Abstract

In this paper, a system based Handwritten Devanagari Character Recognition (HDCR) is proposed. The paper presents an experimental assessment of the efficiency of various methods based on Invariant Moments for handwritten devanagari vowels recognition. The technique is independent of size, slant, orientation, translation and other variations in handwritten vowels. For segmentation of the devanagari words, the header line (Shirorekha), plays vital role. The same tool with vertical and horizontal projection has been adapted to isolate the 13 vowels in five different groups. In order to enhance the performance of the system, an attempt has been made to compute invariant moments by small perturbation in image and information is extracted from the perturbation. But it was found that, another local feature descriptor, image partition in different zoning is better representation of the features than perturbation. The other method of image partition with different ways found better. 10 samples of each vowel from 25 people have been sampled and a database was prepared. Individual image is normalized to 40X40 pixel size. The Fuzzy Gaussian Membership function has been adopted for classification. The success rate of the method is found to be ------.

Reference

Invariant Moments Based Feature Extraction for Handwritten Devanagari Vowels Recognition


Index Terms

Computer Science       Pattern Recognition
Key words

Invariant Moments
Handwritten Devanagari Vowels Recognition
OCR
Segmentation
Fuzzy Membership Function
Image perturbation