ABSTRACT

Nowadays, *pattern recognition* has been most implemented in industries and instancies, such as *automated capture* of signal and images for the needs of identification. Identifying signature is a kind of process to recognize and emphasize one's signature. The technology of identification human's signature includes in the biometric using the natural characteristic of human beings. Falsifying the the image of signature can be eagerly happened, so that it is necesarry to count on the identification system, which is able to differenciate the original signature from the false signature. Lots of methods of extracting character which can be applied as pattern identification. In this final assignment, the writer make a comparison to some methods of extracting character to get the verification of the most accurate pattern of signature. The methods used here are *Discrete Cosinus of Transformation, Discrete Fourier Transformation,* and *2D Filter of Gabor Wavelet*. In this final assignment, it is defined by capturing the signature with webcam, then preprocessing it with the improvement of the image's quality, and at last, completing it with the three methods mentioned above. Classifying is used to recognize the character of signature input as one's in a kind of database using the *K-means* method. From the three tested feature extraction methods, it is obtained the highest accuracy which is 77.78% (using Gabor Wavelet method).

Keywords: *Features extraction methods*, DCT, DFT, 2D Filter of Gabor Wavelet, *Preprocessing*, K-means