

عنوان مقاله:

An integrated approach for handwritten structural and textural features in author identification

محل انتشار:

سومین کنگره بین المللی علوم و مهندسی (سال: 1398)

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خلاصه مقاله:

In the present work, we studied an off-line, text-independent approach based on the integrated textural and structural features for identification and validation of the author's identity in a Persian handwritten text. Because there is no well-known database containing Persian handwritten words for researchers to test, we developed a new database of offline Persian handwriting text to be used for the writer identification. Textural features are not capable of extracting structural features, such as inter-word or inter-line spacing. For this purpose, this study aimed to increase the accuracy of the proposed system beside the new textural and structural features introduced through integrating them as a unique feature. First, the proposed method extracts three structural features, including the average inter-word spacing, average inter-line spacing, and simultaneously distribution of direction and area for the closed loops. Then, it extracts three extended features based on the local binary pattern in order to obtain the textural features from the text. Each handwritten document is represented by an integrated triple histogram using the binary patterns in the image, and finally the integrated structural and textural features were prepared as the final feature to the nearest neighbor classifier in order to identify the author. The proposed method was evaluated on two Arabic and Persian datasets. Results suggested that the greater accuracy can be obtained through integrating both textural and structural features uniformly.

کلمات کلیدی:

.Author identification, Extended binary pattern, Structural features

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