The book was found

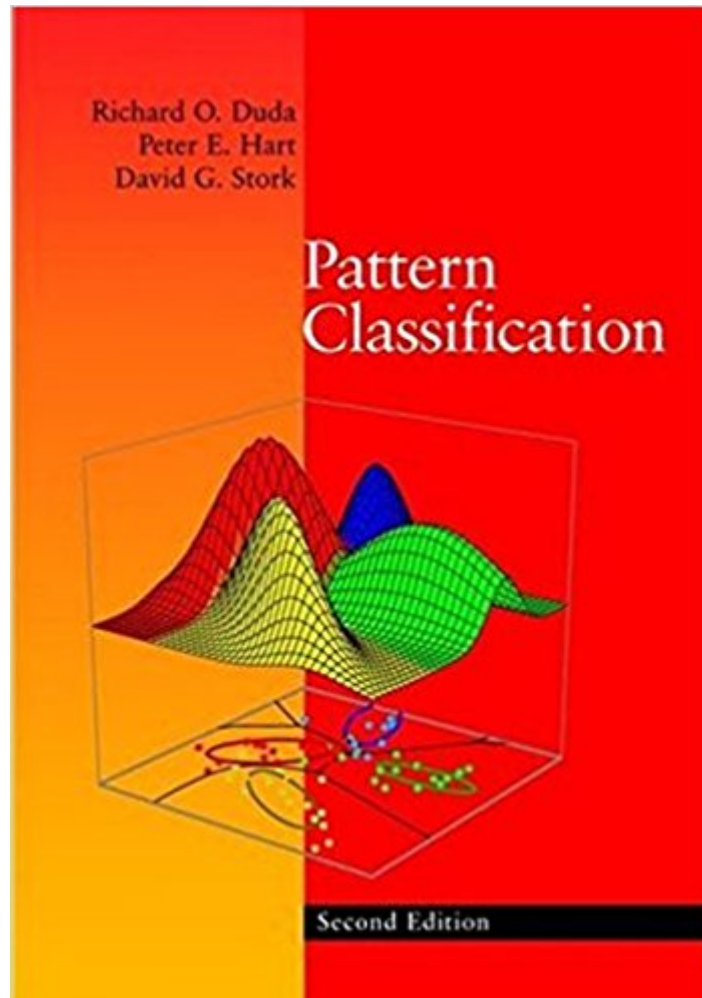# Pattern Classification (Pt.1)

Richard O. Duda
Peter E. Hart
David G. Stork

Pattern
Classification

Second Edition

Synopsis

The first edition, published in 1973, has become a classic reference in the field. Now with the second edition, readers will find information on key new topics such as neural networks and statistical pattern recognition, the theory of machine learning, and the theory of invariances. Also included are worked examples, comparisons between different methods, extensive graphics, expanded exercises and computer project topics. An Instructor's Manual presenting detailed solutions to all the problems in the book is available from the Wiley editorial department.

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Customer Reviews

"Ã¢â ¬Â¦it provides a good introduction to the subject of Pattern Classification." (Journal of Classification, September 2007) "Ã¢â ¬Â¦a fantastic book! The presentation...could not be better, and I recommend that future authors considerÃ¢â ¬Â¦this book as a role model." (Journal of Statistical Computation and Simulation, March 2006) "...strongly recommended both as a professional reference and as a text for students..." (Technometrics, February 2002) "...provides information needed to choose the most appropriate of the many available technique for a given class of problems." (SciTech Book News, Vol. 25, No. 2, June 2001) "I do not believe anybody wishing to teach or do serious work on Pattern Recognition can ignore this book, as it is the sort of book one wishes to find the time to read from cover to cover!" (Pattern Analysis & Applications Journal, 2001) "This book is the unique text/professional reference for any serious student or worker in the field of pattern recognition." (Mathematical Reviews, Issue 2001k) "...gives a systematic

overview about the major topics in pattern recognition, based whenever possible on fundamental principles." (Zentralblatt MATH, Vol. 968, 2001/18) "attractively presented and readable" (Journal of Classification, Vol.18, No.2 2001)

From the reviews . . . "The first edition of this book, published 30 years ago by Duda and Hart, has been a defining book for the field of Pattern Recognition. Stork has done a superb job of updating the book. He has undertaken a monumental task of sifting through 30 years of material in a rapidly growing field and presented another snapshot of the field, determining what will be of importance for the next 30 years and incorporating it into this second edition. The style is easy to read as in the original book and the statistical, mathematical material comes alive with many new illustrations. The end result is harmonious, leading the reader through many new topics..." Ã¢â ¬â œSargur N. Srihari, PhD, Director, Center for Excellence in Document Analysis and Recognition, Distinguished Professor, Department of Computer Science and Engineering, SUNY at Buffalo Practitioners developing or investigating pattern recognition systems in such diverse application areas as speech recognition, optical character recognition, image processing, or signal analysis, often face the difficult task of having to decide among a bewildering array of available techniques. This unique text/professional reference provides the information you need to choose the most appropriate method for a given class of problems, presenting an in-depth, systematic account of the major topics in pattern recognition today. A new edition of a classic work that helped define the field for over a quarter century, this practical book updates and expands the original work, focusing on pattern classification and the immense progress it has experienced in recent years. Special features include: Clear explanations of both classical and new methods, including neural networks, stochastic methods, genetic algorithms, and theory of learning Over 350 high-quality, two-color illustrations highlighting various concepts Numerous worked examples Pseudocode for pattern recognition algorithms Expanded problems, keyed specifically to the text Complete exercises, linked to the text Algorithms to explain specific pattern-recognition and learning techniques Historical remarks and important references at the end of chapters Appendices covering the necessary mathematical background NOTE: Computer Manual in MATLAB to Accompany Pattern Classification, 2e users access toolbox via ftp://ftp.wiley.com/public/sci_tech_med/pattern_classification/ (Note: Visitors will require a password from the Manual to access.)

My impression reading the book is that it was very carefully written. Don't speak too broad and too

general but also include the fundamental topics with some examples. Such topics might be old and even unused but they form the understanding and create solid basis for further studies in this field. The minor drawback (i didn't read and compared everything to old book) but it seems that this book is simply rewrite or "correction of mistakes" if comparing previous edition.

Seems a very good book. Could not tell what the little criticism was about. The author goes out of his way to explain and make it pertinet. Happy reading.

The 1973 book by Duda and Hart was a classic. It surveyed the literature on pattern classification and scene analysis and provided the practitioner with wonderful insight and exposition of the subject. In the intervening 28 years the field has exploded and there has been an enormous increase in technical approaches and applications.With this in mind the authors and their new coauthor David Stork go about the task of providing a revision. True to the goals of the original the authors undertake to describe pattern recognition under a variety of topics and with several available methods to cover each topic. Important new areas are covered and old but now deemed less significant are dropped. Advances in statistical computing and computing in general also dictate the topics. So although the authors are the same and the title is almost the same (note that scene analysis is dropped from the title) it is more like an entirely new book on the subject rthan a revision of the old. For a revision, I would expect to see mostly the same chapters with the same titles and only a few new chapters along with expansion of old chapters.Although I view this as a new book, that is not necessarily bad. In fact it may be viewed as a strength of the book. It maintains the style and clarity of the original that we all loved but represents the state-of-the-art in pattern recognition at the beginning of the 21st Century.The original had some very nice pictures. I liked some of them so much that I used them with permission in the section on classification error rate estimation in my bootstrap book. This edition goes much further with beautiful graphics including many nice three-dimensional color pictures like the one on the cover page.The standard classical material is covered in the first five chapters with new material included (e.g. the EM algorithm and hidden markov models in Chapter 3). Chapter 6 covers multilayer neural networks (a totally new area). Nonmetric methods including decision trees and the CART methodology are covered in Chapter 8. Each chapter has a large number of relevant references and many homework exercises and computer exercises.Chapter 9 is "Algorithm-Independent Machine Learning" and it includes the wonderful "No Free Lunch" theorem (Theorem 9.1), a discussion of the minimum desciption length principle, overfitting issues and Occam's razor, bias - variance

tradeoffs,resampling method for estimation and classifier evaluation, and ideas about combining classifiers.Chapter 10 is on unsurpervised learning and clustering. In addition to the traditional techniques covered in the first edition the authors include the many advances in mixture models.I was particularly interested in that part of Chapter 9. There is good coverage of the topics and they provide a number of good references. However, I was a bit disappointed with the cursory treatment of bootstrap estimation of classification accuracy (section 9.6.3 on pages 485 - 486). I particularly disagree with the simplistic statement "In practice, the high computational complexity of bootstrap estimation of classifier accuracy is rarely worth possible improvements in that estimate (Section 9.5.1)". On the other hand, the book is one of the first to cover the newer and also promising resampling approaches called "Bagging" and "Boosting" that these authors seem to favor.Davison and Hinkley's bootstrap text is mentioned for its practical applications and guidance for bootstrapping. The authors overlook Shao and Tu which offers more in the way of guidance. Also my book provides some guidance for error rate estimation but is overlooked.My book also illustrate the limitations of the bootstrap. Phil Good's book provides guidance and is mentioned by the authors. But his book is very superficial and overgeneralized with respect to guiding practitioners. For these reasons I held back my enthusiasm and only gave this text four stars.

This book was published in 1973 and there have been many advances since. Still I find it provides great exposition of the fundamental concepts. In fact the nearest neighbor algorithms that are now popular are covered in this book and date back to the work of Cover and Hart in the late 1960s. Those new to pattern recognition who think kth nearest neighbor rules are new should read this book to find out exactly when it was really thought up.For a more up-to-date treatment, see McLachlan's recent book in the Wiley statistics series. However, this book provides valuable explanations of Bayes rules and shows pictorially what the boundaries look like for linear and quadratic classifiers. In fact I borrowed their pictures in Chapter 2 of my book on bootstrap methods and it appears in both the first and second editions of my book.The authors with the help of a third author have updated this book recently and I highly recommend the new addition which maintains many of the nice features of the original.

I used this book back in the 80's when I was in school. It was an excellent reference Pattern Recognition which was a hot topic. What made this book so great is that it was a compendium of all of the methods used at the time. Little has changed except the speed of the computers to implement the algorithms. Also, the book did not use computer software to demonstrate the algorithms which is

good because languages come and go, but the clear writing demonstrated throughout the book makes it as valuable a reference today as it was in the past.

I used the first edition of this book in a class on pattern recognition back in 1998. That old first edition did a great job of explaining the different aspects of pattern recognition as they were generally taught when the first edition came out in 1969. However, over the next 30 years the field expanded enough that a second edition was required. I purchased it, expecting an expanded version that went over the details as well as the first edition, and boy was I wrong. This second edition just glosses over the details of modern pattern classification techniques and doesn't show sufficient examples or even motivation for you to "get it". It's almost like the entire book is an introduction. I'm accustomed to the first chapter of a technical book being an overview that doesn't tell you much, but not the entire book. The only thing the second edition has to offer are slicker illustrations. My advice is find a copy of the first edition. It is very well put together. If you need additional material on subjects the first edition doesn't cover well, then go find more modern books specifically on those subjects. You may spend more money but at least you'll learn something.

WHO Classification of Tumours of Haematopoietic and Lymphoid Tissues (IARC WHO Classification of Tumours) WHO Classification of Tumours of Endocrine Organs (IARC WHO Classification of Tumours) WHO Classification of Head and Neck Tumours (IARC WHO Classification of Tumours) WHO Classification of Tumours of the Central Nervous System (IARC WHO Classification of Tumours) WHO Classification of Tumours of the Lung, Pleura, Thymus and Heart (IARC WHO Classification of Tumours) WHO Classification of Tumours of the Urinary System and Male Genital Organs (IARC WHO Classification of Tumours) WHO Classification of Tumours of Soft Tissue and Bone (IARC WHO Classification of Tumours) WHO Classification of Tumours of Haematopoietic and Lymphoid Tissue [OP] (IARC WHO Classification of Tumours) WHO Classification of Tumours of the Digestive System (IARC WHO Classification of Tumours) Pattern Classification (Pt.1) Pattern Recognition and Classification: An Introduction 300+ Mathematical Pattern Puzzles: Number Pattern Recognition & Reasoning (Improve Your Math Fluency) 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 International Classification of Diseases for Oncology (Nonserial Publications) ICPC-2-R: International

Classification of Primary Care (Oxford Medical Publications) ICD 10: International Statistical Classification of Diseases and Related Health Problems Volume 1 ICD-10 Volume 2: International Statistical Classification of Diseases and Related Health Problems : Instruction Manual Classification of Chronic Pain: Descriptions of Chronic Pain Syndromes and Definitions of Pain Terms