Abstract

The most common secure personal authentication in biometrics is handwritten signature. It’s widely used in many fields as banks, business transactions, and documents which are being authorized via signatures. The main challenging problem in design offline signature verification system is the phase of extracting features that distinguish between forged and genuine signatures. In this paper, a novel feature of extraction method based on static image splitting is proposed. The center of density of the signature image is used for the splitting. In the proposed system, a new feature called Pixel Length (F4) is suggested. This feature is used in combination with other three features: Pixel Density (F1), Cell Angle (F2), and Pixel Angle (F3) which are common features in the offline verification signature process. Euclidean distance measure was used for classification. The proposed system is implemented and tested using GPDS database. The performance of the proposed system is measured and the experimental results show the usefulness and effectiveness of the proposed system.
References


classifiers and support vector machines, In Proceedings of 9th International Conference on
Document Analysis and Recognition (ICDAR 2007), IEEE Computer Society Washington, USA,
vol. 2, pp. 734-738.  

methods for offline signature verification. In Proceedings of 9th International Workshop on
Frontiers in Handwriting Recognition (IWFHR-2004), IEEE Computer Society Washington, DC,
USA, pp. 161-166.

signature verification based on gray level features. IEEE Transactions on Information Forensics

Offline signature verification system based on DWT and common features extraction. Journal of

22. Hetal V. Davda. and S. K. G. 2014. Offline signature verification system using energy on

network, International Conference on Advances in Engineering and Technology, vol. 1,
pp.302-306.

granulometric size distributions. IEEE Transactions on Pattern Analysis and Machine
Intelligence, vol. 19, Issue 9, pp. 976-988.


Robust offline signature verification based on global features. In Advance Computing

signature GPDS-960 corpus, International Conference on Document Analysis and Recognition
(ICDAR), vol. 2, pp. 764-768.

generation. In Proceedings of the 9th International Conference on Biometrics (ICB2013), IEEE,
pp. 1-7.

angle feature and pixel density feature and both method together. International Journal of Soft


Index Terms

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