

Analyzing Social Media Networks With Nodexl Insights From A Connected World By Derek Hansen Ben Shneiderman Marc A Smith

This timely book focuses on influence and behavior analysis in the broader context of social network applications and social media. Twitter accounts of telecommunications companies are analyzed. Rumor sources in finite graphs with boundary effects by message-passing algorithms are identified. The coherent, state-of-the-art collection of chapters was initially selected based on solid reviews from the IEEE/ACM International Conference on Advances in Social Networks, Analysis, and Mining (ASONAM '17). Chapters were then improved and extended substantially, and the final versions were rigorously reviewed and revised to meet the series standards. Original chapters coming from outside of the meeting round out the coverage. The result will appeal to researchers and students working in social network and social media analysis.

The aim of Sentiment Analysis is to define automatic tools able to extract subjective information from texts in natural language, such as opinions and sentiments, in order to create structured and actionable knowledge to be used by either a decision support system or a decision maker. Sentiment analysis has gained even more value with the advent and growth of social networking. Sentiment Analysis in Social Networks begins with an overview of the latest research trends in the field. It then discusses the sociological and psychological processes underlying social network interactions. The book explores both semantic and machine learning models and methods that address context-dependent and dynamic text in online social networks, showing how social network streams pose numerous challenges due to their large-scale, short, noisy, context- dependent and dynamic nature. Further, this volume: Takes an interdisciplinary approach from a number of computing domains, including natural language processing, machine learning, big data, and statistical methodologies Provides insights into opinion spamming, reasoning, and social network analysis Shows how to apply sentiment analysis tools for a particular application and domain, and how to get the best results for understanding the consequences Serves as a one-stop reference for the state-of-the-art in social media analytics Takes an interdisciplinary approach from a number of computing domains, including natural language processing, big data, and statistical methodologies Provides insights into opinion spamming, reasoning, and social network mining Shows how to apply opinion mining tools for a particular application and domain, and how to get the best results for understanding the consequences Serves as a one-stop reference for the state-of-the-art in social media analytics

Analyzing Social Media Networks with NodeXL: Insights from a Connected World, Second Edition, provides readers with a thorough, practical and updated guide to NodeXL, the open-source social network analysis (SNA) plug-in for use with Excel. The book analyzes social media, provides a NodeXL tutorial, and presents network analysis case studies, all of which are revised to reflect the latest developments. Sections cover history and concepts, mapping and modeling, the detailed operation of NodeXL, and case studies, including e-mail, Twitter, Facebook, Flickr and YouTube. In addition, there are descriptions of each system and types of analysis for identifying people, documents, groups and events. This book is perfect for use as a course text in social network analysis or as a guide for practicing NodeXL users. Walks users through NodeXL while also explaining the theory and development behind each step Demonstrates how visual analytics research can be applied to SNA tools for the mass market Includes updated case studies from researchers who use NodeXL on popular networks like email, Facebook, Twitter, and Instagram Includes downloadable companion materials and online resources at <https://www.smrfoundation.org/nodexl/teaching-with-nodexl/teaching-resources>

"Analyzing Social Media Networks with NodeXL provides a much needed resource for the social media research community, as it describes network theory, provides compelling examples using data sources like Twitter and Flickr, and highlights how to use a free sophisticated tool for analysis. This is the perfect book for anyone trying to analyze the behavior of online social networks and beyond." --Adam Perer, Research Scientist, IBM Research "This book provides a basic introduction to social network analysis, followed by practical instruction and examples on gathering data from online sources, importing into Excel, and then analyzing the data through Excel. The book will be important for promoting research in the area for those in information science, sociology, cultural studies, virtual community, and e-commerce."--Caroline Haythornthwaite, PhD, Professor, Graduate School of Library and Information Science, University of Illinois at Urbana-Champaign Businesses, entrepreneurs, individuals, and government agencies alike are looking to social network analysis (SNA) tools for insight into trends, connections, and fluctuations in social media. Microsoft's NodeXL is a free, open-source SNA plug-in for use with Excel. It provides instant graphical representation of relationships of complex networked data. But it goes further than other SNA tools - NodeXL was developed by a multidisciplinary team of experts that bring together information studies, computer science, sociology, human-computer interaction, and over 20 years of visual analytic theory and information visualization into a simple tool anyone can use. This makes NodeXL of interest not only to end-users but also to researchers and students studying visual and network analytics and their application in the real world.

Knowledge Solutions

Mining the Social Web

Social Networks

Methods and Examples

A Handbook

Analyzing and Securing Social Networks

"This book covers current research trends in the area of social networks analysis and mining, sharing research from experts in the social network analysis and mining communities, as well as practitioners from social science, business, and computer science"--Provided by publisher.

Designed to walk beginners through core aspects of collecting, visualizing, analyzing, and interpreting social network data, this book will get you up-to-speed on the theory and skills you need to conduct social network analysis. Using simple language and equations, the authors provide expert, clear insight into every step of the research process—including basic maths principles—without making assumptions about what you know. With a particular focus on NetDraw and UCINET, the book introduces relevant software tools step-by-step in an easy to follow way. In addition to the fundamentals of network analysis and the research process, this Second Edition focuses on: Digital data and social networks like Twitter Statistical models to use in SNA, like QAP and ERGM The structure and centrality of networks Methods for cohesive subgroups/community detection Supported by new chapter exercises, a glossary, and a fully updated companion website, this text is the perfect student-friendly introduction to social network analysis.

Analyzing Social Media Networks with NodeXL: Insights from a Connected World, Second Edition, provides readers with a thorough, practical and updated guide to NodeXL, the open-source social network analysis (SNA) plug-in for use with Excel. The book analyzes social media, provides a NodeXL tutorial, and presents network analysis case studies, all of which are revised to reflect the latest developments. Sections cover history and concepts, mapping and modeling, the detailed operation of NodeXL, and case studies, including e-mail, Twitter, Facebook, Flickr and YouTube. In addition, there are descriptions of each system and types of analysis for identifying people, documents, groups and events. This book is perfect for use as a course text in social network analysis or as a guide for practicing NodeXL users. Walks users through NodeXL while also explaining the theory and development behind each step Demonstrates how visual analytics research can be applied to SNA tools for the mass market Includes updated case studies from researchers who use NodeXL on popular networks like email, Facebook, Twitter, and Instagram Includes downloadable companion materials and online resources at <https://www.smrfoundation.org/nodexl/teaching-with-nodexl/teaching-resources>

Align Strategy With Metrics Using Social Monitoring Best Practices "Two or three years from now, every public relations firm that wants to be taken seriously in the C-suite and/or a lead marketing role will have someone like Marshall in its senior leadership ranks, a chief analytics officer responsible for ensuring that account leaders think more deeply about analytics and that thfirm works with the best available outside suppliers to integrate analytics appropriately." --Paul Holmes, The Holmes Report "Marshall has provided much-needed discipline to our newest marketing frontier—a territory full of outlaws, medicine men, dot com tumbleweeds, and snake oil." --Ryan Rasmussen, VP Research, Zócalo Group "Marshall Sponder stands apart from the crowd with this work. His case study approach, borne of real-world experience, provides the expert and the amateur alike with bibliography, tools, links, and examples to shortcut the path to bedrock successes. This is a reference work for anyone who wants to explore the potential of social networks." --W. Reid Cornwell, Ph.D., Chief Scientist, The Center for Internet Research "Marshall is a solutions design genius of unparalleled knowledge and acumen, and when he applies himself to the business of social media, the result is a timely and important commentary on the state of research and crisis management for social media." --Barry Fleming, Director, Analytics & Insights, WCG, and Principal, DharmasBuilt.com About the Book Practically overnight, social media has become a critical tool for every marketing objective—from outreach and customer relations to branding and crisis management. For the most part, however, the data collected through social media is just that: data. It usually seems to hold little or no meaning on which to base business decisions. But the meaning is there . . . if you're applying the right systems and know how to use them. With Social Media Analytics, you'll learn how to get supremely valuable information from this revolutionary new marketing tool. One of the most respected leaders in his field and a pioneer in Web analytics, Marshall Sponder shows how to: Choose the best social media platforms for your needs Set up the right processes to achieve your goals Extract the hidden meaning from all the data you collect Quantify your results and determine ROI Filled with in-depth case studies from a range of industries, along with detailed reviews of several social-monitoring platforms, Social Media Analytics takes you beyond "up-to-date" and leads you well into the future—and far ahead of your competition. You will learn how to use the most sophisticated methods yet known to find customers, create relevant content (and track it), mash up data from disparate sources, and much more. Sponder concludes with an insightful look at where the field will likely be going during the next few years. Whether your social media marketing efforts are directed at B2B, B2C, C2C, nonprofit, corporate, or public sector aims, take them to the next step with the techniques, strategies, and methods in Social Media Analytics—the most in-depth, forward-looking book on the subject.

Interdisciplinary Approaches and Case Studies

Analyzing Social Media Networks with NodeXL

Influence and Behavior Analysis in Social Networks and Social Media

Workshop Summary and Papers

Practical Social Network Analysis with Python

Social Network Analysis

In the summer of 2002, the Office of Naval Research asked the Committee on Human Factors to hold a workshop on dynamic social network and analysis. The primary purpose of the workshop was to bring together scientists who represent a diversity of views and approaches to share their insights, commentary, and critiques on the developing body of social network analysis research and application. The secondary purpose was to provide sound models and applications for current problems of national importance, with a particular focus on national security. This workshop is one of several activities undertaken by the National Research Council that bears on the contributions of various scientific disciplines to understanding and defending against terrorism. The presentations were grouped in four sessions á€ Social Network Theory Perspectives, Dynamic Social Networks, Metrics and Models, and Networked Worlds á€ each of which concluded with a discussant-led roundtable discussion among the presenters and workshop attendees on the themes and issues raised in the session.

Part of the What is...? series, this book is an introductory guide providing explanations of the nature of social network methods.

Social network analysis is used widely in the social and behavioral sciences, as well as in economics, marketing, and industrial engineering. The social network perspective focuses on relationships among social entities and is an important addition to standard social and behavioral research, which is primarily concerned with attributes of the social units. Social Network Analysis: Methods and Applications reviews and discusses methods for the analysis of social networks with a focus on applications of these methods to many substantive examples. It is a reference book that can be used by those who want a comprehensive review of network methods, or by researchers who have gathered network data and want to find the most appropriate method by which to analyze it. It is also intended for use as a textbook as it is the first book to provide comprehensive coverage of the methodology and applications of the field.

Social Network Analysis: Methods and Examples by Song Yang, Franziska B. Keller, and Lu Zheng prepares social science students to conduct their own social network analysis (SNA) by covering basic methodological tools along with illustrative examples from various fields. This innovative book takes a conceptual rather than a mathematical approach as it discusses the connection between what SNA methods have to offer and how those methods are used in research design, data collection, and analysis. Four substantive applications chapters provide examples from politics, work and organizations, mental and physical health, and crime and terrorism studies.

Social Network Analysis for Ego-Nets

Learning Social Media Analytics with R

Social Media Mining and Social Network Analysis: Emerging Research

Analyzing Data from Facebook, Twitter, LinkedIn, and Other Social Media Sites

Social Media Analytics: Effective Tools for Building, Interpreting, and Using Metrics

Tools, Methods, and Approaches to Drive Organizational Performance

Tap into the realm of social media and unleash the power of analytics for data-driven insights using R About This Book A practical guide written to help leverage the power of the R eco-system to extract, process, analyze, visualize and model social media data Learn about data access, retrieval, cleaning, and curation methods for data originating from various social media platforms. Visualize and analyze data from social media platforms to understand and model complex relationships using various concepts and techniques such as Sentiment Analysis, Topic Modeling, Text Summarization, Recommendation Systems, Social Network Analysis, Classification, and Clustering. Who This Book Is For It is targeted at IT professionals, Data Scientists, Analysts, Developers, Machine Learning Enthusiasts, social network researchers, and anyone interested in data analytics, and generating insights from social data. Some background experience in R analysis would be helpful, but not necessary, since this book is written keeping in mind that readers can have varying levels of expertise. What You Will Learn Learn how to tap into data from diverse social media platforms using the R ecosystem Use social media data to formulate and solve real-world problems Analyze user social networks and communities using concepts from graph theory and network analysis Learn to detect opinion and sentiment, extract themes, topics, and trends from unstructured noisy text data from diverse social media channels Understand the art of representing actionable insights with effective visualizations Analyze data from major social media channels such as Twitter, Facebook, Flickr, Foursquare, Github, StackExchange, and so on Learn to leverage popular R packages such as gplp2, topicmodels, caret, e1071, tm, wordcloud, twittr, Rfacebook, dplyr, reshape2, and many more In Detail The Internet has truly become homungous, especially with the rise of various forms of social media in the last decade, which give users a platform to express themselves and also communicate and collaborate with each other. This book will help the reader to understand the current social media landscape and to learn how analysis can be leveraged to derive insights from it. This data can be analyzed to gain valuable insights into the behavior and engagement of users, organizations, businesses, and brands. It will help readers frame business problems and solve them using social data. The book will also cover several practical real-world use cases on social media using R and its advanced packages to utilize data science methodologies such as sentiment analysis, topic modeling, text summarization, recommendation systems, social network analysis, classification, and clustering. This will enable readers to learn different hands-on approaches to obtain data from diverse social media sources such as Twitter and Facebook. It will also show readers how to establish detailed workflows to process, visualize, and analyze data to transform social data into actionable insights. Style and approach This book follows a step-by-step approach with detailed strategies for understanding, extracting, analyzing, visualizing, and modeling data from several major social network platforms such as Facebook, Twitter, Foursquare, Flickr, Github, and StackExchange. The chapters cover several real-world use cases and leverage data science, machine learning, network analysis, and graph theory concepts along with the R ecosystem, including popular packages such as gplp2, caret,dplyr, topicmodels, tm, and so on.

The book addresses the issue of interdisciplinary understanding of collaboration on the topic of social network studies. Researchers and practitioners from various disciplines including sociology, computer science, socio-psychology, public health, complex systems, and management science have worked largely independently, each with quite different principles, terminologies, theories, and methodologies. The book aims to fill the gap among these disciplines with a number of the latest interdisciplinary collaboration studies.

This is the first textbook on social network analysis integrating theory, applications, and professional software for performing network analysis. The book introduces the main concepts and their applications in social research with exercises. An application section explaining how to perform the network analyses with Pajek software follows each theoretical section.

The present volume provides a comprehensive resource for practitioners and researchers alike-both those new to the field as well as those who already have some experience. The work covers Social Network Analysis theory and methods with a focus on current applications and case studies applied in various domains such as mobile networks, security, machine learning and health. With the increasing popularity of Web 2.0, social media has become a widely used communication platform. Parallel to this development, Social Network Analysis gained in importance as a research field, while opening up many opportunities in different application domains. Forming a bridge between theory and applications makes this work appealing to both academics and practitioners as well as graduate students.

What is Social Network Analysis?

Analyzing Social Networks Using R

Social Network Mining, Analysis, and Research Trends: Techniques and Applications

Exploratory Social Network Analysis with Pajek

Insights from a Connected World

Social Network Analysis for Actor-Centred Networks

Analyzing Social Media Networks with NodeXL offers backgrounds in information studies, computer science, and sociology. This book is divided into three parts: analyzing social media, NodeXL tutorial, and social-media network analysis case studies. Part I provides background in the history and concepts of social media and social networks. Also included here is social network analysis, which flows from measuring, to mapping, and modeling collections of connections. The next part focuses on the detailed operation of the free and open-source NodeXL extension of Microsoft Excel, which is used in all exercises throughout this book. In the final part, each chapter presents one form of social media, such as e-mail, Twitter, Facebook, Flickr, and Youtube. In addition, there are descriptions of each system, the nature of networks when people interact, and types of analysis for identifying people, documents, groups, and events. Walks users through NodeXL while also explaining the theory and development behind each step, providing takeaways that can apply to SNA Demonstrates how visual analytics research can be applied to SNA tools for the mass market Includes case studies from researchers who use NodeXL on popular networks like email, Facebook, Twittr, and wikis Downloaded companion materials and resources at <https://nodexl.codexlab.com/documentation> This book focuses on social network analysis from a computational perspective, introducing readers to the fundamental aspects of network theory by discussing the various metrics used to measure the social network. It covers different forms of graphs and their analysis using techniques like filtering, clustering and rule mining, as well as important theories like small world phenomenon. It also presents methods for identifying influential nodes in the network and information dissemination models. Further, it uses examples to explain the tools for visualising large-scale networks, and explores emerging topics like big data and deep learning in the context of social network analysis. With the Internet becoming part of our everyday lives, social networking tools are used as the primary means of communication. And as the volume and speed of such data is increasing rapidly, there is a need to apply computational techniques to interpret and understand it. Moreover, relationships in molecular structures, co-authors in scientific journals, and developers in a software community can also be understood better by visualising them as networks. This book brings together the theory and practice of social network analysis and includes mathematical concepts, computational techniques and examples from the real world to offer readers an overview of this domain.

Analyzing Social Media Networks with NodeXL Insights from a Connected WorldMorgan Kaufmann This book is open access under a CC BY-NC 3.0 IGO license. This book comprehensively covers topics in knowledge management and competence in strategy development, management techniques, collaboration mechanisms, knowledge sharing and learning, as well as knowledge capture and storage. Presented in accessible chunks, it includes more than 120 topics that are essential to high-performance organizations. The extensive use of quotes by respected experts provides the reader with lead weight to key concepts, 'cheat sheets' that simplify access and reference to individual articles, as well as the grouping of many of these topics under recurrent themes make this book unique. In addition, it provides valuable tried-and-tested tools, method and approaches for improved organizational effectiveness. The research included is particularly useful to knowledge workers engaged in executive leadership.

Emerging Research

Methods and Applications

Modeling and Analysis

Taking Turing to the Arts

Analyzing Social Media Networks with NodeXL, 2nd Edition

Social network analysis has created novel opportunities within the field of data science. The complexity of these networks requires new techniques to optimize the extraction of useful information. Graph Theoretic Approaches for Analyzing Large-Scale Social Networks is a pivotal reference source for the latest academic research on emerging algorithms and methods for the analysis of social networks. Highlighting a range of pertinent topics such as influence maximization, probabilistic exploration, and distributed memory, this book is ideally designed for academics, graduate students, professionals, and practitioners actively involved in the field of data science.

The goal of this book is to provide a reference for applications of mathematical modelling in social media and related network analysis and offer a theoretically sound background with adequate suggestions for better decision-making. Social Networks: Modelling and Analysis provides the essential knowledge of network analysis applicable to real-world data, with examples from today's most popular social networks such as Facebook, Twitter, Instagram, YouTube, etc. The book provides basic notation and terminology used in social media and its network science. It covers the analysis of statistics for social network analysis such as degree distribution, centrality, clustering coefficient, diameter, and path length. The ranking of the pages using rank algorithms such as Page Rank and HITS are also discussed. Written as a reference this book is for engineering and management students, research scientists, as well as academicians involved in complex networks, mathematical sciences, and marketing research.

Provides information on data analysis from a variety of social networking sites, including Facebook, Twitter, and LinkedIn.

Analyzing the Social Web provides a framework for the analysis of public data currently available and being generated by social networks and social media, like Facebook, Twitter, and Foursquare. Access and analysis of this public data about people and their connections to one another allows for new applications of traditional social network analysis techniques that let us identify things like who are the most important or influential people in a network, how things will spread through the network, and the nature of peoples' relationships. Analyzing the Social Web introduces you to these techniques, shows you their application to many different types of social media, and discusses how social media can be used as a tool for interacting with the online public. Presents interactive social applications on the web, and the types of analysis that are currently conducted in the study of social media. Covers the basics of network structures for beginners, including measuring methods for describing nodes, edges, and parts of the network. Discusses the major categories of social media applications or phenomena and shows how the techniques presented can be applied to analyze and understand the underlying data. Provides an introduction to information visualization, particularly network visualization techniques, and methods for using them to identify interesting features in a network, generate hypotheses for analysis, and recognize patterns of behavior.

Includes a supporting website with lecture slides, exercises, and downloadable social network data sets that can be used can be used to apply the techniques presented in the book.

The SAGE Handbook of Social Network Analysis

Analyzing Global Social Media Consumption

Social Network Analysis For Startups

Applications of Social Media and Social Network Analysis

Advances in Social Network Analysis

Social Networks: Analysis and Case Studies

Social network analysis increasingly bridges the discovery of patterns in diverse areas of study as more data becomes available and complex. Yet the construction of huge networks from large data often requires entirely different approaches for analysis including: graph theory, statistics, machine learning and data mining. This work covers frontier studies on social network analysis and mining from different perspectives such as social network sites, financial data, e-mails, forums, academic research funds, XML technology, blog content, community detection and clique finding, prediction of user's behavior, privacy in social network analysis, mobility from spatio-temporal point of view, agent technology and political parties in parliament. These topics will be of interest to researchers and practitioners from different disciplines including, but not limited to, social sciences and engineering.

This approachable book introduces network research in R, walking you through every step of doing social network analysis. Drawing together research design, data collection and data analysis, it explains the core concepts of network analysis in a non-technical way. The book balances an easy to follow explanation of the theoretical and statistical foundations underpinning network analysis with practical guidance on key steps like data management, preparation and visualisation. With clarity and expert insight, it:

• Discusses measures and techniques for analyzing social network data, including digital media

• Explains a range of statistical models including QAP and ERGM, giving you the tools to approach different types of networks

• Offers digital resources like practice datasets and worked examples that help you get to grips with R software

The ego-net approach to social network analysis, which takes discrete individual actors and their contacts as its starting point, is one of the most widely used approaches in the field. This is the first textbook to take readers through each stage of ego-net research, from conception, through research design and data gathering to analysis. It starts with the basics, assuming no prior knowledge of social network analysis, but then moves on to introduce cutting edge innovations, covering both new statistical approaches to ego-net analysis and also the most recent thinking on mixing methods (quantitative and qualitative) to achieve depth and rigour. It is an absolute must for anybody wishing to explore the importance of networks.

Social media has revolutionized how individuals, communities, and organizations create, share, and consume information. Similarly, social media offers numerous opportunities as well as enormous social and economic ills for individuals, communities, and organizations. Despite the increase in popularity of social networking sites and related digital media, there are limited data and studies on consumption patterns of the new media by different global communities. Analyzing Global Social Media Consumption is an essential reference book that investigates the current trends, practices, and newly emerging narratives on theoretical and empirical research on all aspects of social media and its global use. Covering topics that include fake news detection, social media addiction, and motivations and impacts of social media use, this book is ideal for big data analysts, media and communications experts, researchers, academicians, and students in media and communications, information systems, and information technology study programs.

Analyzing Social Media Data and Web Networks

Analyzing the Social Web

Encyclopedia of Social Network Analysis and Mining

Techniques and Applications

Sentiment Analysis in Social Networks

Social Network Analysis with Applications

This book uses literature as a wrench to pry open social networks and to ask different questions than have been asked about social networks previously. The book emphasizes the story-telling aspect of social networks, as well as the connection between narrative and social networks by incorporating narrative, dynamic networks, and time. Thus, it constructs a bridge between literature, digital humanities, and social networks. This book is a pioneering work that attempts to express social and philologic constructs in mathematical terms. The material used to test the algorithms is texts intended for performance, such as plays, film scripts, and radio plays; mathematical representations of the texts, or "literature networks", are then used to analyze the social networks found in the respective texts. By using literature networks and their accompanying narratives, along with their supporting analyses, this book allows for a novel approach to social network analysis.

Sociometrics and Human Relationships translates the latest academic research into practical business strategies and techniques for social network analysis. This essential new title is key reading for students and practitioners across marketing, design, sociology, psychology and the humanities, and comes with a free academic license of Conдор. The revised and updated edition of this bestselling text provides an accessible introduction to the theory and practice of network analysis in the social sciences. It gives a clear and authoritative guide to the general framework of network analysis, explaining the basic concepts, technical measures and reviewing the available computer programs. The book outlines both the theoretical basis of network analysis and the key techniques for using it as a research tool. Building upon definitions of points, lines and nodes, the text demonstrates their use in clarifying such measures as density, fragmentation and centralization. He identifies the various cliques, components and circles into which networks are formed, and outlines an approach to the study of socially structured positions. He also discusses the use of multidimensional methods for investigating social networks. Social Network Analysis is an invaluable resource for researchers across the social sciences and for students of social theory and research methods.

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 network 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.

Finding Connections on the Social Web

Sociometrics and Human Relationships

Analyzing Narratives in Social Networks

Analyzing Social Networks to Manage Brands, Predict Trends, and Improve Organizational Performance

State of the Art Applications of Social Network Analysis

Graph Theoretic Approaches for Analyzing Large-Scale Social Networks

As governments, citizens and organizations have moved online there is an increasing need for academic enquiry to adapt to this new context for communication and political action. This adaptation is crucially dependent on researchers being equipped with the necessary methodological tools to extract, analyze and visualize patterns of web activity. This volume profiles the latest techniques being employed by social scientists to collect and interpret data from some of the most popular social media applications, the political parties' own online activist spaces, and the wider system of hyperlinks that structure the inter-connections between these sites. Including contributions from a range of academic disciplines including Political Science, Media and Communication Studies, Economics, and Computer Science, this study showcases a new methodological approach that has been expressly designed to capture and analyze web data in the process of investigating substantive questions.

SNA techniques are derived from sociological and social-psychological theories and take into account the whole network (or, in case of very large networks such as Twitter -- a large segment of the network). Thus, we may arrive at results that may seem counter-intuitive -- e.g. that Justin Bieber (7.5 mil. followers) and Lady Gaga (7.2 mil. followers) have relatively little actual influence despite their celebrity status -- while a middle-of-the-road blogger with 30K followers is able to generate tweets that "go viral" and result in millions of impressions. O'Reilly's "Mining Social Media" and "Programming Collective Intelligence" books are an excellent start for people interested in SNA. This book builds on these books' foundations to teach a new, pragmatic, way of doing SNA. I would like to write a book that links theory ("why is this important?"; "how do various concepts interact?"; "how do I interpret quantitative results?") and practice -- gathering, analyzing and visualizing data using Python and other open-source tools.

Social Network Analysis and Mining Encyclopedia (ESNAM) is the first major reference work to integrate fundamental concepts and research directions in the areas of social networks and applications to data mining. The second edition of ESNAM is a truly outstanding reference appealing to researchers, practitioners, instructors and students (both undergraduate and graduate), as well as the general public. This updated reference integrates all basics concepts and research efforts under one umbrella. Coverage has been expanded to include new emerging topics such as crowdsourcing, opinion mining, and sentiment analysis. Revised content of existing material keeps the encyclopedia current. The second edition is intended for college students as well as public and academic libraries. It is unique in that it simultaneously addresses their use in clarifying such measures as density, fragmentation and centralization. He identifies the various cliques, components and circles into which networks are formed, and outlines an approach to the study of socially structured positions. He also discusses the use of multidimensional methods for investigating social networks. Social Network Analysis is an invaluable resource for researchers across the social sciences and for students of social theory and research methods.

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 network 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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Graph Theoretic Approaches for Analyzing Large-Scale Social Networks

As governments, citizens and organizations have moved online there is an increasing need for academic enquiry to adapt to this new context for communication and political action. This adaptation is crucially dependent on researchers being equipped with the necessary methodological tools to extract, analyze and visualize patterns of web activity. This volume profiles the latest techniques being employed by social scientists to collect and interpret data from some of the most popular social media applications, the political parties' own online activist spaces, and the wider system of hyperlinks that structure the inter-connections between these sites. Including contributions from a range of academic disciplines including Political Science, Media and Communication Studies, Economics, and Computer Science, this study showcases a new methodological approach that has been expressly designed to capture and analyze web data in the process of investigating substantive questions.

SNA techniques are derived from sociological and social-psychological theories and take into account the whole network (or, in case of very large networks such as Twitter -- a large segment of the network). Thus, we may arrive at results that may seem counter-intuitive -- e.g. that Justin Bieber (7.5 mil. followers) and Lady Gaga (7.2 mil. followers) have relatively little actual influence despite their celebrity status -- while a middle-of-the-road blogger with 30K followers is able to generate tweets that "go viral" and result in millions of impressions. O'Reilly's "Mining Social Media" and "Programming Collective Intelligence" books are an excellent start for people interested in SNA. This book builds on these books' foundations to teach a new, pragmatic, way of doing SNA. I would like to write a book that links theory ("why is this important?"; "how do various concepts interact?"; "how do I interpret quantitative results?") and practice -- gathering, analyzing and visualizing data using Python and other open-source tools.

Social Network Analysis and Mining Encyclopedia (ESNAM) is the first major reference work to integrate fundamental concepts and research directions in the areas of social networks and applications to data mining. The second edition of ESNAM is a truly outstanding reference appealing to researchers, practitioners, instructors and students (both undergraduate and graduate), as well as the general public. This updated reference integrates all basics concepts and research efforts under one umbrella. Coverage has been expanded to include new emerging topics such as crowdsourcing, opinion mining, and sentiment analysis. Revised content of existing material keeps the encyclopedia current. The second edition is intended for college students as well as public and academic libraries. It is unique in that it simultaneously addresses their use in clarifying such measures as density, fragmentation and centralization. He identifies the various cliques, components and circles into which networks are formed, and outlines an approach to the study of socially structured positions. He also discusses the use of multidimensional methods for investigating social networks. Social Network Analysis is an invaluable resource for researchers across the social sciences and for students of social theory and research methods.

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 network 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.

This sparkling Handbook offers an unrivalled resource for those engaged in the cutting edge field of social network analysis. Systematically, it introduces readers to the key concepts, substantive topics, central methods and prime debates. Among the specific areas covered are: Network theory Interdisciplinary applications Online networks Corporate networks Lobbying networks Deviant networks Measuring devices Key Methodologies Software applications. The result is a peerless resource for teachers and students which offers a critical survey of the origins, basic issues and major debates. The Handbook provides a one-stop guide that will be used by readers for decades to come.