



Social Network Analysis Visualization

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Outline

- Assignments

- Homework 3
- Homework 4

- File formats

- Visualization: General

- Visualization: Networks

- Overview
- Nodes
- Edges
- Layout

- Break

- Lab CDM 801

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Homework 3

- Questions?

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Homework 4



- No more step by step code scaffolding
- Working with bipartite data
 - Les Miserables, but
- Section-section projection
- Filtering
- Save as .graphml file
- Make visualizations in Gephi
- Demonstrate image inclusion syntax



Turn in

- More files

- ~~HTML~~ Assignment Project Exam Help
- Rmd <https://powcoder.com>
- R Add WeChat powcoder
- GraphML
- PNG



Proposal milestone

- Fill out the form
- Due next week [Assignment Project Exam Help](#)
- Issues <https://powcoder.com>
 - Sampling / selecting huge data sets [Add WeChat powcoder](#)
 - Data gathering practicalities
- Questions?



Graph formats

- Different from how graphs are stored internally
- How are graphs stored in files?
- Many different options

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Most common

- edgelist
 - very simple, just a list of edges
 - no place to store node and edge attributes
- Pajek (.net)
 - (what were they thinking!)
 - lists nodes and edges separately
 - also can store multiple networks at once
 - associated with the Pajek tool
- GML (.gml)
 - stores a bit more graphical information
 - format a bit like JSON
 - ids must be numeric
- GraphML (.graphml)
 - an XML format
 - most comprehensive
 - least space-efficient
- GEXF
 - similar to GraphML
 - Gephi project

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In igraph

- `g <- read_graph("my-graph.graphml",
format="graphml")`
- `write_graph(g, "new-graph.net",
format="pajek")`
- Supported formats
 - edgelist
 - pajek
 - **graphml**
 - gml
 - plus dimacs, dot, leda, ncol, lgl
 - not gexf
 - created by the Gephi project

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