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 experimentations 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

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Keywords

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