Abstract

In today's fast paced networked world, the need to maintain the security of information or physical property is becoming both increasingly important and increasingly difficult. Recently, a groundbreaking technology; biometrics, which is still a subject of growing research became available to allow verification of "true" individual identity. This is the focal point of our work where a face recognition system is implemented. We implemented an authentication system based on face recognition. We trained the images using principal component analysis and then combine with a feature based technique. For the feature based technique, we extract some key features including the red, green and blue colours of the eyes, the width and height of the eyes etc and ratios between them. We computed weights for each image based on these features and record the weights in the database for each subject in the database. We finally combine these feature weights with the weights computed from the principal component analysis and used it as the final weight to perform recognition. The system achieved a good recognition result.

References

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Biometric Authentication with Face Recognition using Principal Component Analysis and Feature based Techniques

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Index Terms

Computer Science Pattern Recognition

Keywords

Principal Component Analysis  Feature Based Technique  Biometric  Authentication Threshold