In this paper, appropriate features set based on Discrete Fourier Transform coefficients and the box approach have been proposed to achieve higher recognition accuracy, decreasing the features set dimensions and recognition time of Persian numerals. In classification phase, support vector machine (SVM) has been employed as the classifier. Feature sets consists of
154 dimensions, which are the Fourier coefficients in the contour pixels of input image, average angle and distance pixels which are equal to one in each box the box approach. The scheme has been evaluated on 80,000 handwritten samples of Persian numerals. Using 60,000 samples for training, scheme was tested on other 20,000 samples and 98.84% correct recognition rate was obtained.

Reference

Persian Handwritten Digit Recognition using Support Vector Machines


Index Terms

Computer Science    Pattern Recognition

Key words

Box approach         Discrete Fourier Transform coefficients

Support vector machines

Gaussian kernel