Assignment #3: Network Visualization

Task:

Explore the data set, the goal of this assignment is to analyze the network by answering the following questions, then to convert the given data set to proper format and generate a network visualization.

(Review slides) Explain the network in context and answer the following questions:

a) Do you find communities (modularity)? If yes, how many?

b) What is the average degree centrality? What does it mean in this email network?

c) What is the average betweenness centrality? What does it mean in this email network?

d) What is the average Eigenvector centrality? What does it mean in this email network?

e) Output a network visualization based on this network, adjust the node sizes according to the Eigenvector centrality (You may multiply a constant to make it visible) adjust the node color according to the Eigenvector centrality (you may use any colors, the darker shades indicate higher value). Finally, indicate which layout algorithm did you use, why do you decide to settle with this layout?

Note: You are free to transform the data as needed. You have to include **all** the data, no external data is needed. **You must use Gephi or R (i.e. igraph)**.

Data set:
Email back and forward within CSE578 class in 2020 Spring semester (Feb)

Evaluation: Q&A(80%), Visualization: clarity (10%), Originality (10%)

Submission:
1.This is an individual assignment.
2.Your submission should include 1 page of your write up and a copy of your visualization in standard image file format (PDF, PNG, JPG, TIFF, GIF) or the entire site (if it's an interactive visualization). Zip all the files.
3.File must be named as Assign3-YourFirstnameLastname (i.e. *Assign3-SharonHsiao)*
4.Submit it through Canvas.
5.Deadline: **Monday March. 16th 2020, by 11:59pm.** * Your assignment will be discussed in class or on blog.