

# Classifying online handwriting characters under cosine representation

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**Abstract:** The natural way of handwriting to enter data into computer is still preferable in many tasks. However, handwriting character recognition is not a trivial task for computer. Based on the presentation of the input, handwriting recognition can be divided into two classes: offline and online. The main advantage of online handwritten data over offline data is the availability of stroke segmentation and order of writing. Utilizing this information rather than static image only can obtain higher recognition rate [11]. In this paper, we extend the method proposed in [13] to represent multiple strokes of a character together in a single set of features using cosine transformation. Using this representation, we have developed an online writer-independent character recognition system with MultiLayer Perceptron (MLP) classifiers, one classifier for each single character. We have tested our system on Section 1a (isolated digits) of the Unipen data set [7] and have obtained very competitive results. © 2007 IEEE.

**Index Keywords:** Character recognition; Classification (of information); Classifiers; Feedforward neural networks; Information technology; Linguistics; Technology; Character recognition system; Data sets; Handwriting recognition; International conferences; Language processing; Multi layering; Off-line data; Online handwriting; Online writer; Recognition rates; Static imaging; Web information; Learning systems

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