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## Abstract

Zoning is one of the popular methods used for the optical character recognition of documents. In this paper the zoning approach is used for recognition of printed Kannada numerals. The input scanned document image containing printed Kannada numerals is binarized. The noise present in the document in the form of tiny dots is eliminated. The row segmentation followed by the column segmentation is performed on this document to segment out every numeral. The number of regions is obtained from this segmented numeral, which will be used as one of the feature during recognition stage. A morphological thinning algorithm is applied to thin this numeral. In the next stage the number of end points and the coordinate values of each end point are obtained. The zones in which the end points lie, and the regions that each numeral generates, are used for the recognition of the numeral. The proposed algorithm is applied on

the document containing the printed Kannada numerals of different fonts generated using Nudi 4.0 software. The analysis of recognition using proposed method is also presented here.

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### Index Terms

Computer Science

Pattern Recognition

**Keywords**

Zoning Printed Kannada Numerals Handwritten Kannada Numerals Ocr Numeral Recognition