: an incomplete page or code; -10: not social visualization, (social visualization Figure 2)}
- *Analysis & Findings (30%):* You must list at least 3 bullet points of **pattern findings** from your interactive visualization, then explain the patterns in texts on the same page, describe your steps to find the results and why does it matter. {-5: Less than 3 findings; -10: no explanations; full score will be awarded by the quality of the pattern analysis}
- *Interactivity (20%):* A parameter change via input box, mouse hovering, a button/hyperlink click etc are all counted as interactivity. You need at least three kinds of interactions directly interact with data or formatted data. {-20: no interaction; -5: only 1 interaction: -10: only 2 interactions}
- *Originality (10%):* Use your imagination and creativity to implement ANYTHING (can be UI, can be analytical methods) outside the box but related to this assignment.
- *Bonus:* Satisfy the submission and analysis criteria (5%)

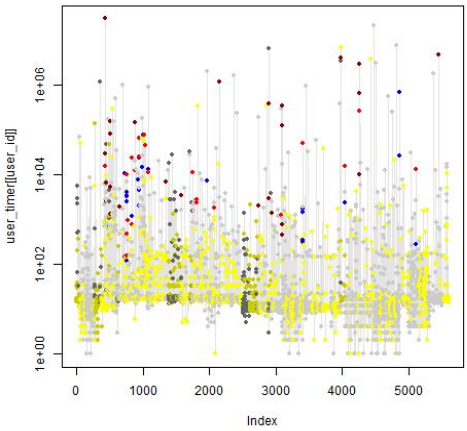
Submission:

1. This is an individual assignment.
2. Your submission should be executable online and offline. You may indicate a link when submitting via Blackboard, and enclose a zip file for all the source code. Entry page must set as **index.html or clearly noted in the submission.**
3. File must be named as Assign1-YourFirstnameLastname (i.e. Assign1-SharonHsiao)
4. Submit it through Blackboard.
5. Deadline: **Wednesday Feb.03/2016, by noon.**

Your assignment will be discussed in class or on blog.

To get you started:

1. download data immediately, explore data
2. Think about, how do I see every user's operation over time. (Figure 1)
3. Then move on to, how do I see each user versus the rest of the users (i.e. versus average). (Figure 2)



(Figure1. this is an example)

(Figure2. example of social visualization)