Abstract

In this paper, we present a novel method for automatic recognition of isolated Marathi handwritten numerals. Chain code and Fourier Descriptors that capture the information about the shape of the numeral are used as features. After preprocessing the numeral image, the normalized chain code and the Fourier descriptors of the contour of the numeral are extracted. These features are then fed in the Support Vector Machine (SVM) for classification. The proposed method is experimented on a database of 12690 samples of Marathi handwritten numeral using fivefold cross validation technique. We have obtained recognition accuracy of
98.15%.

Reference

- H. Freeman, Computer Processing of Line Drawings, Computing Surveys, Vol. 6, 57-97
- C. J. C. Burges. A tutorial on support vector machines for pattern recognition, Data Mining and Knowledge.

**Index Terms**

| Computer Science | Pattern Recognition |

**Key words**

Marathi handwritten numerals
feature extraction

Fourier descriptors
chain code
Support Vector Machines