

A Multimodal Biometric Identification Approach using Machine Learning

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Abstract – Unimodal biometric systems have been in existence for some years, but are rather adapted to an average level of security. In fact, the higher the level of security, the more one will tend towards the use of multimodal systems, more efficient and safer.

This paper develops an approach of multimodal biometric identification system from the fusion of Discrete Wavelet Transform (DWT) features of face and fingerprint images along with Gabor wavelet and wavelet moment features of Iris image and performing the results with Random Forest Classifier. Performance evaluation is done using confusion matrix plot with sensitivity, specificity and accuracy.

Keywords – DWT, Gabor Wavelet, Wavelet Moment, Random Forest Classifier.