Machine Learning for Audio, Image and Video Analysis [Theory and Applications /

Camastra, Francesco.,
author

Springer London,
2008

Monografía

Machine Learning involves several scientific domains including mathematics, computer science, statistics and biology, and is an approach that enables computers to automatically learn from data. Focusing on complex media and how to convert raw data into useful information, this book offers both introductory and advanced material in the combined fields of machine learning and image/video processing. The machine learning techniques presented enable readers to address many real world problems involving complex data. Examples covering areas such as automatic speech and handwriting transcription, automatic face recognition, and semantic video segmentation are included, along with detailed introductions to algorithms and examples of their applications. The book is organized in four parts: The first focuses on technical aspects, basic mathematical notions and elementary machine learning techniques. The second provides an extensive survey of most relevant machine learning techniques for media processing, while the third part focuses on applications and shows how techniques are applied in actual problems. The fourth part contains detailed appendices that provide notions about the main mathematical instruments used throughout the text. Students and researchers needing a solid foundation or reference, and practitioners interested in discovering more about the state-of-the-art will find this book invaluable. Examples and problems are based on data and software packages publicly available on the web

Título: Machine Learning for Audio, Image and Video Analysis Recurso electrónico-En línea] Theory and Applications by Francesco Camastra, Alessandro Vinciarelli

Editorial: London Springer London 2008

Descripción física: XVI, 494 p. online resource

Tipo Audiovisual: Computer science Multimedia systems Computer vision Optical pattern recognition Computer Science Pattern Recognition Image Processing and Computer Vision Multimedia Information Systems

Mención de serie: Advanced Information and Knowledge Processing

Documento fuente: Springer eBooks

Nota general: Computer Science (Springer-11645)

Contenido: From Perception to Computation -- Audio Acquisition, Representation and Storage -- Image and Video Acquisition, Representation and Storage -- Machine Learning -- Machine Learning -- Bayesian Theory of Decision -- Clustering Methods -- Foundations of Statistical Learning and Model Selection -- Supervised Neural Networks and Ensemble Methods -- Kernel Methods -- Markovian Models for Sequential Data -- Feature Extraction Methods and Manifold Learning Methods -- Applications -- Speech and Handwriting Recognition -- Automatic Face Recognition -- Video Segmentation and Keyframe Extraction

Restricciones de acceso: Accesible sólo para usuarios de la UPV

Tipo recurso electrónico: Recurso a texto completo

Detalles del sistema: Forma de acceso: Web

ISBN: 9781848000070 978-1-84800-007-0

Autores: Vinciarelli, Alessandro., author

Entidades: SpringerLink (Servicio en línea)

Enlace a formato físico adicional: Printed edition 9781848000063

Punto acceso adicional serie-Título: Advanced Information and Knowledge Processing

---

Baratz Innovación Documental

- Gran Vía, 59 28013 Madrid
- (+34) 91 456 03 60
- informa@baratz.es