

Abstract

Development of ICT in today's technology continues to evolve, one of the technologies used in the application of human life is Optical Character Recognition. This technology is able to recognize human handwriting that can be read by a computer. This application can be implemented into the introduction of writing letters and numbers. One of them is writing letters and arabic numerals hijaiyyah. Arabic letters and numbers have a difference with latin writing. It can be seen from the level of difficulty and procedure writing.

The computer can recognize a pattern of human handwriting in the form of images is required a method that is able to classify the pattern. The method is suitable to perform the data classification is one of artificial neural networks Learning Vector Quantization (LVQ)[13].

At the end of this task will be a system capable of reading the input images of characters and Arabic numbers using haar wavelet and neural network LVQ. Haar wavelet method is used as a preprocessing that is able to reduce the size of the pixels of an image into a quarter part of the first image. LVQ algorithm is used for data classification.

Results of tests performed by combining the haar wavelet and LVQ truth of the obtained level of accuracy for 94% arabic numerals and letters hijaiyyah of 79.76% for the data using a pen and 65.47% using the markers.

Keywords: Pattern Recognition, Haar Wavelet, LVQ.