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## Abstract

While different iris segmentation techniques continue to appear, there has been a lack of recognition accuracy of existing methods with noisy iris dataset. To handle iris images (captured on less constrained conditions) with some types of noise (iris obstructions and specular reflection), the authors shows the results of performance evaluation of their proposed iris segmentation technique over existing techniques. The performance of a proposed iris segmentation technique is evaluated based on the accuracy and time. To evaluate the performance, the authors use the most important points to compare their proposed technique with others, which is Equal Error Rate (EER). The system is implemented and tested using MATLAB Version 7. 5. 0. 342 (R2007b) software. The environment where the experiments are performed in is Compaq PC, Core 2 Due Intel Pentium Processor (2. 00 GHz), with 1GB RAM and Windows 7 operating system, a dataset of UBIRIS v1, UBIRIS v2 and CASIA-IrisV4 databases samples of iris data with different contrast quality.

**Refer**

**ences**

- Rajeev Gupta, Ashok Kumar, Implementation of Proposed Effective Segmentation

Technique for Noisy Iris Images, 2014, International Journal of Advanced Information Science and Technology, vol. 29(29), pp. 69-74

- Rajeev Gupta, Ashok Kumar, An Effective Segmentation Technique for Noisy Iris Images, 2013, International Journal of Application or Innovation in Engineering & Management, vol. 2(12), pp. 118-125

- Daugman, J, 1993, High confidence visual recognition of persons by a test of statistical independence, IEEE Transactions on Pattern Analysis and Machine Intelligence. , vol. 15(11), pp. 1148–1161

- Camus, T. A. , and Wildes, R, 2004, Reliable and fast eye finding in closeup images. IEEE 16th International Conference on Pattern Recognition, Quebec, Canada, pp. 389–394

- Proenca, H. , 2006, Towards Non-Cooperative Biometric Iris Recognition. PhD thesis, University of Beira Interior.

- Proenca, H. , 2010, Iris Recognition: On the Segmentation of Degraded Images Acquired in the Visible Wavelength, IEEE Transactions on Pattern Analysis and Machine Intelligence, vol. 32(8), pp. 1502-1516.

- Martin-Roche, D. , Sanchez-Avila, C. , and Sanchez-Reillo, R. ,2002, Iris recognition for biometric identification using dyadic wavelet transform zero-crossing, IEEE Aerospace and Electronic Systems Magazine, vol. 17(10), pp. 3–6

- Dobes, M. , Martineka, J. , Dobes, D. S. Z. , Pospisil, J. , 2006, Human Eye Localization Using the Modified Hough Transform, Optik, vol. 117(10), pp. 468-473.

- CASIA Iris Image Database, <http://biometrics.idealtest.org/>

- Proenca, H. and Alexandre, L. A. , 2005, UBIRIS: A noisy iris image database, In Proceedings of the 13th International Conference on Image Analysis and Processing, pp. 970–977.

- Proença, H. , Filipe, S, Santos, R, Oliveira, J, Alexandre, L. A. , 2010, The UBIRIS. v2: A Database of Visible Wavelength Iris Images Captured On-The-Move and At-A-Distance, IEEE Transactions on Pattern Analysis and Machine Intelligence, vol. 32(8), pp. 1529-1535

- Rajeev Gupta, Ashok Kumar, Noisy Iris Recognition & its importance, 2013, Journal of Ultra Scientist of Physical Sciences International Journal of Physical Sciences, vol. 25(2)B, pp. 229-234

## **Index Terms**

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## **Keywords**

Noisy Iris Dataset   Specular Reflection   Edge Detection   Iris Obstructions   Upper

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