Statistical models for Social Networks

Graph $G = (V, E)$ Subgraph $H = (W, E_W)$ Egocentric

Center for Statistics & the Social Sciences
CSSS/STAT 567, Spring 2019

Instructor: Tyler McCormick, Statistics, Sociology, & CSSS

Course components:

- Data analysis homework
- In class presentation
- Final project and poster

Prerequisites :

Familiarity and willingness to expand your knowledge of:

- R, Github, Markdown
- Sampling (e.g. stratified, cluster)
- Inference (e.g. MLE, categorical)

Class meetings: T/Th 11:30-12:50pm (Guggenheim 218) & F 1:30-2:20 (Savery 264)

For more information:

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Overview

This course is a practical, hands-on introduction to design and analysis of social network data, set against a backdrop of theory from sociology, economics, and other disciplines.

Figure from Salter-Townshend & McCormick (2017) using data from Banerjee et al. (2013)

Topics:

- Representing network data
- Statistical models & inference
- Models for peer effects & spillovers
- Designing social network surveys
- Analyzing “big data” networks
- Privacy & reproducibility

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