Recognition of Legal Amount Words on Persian Bank Checks Using Hidden Markov Model

So far, various works in the field of Persian handwritten words recognition have been conducted, but very little work has been done about recognition of legal amount words on Persian bank checks. Nowadays, researchers use different methods for recognition of handwritten words that among them Hidden Markov Model (HMM) has attracted a lot of attention. In this paper, due to high efficiency of HMM on Latin words recognition, it is utilized for legal amount words recognition of Persian bank checks. In our method, for feature extraction a sliding window used to scan the images of the words from right to left. In each window, the four statistical features are extracted to represent parts of handwritten words. Then, right-left discrete Hidden Markov Model and Fuzzy vector quantization are used for classification of the words based on these features. Our experimental results on the valid databases show the efficiency of HMM for the recognition of legal amount words of the Persian bank checks.

Keywords:
handwritten words recognition; Hidden Markov Models; legal amount words; Persian bank checks