



## Pattern Recognition

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### 1. Clustering of time series data—a survey

November 2005

T. Warren Liao

Time series clustering has been shown effective in providing useful information in various domains. There seems to be an increased interest in time series clustering as part of the effort in temporal...



### 2. Survey on speech emotion recognition: Features, classification schemes, and databases

March 2011

Moataz El Ayadi | Mohamed S. Kamel | Fakhri Karray

Recently, increasing attention has been directed to the study of the emotional content of speech signals, and hence, many systems have been proposed to identify the emotional content of a spoken utterance....



### 3. A review of biometric technology along with trends and prospects

August 2014

J.A. Unar | Woo Chaw Seng | Almas Abbasi

Identity management through biometrics offer potential advantages over knowledge and possession based methods. A wide variety of biometric modalities have been tested so far but several factors paralyze...



### 4. A survey of content-based image retrieval with high-level semantics

January 2007

Ying Liu | Dengsheng Zhang | Guojun Lu | Wei-Ying Ma

In order to improve the retrieval accuracy of content-based image retrieval systems, research focus has been shifted from designing sophisticated low-level feature extraction algorithms to reducing...



### 5. A survey on still image based human action recognition

October 2014

Guodong Guo | Alice Lai

Recently still image-based human action recognition has become an active research topic in computer vision and pattern recognition. It focuses on identifying a person's action or behavior from a single...



### 6. A feature construction method for general object recognition

December 2013

Kirt Lillywhite | Dah-Jye Lee | Beau Tippetts | James Archibald

This paper presents a novel approach for object detection using a feature construction method called Evolution-COnstructed (ECO) features. Most other object recognition approaches rely on human experts...

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## 7. Face hallucination based on sparse local-pixel structure

March 2014

Yongchao Li | Cheng Cai | Guoping Qiu | Kin-Man Lam

In this paper, we propose a face-hallucination method, namely face hallucination based on sparse local-pixel structure. In our framework, a high resolution (HR) face is estimated from a single frame...



## 8. Color image segmentation: advances and prospects

December 2001

H.D. Cheng | X.H. Jiang | Y. Sun | Jingli Wang

Image segmentation is very essential and critical to image processing and pattern recognition. This survey provides a summary of color image segmentation techniques available now. Basically, color segmentation...



## 9. Automatic facial expression analysis: a survey

January 2003

B. Fasel | Juergen Luetttin

Over the last decade, automatic facial expression analysis has become an active research area that finds potential applications in areas such as more engaging human-computer interfaces, talking heads,...



## 10. A survey of graph theoretical approaches to image segmentation

March 2013

Bo Peng | Lei Zhang | David Zhang

Image segmentation is a fundamental problem in computer vision. Despite many years of research, general purpose image segmentation is still a very challenging task because segmentation is inherently...



## 11. Recent developments in human motion analysis

March 2003

Liang Wang | Weiming Hu | Tieniu Tan

Visual analysis of human motion is currently one of the most active research topics in computer vision. This strong interest is driven by a wide spectrum of promising applications in many areas such...



## 12. Dynamic selection of classifiers—A comprehensive review

November 2014

Aceu S. Britto Jr. | Robert Sabourin | Luiz E.S. Oliveira

This work presents a literature review of multiple classifier systems based on the dynamic selection of classifiers. First, it briefly reviews some basic concepts and definitions related to such a classification...



## 13. Feature fusion for facial landmark detection

September 2014

Panagiotis Perakis | Theoharis Theoharis | Ioannis A. Kakadiaris

Facial landmark detection is a crucial first step in facial analysis for biometrics and numerous other applications. However, it has proved to be a very challenging task due to the numerous sources...



#### 14. Image processing with neural networks—a review

October 2002

M. Egmont-Petersen | D. de Ridder | H. Handels

We review more than 200 applications of neural networks in image processing and discuss the present and possible future role of neural networks, especially feed-forward neural networks, Kohonen feature...



#### 15. A new method for linear feature and junction enhancement in 2D images based on morphological operation, oriented anisotropic Gaussian function and Hessian information

October 2014

Ran Su | Changming Sun | Chao Zhang | Tuan D. Pham

Feature enhancement is an important preprocessing step in many image processing tasks. It is the process of adjusting image intensities so that the enhanced results are more suitable for analysis. Good...



#### 16. Learning locality-constrained collaborative representation for robust face recognition

September 2014

Xi Peng | Lei Zhang | Zhang Yi | Kok Kiong Tan

The models of low-dimensional manifold and sparse representation are two well-known concise models that suggest that each data can be described by a few characteristics. Manifold learning is usually...



#### 17. Robust face recognition via occlusion dictionary learning

April 2014

Weihua Ou | Xinge You | Dacheng Tao | Pengyue Zhang | Yuanyan Tang | Ziqi Zhu

Sparse representation based classification (SRC) has recently been proposed for robust face recognition. To deal with occlusion, SRC introduces an identity matrix as an occlusion dictionary on the assumption...



#### 18. The MinMax k-Means clustering algorithm

July 2014

Grigorios Tzortzis | Aristidis Likas

Applying k-Means to minimize the sum of the intra-cluster variances is the most popular clustering approach. However, after a bad initialization, poor local optima can be easily obtained. To tackle...



#### 19. A review on automatic image annotation techniques

January 2012

Dengsheng Zhang | Md. Monirul Islam | Guojun Lu

Nowadays, more and more images are available. However, to find a required image for an ordinary user is a challenging task. Large amount of researches on image retrieval have been carried out in the...



## 20. Robust spatially constrained fuzzy c-means algorithm for brain MR image segmentation

July 2014

Zexuan Ji | Jinyao Liu | Guo Cao | Quansen Sun | Qiang Chen

Accurate brain tissue segmentation from magnetic resonance (MR) images is an essential step in quantitative brain image analysis, and hence has attracted extensive research attention. However, due to...



## 21. Pattern Recognition in Latin America in the “Big Data” Era

Available online 18 April 2014

Alicia Fernández | Álvaro Gómez | Federico Lecumberry | Álvaro Pardo | Ignacio Ramírez

The “Big Data” era has arisen, driven by the increasing availability of data from multiple sources such as social media, online transactions, network sensors or mobile devices. This is currently a focus...



## 22. A survey of kernel and spectral methods for clustering

January 2008

Maurizio Filippone | Francesco Camastra | Francesco Masulli | Stefano Rovetta

Clustering algorithms are a useful tool to explore data structures and have been employed in many disciplines. The focus of this paper is the partitioning clustering problem with a special interest...



## 23. Incremental partial least squares analysis of big streaming data

November 2014

Xue-Qiang Zeng | Guo-Zheng Li

Incremental feature extraction is effective for facilitating the analysis of large-scale streaming data. However, most current incremental feature extraction methods are not suitable for processing...



## 24. Infrared face recognition: A comprehensive review of methodologies and databases

September 2014

Reza Shoja Ghiass | Ognjen Arandjelović | Abdelhakim Bendada | Xavier Maldague

Automatic face recognition is an area with immense practical potential which includes a wide range of commercial and law enforcement applications. Hence it is unsurprising that it continues to be one...

