Social Network Analysis with Applications

Description:
A comprehensive introduction to social network analysis that hones in on basic centrality measures, social links, subgroup analysis, data sources, and more

Written by military, industry, and business professionals, this book introduces readers to social network analysis, the new and emerging topic that has recently become of significant use for industry, management, law enforcement, and military practitioners for identifying both vulnerabilities and opportunities in collaborative networked organizations.

Focusing on models and methods for the analysis of organizational risk, Social Network Analysis with Applications provides easily accessible, yet comprehensive coverage of network basics, centrality measures, social link theory, subgroup analysis, relational algebra, data sources, and more. Examples of mathematical calculations and formulas for social network measures are also included.

Along with practice problems and exercises, this easily accessible book covers:

- The basic concepts of networks, nodes, links, adjacency matrices, and graphs
- Mathematical calculations and exercises for centrality, the basic measures of degree, betweenness, closeness, and eigenvector centralities
- Graph-level measures, with a special focus on both the visual and numerical analysis of networks
- Matrix algebra, outlining basic concepts such as matrix addition, subtraction, multiplication, and transpose and inverse calculations in linear algebra that are useful for developing networks from relational data
- Meta-networks and relational algebra, social links, diffusion through networks, subgroup analysis, and more

An excellent resource for practitioners in industry, management, law enforcement, and military intelligence who wish to learn and apply social network analysis to their respective fields, Social Network Analysis with Applications is also an ideal text for upper-level undergraduate and graduate level courses and workshops on the subject.

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