

Social Network Analysis Assignment

COM 329

Learning Objectives

1. Become familiar with key terms and measurements used in social network analysis research
2. Apply network theory and social network analysis methods to the process of social media data analysis
3. Use the results of social network analysis to inform findings regarding a current social, political, economic or technical issue

Tool: Netlytic (<https://netlytic.org/>)

*See https://netlytic.org/home/?page_id=36 for video tutorials and help pages on using Netlytic

Resources

Social Network Analysis: An Introduction by Valdis Krebs

(<http://www.orgnet.com/sna.html>)

Social Network Analysis by John Scott

(<https://us.sagepub.com/en-us/nam/social-network-analysis/book249668>)

Network Literacy: Essential Concepts and Core ideas by NetSciEd team

(<https://sites.google.com/a/binghamton.edu/netscied/teaching-learning/network-concepts>)

Mapping Twitter Topic Networks: From Polarized Crowds to Community Clusters by Marc A. Smith, Lee Rainie, Ben Shneiderman and Itai Himelboim

(<http://www.pewinternet.org/2014/02/20/mapping-twitter-topic-networks-from-polarized-crowds-to-community-clusters/>)

Assignment Overview

For this assignment, you will use the web-based social network analysis tool Netlytic to create a social network visualization using data from Twitter and/or Instagram. You will then identify key metrics within your network, analyze the results and use the findings to draft an informed analysis of a current social, political, economic or technological issue.

Step 1. Register for a free account on Netlytic at <https://netlytic.org/index.php?register>

Step 2. Log in to Netlytic and click on the “New Dataset” tab

Step 3. Link your Twitter and/or Instagram account to Netlytic

Step 4. Launch a search using related to your chosen issue (for example, if you are interested in public perception of sexual assault, you may use the search term #weinsteinscandal)

Step 5. Using the Keyword Extractor tool under the Text Analysis tab, create and export a word cloud of top terms in your results

Step 6. Using the Manual Categories tool under the Text Analysis tab, create at least one original category to provide insight into your content findings. (for example, to analyze what celebrities are being referenced in the #weinsteinscandal search, create a category list that consists of celebrity names)

Step 6: Using either the Name Network tool or the Chain Network tool under the Network Analysis tab, create and export a network visualization (recommended layouts: Fruchterman-Reingold and/or)

Resource: <https://github.com/gephi/gephi/wiki/Fruchterman-Reingold>

Examine the following measures:

- Diameter
- Density
- Reciprocity
- Modularity
- Centrality (overall, indegree, outdegree)

Step 7. Produce a short presentation (no more than 10 minutes) presenting your findings. Your presentation should include the following:

- A. Screenshots of the visualizations (both keyword and network).
- B. List of terms used in manual category creation and a screenshot of the resulting visualization
- C. Analysis of network visualization. (consider presences and connections of clusters. What do these clusters tell you about the nature of online conversation regarding your topic?)
- D. List of key network measures and analysis of meaning
- E. Identification of node or nodes with the highest indegree centrality and outdegree centrality? What does this tell you about influence within this online conversation?
- F. Isolate a single ego-network with a key figure from the visualization as the core node. What does this network tell you about the nature of online communication regarding the chosen issue?
- G. Using the data from your textual and network analysis completely in Netlytic, conclude by sharing at least three insights you learned about your chosen social issue.

To receive full credit for this assignment please submit the following:

- Powerpoint, Keynote or Prezi presentation with voiceover or extensive lecture notes
- OR – present your work during class time on Wednesday, Oct. 18

Due: Wednesday, Oct. 18 at 11:59 p.m.