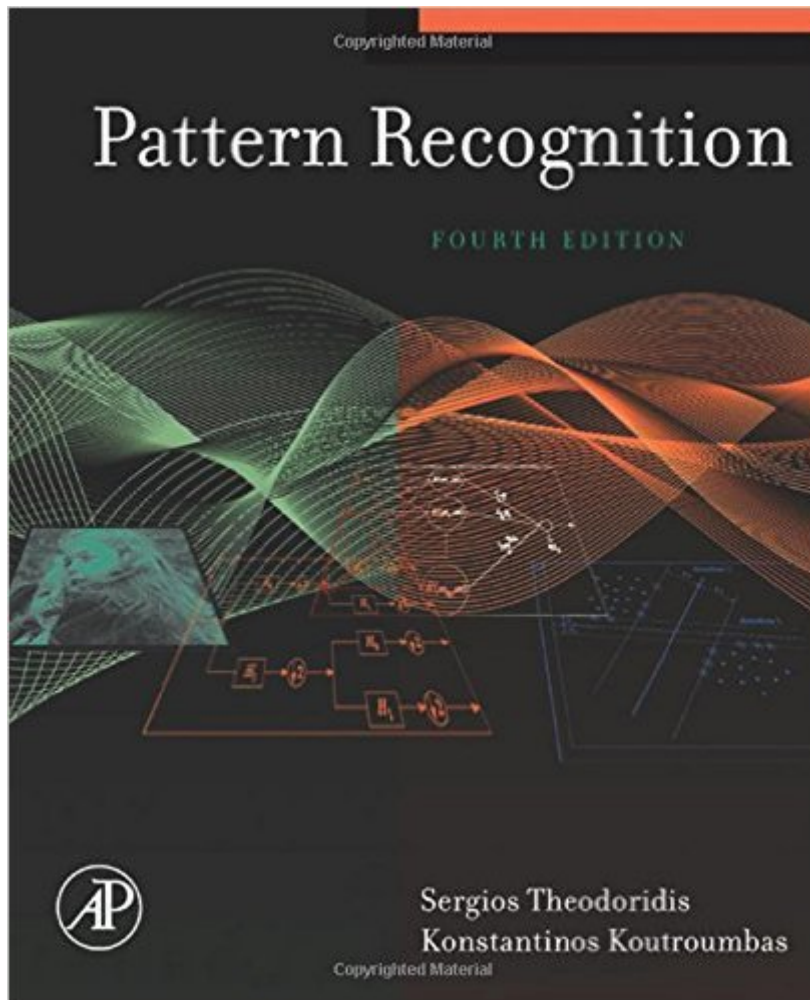The book was found

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. Â Thoroughly developed to include many more worked examples to give greater understanding of the various methods and techniques Â Many more diagrams included--now in two color--to provide greater insight through visual presentation Â Matlab code of the most common methods are given at the end of each chapter.   Â More Matlab code is available, together with an accompanying manual, via this site 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. 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

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Customer Reviews

Professor Theodoridis has written an exciting new book on pattern recognition. The topic is sometimes neglected, particularly in the fields of biomedical and electrical engineering, but it is essential to the understanding of signal and image shape on a mathematical basis, including similarities and differences in shape as well as how to extract, recognize, and measure the important components. Professor Theodoridis covers all of the classic steps in pattern recognition in great detail and in a readily understood fashion: sensors and pattern extraction, features extraction and selection, clustering, classification, supervised and unsupervised recognition, and evaluation of the system. Each section is backed up with computer simulation examples so that the reader can gain practical experience while reading the book. The author discusses essential concepts for computer programming of the pattern recognition techniques that are discussed. This work is necessarily mathematical, and therefore will tend to be of greatest interest to advanced students and practicing engineers in a variety of fields. Biomedical engineering is a rapidly expanding field that is key to the improvement of health care quality. There are plenty of biomedical examples including those in the section of the book on computer-aided diagnosis, such as for the detection of cancerous lesions in x-ray mammography. The section on speech recognition will be useful to engineers who are designing turnkey pattern recognition systems that include speech recognition as input and/or for use as a security key. Also included in the work are the most recently developed topics of interest including fuzzy clustering algorithms, and neural networks using genetic and annealing methods.

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