Networks & Graphs

CS 579 Online Social Network Analysis

Dr. Cindy Hood
8/28/25

Hw #1

- Assigned 8/29
  - Due by midnight Sept 3

Exams and Final Project Poster Presentation

- Exam 1 – Oct 9 in class
- Exam 2 – Dec 2 in class

- Final Project Poster Session – Dec 4 in class

- Online students (sections 2 and 3) will have remote options

Teaching Assistants

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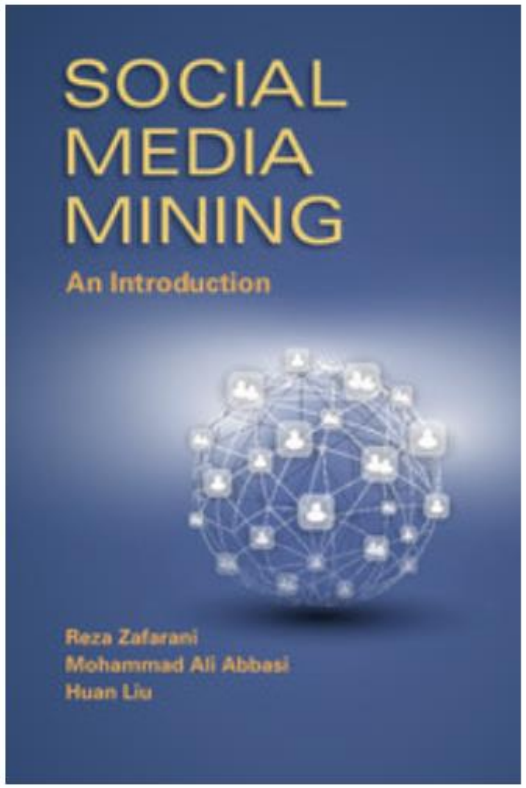
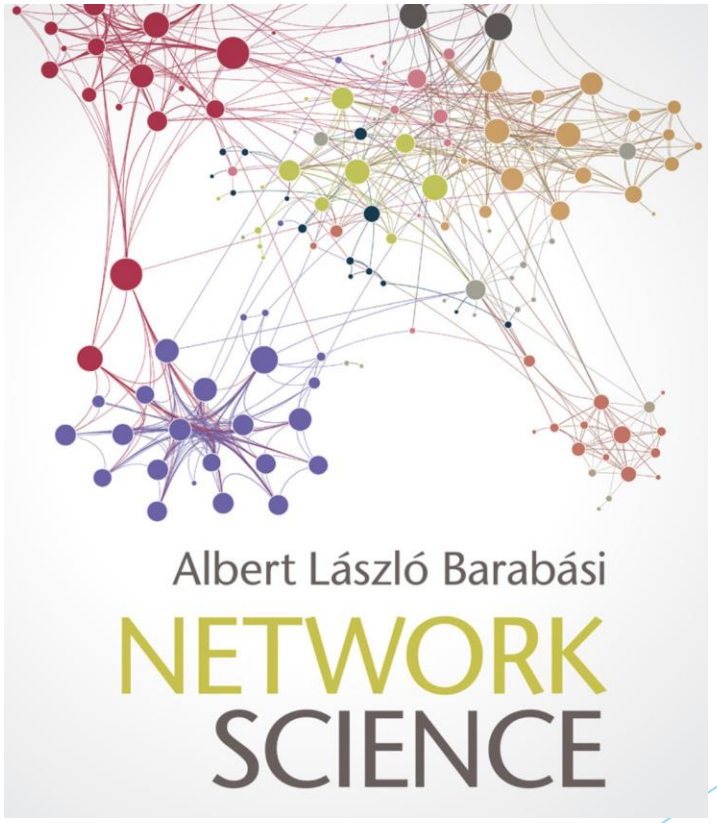
- Office hours tbd

References

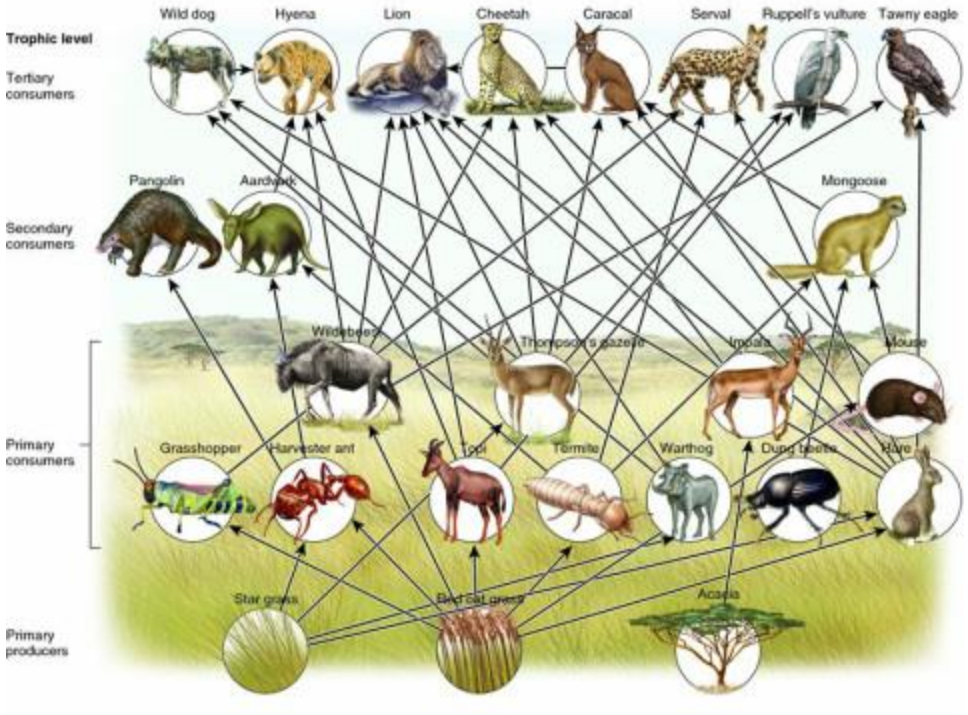




http://www.socialmediamining.info

http://networksciencebook.com

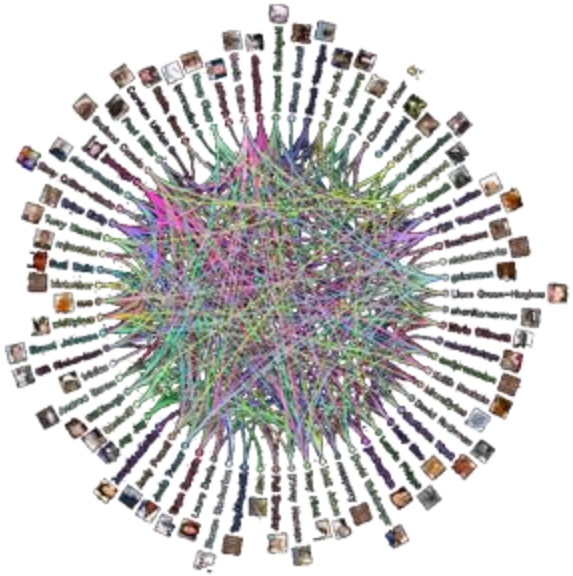
Food Web

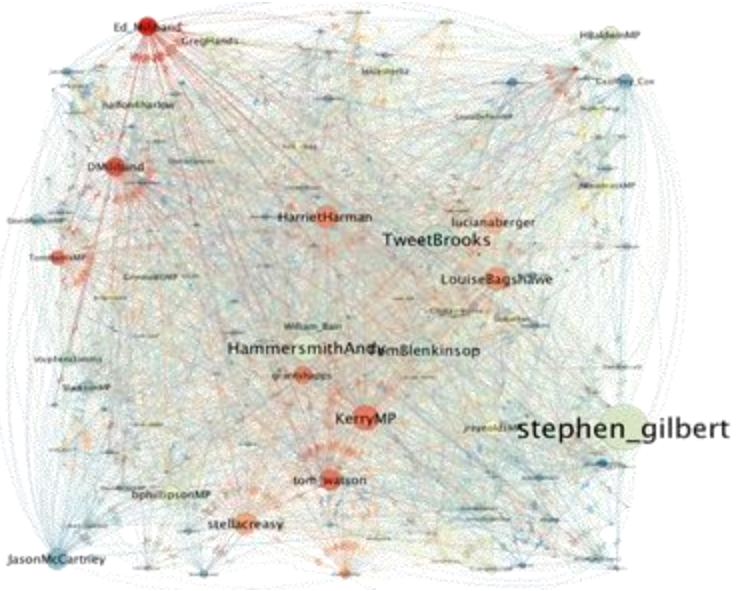


Green header indicates slides are from https://www.socialmediamining.info/slides/

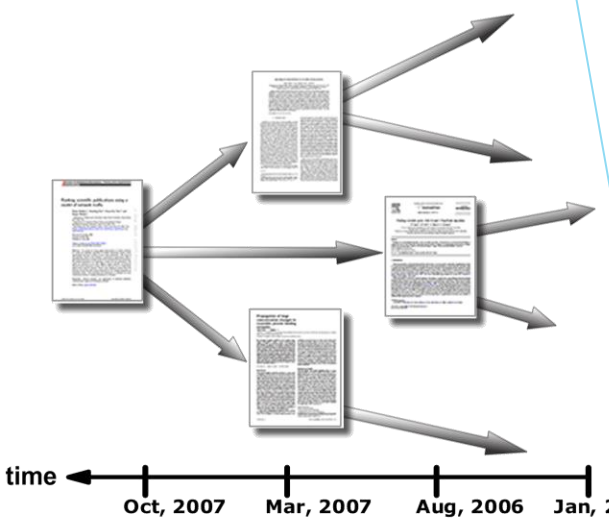
Network are Pervasive

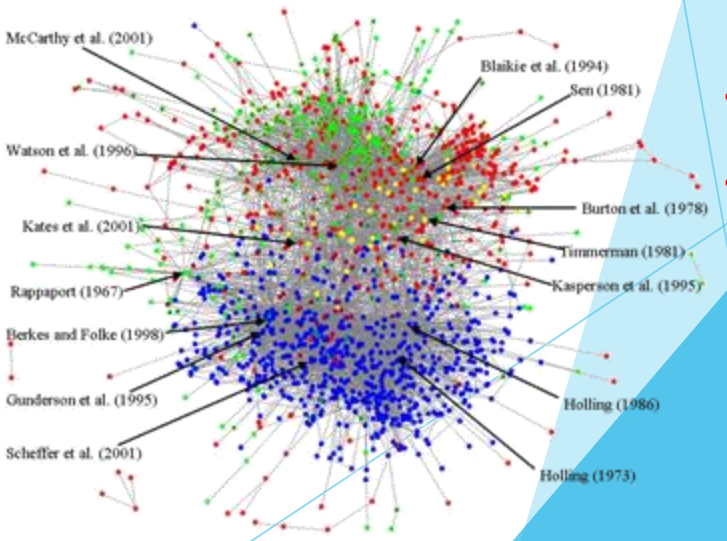
Twitter Networks



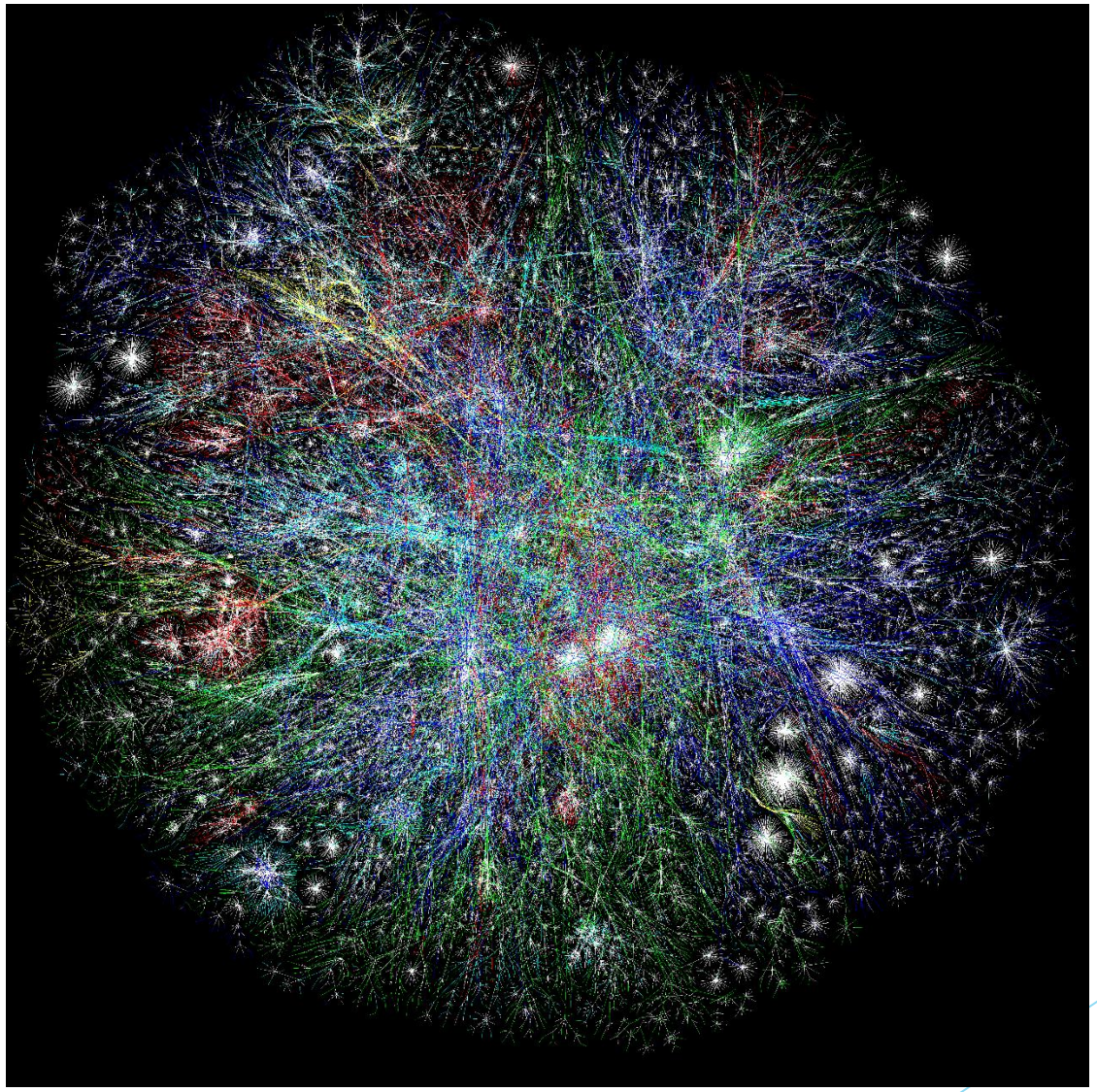


Citation Networks





Internet



Network of the US Interstate Highways

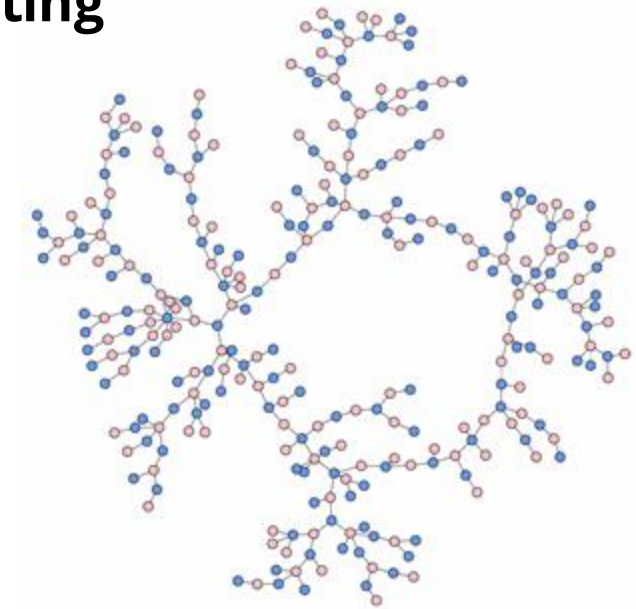
NY State Road Network

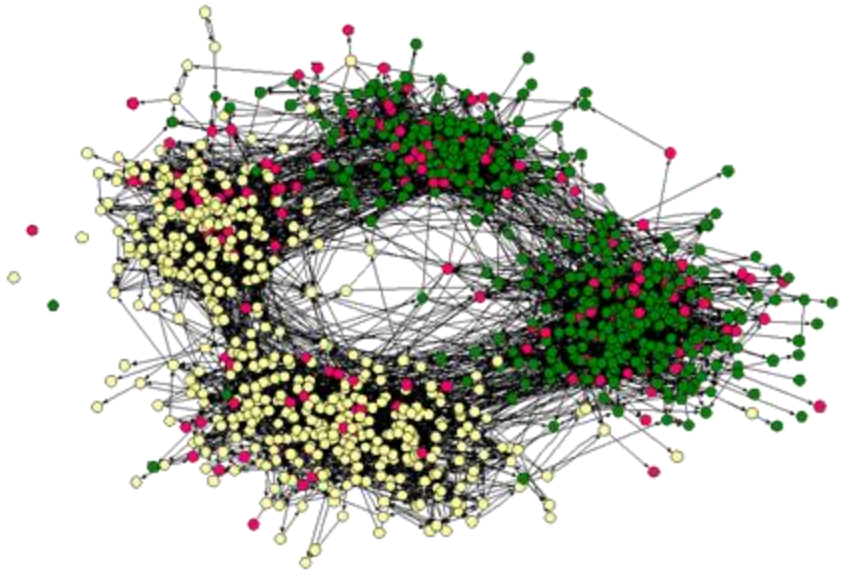
Social Networks and Social Network Analysis

- A social network
  - A network where elements have a social structure
    - A set of actors (such as individuals or organizations)
    - A set of ties (connections between individuals)
- Social networks examples:
  - your family network, your friend network, your colleagues ,etc.
- To analyze these networks we can use Social Network Analysis (SNA)
- Social Network Analysis is an interdisciplinary field from social sciences, statistics, graph theory, complex networks, and now computer science

Social Networks: Examples

High school dating





High school friendship

Our class social network

- What is the purpose?
  - Educational
    - Use as an example network
  - From your (student) perspective?