DCS/CSCI 2350: Social & Economic Networks

Graphs
Reading: Ch 2 (Easley-Kleinberg)

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Graphs
"Graph theory is a terminological jungle, in which any newcomer may plant a tree." - John Barnes
https://griffsgraphs.wordpress.com/2012/07/02/a-facebook-network/
LinkedIn InMaps

https://blog.linkedin.com/2011/01/24/linkedin-inmaps
Political blogs (2004)
Graphs

Some Properties Puzzles:
Degree-sum formula
Max # of edges
Konigsberg bridge problem
Graphs
Paths
Cycles

ARPANET (1970)
Graphs

Connectivity
Components

High school relationships (1993-95)
Review of vocabulary

Network ↔ Graph
Node ↔ Vertex
Edge: undirected vs. directed (arc)
Degree of a node
Endpoints of an edge
Directed, undirected, mixed graphs
Simple vs non-simple graph
Subgraph
Degree-sum formula
Maximum number of edges
Eulerian circuit problem
Path
Cycle
Connected vs. disconnected graph
Connected components of a graph

Reading

- Chapter 2 of Easley-Kleinberg
- Due before the next class