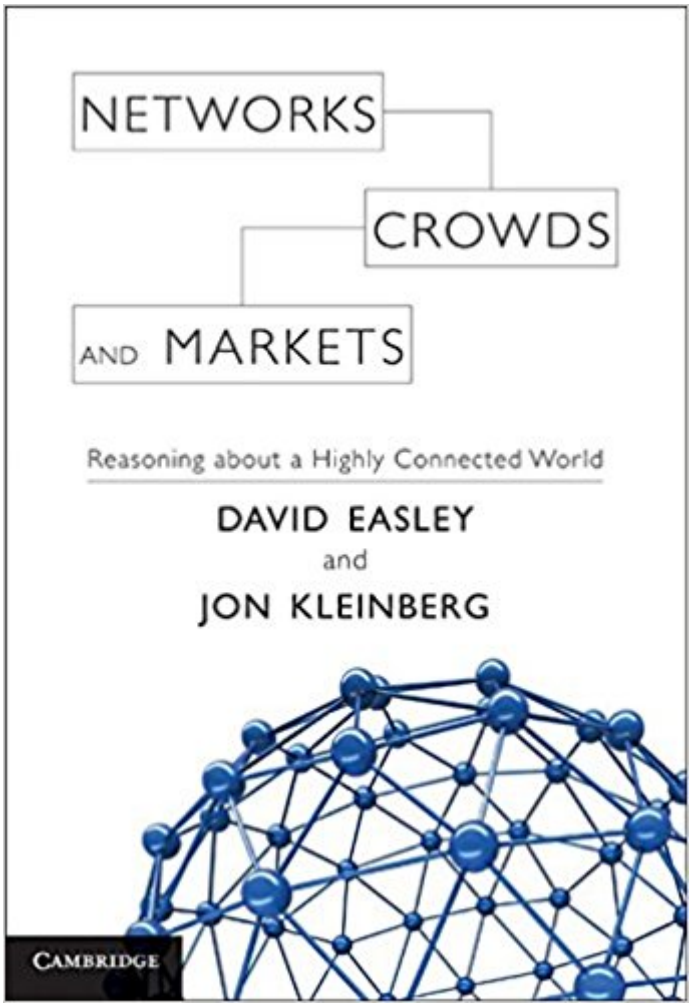
Networks, Crowds, And Markets: Reasoning About A Highly Connected World



Synopsis

Over the past decade there has been a growing public fascination with the complex connectedness of modern society. This connectedness is found in many incarnations: in the rapid growth of the Internet, in the ease with which global communication takes place, and in the ability of news and information as well as epidemics and financial crises to spread with surprising speed and intensity. These are phenomena that involve networks, incentives, and the aggregate behavior of groups of people; they are based on the links that connect us and the ways in which our decisions can have subtle consequences for others. This introductory undergraduate textbook takes an interdisciplinary look at economics, sociology, computing and information science, and applied mathematics to understand networks and behavior. It describes the emerging field of study that is growing at the interface of these areas, addressing fundamental questions about how the social, economic, and technological worlds are connected.

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Customer Reviews

"The field of information networks is an emerging discipline of immense importance that combines graph theory, probability and statistics, microeconomics and facets of the social sciences. Easley and Kleinberg present a panoramic view of this field, from basic graph theory all the way to the state of the art in research." Prabhakar Raghavan, Head of Yahoo! Labs"Networks are everywhere, in our social lives, in our economic relations, and in nature; they are now finally arriving to our classrooms. Easley and Kleinberg have written a masterful introduction to networks. This book successfully combines the game theoretic and algorithmic approaches to the study of social, economic and

communication networks. It is lively, interesting, readable and accessible. It is a pleasure to teach using this book and never a dull moment for the students." Daron Acemoglu, Charles P. Kindleberger Professor of Applied Economics, Massachusetts Institute of Technology"The first college-level text on network science, it should be a big hit for students in economics and business." Stan Wasserman, Rudy Professor of Statistics, Psychology, and Sociology, Indiana University"In this remarkable book, David Easley and Jon Kleinberg bring all the tools of computer science, economics, and sociology to bear on one of the great scientific challenges of our time: understanding the structure, function, and dynamics of networks in society. Clearly written and covering an impressive range of topics, "Networks, Crowds, and Markets" is the ideal starting point for any student aspiring to learn the fundamentals of the emerging field of network science." Duncan Watts, Principal Research Scientist, Yahoo! Research, and author of Six Degrees: The Science of A Connected Age"David Easley and Jon Kleinberg have given us a totally new kind of basic economics text, where students learn how to analyze social networks and crowds as well as games and markets. This book covers a remarkable range of topics and offers a broad new vision of what economics can be about." Roger Myerson, Glen A. Lloyd Distinguished Service Professor of Economics at the University of Chicago and winner of the 2007 Nobel Prize in Economics"In my three decades plus of teaching, I cannot recall an urge to teach a new undergraduate course like the one I felt upon leafing through this wonderful introduction to everything that is new and important and intellectually challenging in our world." Christos Papadimitriou, C. Lester Hogan Professor of EECS, University of California, Berkeley"The elegant explanations in this book allow readers to rapidly gain a deep understanding of how networks work. Without resorting to either advanced math or even a bit of hand-waving, Easley and Kleinberg take us through the essential concepts and intriguing real-world applications." Professor Lada Adamic, School of Information and Center for the Study of Complex Systems, University of MichiganCheck out this review: Read Suite 101’s Review Here."This unusual range of topics is what makes this book invaluable. Instead of just focusing on abstract mathematical models and their formal properties, it puts models in their proper place within a process that begins with empirical observations, leads to mathematical models, is followed by some predictions, and is then subject to experimental validation that starts the cycle anew. In the meantime, one reasons about the connected world around us, discovers some facts, gets some insight into the behavior of complex systems, and even enjoys some "aha!" moments. The book is a pleasure to read." Fernando Berzal, Computing Reviews"The book is clearly written and produced to the quality you can expect from CUP. This important and inspiring book must not be missing from the computer scientist’s bookshelf in the 21st century, be it because they ought to be teaching the

material to their students as an academic, be it because they are a practitioner who want a fundamental understanding of the methods they may already deploy, and how they relate to other areas." Jochen L. Leidner"This excellent book by David Easley and Jon Kleinberg, both at Cornell University, is an interdisciplinary work that is well placed to channel and challenge the enthusiasm we have today for all things networked. It covers a wide range of theoretical and practical topics that effectively define the operation of networks, our relationship with them and the behaviours that they engender.Far from being a terse, technical analysis, this is an elegant and engaging examination of the subject. Game theory, for example, suddenly gains a whole new interest when discussed, as it is here, in terms of the behaviour of buyers and sellers in an online auction - a subject that will appeal to the inner geek in those readers seeking to understand the "deep magic" of the process." John Gilbey, Times Higher Education"Networks, Crowds, and Markets is an exceptional book." George K. Thiruvathukal, IEEE Computing in Science and Engineering"This text offers an integrated, but not superficial, introduction to these new mathematical concepts and their application across a range of social problems. Each section provides rigorous proofs of key results and rich references to the literature, while remaining accessible to the undergraduate with only a high school mathematics background. It also holds great promise for people with a strong background in another field who wish to understand some of the key questions addressed by the social sciences." H. Van Dyke Parunak, Computing Reviews"Networks, Crowds, and markets offers students an excellent opportunity to relate enduring conceptual material, taught in numerous traditional courses, to their fast-paced and ever-changing world. Typically, textbooks have not often done so. This work serves, therefore, not only as motivation for students to appreciate the beauty of the abstract, but also as a model for what textbooks might become in the near future." Sandra L. Arlinghaus, Mathematical Reviews"This is a fun book. It offers a feast learning curve without confusing the reader with technical details, and it opens a great and timely perspective on dynamical processes in social systems. Easley, an economist, and Kleinberg, a computer scientist, accomplish the difficult task of making the subject available to students from basically any field without being superficial... a hot pick for interested students and researchers new to the interdisciplinary field of complex networks." Dirk Brockmann, Physics Today

This introductory undergraduate textbook draws on economics, sociology, computing and information science, and applied mathematics to understand networks and behavior. It describes the emerging field of study that is growing at the interface of these areas, addressing fundamental questions about how the phenomena of the connectedness of modern society involve networks,

incentives, and the aggregate behavior of groups of people.

This is a nice introductory book to network ideas and some basic math concepts for network analysis. The math is made very easy and intelligible. There are lots of examples of real networks that have been studied. I think it makes for a good undergraduate textbook.

a good handbook on networks

Excellent work by authors who know how to make a complex subject accessible, fascinating and engrossing to non-experts. (This book is always checked out at our library.) I have only one problem with this book: the inks or glue(?) really smell! The off-gassing is nauseating. Get the ebook version!

This book starts with an analysis of the game theory by a general view. If we study particularly the way of connecting the paths, we have an approach to many questions of several matters. Those questions are the traditional of the game theory, but the book talks also about the Web structure, the relation with the market, the power laws. The last case connects the game theory with the fractals. Other facts whom have a sure interest by this point of view are related to the biology, the voting system, the intellectual property.

Love this book. Introduces in a very intuitive way, without loosing it’s formality, the concepts of networks and its applications.

nice

It was a nicely written book. Though I originally was hoping there would be more discussions on the small world aspect of the social network, I found other part of the book interesting as well.

Excellent introductory book for network theory.

Practical Guide to Implementing 802.11n and 802.11ac Wireless Networks For Enterprise-Based Applications (2nd Edition) (Networking Technology) Empath: 16 Simple Habits To Protect Yourself, Feel Better & Enjoy Life Even If You Are Highly Sensitive: Secrets To Thrive As An Empath (Survival & Healing ... Empaths & Highly Sensitive People (HSP)) The Highly Selective Dictionary of Golden Adjectives: For the Extraordinarily Literate (Highly Selective Reference) A Self-Guided Workbook for Highly Effective Teens: A Companion to the Best Selling 7 Habits of Highly Effective Teens Legal Reasoning and Legal Writing [Connected Casebook] (Aspen Coursebook) Critical Reasoning GMAT Strategy Guide, 5th Edition (Manhattan GMAT Preparation Guide: Critical Reasoning) The PowerScore LSAT Logical Reasoning Bible: A Comprehensive System for Attacking the Logical Reasoning Section of the LSAT Energy Networks and the Law: Innovative Solutions in Changing Markets Study Guide for The Economics of Money, Banking, and Financial Markets and The Economics of Money, Banking, and Financial Markets Business School Edition Extraordinary Popular Delusions and the Madness of Crowds and Confusion Grand Canyon Tips: The LocalÃ¢â ¬â„¢s Guide to Avoiding the Crowds and Getting the Most Out of Your Visit Extraordinary Popular Delusions and the Madness of Crowds (Illustrated) Extraordinary Popular Delusions and The Madness of Crowds Crowd Management Made Easy: Models, methods and examples to keep your crowds safe KYOTO WITHOUT CROWDS: A Guide to the City’s Most Peaceful Temples and Gardens Crowds, Colour, Chaos: Travels in India, Nepal, Sri Lanka and Bangladesh Crowds, Chaos, Colour: Visiting India, Nepal, Sri Lanka and Bangladesh