Abstract

Good features are those whose values are similar for objects belonging to the same category and distinct for objects in different categories. In this paper, an attempt is made to develop an
algorithm for recognition of machine printed isolated Kannada vowels of different font, size and style using fast discrete curvelet transform. A standard deviation is applied to the coefficients obtained and the result of this is used as the feature vector. In addition, the features are obtained by applying the curvelet transform with different scales. A k-NN classifier is adopted for classification. The proposed algorithm is experimented on 5850 samples of vowels. The recognition is independent of the font and size of the printed characters and the system is seen to deliver reasonable recognition accuracies for different scales with 90.17% being the highest for a combination of scales 1, 2, 3.

References


Index Terms

Computer Science

Pattern Recognition

Keywords

Curvelets

Kannada character recognition

Standard deviation

k-NN classifier