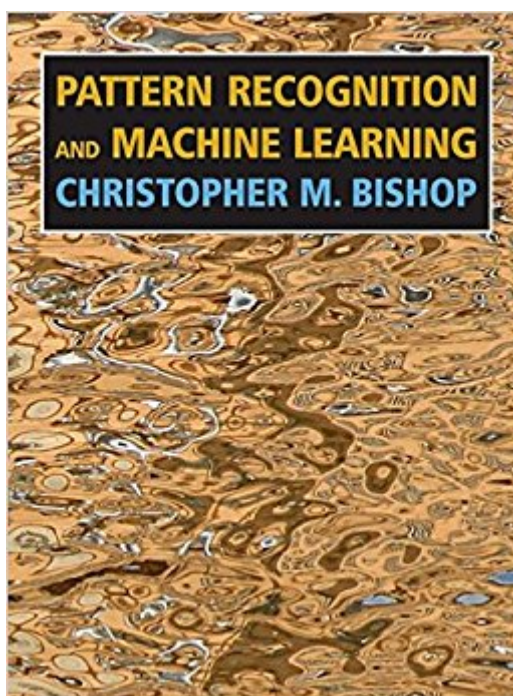The book was found

Pattern Recognition And Machine Learning (Information Science And Statistics)

Synopsis

This is the first textbook on pattern recognition to present the Bayesian viewpoint. The book presents approximate inference algorithms that permit fast approximate answers in situations where exact answers are not feasible. It uses graphical models to describe probability distributions when no other books apply graphical models to machine learning. No previous knowledge of pattern recognition or machine learning concepts is assumed. Familiarity with multivariate calculus and basic linear algebra is required, and some experience in the use of probabilities would be helpful though not essential as the book includes a self-contained introduction to basic probability theory.

Book Information

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Average Customer Review: 4.1 out of 5 stars   138 customer reviews

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Customer Reviews

From the reviews: "This beautifully produced book is intended for advanced undergraduates, PhD students, and researchers and practitioners, primarily in the machine learning or allied areas...A strong feature is the use of geometric illustration and intuition...This is an impressive and interesting book that might form the basis of several advanced statistics courses. It would be a good choice for a reading group." John Maindonald for the Journal of Statistical Software "In this book, aimed at senior undergraduates or beginning graduate students, Bishop provides an authoritative presentation of many of the statistical techniques that have come to be considered part of Ã¢â ¬Ëœepattern recognitionÃ¢â ¬â„¢ or Ã¢â ¬Ëœemachine learningÃ¢â ¬â„¢. Ã¢â ¬Â| This book will serve as an excellent reference. Ã¢â ¬Â| With its coherent viewpoint, accurate and extensive

coverage, and generally good explanations, BishopÃ¢â ¬â„¢s book is a useful introduction Ã¢â ¬Â| and a valuable reference for the principle techniques used in these fields." (Radford M. Neal, Technometrics, Vol. 49 (3), August, 2007) "This book appears in the Information Science and Statistics Series commissioned by the publishers. Ã¢â ¬Â| The book appears to have been designed for course teaching, but obviously contains material that readers interested in self-study can use. It is certainly structured for easy use. Ã¢â ¬Â| For course teachers there is ample backing which includes some 400 exercises. Ã¢â ¬Â| it does contain important material which can be easily followed without the reader being confined to a pre-determined course of study." (W. R. Howard, Kybernetes, Vol. 36 (2), 2007) "Bishop (Microsoft Research, UK) has prepared a marvelous book that provides a comprehensive, 700-page introduction to the fields of pattern recognition and machine learning. Aimed at advanced undergraduates and first-year graduate students, as well as researchers and practitioners, the book assumes knowledge of multivariate calculus and linear algebra Ã¢â ¬Â| . Summing Up: Highly recommended. Upper-division undergraduates through professionals." (C. Tappert, CHOICE, Vol. 44 (9), May, 2007) "The book is structured into 14 main parts and 5 appendices. Ã¢â ¬Â| The book is aimed at PhD students, researchers and practitioners. It is well-suited for courses on machine learning, statistics, computer science, signal processing, computer vision, data mining, and bio-informatics. Extensive support is provided for course instructors, including more than 400 exercises, lecture slides and a great deal of additional material available at the bookÃ¢â ¬â„¢s web site Ã¢â ¬Â| ." (Ingmar Randvee, Zentralblatt MATH, Vol. 1107 (9), 2007) "This new textbook by C. M. Bishop is a brilliant extension of his former book Ã¢â ¬ËœNeural Networks for Pattern RecognitionÃ¢â ¬â„¢. It is written for graduate students or scientists doing interdisciplinary work in related fields. Ã¢â ¬Â| In summary, this textbook is an excellent introduction to classical pattern recognition and machine learning (in the sense of parameter estimation). A large number of very instructive illustrations adds to this value." (H. G. Feichtinger, Monatshefte fÃƒÂ r Mathematik, Vol. 151 (3), 2007) "Author aims this text at advanced undergraduates, beginning graduate students, and researchers new to machine learning and pattern recognition. Ã¢â ¬Â| Pattern Recognition and Machine Learning provides excellent intuitive descriptions and appropriate-level technical details on modern pattern recognition and machine learning. It can be used to teach a course or for self-study, as well as for a reference. Ã¢â ¬Â| I strongly recommend it for the intended audience and note that Neal (2007) also has given this text a strong review to complement its strong sales record." (Thomas Burr, Journal of the American Statistical Association, Vol. 103 (482), June, 2008) "This accessible monograph seeks to provide a comprehensive introduction to the fields of pattern recognition and machine learning. It presents a

unified treatment of well-known statistical pattern recognition techniques. Ã¢â ¬Â| The book can be used by advanced undergraduates and graduate students Ã¢â ¬Â| . The illustrative examples and exercises proposed at the end of each chapter are welcome Ã¢â ¬Â| . The book, which provides several new views, developments and results, is appropriate for both researchers and students who work in machine learning Ã¢â ¬Â| ." (L. State, ACM Computing Reviews, October, 2008) "Chris BishopÃ¢â ¬â„¢s Ã¢â ¬Â| technical exposition that is at once lucid and mathematically rigorous. Ã¢â ¬Â| In more than 700 pages of clear, copiously illustrated text, he develops a common statistical framework that encompasses Ã¢â ¬Â| machine learning. Ã¢â ¬Â| it is a textbook, with a wide range of exercises, instructions to tutors on where to go for full solutions, and the color illustrations that have become obligatory in undergraduate texts. Ã¢â ¬Â| its clarity and comprehensiveness will make it a favorite desktop companion for practicing data analysts." (H. Van Dyke Parunak, ACM Computing Reviews, Vol. 49 (3), March, 2008)

The dramatic growth in practical applications for machine learning over the last ten years has been accompanied by many important developments in the underlying algorithms and techniques. For example, Bayesian methods have grown from a specialist niche to become mainstream, while graphical models have emerged as a general framework for describing and applying probabilistic techniques. The practical applicability of Bayesian methods has been greatly enhanced by the development of a range of approximate inference algorithms such as variational Bayes and expectation propagation, while new models based on kernels have had a significant impact on both algorithms and applications. This completely new textbook reflects these recent developments while providing a comprehensive introduction to the fields of pattern recognition and machine learning. It is aimed at advanced undergraduates or first-year PhD students, as well as researchers and practitioners. No previous knowledge of pattern recognition or machine learning concepts is assumed. Familiarity with multivariate calculus and basic linear algebra is required, and some experience in the use of probabilities would be helpful though not essential as the book includes a self-contained introduction to basic probability theory. The book is suitable for courses on machine learning, statistics, computer science, signal processing, computer vision, data mining, and bioinformatics. Extensive support is provided for course instructors, including more than 400 exercises, graded according to difficulty. Example solutions for a subset of the exercises are available from the book web site, while solutions for the remainder can be obtained by instructors from the publisher. The book is supported by a great deal of additional material, and the reader is encouraged to visit the book web site for the latest information. Christopher M. Bishop is Deputy

Director of Microsoft Research Cambridge, and holds a Chair in Computer Science at the University of Edinburgh. He is a Fellow of Darwin College Cambridge, aÃ Â Fellow of the Royal Academy of Engineering, and a Fellow of the Royal Society of Edinburgh. His previous textbook "Neural Networks for Pattern Recognition" has been widely adopted. Coming soon: *For students, worked solutions to a subset of exercises available on a public web site (for exercises marked "www" in the text) *For instructors, worked solutions to remaining exercises from the Springer web site *Lecture slides to accompany each chapter *Data sets available for download

good quality (however not "brand new" as stated), price ok

I like the book a lot and fits perfect in what I am working! Thank you...

Wonderful book with color pages. Like it!

Great product, fast delivery, thanks!

I'm impressed by the breadth of knowledge the author has accumulated into one text. He dives in from survey-level discussion all the way down through some involved math. The good news is he leaves out some more intensive proofs and just references relevant sources there. The only thing missing for me is a few more practical examples.

Good book on machine learning. However very mathematical advanced. Start with a beginner's book on the subject then study this one. You will need very good math training to understand.

I think this is a great text considering the vast array of topics covered by Bishop in this book. The best thing I liked about the book are the fantastic insights the author has provided on various methods and their usage limitations, sometimes in very easy to understand language and studded with some real practical experience going behind it. One thing which I found rather missing was the excessive use of equations without much dwell into their derivations, which can sometimes confuse the first time reader, but when worked diligently by hand, would make the stuff clearer. Said that, the book is a great text for someone to gain latest perspectives on the field from the author's rich research experience. I would definitely recommend someone who wants a fairly broad and usable knowledge about this field.

This is really an excellent book.It is very clear and there is a excellent balancebetween the frequentist and bayesian views of severalof the models(for example, neural networks and bayesianneural networks).It would be a great idea to complement some missing parts such as"optimizacion algorithms" and "radial basis functions"with the lecture of the bookNeural Networks for Pattern RecognitionAnd, if you want to implement some of the algorithms of this book,then you should readÃ Â Netlab, a really excelent bookthat teach you how to implement this algorithms step by step using MATLAB.

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