

Signature Recognition Systems and Algorithms Using Robust Techniques of Contour Detection, Euclidian Distance Classifiers and Neural Networks.

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Abstract

The signature of the person represents a biometrical identifier used in our days. In this context, in the literature, different kind of system for recognition were developed. The signature recognition systems should be invariant for small writing changes of the same person, at noise or intensity variations. In this work I briefly present the main procedures used for the recognition of the signature based on images analysis, I implemented using Matlab such a system based on neural networks and I proposed a new system where the signature descriptors are directional gradient features. The proposed system is original because of its features, gradients and directions, being obtained with the help of the Nevatia-Babu operator, that leads to a robust algorithm and to a high recognition speed. The correct recognition rates on obtained with both systems are very good (92-93%).