

Face Recognition Using Pca Matlab Source Code

Machine Vision and Mechatronics in Practice
 Biometric Recognition
 Data Science and Big Data Analytics
 Intelligent Computing and Networking
 Progress in Advanced Computing and Intelligent Engineering
 Handbook of Face Recognition
 Metaheuristics for Enterprise Data Intelligence
 Intelligent Computing
 Advanced Concepts for Intelligent Vision Systems
 Proceedings of the Third International Conference on Trends in Information, Telecommunication and Computing
 New Approaches in Commerce, Economics, Engineering, Humanities, Arts, Social Sciences and Management: Challenges and Opportunities
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 Recent Advances in Face Recognition
 Artificial Intelligence and Applied Mathematics in Engineering Problems
 Use of Internet of Things in Real Life
 Computational Intelligence in Data Mining—Volume 1
 Computer Vision, Graphics, and Image Processing
 Advances in Face Detection and Facial Image Analysis
 Efficient 3D face recognition based on PCA
 Advanced Image and Video Processing Using MATLAB
 Handbook of Formal Optimization
 Face Processing: Advanced Modeling and Methods
 Introduction to Computational Engineering with MATLAB®
 Intelligent Systems and Applications
 Digital Signal and Image Processing Using MATLAB
 Digital Signal and Image Processing using MATLAB, Volume 2
 Face Detection and Recognition
 Progress in Pattern Recognition, Image Analysis, Computer Vision, and Applications
 Advances in Communication, Devices and Networking
 Intelligent Computing Theories and Application
 Soft Computing Techniques in Vision Science
 9th International Conference on the Development of Biomedical Engineering in Vietnam
 Advances in Biometrics
 An Integrated Approach to Home Security and Safety Systems
 Generalized Principal Component Analysis
 Guide to Signals and Patterns in Image Processing
 An Introduction to Statistical Data Science
 2nd International Congress of Electrical and Computer Engineering
 Water Quality Monitoring and Management
 Intelligent Data Communication Technologies and Internet of Things

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LESTER GIANNA

Machine Vision and Mechatronics in Practice CRC Press
 This book constitutes the refereed proceedings of the 10th Chinese Conference on Biometric Recognition, CCBR 2015, held in Tianjin, China, in November 2015. The 85 revised full papers presented were carefully reviewed and selected from among 120 submissions. The papers focus on face, fingerprint and palmprint, vein biometrics, iris and ocular biometrics, behavioral biometrics, application and system of biometrics, multi-biometrics and information fusion, other biometric recognition and processing.

[Biometric Recognition](#) Springer

This book constitutes the refereed proceedings of the 17th Iberoamerican Congress on Pattern Recognition, CIARP 2012, held in Buenos Aires, Argentina, in September 2012. The 109 papers presented, among them two tutorials and four keynotes, were carefully reviewed and selected from various submissions. The papers are organized in topical sections on face and iris: detection and recognition; clustering; fuzzy methods; human actions and gestures; graphs; image processing and analysis; shape and texture; learning, mining and neural networks; medical images; robotics, stereo vision and real time; remote sensing; signal processing; speech and handwriting analysis; statistical pattern recognition; theoretical pattern recognition; and video analysis.

[Data Science and Big Data Analytics](#) CRC Press

This book offers a comprehensive introduction to advanced methods for image and video analysis and processing. It covers deraining, dehazing, inpainting, fusion, watermarking and stitching. It describes techniques for face and lip recognition, facial expression recognition, lip reading in videos, moving object tracking, dynamic scene classification, among others. The book combines the latest machine learning methods with computer vision applications, covering topics such as event recognition based on deep learning, dynamic scene classification based on topic model, person re-identification based on metric learning and behavior analysis. It also offers a systematic introduction to image evaluation criteria showing how to use them in different experimental contexts. The book offers an example-based practical guide to researchers, professionals and graduate students dealing with advanced problems in image analysis and computer vision.

[Intelligent Computing and Networking](#) Springer Nature

This three-volume set LNCS 10361, LNCS 10362, and LNAI 10363 constitutes the refereed proceedings of the 13th International Conference on Intelligent Computing, ICIC 2017, held in Liverpool, UK, in August 2017. The 212 full papers and 20 short papers of

the three proceedings volumes were carefully reviewed and selected from 612 submissions. This first volume of the set comprises 71 papers. The papers are organized in topical sections such as Evolutionary Computation and Learning; Neural Networks; Nature Inspired Computing and Optimization; Signal Processing; Pattern Recognition; Biometrics Recognition; Image Processing; Information Security; Virtual Reality and Human-Computer Interaction; Business Intelligence and Multimedia Technology; Genetic Algorithms; Biomedical Informatics Theory and Methods; Particle Swarm Optimization and Niche Technology; Swarm Intelligence and Optimization; Independent Component Analysis; Compressed Sensing and Sparse Coding; Natural Computing; Intelligent Computing in Computer Vision; Computational Intelligence and Security for Image Applications in Social Network; Neural Networks: Theory and Application.

[Progress in Advanced Computing and Intelligent Engineering](#) Springer Nature

The contributions for this book have been gathered over several years from conferences held in the series of Mechatronics and Machine Vision in Practice, the latest of which was held in Ankara, Turkey. The essential aspect is that they concern practical applications rather than the derivation of mere theory, though simulations and visualization are important components. The topics range from mining, with its heavy engineering, to the delicate machining of holes in the human skull or robots for surgery on human flesh. Mobile robots continue to be a hot topic, both from the need for navigation and for the task of stabilization of unmanned aerial vehicles. The swinging of a spray rig is damped, while machine vision is used for the control of heating in an asphalt-laying machine. Manipulators are featured, both for general tasks and in the form of grasping fingers. A robot arm is proposed for adding to the mobility scooter of the elderly. Can EEG signals be a means to control a robot? Can face recognition be achieved in varying illumination?"

[Handbook of Face Recognition](#) John Wiley & Sons

This book constitutes the refereed proceedings of the 9th International Conference on Advanced Concepts for Intelligent Vision Systems, ACIVS 2007, held in Delft, The Netherlands, August 2007. Coverage includes noise reduction and restoration, segmentation, motion estimation and tracking, video processing and coding, camera calibration, image registration and stereo matching, biometrics and security, medical imaging, image retrieval, as well as classification and recognition.

[Metaheuristics for Enterprise Data Intelligence](#) Springer
 Face detection and recognition are the nonintrusive biometrics of choice in many security applications. Examples of their use include border control, driver's license issuance, law enforcement investigations, and physical access control. Face Detection and

Recognition: Theory and Practice elaborates on and explains the theory and practice of face de
[Intelligent Computing](#) Springer
 Project Report from the year 2012 in the subject Engineering - Computer Engineering, Gujarat University, course: Electronics and communication, language: English, abstract: This thesis describes a face recognition system that overcomes the problem of changes in gesture and mimics in three-dimensional (3D) range images. Here, we propose a local variation detection and restoration method based on the two-dimensional (2D) principal component analysis (PCA). The depth map of a 3D facial image is first smoothed using median filter to minimize the local variation. The detected face shape is cropped & normalized to a standard image size of 101x101 pixels and the forefront nose point is selected to be the image center. Facial depth values are scaled between 0 and 255 for translation and scaling-invariant identification. The preprocessed face image is smoothed to minimize the local variations. The 2DPCA is applied to the resultant range data and the corresponding principal-(or eigen-) images are used as the characteristic feature vectors of the subject to find his/her identity in the database of pre-recorded faces. The system's performance is tested against the GavabDB facial databases. Experimental results show that the proposed method is able to identify subjects with different gesture and mimics in the presence of noise in their 3D facial image.

[Advanced Concepts for Intelligent Vision Systems](#) CRC Press

The book is a collection of high-quality peer-reviewed research papers presented in the Second International Conference on Computational Intelligence in Data Mining (ICCIDM 2015) held at Bhubaneswar, Odisha, India during 5 - 6 December 2015. The two-volume Proceedings address the difficulties and challenges for the seamless integration of two core disciplines of computer science, i.e., computational intelligence and data mining. The book addresses different methods and techniques of integration for enhancing the overall goal of data mining. The book helps to disseminate the knowledge about some innovative, active research directions in the field of data mining, machine and computational intelligence, along with some current issues and applications of related topics.

[Proceedings of the Third International Conference on Trends in Information, Telecommunication and Computing](#) Springer Science & Business Media

This Special Edited Volume is a unique approach towards Computational solution for the upcoming field of study called Vision Science. From a scientific firmament Optics, Ophthalmology, and Optical Science has surpassed an Odyssey of optimizing configurations of Optical systems, Surveillance

Cameras and other Nano optical devices with the metaphor of Nano Science and Technology. Still these systems are falling short of its computational aspect to achieve the pinnacle of human vision system. In this edited volume much attention has been given to address the coupling issues Computational Science and Vision Studies. It is a comprehensive collection of research works addressing various related areas of Vision Science like Visual Perception and Visual system, Cognitive Psychology, Neuroscience, Psychophysics and Ophthalmology, linguistic relativity, color vision etc. This issue carries some latest developments in the form of research articles and presentations. The volume is rich of contents with technical tools for convenient experimentation in Vision Science. There are 18 research papers having significance in an array of application areas. The volume claims to be an effective compendium of computing developments like Frequent Pattern Mining, Genetic Algorithm, Gabor Filter, Support Vector Machine, Region Based Mask Filter, 4D stereo camera systems, Principal Component Analysis etc. The detailed analysis of the papers can immensely benefit to the researchers of this domain. It can be an Endeavour in the pursuit of adding value in the existing stock of knowledge in Vision Science.

New Approaches in Commerce, Economics, Engineering, Humanities, Arts, Social Sciences and Management: Challenges and Opportunities Springer Nature

Although the history of computer-aided face recognition stretches back to the 1960s, automatic face recognition remains an unsolved problem and still offers a great challenge to computer-vision and pattern recognition researchers. This handbook is a comprehensive account of face recognition research and technology, written by a group of leading international researchers. Twelve chapters cover all the sub-areas and major components for designing operational face recognition systems. Background, modern techniques, recent results, and challenges and future directions are considered. The book is aimed at practitioners and professionals planning to work in face recognition or wanting to become familiar with the state-of-the-art technology. A comprehensive handbook, by leading research authorities, on the concepts, methods, and algorithms for automated face detection and recognition. Essential reference resource for researchers and professionals in biometric security, computer vision, and video image analysis.

Computational Science and Its Applications - ICCSA 2019 Springer

This book gathers selected papers presented at the 5th International Conference on Intelligent Data Communication Technologies and Internet of Things (ICICI 2021), organized by JCT College of Engineering and Technology, Coimbatore, Tamil Nadu, India during 27 - 28 August 2021. This book solicits the innovative research ideas and solutions for almost all the intelligent data intensive theories and application domains. The general scope of this book covers the design, architecture, modeling, software, infrastructure and applications of intelligent communication architectures and systems for big data or data-intensive applications. In particular, this book reports the novel and recent research works on big data, mobile and wireless networks, artificial intelligence, machine learning, social network mining, intelligent computing technologies, image analysis, robotics and autonomous systems, data security and privacy.

Recent Advances in Face Recognition Springer

The six volumes LNCS 11619-11624 constitute the refereed proceedings of the 19th International Conference on Computational Science and Its Applications, ICCSA 2019, held in Saint Petersburg, Russia, in July 2019. The 64 full papers, 10 short papers and 259 workshop papers presented were carefully reviewed and selected from numerous submissions. The 64 full papers are organized in the following five general tracks: computational methods, algorithms and scientific applications; high performance computing and networks; geometric modeling, graphics and visualization; advanced and emerging applications; and information systems and technologies. The 259 workshop papers were presented at 33 workshops in various areas of computational sciences, ranging from computational science

technologies to specific areas of computational sciences, such as software engineering, security, artificial intelligence and blockchain technologies.

Artificial Intelligence and Applied Mathematics in Engineering Problems Springer Nature

This book presents cutting-edge research and developments in the field of biomedical engineering, with a special emphasis on results achieved in Vietnam and neighboring low- and middle-income countries. Covering both fundamental and applied research, and focusing on the theme of "Translational Healthcare Technology from Advanced to Low and Middle Income Countries in the Era of Covid and Digital Transformation", it reports on the design, fabrication, and application of low-cost and portable medical devices, biosensors, and microfluidic devices, on improved methods for biological data acquisition and analysis, on nanoparticles for biological applications, and on new achievements in biomechanics, tissue engineering, and regeneration. It describes the developments of molecular and cellular biology techniques, neuroengineering techniques, and statistical and computational methods, including artificial intelligence, for biomedical applications. It also discusses strategies to address some relevant issues in biomedical education and entrepreneurship. Gathering the proceedings of the 9th International Conference on The Development of Biomedical Engineering in Vietnam, BME 9, held on December 27-29, 2022, in Ho Chi Minh, Vietnam, the book offers important answers to current challenges in the field and a source of inspiration for scientists, engineers, and researchers with various backgrounds working in different research institutes, companies, and countries.

Use of Internet of Things in Real Life Springer

This book presents the state-of-the-art in face detection and analysis. It outlines new research directions, including in particular psychology-based facial dynamics recognition, aimed at various applications such as behavior analysis, deception detection, and diagnosis of various psychological disorders. Topics of interest include face and facial landmark detection, face recognition, facial expression and emotion analysis, facial dynamics analysis, face classification, identification, and clustering, and gaze direction and head pose estimation, as well as applications of face analysis.

Computational Intelligence in Data Mining—Volume 1 Springer

The most important theoretical aspects of Image and Signal Processing (ISP) for both deterministic and random signals, the theory being supported by exercises and computer simulations relating to real applications. More than 200 programs and functions are provided in the MATLAB® language, with useful comments and guidance, to enable numerical experiments to be carried out, thus allowing readers to develop a deeper understanding of both the theoretical and practical aspects of this subject. Following on from the first volume, this second installation takes a more practical stance, providing readers with the applications of ISP.

Computer Vision, Graphics, and Image Processing Springer

This title provides the most important theoretical aspects of Image and Signal Processing (ISP) for both deterministic and random signals. The theory is supported by exercises and computer simulations relating to real applications. More than 200 programs and functions are provided in the MATLAB® language, with useful comments and guidance, to enable numerical experiments to be carried out, thus allowing readers to develop a deeper understanding of both the theoretical and practical aspects of this subject.

Advances in Face Detection and Facial Image Analysis Springer

The book focuses on both theory and applications in the broad areas of communication technology, computer science and information security. This two volume book contains the Proceedings of International Conference on Advanced Computing and Intelligent Engineering. These volumes bring together academic scientists, professors, research scholars and students to share and disseminate information on knowledge and scientific research works related to computing, networking, and informatics to discuss the practical challenges encountered and the solutions adopted. The book also promotes translation of basic research

into applied investigation and convert applied investigation into practice.

Efficient 3D face recognition based on PCA Springer

This book provides an integrated solution for security and safety in the home, covering both assistance in health monitoring and safety from strangers/intruders who want to enter the home with harmful intentions. It defines a system whereby recognition of a person/stranger at the door is done using three modules: Face Recognition, Voice Recognition and Similarity Index. These three modules are taken together to provide a percentage likelihood that the individual is in the "known" or "unknown" category. The system can also continuously monitor the health parameters of a vulnerable person living alone at home and aid them in calling for help in an emergency. The authors have analyzed a number of existing biometric techniques to provide security for an individual living alone at home. These biometric techniques have been tested using MATLAB® image processing and signal processing toolboxes, and results have been calculated on the basis of recognition rate. A major contribution in providing security is a hybrid algorithm proposed by the author named PICA, which combines features of both PCA (Principle Component Analysis) and ICA (Independent Component Analysis) algorithms. This hybrid approach gives better performance recognition than either system alone. The second proposed hybrid algorithm for voice recognition is named as a MFRSTA algorithm by combining features of MFCC (Mel Frequency Cepstral Coefficient) and RASTA-PLP (RelAtive SpecTrA-Perceptual Linear Prediction) algorithm. After performing experiments, results are collected on the basis of recognition rate. The authors have also proposed a third technique named as a Similarity Index to provide trust-based security for an individual. This technique is text independent in which a person is recognized by pronunciation, frequency, tone, pitch, etc., irrespective of the content spoken by the person. By combining these three techniques, a high recognition rate is provided to the person at the door and high security to the individual living independently at home. In the final contribution, the authors have proposed a fingertip-based application for health monitoring by using the concept of sensors. This application is developed using iPhone 6's camera. When a person puts their fingertip on a camera lens, with the help of brightness of the skin, the person's heartbeat will be monitored. This is possible even with a low-quality camera. In case of any emergency, text messages will be sent to the family members of the individual living alone by using 3G Dongle and MATLAB tool. Results show that the proposed work outperforms all the existing techniques used in face recognition, voice recognition, and health monitoring alone.

Advanced Image and Video Processing Using MATLAB Springer

With the emergence of the data economy, information has become integral to business excellence. Every enterprise, irrespective of its domain of interest, carries and processes a lot of data in their day-to-day activities. Converting massive datasets into insightful information plays an important role in developing better business solutions. Data intelligence and its analysis pose several challenges in data representation, building knowledge systems, issue resolution and predictive systems for trend analysis and decisionmaking. The data available could be of any modality, especially when data is associated with healthcare, biomedical, finance, retail, cybersecurity, networking, supply chain management, manufacturing, etc. The optimization of such systems is therefore crucial to leveraging the best outcomes and conclusions. To this end, AI-based nature-inspired optimization methods or approximation-based optimization methods are becoming very powerful. Notable metaheuristics include genetic algorithms, differential evolution, ant colony optimization, particle swarm optimization, artificial bee colony, grey wolf optimizer, political optimizer, cohort intelligence and league championship algorithm. This book provides a systematic discussion of AI-based metaheuristics application in a wide range of areas, including big data intelligence and predictive analytics, enterprise analytics, graph optimization algorithms, machine learning and ensemble learning, computer vision enterprise practices and data benchmarking.