

Hit-Or-Miss Transform as a Tool for Similar Shape Detection

Authors : Osama Mohamed Elrajubi, Idris El-Feghi, Mohamed Abu Baker Saghayer

Abstract : This paper describes an identification of specific shapes within binary images using the morphological Hit-or-Miss Transform (HMT). Hit-or-Miss transform is a general binary morphological operation that can be used in searching of particular patterns of foreground and background pixels in an image. It is actually a basic operation of binary morphology since almost all other binary morphological operators are derived from it. The input of this method is a binary image and a structuring element (a template which will be searched in a binary image) while the output is another binary image. In this paper a modification of Hit-or-Miss transform has been proposed. The accuracy of algorithm is adjusted according to the similarity of the template and the sought template. The implementation of this method has been done by C language. The algorithm has been tested on several images and the results have shown that this new method can be used for similar shape detection.

Keywords : hit-or-miss operator transform, HMT, binary morphological operation, shape detection, binary images processing

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