عنوان مقاله:

Holistic Persian Handwritten Word Recognition Using Convolutional Neural Network

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خلاصه مقاله:

Due to the cursive-ness and high variability of Persian scripts, the segmentation of handwritten words into sub-words is still a challenging task. These issues could be addressed in a holistic approach by sidestepping segmentation at the character level. In this paper, an end-to-end holistic method based on deep convolutional neural network is proposed to recognize off-line Persian handwritten words. The proposed model uses only five convolutional layers and two fully connected layers for classifying word images effectively, which can lead to a substantial reduction in parameters. The effect of various pooling strategies is also investigated in this paper. The primary goal of this article is to ignore handcrafted feature extraction and attain a generalized and stable word recognition system. The presented model is assessed using two famous handwritten Persian word databases called Sadri and IRANSHAHR. The recognition accuracies were obtained at ۹۸.۶% and ۹۴.۶%, on Sadri and IRANSHAHR datasets respectively, and outperformed the state-of-the-art methods.

کلمات کلیدی:

Persian handwritten word recognition, convolutional neural network, End-to-end learning method, Transfer learning, Persian handwritten dataset

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