Abstract

This paper presents discrete curvelet transform (DCvT) based block level handwritten script
identification. The conventional two-dimensional (2-D) discrete wavelet transforms (DWTs),
de-emphasizes directional discriminating properties such as curves, lines and edges of the
texture under study and whereas discrete curvelet transform (DCvT) efficiently extracts
directional selective features. Typically it can be observed that the patterns of any handwritten
text blocks encompass directionally dominant texture primitives. Therefore, the primary aim of
this paper is to show the efficiency of discrete curvelet transform (DCvT) in describing the
handwritten text blocks of six Indian scripts. Exhaustive experimentalizations were conducted on
a large dataset with various combinations of scripts. For instance, average script classification
accuracy achieved in case of bi-scripts and tri-scripts combinations are 94.19% and 95.24%
respectively.

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Index Terms

Computer Science
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Keywords

Bilingual Trilingual Multilingual Script Identification Curvelet Transform Nearest Neighbor Classifier

Texture Features.