
Iris Recognition Using Hough Transform Matlab Code

Dual iris authentication system using Dezer-Smarandache theory
ICIPCN 2021

Advances in Biometrics

An Improved Hough Transform Algorithm in Iris Recognition System
Towards More Secure and Robust Iris Recognition Systems

Proceedings of the Multi-Conference 2011

Image Analysis and Recognition

Iris Analysis for Biometric Recognition Systems

13th International CSI Computer Conference, CSICC 2008 Kish Island, Iran, March
9-11, 2008 Revised Selected Papers

Pattern Recognition and Image Analysis

Handbook of Iris Recognition

Advances in Data Science, Cyber Security and IT Applications

An Approach Towards Iris Localization for Non Cooperative Images: A Study

Advances in 3D Image and Graphics Representation, Analysis, Computing and

Information Technology

Information and Communication Technology for Sustainable Development

Intelligent Computing Systems

Third International Conference, PReMI 2009 New Delhi, India, December 16-20, 2009

Proceedings

Proceedings of the International Conference on CIDM, 20-21 December 2014

Proceedings of ICT4SD 2016

Computation and Communication Technologies

Biometric Systems

A. Eye Detection Using Variants of Hough Transform B. Off-Line Signature Verification

Enhancing Iris Recognition

Advances in Computing and Network Communications

2014 International Conference on Artificial Intelligence and Software Engineering(AISE2014)

Handbook of Iris Recognition

Swarm Intelligence for Iris Recognition

Iris Biometric Model for Secured Network Access

Proceedings of ICT4SD 2016, Volume 2

Information Science and Applications (ICISA) 2016

Proceedings of the International Conference on ISMAC in Computational Vision and Bio-Engineering 2018 (ISMAC-CVB)
Computational Intelligence in Data Mining - Volume 1
Security of Biometrics Using Multimodal Approach
Algorithms and Applications, Proceedings of IC3DIT 2019, Volume 2
Face, Expression, and Iris Recognition Using Learning-based Approaches
Biometric Systems
An Improved Hough Transform Algorithm in Iris Recognition System
International Conference, ICB 2006, Hong Kong, China, January 5-7, 2006,
Proceedings

*Iris Recognition Using
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MARSHALL TATE

*Dual iris authentication system using
Dezert-Smarandache theory* IGI Global
This book includes the papers presented
in 2nd International Conference on
Image Processing and Capsule Networks

[ICIPCN 2021]. In this digital era, image processing plays a significant role in wide range of real-time applications like sensing, automation, health care, industries etc. Today, with many technological advances, many state-of-the-art techniques are integrated with image processing domain to enhance its adaptiveness, reliability, accuracy and

efficiency. With the advent of intelligent technologies like machine learning especially deep learning, the imaging system can make decisions more and more accurately. Moreover, the application of deep learning will also help to identify the hidden information in volumetric images. Nevertheless, capsule network, a type of deep neural network, is revolutionizing the image processing domain; it is still in a research and development phase. In this perspective, this book includes the state-of-the-art research works that integrate intelligent techniques with image processing models, and also, it reports the recent advancements in image processing techniques. Also, this book includes the novel tools and techniques for deploying real-time image processing

applications. The chapters will briefly discuss about the intelligent image processing technologies, which leverage an authoritative and detailed representation by delivering an enhanced image and video recognition and adaptive processing mechanisms, which may clearly define the image and the family of image processing techniques and applications that are closely related to the humanistic way of thinking.

ICPCN 2021 Springer

These are the proceedings of the International Conference on ISMAC-CVB, held in Palladam, India, in May 2018. The book focuses on research to design new analysis paradigms and computational solutions for quantification of information provided by object

recognition, scene understanding of computer vision and different algorithms like convolutional neural networks to allow computers to recognize and detect objects in images with unprecedented accuracy and to even understand the relationships between them. The proceedings treat the convergence of ISMAC in Computational Vision and Bioengineering technology and includes ideas and techniques like 3D sensing, human visual perception, scene understanding, human motion detection and analysis, visualization and graphical data presentation and a very wide range of sensor modalities in terms of surveillance, wearable applications, home automation etc. ISMAC-CVB is a forum for leading academic scientists, researchers and research scholars to

exchange and share their experiences and research results about all aspects of computational vision and bioengineering.

Advances in Biometrics Springer

In the last few years, biometric techniques have proven their ability to provide secure access to shared resources in various domains.

Furthermore, software agents and multi-agent systems (MAS) have shown their efficiency in resolving critical network problems. Iris Biometric Model for Secured Network Access proposes a new model, the IrisCryptoAgentSystem (ICAS), which is based on a biometric method for authentication using the iris of the eyes and an asymmetric cryptography method using "Rivest-Shamir-Adleman" (RSA) in an agent-

based architecture. It focuses on the development of new methods in biometric authentication in order to provide greater efficiency in the ICAS model. It also covers the pretopological aspects in the development of the indexed hierarchy to classify DRVA iris templates. The book introduces biometric systems, cryptography, and multi-agent systems (MAS) and explains how they can be used to solve security problems in complex systems. Examining the growing interest to exploit MAS across a range of fields through the integration of various features of agents, it also explains how the intersection of biometric systems, cryptography, and MAS can apply to iris recognition for secure network access. The book presents the various

conventional methods for the localization of external and internal edges of the iris of the eye based on five simulations and details the effectiveness of each. It also improves upon existing methods for the localization of the external and internal edges of the iris and for removing the intrusive effects of the eyelids.

An Improved Hough Transform Algorithm in Iris Recognition System Springer Nature

The book proposes new technologies and discusses future solutions for design infrastructure for ICT. The book contains high quality submissions presented at Second International Conference on Information and Communication Technology for Sustainable Development (ICT4SD - 2016) held at Goa, India during

1 - 2 July, 2016. The conference stimulates the cutting-edge research discussions among many academic pioneering researchers, scientists, industrial engineers, and students from all around the world. The topics covered in this book also focus on innovative issues at international level by bringing together the experts from different countries.

Towards More Secure and Robust Iris Recognition Systems Walter de Gruyter GmbH & Co KG

Iris recognition is regarded as the most reliable and accurate biometric identification system available. Iris recognition system captures an image of an individual's eye, the iris in the image is then segmented and normalized for feature extraction process. The

performance of iris recognition systems highly depends on segmentation. Segmentation is used to locate the correct iris region in an eye and it should be done accurately and correctly to remove the eyelids, eyelashes, reflection and pupil noises present in iris region. In our book we are comparing two segmentation methods namely, Daughman's algorithm and Hough Transform. Iris images are selected from the CASIA Database, then the iris and pupil boundary are detected from rest of the eye image, removing the noises. The segmented iris region was normalized to eliminate dimensional inconsistencies between iris regions by using Daugman's Rubber Sheet Model. A comparative analysis is made of the two methods to find out the better method.

**Proceedings of the Multi-Conference
2011** Springer Science & Business Media

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.

Image Analysis and Recognition
Springer

The security is an important aspect in our daily life whichever the system is considered, security plays vital role. The biometric person identification technique based on the pattern of human iris is suitable to be applied to access control and provides strong e-security. Iris recognition is one of important biometric recognition approaches in human identification is very active topic in research and practical application. Iris Recognition System consists of Acquisition, Localization, Feature Extraction and Feature Matching phases. Circular Hough Transform is one the best suitable algorithm in segmentation phase, but as a result of having two for-

loops in its structure; CHT algorithm consumes high time processing and uses high storage capacity. These drawbacks make it hardly appropriate for real time applications of iris recognition system. To improve time and storage complexity, firstly, a pre-processing of CUHK iris image dataset is done to eliminate unnecessarily regions and secondly, a radius table is created based on pupil size variation of CUHK iris image dataset. The results show at least 40% efficiency in time complexity and minimum 20% efficiency in storage complexity.

Iris Analysis for Biometric Recognition Systems Springer

It is our pleasure to welcome you to the proceedings of the 13th International Computer Society of Iran Computer

Conference (CSICC-2008). The conference has been held annually since 1995, except for 1998, when it transitioned from a year-end to first-quarter schedule. It has been moving in the direction of greater selectivity (see Fig.1) and broader international participation. Holding it in Kish Island this year represents an effort to further facilitate and encourage international contributions. We feel privileged to participate in further advancing this strong technical tradition.

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*13th International CSI Computer
 Conference, CSICC 2008 Kish Island,
 Iran, March 9-11, 2008 Revised Selected
 Papers* Springer

This book gathers selected papers
 presented at the conference “Advances
 in 3D Image and Graphics
 Representation, Analysis, Computing and
 Information Technology,” one of the first
 initiatives devoted to the problems of 3D
 imaging in all contemporary scientific
 and application areas. The aim of the

conference was to establish a platform
 for experts to combine their efforts and
 share their ideas in the related areas in
 order to promote and accelerate future
 development. This second volume
 discusses algorithms and applications,
 focusing mainly on the following topics:
 3D printing technologies; naked,
 dynamic and auxiliary 3D displays;
 VR/AR/MR devices; VR camera
 technologies; microprocessors for 3D
 data processing; advanced 3D
 computing systems; 3D data-storage
 technologies; 3D data networks and
 technologies; 3D data intelligent
 processing; 3D data cryptography and
 security; 3D visual quality estimation
 and measurement; and 3D decision
 support and information systems.

Pattern Recognition and Image

Analysis Springer Nature

This book constitutes the thoroughly refereed post-conference proceedings of the 4th International Conference on Computing and Network Communications (CoCoNet'20), October 14-17, 2020, Chennai, India. The papers presented were carefully reviewed and selected from several initial submissions. The papers are organized in topical sections on Signal, Image and Speech Processing, Wireless and Mobile Communication, Internet of Things, Cloud and Edge Computing, Distributed Systems, Machine Intelligence, Data Analytics, Cybersecurity, Artificial Intelligence and Cognitive Computing and Circuits and Systems. The book is directed to the researchers and scientists engaged in various fields of

computing and network communication domains.

Handbook of Iris Recognition Springer

The contributed volume aims to explicate and address the difficulties and challenges for the seamless integration of two core disciplines of computer science, i.e., computational intelligence and data mining. Data Mining aims at the automatic discovery of underlying non-trivial knowledge from datasets by applying intelligent analysis techniques. The interest in this research area has experienced a considerable growth in the last years due to two key factors: (a) knowledge hidden in organizations' databases can be exploited to improve strategic and managerial decision-making; (b) the large volume of data managed by organizations makes it

impossible to carry out a manual analysis. 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.

Advances in Data Science, Cyber Security and IT Applications Springer
Iris localization is the most important part of iris recognition which involves the detection of iris boundaries in an image. A very important need of this effective security system is to overcome the rigid constraints necessitated by the practical implementation of such a system. There are a few existing techniques for iris

segmentation in which iris detection using Circular Hough Transform is the most reliable and popular and it has been implemented in this project. But there is a shortcoming in this technique. It does not perform well and does not give high accuracy with images containing noise or occlusions caused by eyelids. Such kind of images constitute non-cooperative data for iris recognition. To provide acceptable measures of accuracy, it is critical for an iris recognition system to overcome various noise effects introduced in images captured under different environments such as occlusions due to eyelids. This report discusses an approach towards less constrained iris recognition using occluded images. The Circular Hough Transform is implemented for few

images and a novel approach towards iris localization and eyelids detection is studied.

An Approach Towards Iris Localization for Non Cooperative Images: A Study LAP

Lambert Academic Publishing

The book proposes new technologies and discusses future solutions for design infrastructure for ICT. The book contains high quality submissions presented at Second International Conference on Information and Communication Technology for Sustainable Development (ICT4SD - 2016) held at Goa, India during 1 - 2 July, 2016. The conference stimulates the cutting-edge research discussions among many academic pioneering researchers, scientists, industrial engineers, and students from all around the world. The topics covered

in this book also focus on innovative issues at international level by bringing together the experts from different countries.

Advances in 3D Image and Graphics Representation, Analysis, Computing and Information Technology Springer

Cross disciplinary biometric systems help boost the performance of the conventional systems. Not only is the recognition accuracy significantly improved, but also the robustness of the systems is greatly enhanced in the challenging environments, such as varying illumination conditions. By leveraging the cross disciplinary technologies, face recognition systems, fingerprint recognition systems, iris recognition systems, as well as image search systems all benefit in terms of

recognition performance. Take face recognition for an example, which is not only the most natural way human beings recognize the identity of each other, but also the least privacy-intrusive means because people show their face publicly every day. Face recognition systems display superb performance when they capitalize on the innovative ideas across color science, mathematics, and computer science (e.g., pattern recognition, machine learning, and image processing). The novel ideas lead to the development of new color models and effective color features in color science; innovative features from wavelets and statistics, and new kernel methods and novel kernel models in mathematics; new discriminant analysis frameworks, novel similarity measures,

and new image analysis methods, such as fusing multiple image features from frequency domain, spatial domain, and color domain in computer science; as well as system design, new strategies for system integration, and different fusion strategies, such as the feature level fusion, decision level fusion, and new fusion strategies with novel similarity measures.

Information and Communication
Technology for Sustainable Development
CRC Press

In this paper, a dual iris authentication using Dezert-Smarandache theory is presented. The proposed method consists of three main steps: In the first one, the iris images are segmented in order to extract only half iris disc that contains relevant information and is less

affected by noise. For that, a Hough transform is used. The segmented images are normalized by Daugman rubber sheet model. In the second step, the normalized images are analyzed by a bench of two 1D Log-Gabor filters to extract the texture characteristics. The encoding is realized with a phase of quantization developed by J. Daugman to generate the binary iris template. For the authentication and the similarity measurement between both binary irises templates, the hamming distances are used with a previously calculated threshold. The score fusion is applied using DS_mC combination rule. The proposed method has been tested on a subset of iris database CASIA-IrisV3-Interval. The obtained results give a satisfactory performance with accuracy

of 99.96%, FAR of 0%, FRR of 3.89%, EER of 2% and processing time for one iris image of 12.36 s.

Springer

The International Conference on Signals, Systems and Automation (ICSSA 2011) aims to spread awareness in the research and academic community regarding cutting-edge technological advancements revolutionizing the world. The main emphasis of this conference is on dissemination of information, experience, and research results on the current topics of interest through in-depth discussions and participation of researchers from all over the world. The objective is to provide a platform to scientists, research scholars, and industrialists for interacting and exchanging ideas in a number of

research areas. This will facilitate communication among researchers in different fields of Electronics and Communication Engineering. The International Conference on Intelligent System and Data Processing (ICISD 2011) is organized to address various issues that will foster the creation of intelligent solutions in the future. The primary goal of the conference is to bring together worldwide leading researchers, developers, practitioners, and educators interested in advancing the state of the art in computational intelligence and data processing for exchanging knowledge that encompasses a broad range of disciplines among various distinct communities. Another goal is to promote scientific information interchange

between researchers, developers, engineers, students, and practitioners working in India and abroad.

Intelligent Computing Systems Springer Science & Business Media

Because of the accelerating progress in biometrics research and the latest nation-state threats to security, this book's publication is not only timely but also much needed. This volume contains seventeen peer-reviewed chapters reporting the state of the art in biometrics research: security issues, signature verification, fingerprint identification, wrist vascular biometrics, ear detection, face detection and identification (including a new survey of face recognition), person re-identification, electrocardiogram (ECT) recognition, and several multi-modal

systems. This book will be a valuable resource for graduate students, engineers, and researchers interested in understanding and investigating this important field of study.

Third International Conference, PReMI 2009 New Delhi, India, December 16-20, 2009 Proceedings Springer Nature

PART (A): EYE DETECTION USING VARIANTS OF HOUGH TRANSFORM:

Broadly eye detection is the process of tracking the location of human eye in a face image. Previous approaches use complex techniques like neural network, Radial Basis Function networks, Multi-Layer Perceptrons etc. In the developed project human eye is modeled as a circle (iris; the black circular region of eye) enclosed inside an ellipse (eye-lashes). Due to the sudden intensity variations in

the iris with respect the inner region of eye-lashes the probability of false acceptance is very less. Since the image taken is a face image the probability of false acceptance further reduces. Hough transform is used for circle (iris) and ellipse (eye-lash) detection. Hough transform was the obvious choice because of its resistance towards the holes in the boundary and noise present in the image. Image smoothing is done to reduce the presence of noise in the image further it makes the image better for further processing like edge detection (Prewitt method). Compared to the aforementioned models the proposed model is simple and efficient. The proposed model can further be improved by including various features like orientation angle of eye-lashes

(which is assumed constant in the proposed model), and by making the parameters adaptive. PART (B): OFF-LINE SIGNATURE VERIFICATION: Hand-written signature is widely used for authentication and identification of individual. It has been the target for fraudulence ever since. A novel off-line signature verification algorithm has been developed and tested successfully. Since the hand-written signature can be random, because of presence of various curves and features, techniques like character recognition cannot be applied for signature verification. The proposed algorithm incorporates a soft-computing technique "CLUSTERING" for extraction of feature points from the image of the signature. These feature points or centers are updated using the clustering

update equations for requ.

Proceedings of the International Conference on CIDM, 20-21 December 2014 Springer

This conference proceedings summarizes invited publications from the two IDES (Institute of Doctors Engineers and Scientists) International conferences, both held in Bangalore/ India.

Proceedings of ICT4SD 2016 Springer

This book constitutes the proceedings of the 4th International Symposium on Intelligent Computing Systems, ISICS 2022, held in Santiago, Chile, in March 2022. Due to the COVID-19 pandemic the conference was held online. The 9 full papers along with 2 short papers presented in this volume were carefully reviewed and selected from 30

submissions. They deal with the field of intelligent computing systems focusing on artificial intelligence, computer vision and image processing.

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- [A Court Of Wings And Ruin \(a Court Of Thorns And Roses, 3\) By Sarah J. Maas](#)
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- [I Will Teach You To Be Rich: No Guilt. No Excuses. Just A 6-week Program That Works \(second Edition\) By Ramit Sethi](#)
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