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KEY=COURSE - HAYNES ZAYNE

A First Course in Network Theory

Oxford University Press, USA **The study of network theory is a highly interdisciplinary field, which has emerged as a major topic of interest in various disciplines ranging from physics and mathematics, to biology and sociology. This book promotes the diverse nature of the study of complex networks by balancing the needs of students from very different backgrounds. It references the most commonly used concepts in network theory, provides examples of their applications in solving practical problems, and clear indications on how to analyse their results. In the first part of the book, students and researchers will discover the quantitative and analytical tools necessary to work with complex networks, including the most basic concepts in network and graph theory, linear and matrix algebra, as well as the physical concepts most frequently used for studying networks. They will also find instruction on some key skills such as how to proof analytic results and how to manipulate empirical network data. The bulk of the text is focused on instructing readers on the most useful tools for modern practitioners of network theory. These include degree distributions, random networks, network fragments, centrality measures, clusters and communities, communicability, and local and global properties of networks. The combination of theory, example and method that are presented in this text, should ready the student to conduct their own analysis of networks with confidence and allow teachers to select appropriate examples and problems to teach this subject in the classroom.**

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A First Course in Network Science

Cambridge University Press **A practical introduction to network science for students across business, cognitive science, neuroscience, sociology, biology, engineering and other disciplines.**

A First Course in Information Theory

Springer Science & Business Media **This book provides an up-to-date introduction to information theory. In addition to the classical topics discussed, it provides the first comprehensive treatment of the theory of I-Measure, network coding theory, Shannon and non-Shannon type information inequalities, and a relation between entropy and group theory. ITIP, a software package for proving information inequalities, is also included. With a large number of examples, illustrations, and original problems, this book is excellent as a textbook or reference book for a senior or graduate level course on the subject, as well as a reference for researchers in related fields.**

An Introduction to Neural Networks

CRC Press **Though mathematical ideas underpin the study of neural networks, the author presents the fundamentals without the full mathematical apparatus. All aspects of the field are tackled, including artificial neurons as models of their real counterparts; the geometry of network action in pattern space; gradient descent methods, including back-propagation; associative memory and Hopfield nets; and self-organization and feature maps. The traditionally difficult topic of adaptive resonance theory is clarified within a hierarchical description of its operation. The book also includes several real-world examples to provide a concrete focus. This should enhance its appeal to those involved in the design, construction and management of networks in commercial environments and who wish to improve their understanding of network simulator packages. As a comprehensive and highly accessible introduction to one of the most important topics in cognitive and computer science, this volume should interest a wide range of readers, both students and professionals, in cognitive science, psychology, computer science and electrical engineering.**

Networks, Crowds, and Markets

Reasoning About a Highly Connected World

Cambridge University Press **Are all film stars linked to Kevin Bacon? Why do the stock markets rise and fall sharply on the strength of a vague rumour? How does gossip spread so quickly? Are we all related through six degrees of separation? There is a growing awareness of the complex networks that pervade modern society. We see them in the rapid growth of the Internet, the ease of global communication, the swift spread of news and information, and in the way epidemics and financial crises develop with startling speed and intensity. This introductory book on the new science of networks takes an interdisciplinary approach, using economics, sociology, computing, information science and applied mathematics to address fundamental questions about the links that connect us, and the ways that our decisions can have consequences for others.**

A First Course in Artificial

Intelligence

Bentham Science Publishers **The importance of Artificial Intelligence cannot be over-emphasised in current times, where automation is already an integral part of industrial and business processes. A First Course in Artificial Intelligence is a comprehensive textbook for beginners which covers all the fundamentals of Artificial Intelligence. Seven chapters (divided into thirty-three units) introduce the student to key concepts of the discipline in simple language, including expert system, natural language processing, machine learning, machine learning applications, sensory perceptions (computer vision, tactile perception) and robotics. Each chapter provides information in separate units about relevant history, applications, algorithm and programming with relevant case studies and examples. The simplified approach to the subject enables beginners in computer science who have a basic knowledge of Java programming to easily understand the contents. The text also introduces Python programming language basics, with demonstrations of natural language processing. It also introduces readers to the Waikato Environment for Knowledge Analysis (WEKA), as a tool for machine learning. The book is suitable for students and teachers involved in introductory courses in undergraduate and diploma level courses which have appropriate modules on artificial intelligence.**

Understanding Machine Learning From Theory to Algorithms

Cambridge University Press **Introduces machine learning and its algorithmic paradigms, explaining the principles behind automated learning approaches and the considerations underlying their usage.**

World Congress on Neural Networks 1994 International Neural Network Society Annual Meeting

Routledge **Centered around 20 major topic areas of both theoretical and practical importance, the World Congress on Neural Networks provides its registrants -- from a diverse background encompassing industry, academia, and government -- with the latest research and applications in the neural network field.**

Information Theory and Network Coding

Springer Science & Business Media **This book is an evolution from my book A First Course in Information Theory published in 2002 when network coding was still at its infancy. The last few years have witnessed the rapid development of network coding into a research ?eld of its own in information science. With its root in infor- tion theory, network coding has not only brought about a paradigm shift in network communications at large, but also had signi?cant in?uence on such speci?c research ?elds as coding theory, networking, switching, wireless c-munications,distributeddatastorage,cryptography,andoptimizationtheory. While new applications of network coding keep emerging, the fundamental - sults that lay the foundation of the subject are more or less mature. One of the main goals of this book therefore is to present these results in a unifying and coherent manner. While the previous book focused only on information theory for discrete random variables, the current book contains two new chapters on information theory for continuous random variables, namely the chapter on di?erential entropy and the chapter on continuous-valued channels. With these topics included, the book becomes more comprehensive and is more suitable to be used as a textbook for a course in an electrical engineering department.**

Network Flow Algorithms

Cambridge University Press **Offers an up-to-date, unified treatment of combinatorial algorithms to solve network flow problems for graduate students and professionals.**

Information Theory, Inference and Learning Algorithms

Cambridge University Press **Table of contents**

Elements of Information Theory

John Wiley & Sons **The latest edition of this classic is updated with new problem sets and material The Second Edition of this fundamental textbook maintains the book's tradition of clear, thought-provoking instruction. Readers are provided once again with an instructive mix of mathematics, physics, statistics, and information theory. All the essential topics in information theory are covered in detail, including entropy, data compression, channel capacity, rate distortion, network information**

theory, and hypothesis testing. The authors provide readers with a solid understanding of the underlying theory and applications. Problem sets and a telegraphic summary at the end of each chapter further assist readers. The historical notes that follow each chapter recap the main points. The Second Edition features: * Chapters reorganized to improve teaching * 200 new problems * New material on source coding, portfolio theory, and feedback capacity * Updated references Now current and enhanced, the Second Edition of Elements of Information Theory remains the ideal textbook for upper-level undergraduate and graduate courses in electrical engineering, statistics, and telecommunications.

A First Course in Information Theory

Springer Science & Business Media **This book provides an up-to-date introduction to information theory. It provides the first comprehensive treatment of the theory of I-Measure, network coding theory, Shannon and non-Shannon type information inequalities, and a relation between entropy and group theory.**

Control Theory in Engineering

BoD – Books on Demand **The subject matter of this book ranges from new control design methods to control theory applications in electrical and mechanical engineering and computers. The book covers certain aspects of control theory, including new methodologies, techniques, and applications. It promotes control theory in practical applications of these engineering domains and shows the way to disseminate researchers' contributions in the field. This project presents applications that improve the properties and performance of control systems in analysis and design using a higher technical level of scientific attainment. The authors have included worked examples and case studies resulting from their research in the field. Readers will benefit from new solutions and answers to questions related to the emerging realm of control theory in engineering applications and its implementation.**

Network Tomography

Identifiability, Measurement Design, and Network State Inference

Cambridge University Press **A rigorous yet accessible treatment of the fundamental theory and algorithms of network tomography.**

Network Information Theory

Cambridge University Press **This comprehensive treatment of network information theory and its applications provides the first unified coverage of both classical and recent results. With an approach that balances the introduction of new models and new coding techniques, readers are guided through Shannon's point-to-point information theory, single-hop networks, multihop networks, and extensions to distributed computing, secrecy, wireless communication, and networking. Elementary mathematical tools and techniques are used throughout, requiring only basic knowledge of probability, whilst unified proofs of coding theorems are based on a few simple lemmas, making the text accessible to newcomers. Key topics covered include successive cancellation and superposition coding, MIMO wireless communication, network coding, and cooperative relaying. Also covered are feedback and interactive communication, capacity approximations and scaling laws, and asynchronous and random access channels. This book is ideal for use in the classroom, for self-study, and as a reference for researchers and engineers in industry and academia.**

A Course in Networks and Markets

Game-theoretic Models and Reasoning

MIT Press **A graduate-level, mathematically rigorous introduction to strategic behavior in a networked world. This introductory graduate-level text uses tools from game theory and graph theory to examine the role of network structures and network effects in economic and information markets. The goal is for students to develop an intuitive and mathematically rigorous understanding of how strategic agents interact in a connected world. The text synthesizes some of the central results in the field while also simplifying their treatment to make them more accessible to nonexperts. Thus, students at the introductory level will gain an understanding of key ideas in the field that are usually only taught at the advanced graduate level. The book introduces basic concepts from game theory and graph theory as well as some fundamental algorithms for exploring graphs. These tools are then applied to analyze strategic interactions over social networks, to explore different types of markets and mechanisms for networks, and to study the role of beliefs and higher-level beliefs (beliefs about beliefs). Specific topics discussed include coordination and contagion on social networks, traffic networks, matchings and matching markets, exchange networks, auctions, voting, web search, models of belief and knowledge, and how beliefs affect auctions and**

markets. An appendix offers a "Primer on Probability." Mathematically rigorous, the text assumes a level of mathematical maturity (comfort with definitions and proofs) in the reader.

The Valuation of Digital Intangibles

Technology, Marketing and Internet

Springer Nature **This book offers a primer on the valuation of digital intangibles, a trending class of immaterial assets. Startups like successful unicorns, as well as consolidated firms desperately working to re-engineer their business models, are now trying to go digital and to reap higher returns by exploiting new intangibles. This book is innovative in its design and concept since it tackles a frontier topic with an original methodology, combining academic rigor with practical insights. Digital intangibles range from digitized versions of traditional immaterial assets (brands, patents, know-how, etc.) to more trendy applications like big data, Internet of Things, interoperable databases, artificial intelligence, digital newspapers, social networks, blockchains, FinTech applications, etc. This book comprehensively addresses related valuation issues, and demonstrates how best practices can be applied to specific asset appraisals, making it of interest to researchers, students, and practitioners alike.**

Holistic Analysis and Management of Distributed Social Systems

Springer **This book describes the application of a high-level technology to solve problems in distributed systems that have networked structures with millions to billions of nodes. The main difference from other works is that the approach is based on holistically and simultaneously analysing these systems using a spatial pattern-matching mode, which produces solutions hundreds of times faster than usual. The latest version of the technology is described, together with implementation details and basic Spatial Grasp Language. In addition, the book highlights numerous solutions, covering graph and network problems, their use in large social, industrial, and business ecosystems, social robotics and driverless transport, and the possibility of extrapolating from known gestalt laws on distributed systems, which could potentially be applied in civil and defence contexts. The book is intended for system scientists, business and industry managers, economists, application programmers, security and defence personnel, as well as university students.**

Mathematics for Machine Learning

Cambridge University Press **The fundamental mathematical tools needed to understand machine learning include linear algebra, analytic geometry, matrix decompositions, vector calculus, optimization, probability and statistics. These topics are traditionally taught in disparate courses, making it hard for data science or computer science students, or professionals, to efficiently learn the mathematics. This self-contained textbook bridges the gap between mathematical and machine learning texts, introducing the mathematical concepts with a minimum of prerequisites. It uses these concepts to derive four central machine learning methods: linear regression, principal component analysis, Gaussian mixture models and support vector machines. For students and others with a mathematical background, these derivations provide a starting point to machine learning texts. For those learning the mathematics for the first time, the methods help build intuition and practical experience with applying mathematical concepts. Every chapter includes worked examples and exercises to test understanding. Programming tutorials are offered on the book's web site.**

Structure, Agency and Biotechnology

The Case of the Rothamsted GM Wheat Trials

Anthem Press **Structure, Agency and Biotechnology argues for the significance of sociological theory and highlights the insights it can offer to the study of agricultural biotechnology. Cautioning against a simplistic reading of the GM controversy as merely a debate of science versus politics, Aristeidis Panagiotou suggests that the discussion should be embedded in the wider social, political, economic and cultural contexts. Structure, Agency and Biotechnology assesses the 2012 Rothamsted GM wheat trials and proposes that the tension underlying GM technology should be resolved through sustained dialogue, public involvement and broad scientific consensus.**

The Mathematical Theory of

Communication

University of Illinois Press **Scientific knowledge grows at a phenomenal pace-- but few books have had as lasting an impact or played as important a role in our modern world as The Mathematical Theory of Communication, published originally as a paper on communication theory more than fifty years ago. Republished in book form shortly thereafter, it has since gone through four hardcover and sixteen paperback printings. It is a revolutionary work, astounding in its foresight and contemporaneity. The University of Illinois Press is pleased and honored to issue this commemorative reprinting of a classic.**

A First Course in Loop Quantum Gravity

Oxford University Press **Loop quantum gravity is one of the modern contenders for a unified description of quantum mechanics and gravity. Up to now no book has covered the material at the level of a college student or of other readers with some knowledge of college level physics. This book fills that gap.**

Quantum Computation and Quantum Information

Cambridge University Press **First-ever comprehensive introduction to the major new subject of quantum computing and quantum information.**

Deep Learning

MIT Press **An introduction to a broad range of topics in deep learning, covering mathematical and conceptual background, deep learning techniques used in industry, and research perspectives. "Written by three experts in the field, Deep Learning is the only comprehensive book on the subject." —Elon Musk, cochair of OpenAI; cofounder and CEO of Tesla and SpaceX Deep learning is a form of machine learning that enables computers to learn from experience and understand the world in terms of a hierarchy of concepts. Because the computer gathers knowledge from experience, there is no need for a human computer operator to formally specify all the knowledge that the computer needs. The hierarchy of concepts allows the computer to learn complicated concepts by building them out of simpler ones; a graph of these hierarchies would be many layers deep. This book introduces a broad range of topics in deep learning. The text offers mathematical and conceptual background, covering**

relevant concepts in linear algebra, probability theory and information theory, numerical computation, and machine learning. It describes deep learning techniques used by practitioners in industry, including deep feedforward networks, regularization, optimization algorithms, convolutional networks, sequence modeling, and practical methodology; and it surveys such applications as natural language processing, speech recognition, computer vision, online recommendation systems, bioinformatics, and videogames. Finally, the book offers research perspectives, covering such theoretical topics as linear factor models, autoencoders, representation learning, structured probabilistic models, Monte Carlo methods, the partition function, approximate inference, and deep generative models. Deep Learning can be used by undergraduate or graduate students planning careers in either industry or research, and by software engineers who want to begin using deep learning in their products or platforms. A website offers supplementary material for both readers and instructors.

A First Course in String Theory

Cambridge University Press **Publisher Description**

Network Governance

Concepts, Theories, and Applications

Network governance has received much attention within the fields of public administration and policy in recent years, but surprisingly few books are designed specifically to help students, researchers, and practitioners examine key concepts, synthesize the growing body of literature into reliable frameworks, and to bridge the theory-practice gap by exploring network applications. Network Governance: Concepts, Theories, and Applications is the first textbook to focus on interorganizational networks and network governance from the perspective of public policy and administration, asking important questions such as: How are networks designed and developed? How are they governed, and what type of leadership do they require? To whom are networks accountable, and when are they effective? How can network governance contribute to effective delivery of public services and policy implementation? In this timely new book, authors Naim Kapucu and Qian Hu define and examine key concepts, propose exciting new theoretical frameworks to synthetize the fast-growing body of network research in public policy and administration, and provide detailed discussion of applications. Network Governance offers not only a much-needed systematic examination of existing knowledge, but it

also goes much further than existing books by discussing the applications of networks in a wide range of management practice and policy domains-- including natural resource management, environmental protection, public health, emergency and crisis management, law enforcement, transportation, and community and economic development. Chapters include understudied network research topics such as power and decision-making in interorganizational networks, virtual networks, global networks, and network analysis applications. What sets this book apart is the introduction of social network analysis and coverage of applications of social network analysis in the policy and management domains. PowerPoint slides and a sample syllabus are available for adopters on an accompanying website. Drawing on literature from sociology, policy sciences, organizational studies, and economics, this textbook will be required reading for courses on network governance, collaborative public management, cross-sector governance, and collaboration and partnerships in programs of public administration, public affairs, and public policy.

Social Media Data Extraction and Content Analysis

IGI Global **In today's society, the utilization of social media platforms has become an abundant forum for individuals to post, share, tag, and, in some cases, overshare information about their daily lives. As significant amounts of data flood these venues, it has become necessary to find ways to collect and evaluate this information. Social Media Data Extraction and Content Analysis explores various social networking platforms and the technologies being utilized to gather and analyze information being posted to these venues. Highlighting emergent research, analytical techniques, and best practices in data extraction in global electronic culture, this publication is an essential reference source for researchers, academics, and professionals.**

Broadcast your Shakespeare Continuity and Change Across Media

Bloomsbury Publishing **This volume of essays contributes to current debates about Shakespeare in new media. It importantly develops the field by providing a comparativist approach to Shakespeare's dynamic media history. Contributors to Broadcast Your Shakespeare address the variety of ways Shakespeare texts have been expressed through different media and continue to be. Writing at the intersection of Shakespeare studies and**

media studies, these international contributors also consider the role of a particular media in producing Shakespeare's effect on us - as readers, viewers and users. The volume suggests how current analyses of new media Shakespeare have much to learn from older media, and that an awareness both of media specificity and also continuity can enhance Shakespeare pedagogy and research.

Twenty Lectures on Algorithmic Game Theory

Cambridge University Press **Computer science and economics have engaged in a lively interaction over the past fifteen years, resulting in the new field of algorithmic game theory. Many problems that are central to modern computer science, ranging from resource allocation in large networks to online advertising, involve interactions between multiple self-interested parties. Economics and game theory offer a host of useful models and definitions to reason about such problems. The flow of ideas also travels in the other direction, and concepts from computer science are increasingly important in economics. This book grew out of the author's Stanford University course on algorithmic game theory, and aims to give students and other newcomers a quick and accessible introduction to many of the most important concepts in the field. The book also includes case studies on online advertising, wireless spectrum auctions, kidney exchange, and network management.**

Modeling Techniques in Predictive Analytics

Business Problems and Solutions with R

Pearson Education **Today, successful firms win by understanding their data more deeply than competitors do. In short, they compete based on analytics. Now, in Modeling Techniques in Predictive Analytics, the leader of Northwestern University's prestigious analytics program brings together all the concepts, techniques, and R code you need to excel in analytics. Thomas W. Miller's unique balanced approach combines business context and quantitative tools, appealing to managers, analysts, programmers, and students alike.--**

Network Science

Cambridge University Press **Illustrated throughout in full colour, this pioneering text is the only book you need for an introduction to network science.**

Foundations of Data Science

Cambridge University Press **This book provides an introduction to the mathematical and algorithmic foundations of data science, including machine learning, high-dimensional geometry, and analysis of large networks. Topics include the counterintuitive nature of data in high dimensions, important linear algebraic techniques such as singular value decomposition, the theory of random walks and Markov chains, the fundamentals of and important algorithms for machine learning, algorithms and analysis for clustering, probabilistic models for large networks, representation learning including topic modelling and non-negative matrix factorization, wavelets and compressed sensing. Important probabilistic techniques are developed including the law of large numbers, tail inequalities, analysis of random projections, generalization guarantees in machine learning, and moment methods for analysis of phase transitions in large random graphs. Additionally, important structural and complexity measures are discussed such as matrix norms and VC-dimension. This book is suitable for both undergraduate and graduate courses in the design and analysis of algorithms for data.**

Reinforcement Learning, second edition

An Introduction

MIT Press **The significantly expanded and updated new edition of a widely used text on reinforcement learning, one of the most active research areas in artificial intelligence. Reinforcement learning, one of the most active research areas in artificial intelligence, is a computational approach to learning whereby an agent tries to maximize the total amount of reward it receives while interacting with a complex, uncertain environment. In Reinforcement Learning, Richard Sutton and Andrew Barto provide a clear and simple account of the field's key ideas and algorithms. This second edition has been significantly expanded and updated, presenting new topics and updating coverage of other topics. Like the first edition, this second edition focuses on core online learning algorithms, with the more mathematical material set off in shaded boxes. Part I covers as much of**

reinforcement learning as possible without going beyond the tabular case for which exact solutions can be found. Many algorithms presented in this part are new to the second edition, including UCB, Expected Sarsa, and Double Learning. Part II extends these ideas to function approximation, with new sections on such topics as artificial neural networks and the Fourier basis, and offers expanded treatment of off-policy learning and policy-gradient methods. Part III has new chapters on reinforcement learning's relationships to psychology and neuroscience, as well as an updated case-studies chapter including AlphaGo and AlphaGo Zero, Atari game playing, and IBM Watson's wagering strategy. The final chapter discusses the future societal impacts of reinforcement learning.

Proceedings of the Fourth International Forum on Decision Sciences

Springer **These conference proceedings focus on the topics of data-driven decision-making, stochastic decision-making, fuzzy decision-making and their applications in real-life problems. Beijing University of Chemical Technology organized IFDS2016, the 4th International Forum on Decision Sciences, with the theme "Data-Driven Decision-Making." The proceedings collect 84 selected papers presenting cutting-edge modeling and solution methods and include numerous practical case studies, making it a valuable resource for students, researchers and practitioners working in the fields of decision science, operations research, management science and engineering.**

Graph Representation Learning

Springer Nature **Graph-structured data is ubiquitous throughout the natural and social sciences, from telecommunication networks to quantum chemistry. Building relational inductive biases into deep learning architectures is crucial for creating systems that can learn, reason, and generalize from this kind of data. Recent years have seen a surge in research on graph representation learning, including techniques for deep graph embeddings, generalizations of convolutional neural networks to graph-structured data, and neural message-passing approaches inspired by belief propagation. These advances in graph representation learning have led to new state-of-the-art results in numerous domains, including chemical synthesis, 3D vision, recommender systems, question answering, and social network analysis. This book provides a synthesis and overview of graph representation learning. It begins with a discussion of the goals of graph representation learning as well as key methodological foundations in**

graph theory and network analysis. Following this, the book introduces and reviews methods for learning node embeddings, including random-walk-based methods and applications to knowledge graphs. It then provides a technical synthesis and introduction to the highly successful graph neural network (GNN) formalism, which has become a dominant and fast-growing paradigm for deep learning with graph data. The book concludes with a synthesis of recent advancements in deep generative models for graphs—a nascent but quickly growing subset of graph representation learning.

Graph Theory with Applications to Engineering and Computer Science

PHI Learning Pvt. Ltd. **Because of its inherent simplicity, graph theory has a wide range of applications in engineering, and in physical sciences. It has of course uses in social sciences, in linguistics and in numerous other areas. In fact, a graph can be used to represent almost any physical situation involving discrete objects and the relationship among them. Now with the solutions to engineering and other problems becoming so complex leading to larger graphs, it is virtually difficult to analyze without the use of computers. This book is recommended in IIT Kharagpur, West Bengal for B.Tech Computer Science, NIT Arunachal Pradesh, NIT Nagaland, NIT Agartala, NIT Silchar, Gauhati University, Dibrugarh University, North Eastern Regional Institute of Management, Assam Engineering College, West Bengal Univerity of Technology (WBUT) for B.Tech, M.Tech Computer Science, University of Burdwan, West Bengal for B.Tech. Computer Science, Jadavpur University, West Bengal for M.Sc. Computer Science, Kalyani College of Engineering, West Bengal for B.Tech. Computer Science. Key Features: This book provides a rigorous yet informal treatment of graph theory with an emphasis on computational aspects of graph theory and graph-theoretic algorithms. Numerous applications to actual engineering problems are incorpo-rated with software design and optimization topics.**

How Learning Works

Seven Research-Based Principles for Smart Teaching

John Wiley & Sons **Praise for How Learning Works "How Learning Works is the perfect title for this excellent book. Drawing upon new research in psychology, education, and cognitive science, the authors have demystified a complex topic into clear explanations of seven powerful learning principles. Full of great ideas and practical suggestions, all based on solid research evidence, this book is essential reading for instructors at all**

levels who wish to improve their students' learning." —Barbara Gross Davis, assistant vice chancellor for educational development, University of California, Berkeley, and author, Tools for Teaching "This book is a must-read for every instructor, new or experienced. Although I have been teaching for almost thirty years, as I read this book I found myself resonating with many of its ideas, and I discovered new ways of thinking about teaching." —Eugenia T. Paulus, professor of chemistry, North Hennepin Community College, and 2008 U.S. Community Colleges Professor of the Year from The Carnegie Foundation for the Advancement of Teaching and the Council for Advancement and Support of Education "Thank you Carnegie Mellon for making accessible what has previously been inaccessible to those of us who are not learning scientists. Your focus on the essence of learning combined with concrete examples of the daily challenges of teaching and clear tactical strategies for faculty to consider is a welcome work. I will recommend this book to all my colleagues." —Catherine M. Casserly, senior partner, The Carnegie Foundation for the Advancement of Teaching "As you read about each of the seven basic learning principles in this book, you will find advice that is grounded in learning theory, based on research evidence, relevant to college teaching, and easy to understand. The authors have extensive knowledge and experience in applying the science of learning to college teaching, and they graciously share it with you in this organized and readable book." —From the Foreword by Richard E. Mayer, professor of psychology, University of California, Santa Barbara; coauthor, e-Learning and the Science of Instruction; and author, Multimedia Learning

Bandit Algorithms

Cambridge University Press **A comprehensive and rigorous introduction for graduate students and researchers, with applications in sequential decision-making problems.**