Abstract

In this paper we present a comparison between two supervised classifiers, the first one is a statistic which is the K-Nearest Neighbors (KNN) while the second is a neuronal which is the multi-layer perceptron MLP in the recognition of cursive handwritten Arabic numerals. The recognition process is organized as follows: in the pre-processing of numeral images, we exploited the median filter, the thresholding, the centering and the normalization techniques, in the features extraction we have used the morphology mathematical method. The classification methods include the KNN and the MLP. The simulation results that we obtained demonstrate the MLP is more efficient than the KNN in this recognition.
A Comparative Study between the K-Nearest Neighbors and the Multi-Layer Perceptron for Cursive Handwritten Arabic Numerals Recognition

References

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Springer Volume 389 2012

**Index Terms**

Computer Science  
Pattern Recognition

**Keywords**

The cursive handwritten Arabic numerals: The median filter  the thresholding  the centering and the normalization techniques  
the mathematical morphology method  
the K-Nearest Neighbors (KNN)

The multi-layer perceptron (MLP).