Iris Recognition System based on Multi-resolution Analysis and Support Vector Machine

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Authors:
Manisha Nirgude, Sachine Gengaje

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Abstract

Iris recognition system is becoming more popular day by day and is being used in many sectors for authentication replacing traditional methods like password, ATM etc. Iris recognition system is more accurate due to unique and stable iris patterns. Here, a feature extraction method based on multi-resolution analysis is proposed. Iris image is represented at multiple resolution levels and feature vector is formed by combining detailed information obtained at different resolution levels. Further, support vector machine classifier is used for recognition purpose to handle nonlinearity of features. Experiment is performed using CASIA 3.0 database with an objective to arrive at optimum number of features with high recognition rate.

References

2. Ahmad M. Sarhan, “Iris Recognition Using Discrete Cosine Transform and Artificial
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4. Adler, F.H., Physiology of the Eye, Chapter VI, page 143, Mosby (1953)
16. Chengqiang Liu, Mei Xie, “Iris Recognition Based on DLDA”, IEEE, The 18th International Conference on Pattern Recognition (ICPR'06), 2006


Index Terms

Computer Science

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Keywords

Iris recognition, Multi-resolution analysis, wavelet transform, support vector machine, RBF kernel