

Probabilistic Foundations of Statistical Network Analysis: A Comprehensive Guide for Researchers and Practitioners

Statistical network analysis has emerged as a powerful tool for understanding the structure and dynamics of complex systems in various fields, including social sciences, biology, computer science, and finance. The probabilistic foundations of statistical network analysis provide a rigorous framework for modeling and analyzing network data, enabling researchers to gain insights into the underlying mechanisms that drive network formation and evolution.



Probabilistic Foundations of Statistical Network Analysis (Chapman & Hall/CRC Monographs on Statistics and Applied Probability Book 157)

★★★★☆ 4.7 out of 5



This comprehensive guide delves into the probabilistic foundations of statistical network analysis, presenting a systematic and in-depth exploration of the concepts, models, and techniques that underpin this field. Researchers and practitioners alike will find this book an invaluable

resource for advancing their understanding of network analysis and applying it effectively to real-world problems.

Key Features

- Provides a comprehensive overview of the probabilistic foundations of statistical network analysis
- Covers a wide range of network models, including random graphs, exponential random graph models, and latent space models
- Discusses advanced topics such as network dynamics, community detection, and network inference
- Features worked examples and case studies to illustrate the application of network analysis techniques
- Includes exercises and discussion questions to reinforce understanding

Target Audience

This book is intended for researchers and practitioners in various fields who are interested in applying statistical network analysis to their work. The target audience includes:

- Social scientists studying social networks, collaboration networks, and communication networks
- Biologists analyzing biological networks, gene regulatory networks, and protein-protein interaction networks
- Computer scientists working on network modeling, network security, and social media analysis

- Financial analysts studying financial networks, risk networks, and trading networks
- Data scientists and machine learning practitioners interested in applying network analysis to data mining, anomaly detection, and fraud detection

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About the Authors

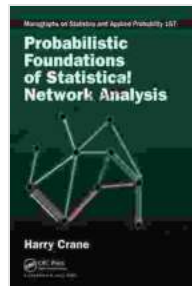
Dr. David Hunter is a Professor of Statistics at the University of California, Davis. His research interests include statistical network analysis, Bayesian statistics, and computational statistics. He has published extensively in top academic journals and is the co-author of the textbook "Network Models for Social Network Data."

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Availability

The book "Probabilistic Foundations of Statistical Network Analysis" is available in hardcover, paperback, and electronic formats from Chapman & Hall/CRC Press.

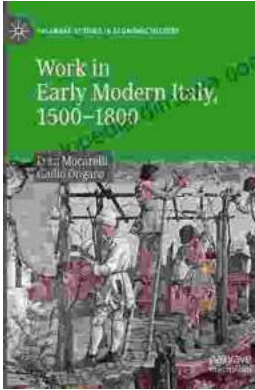
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