Social Network Analysis

Jinseok Kim
Graduate School of Library and Information Science
University of Illinois at Urbana-Champaign
January 30, 2016 at the I-Hotel
Goals of the Session

• Learning by doing
  • How to conceptualize a network
  • How to input network data
  • How to visualize a network

• Getting familiar with
  • a network analysis tool: NodeXL
  • basic network terms
  • Degree Centrality
A dream scenario: You got a NSF funding!

• It requires a research trip to an island
The Republic of Monkeys

• In the island, a group of monkeys live and all they do is banana picking from a banana tree
Defining a social network

• A group of (monkeys) connected by the (collaboration) relationship
  • Monkeys = actors, nodes, or vertices (singular: vertex)
  • Collaboration relationship = ties, lines, or edges

• Characterizing a network
  • Directed vs Undirected
  • Weighted vs Unweighted
Generating network data

• Two monkeys are connected to each other by a collaboration relationship
• The connected relationship is represented by a pair of monkey names (or ids)
Analysis, visualization, and knowledge finding from a network

• Who’s the important one?

• Structure of collaboration
Another example: Les Miserables

- Two actors are connected to each other if they appear in the same scene
- Network analysis can provide information about, for example, who is most connected, and thus most important in terms of network structure
Recap

• Learning by doing
  • How to conceptualize a network
  • How to input network data
  • How to visualize a network

• Getting familiar with
  • a network analysis tool: NodeXL
  • basic network terms
  • Degree Centrality
I hope you enjoy social network analysis
Thank You!

• Question: jkim362@Illinois.edu