Recognition of Handwritten Marathi Vowels using Zone based Symmetric Density Features

Abstract

In this paper, a zone based symmetric density feature is proposed to recognize Handwritten Marathi Vowels. Recognition of handwritten Marathi vowels is a challenging task due to their interclass structural similarities. This paper describes a method for recognition of handwritten Marathi vowels. Since a standard database does not exist for handwritten Marathi vowels, as a part of this work database of 2294 handwritten Marathi vowels was created. Pre-processing techniques are applied to remove noise and there zone based symmetric density features are extracted. According to the fivefold cross validation technique a maximum of 92.91% recognition rate was achieved. The recognition rates were compared with those achieved by KNN and SVM classifiers.

References

- G. G. Rajput and S. M. Mali. Isolated Handwritten Marathi Numerals Recognition
Recognition of Handwritten Marathi Vowels using Zone based Symmetric Density Features


- Prachi Mukherji And Priti P. Rege. Shape Feature And Fuzzy Logic Based Offline Devnagari Handwritten Optical Character Recognition. Journal Of Pattern Recognition Research 4 (2009) 52-68
- R. J. Ramteke. Invariant Moments Based Feature Extraction For Handwritten Devanagari Vowels Recognition. 2010 International Journal Of Computer Applications (0975 -
Recognition of Handwritten Marathi Vowels using Zone based Symmetric Density Features

8887) Volume 1 – No. 18
- Sandhya Arora, Debotosh Bhattacharjee, Mita Nasipuri, Dipak Kumar Basu And Mahantapas Kundu. Combining Multiple Feature Extraction Techniques For Handwritten Devnagari Character Recognition. 2008 IEEE Region 10 Colloquium And The Third ICIIS, Kharagpur, India December 8-10
- Sandhya Arora, Debotosh Bhattacharjee, Mita Nasipuri, L. Malik, M. Kundu And D. K. Basu. Performance Comparison Of SVM.

Index Terms

Computer Science
Pattern Recognition

Keywords
Handwritten Marathi Vowel Recognition; OCR; Zoning; symmetric density; Five fold