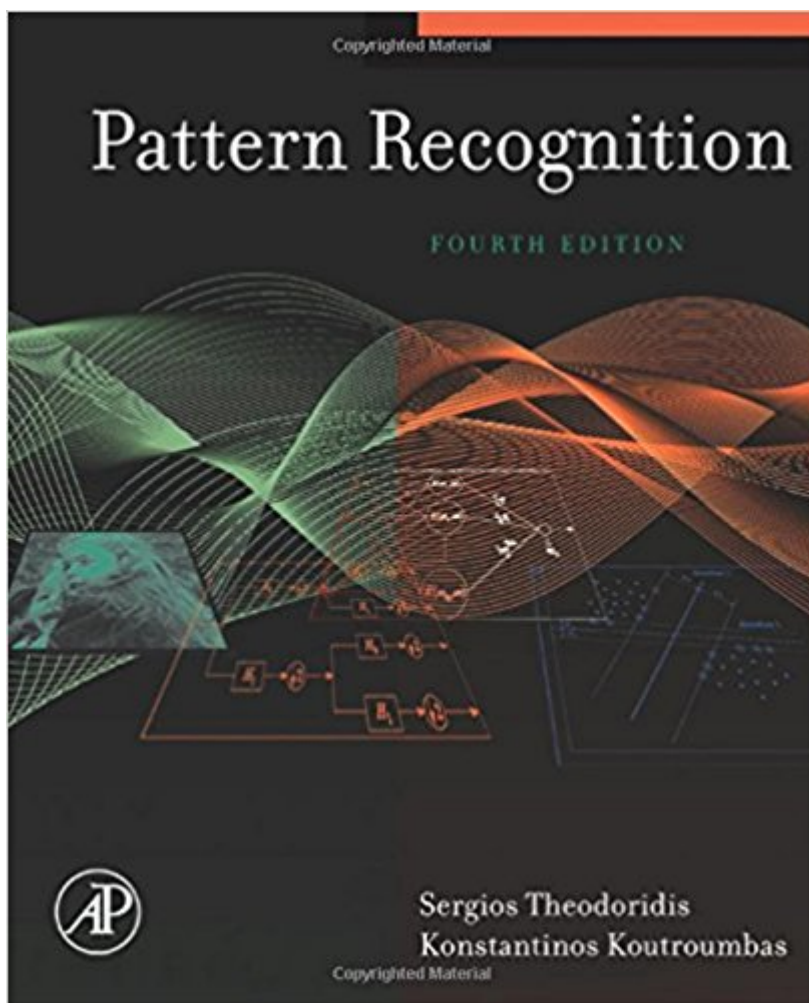The book was found

Pattern Recognition, Fourth Edition

Synopsis

This book considers classical and current theory and practice, of supervised, unsupervised and semi-supervised pattern recognition, to build a complete background for professionals and students of engineering. The authors, leading experts in the field of pattern recognition, have provided an up-to-date, self-contained volume encapsulating this wide spectrum of information. The very latest methods are incorporated in this edition: semi-supervised learning, combining clustering algorithms, and relevance feedback. Ã Â Thoroughly developed to include many more worked examples to give greater understanding of the various methods and techniques Ã Â Many more diagrams included--now in two color--to provide greater insight through visual presentation Ã Â Matlab code of the most common methods are given at the end of each chapter.   Ã Â More Matlab code is available, together with an accompanying manual, via this site   Ã Â Latest hot topics included to further the reference value of the text including non-linear dimensionality reduction techniques, relevance feedback, semi-supervised learning, spectral clustering, combining clustering algorithms. Ã Â An accompanying book with Matlab code of the most common methods and algorithms in the book, together with a descriptive summary, and solved examples including real-life data sets in imaging, and audio recognition. The companion book will be available separately or at a special packaged price (ISBN: 9780123744869). Thoroughly developed to include many more worked examples to give greater understanding of the various methods and techniques Many more diagrams included--now in two color--to provide greater insight through visual presentation Matlab code of the most common methods are given at the end of each chapter An accompanying book with Matlab code of the most common methods and algorithms in the book, together with a descriptive summary and solved examples, and including real-life data sets in imaging and audio recognition. The companion book is available separately or at a special packaged price (Book ISBN: 9780123744869. Package ISBN: 9780123744913) Latest hot topics included to further the reference value of the text including non-linear dimensionality reduction techniques, relevance feedback, semi-supervised learning, spectral clustering, combining clustering algorithms Solutions manual, powerpoint slides, and additional resources are available to faculty using the text for their course. Register at www.textbooks.elsevier.com and search on "Theodoridis" to access resources for instructor.

Book Information

Hardcover: 984 pages

Publisher: Academic Press; 4 edition (November 3, 2008)

Language: English

ISBN-10: 1597492728

ISBN-13: 978-1597492720

Product Dimensions: 9.3 x 7.6 x 2 inches

Shipping Weight: 3.7 pounds (View shipping rates and policies)

Average Customer Review: 3.9 out of 5 stars 29 customer reviews

Best Sellers Rank: #230,165 in Books (See Top 100 in Books) #14 inÃ Â Books > Computers & Technology > Graphics & Design > Computer Modelling > Imaging Systems #32 inÃ Â Books > Computers & Technology > Computer Science > AI & Machine Learning > Computer Vision & Pattern Recognition #52 inÃ Â Books > Science & Math > Physics > Optics

Customer Reviews

""This book is an excellent reference for pattern recognition, machine learning, and data mining. It focuses on the problems of classification and clustering, the two most important general problems in these areas. This book has tremendous breadth and depth in its coverage of these topics; it is clearly the best book available on the topic today. The new edition is an excellent up-to-date revision of the book. I have especially enjoyed the new coverage provided in several topics, including new viewpoints on Support Vector Machines, and the complete in-depth coverage of new clustering methods. This is a standout characteristic of this book: the coverage of the topics is solid, deep, and principled throughout. The book is very successful in bringing out the important points in each technique, while containing lots of interesting examples to explain complicated concepts. I believe the section on dimensionality reduction is an excellent exposition on this topic, among the best available, and this is just one example. Combined with a coverage unique in its extend, this makes the book appropriate for use as a reference, as a textbook for upper level undergraduate or graduate classes, and for the practitioner that wants to apply these techniques in practice. I am a professor in Computer Science. Although pattern recognition is not my main focus, I work in the related fields of data mining and databases. I have used this book for my own research and, very successfully, as teaching material. I would strongly recommend this book to both the academic student and the professional.""- Dimitrios Gunopoulos, University of California, Riverside, USA. nbsp; ""I cut my pattern recognition teeth on a draft version of Duda and Hart (1973). Over subsequent decades, I consistently did two things: (i) recommended Duda and Hart as the best book available on pattern recognition; and (ii) wanted to write the next best book on this topic.nbsp; nbsp;I stopped (i) when the first edition ofnbsp;S. Theodoridis andnbsp;K. Koutroumbas'nbsp;book

appeared, and it supplanted the need for (ii) It was, and is, the best book that has been written on the subject since Duda and Hart's seminal original text. Buy it - you'll be happy you did."" - Jim Bezdek, University of West Florida and Senior Fellow, U. of Melbourne (Australia). ""I consider the fourth edition of the book Pattern Recognition, by S. Theodoridis and K. Koutroumbas as the ""Bible of Pattern Recognition""- Simon Haykin, McMaster University, Canada ""I have taught a graduate course on statistical pattern recognition for more than twenty five years during which I have used many books with different levels of satisfaction. Recently, I adopted the book by Theodoridis and Koutroumbas (4th edition) for my graduate course on statistical pattern recognition at University of Maryland. This course is taken by students from electrical engineering, computer science, linguistics and applied mathematics. The comprehensive book by Thedoridis and Koutroumbas covers both traditional and modern topics in statistical pattern recognition in a lucid manner, without compromising rigor. This book elegantly addresses the needs of graduate students from the different disciplines mentioned above. This is the only book that does justice to both supervised and unsupervised (clustering) techniques. Every student, researcher and instructor who is interested in any and all aspects of statistical pattern recognition will find this book extremely satisfying. I recommend it very highly."" -Rama Chellappa, University of Maryland ""The book Pattern Recognition, by Profs. Sergios Theodoridis and Konstantinos Koutroumbas, has rapidly become the ""bible"" for teaching and learning the ins and outs of pattern recognition technology.nbsp; In my own teaching, I have utilized the material in the first four chapters of the book (from basics to Bayes Decision Theory to Linear Classifiers and finally to Nonlinear Classifiers) in my class on fundamentals of speech recognition and have found the material to be presented in a clear and easily understandable manner, with excellent problems and ideas for projects.nbsp; My students have all learned the basics of pattern recognition from this book and I highly recommend it to any serious student in this area."" -Prof. Lawrence Rabiner

A classic that offers comprehensive coverage with a balance between theory and practice. --This text refers to the Digital edition.

This is not a review on the book itself, but rather the KINDLE EDITION.As a person who bought this book as text for a graduate class, it was very hard to distinguish some of the letters in the formulas contained within. Also, some characters don't seem to have been translated properly. Especially misleading was when a subscript was rendered within the kindle cloud reader as a superscript... which gives any equation an entirely different meaning when such a thing is done.I do

not recommend purchasing the Kindle edition of this textbook... stick with good old paper until this gets revised.

The book "Pattern Recognition" of Theodoridis and Koutroumbas is an excellent one.It covers the field thoroughly, and the material is presented very clearly, bothfrom the mathematical and the algorithm point of view.It includes superb examples andcomputer experiments with which the reader can gain insight to the topics.Also, it is updated with a lot of recent advances on the Pattern Recognition domain,as e.g. Semi-supervised learning, combining classifiers, spectral clustering,nonlinear dimensionality reduction. The presentation of all these advanced material isvery well organized and the reader can follow and understand thesesophisticated mathematically concepts.It is one of my three best books on the topic,the other ones are the "Neural Networks" of S. Haykin, and "Pattern Recognition and Machine Learning",of C. Bishop.I think all these three books are excellent,in their own way,and should not be missed from the bookshelf of anyone that copes with the Pattern Recognition field,either student or researcher.However, for the reader interested in developing computer algorithms in the Pattern Recognition area,the book of Theodoridis and Koutroubas is the superior choice.

Although there is a TON of info in this book it's really not that great for learning pattern recognition. It's definitely more of a reference than anything else. You can't really read a section and then sit down at your computer and code it up. There a so many details missing. And the equations are so compact that you spend most your time decoding bad notation. If this book were a piece of software it would suffer from feature bloat. If you need to actually do any real applications using the techniques in this book you should definitely by the MATLAB companion text.

The book describes the field, including classification and clustering, clearly and concisely, while not ignoring the key mathematical concepts. I'm a CS grad student studying this area and have been subjected to a number of textbooks that are math-heavy and fail to give any descriptive context of what's being presented. A good textbook on a subject should actually TEACH the reader the concepts. This one does that quite well. In addition, three chapters on feature generation and processing are included, a subject most other texts barely cover at all. This revised addition is a substantial expansion of the previous one and now includes many recently-developed concepts. If I were teaching an advanced undergrad or graduate course on the subject I would probably choose this as my primary text.

Man, this IS the book on pattern recognition! Lengthy, simple, direct, clean; contains the most essential one must know about all the techniques when working with pattern recognition. I have also Duda et al Pattern Classification. But THIS one is far better and far didactic. If you want to learn how to classify patterns, this is THE book.

Best ML reference book I have ever read, very thorough and clearA grad student in EE

Printing quality can be better.

I agree with previous reviewers about the broadth and depth of the material in this book. Yes, i didn't read everything but the topics i was looking for were briefly and clearly explained. Exactly what is needed for an phD student doing his work in this field.I am a phD candidate in computer vision lab doing the research on image based localization.

300+ Mathematical Pattern Puzzles: Number Pattern Recognition & Reasoning (Improve Your Math Fluency) Pattern Recognition, Fourth Edition Jane's Aircraft Recognition Guide Fifth Edition (Jane's Recognition Guides) Machine Learning: An Algorithmic Perspective, Second Edition (Chapman & Hall/Crc Machine Learning & Pattern Recognition) Pattern Recognition Improve Your Chess Pattern Recognition: Key Moves and Motifs in the Middlegame Practical Hepatic Pathology: A Diagnostic Approach: A Volume in the Pattern Recognition Series, 2e Practical Hepatic Pathology: A Diagnostic Approach: A Volume in the Pattern Recognition Series, Expert Consult: Online and Print, 1e Practical Hepatic Pathology: A Diagnostic Approach E-Book: A Volume in the Pattern Recognition Series Pattern Recognition and Classification: An Introduction Granular Neural Networks, Pattern Recognition and Bioinformatics (Studies in Computational Intelligence) Virus Infections of Rodents and Lagomorphs: Virus Infections of Vertebrates Series, 1e (Machine Intelligence and Pattern Recognition) Pattern Recognition and Machine Learning (Information Science and Statistics) Practical Orthopedic Pathology: A Diagnostic Approach: A Volume in the Pattern Recognition Series, 1e Jane's Aircraft Recognition Guide Fourth Edition crochet wedding dress pattern pdf Nr25: crochet wedding dress pattern pdf Nr25 18 Inch Doll Crochet Mermaid Costume Pattern Worsted Weight Fits American Girl Doll Journey Girl My Life Our Generation: Crochet Pattern (18 Inch Doll Whimsical Clothing Collection Book 2) Pattern Explorer Level 2 (Grades 7-9) - Pattern Problems to Develop Mathematical Reasoning Recognition of Health

Hazards in Industry: A Review of Materials Processes, 2nd Edition Teaching Word Recognition, Second Edition: Effective Strategies for Students with Learning Difficulties (What Works for Special-Needs Learners)