Abstract

Automatic character recognition is one of the most discovered and crucial application areas of pattern recognition field. Due to the increasing demand of machine processing of handwritten characters, this area of pattern recognition is gaining a lot of attention of researchers. Despite of a great deal of efforts done so far in this direction, still a lot is required to get done. In this work, we are focusing our attention on handwritten Hindi characters. Automatic recognition of Handwritten Hindi characters is complex due to the cursive nature and high level of similarity (such as presence of header line, vertical bar, etc.) in the structure of characters. Hybrid feature extraction approach is followed to extract meaningful features from the collected handwritten characters data. A comparative study of performance analysis of selected neural networks models is performed. Results indicate that the Radial basis function network model perform with 99.09% recognition accuracy.


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Index Terms

Computer Science  Artificial Intelligence

Keywords

Hindi Character Recognition, Backpropagation Algorithm, Radon Transform, Gabor Filter, Feed-forward Neural Network and Radial Basis Function Network.