

Abstract

Human facial expression recognition automatically is one of computer vision research that so important. For instance, in which human and robot interact directly.

Therefore, this final assignment will develop the application that can recognize human facial expression automatically dan classify into six basic emotion such as happy, sad, fear, disgust, surprise and angry, that was described by P. Ekman, an American psychologist on 1971.

This research is combining information technology and psychology knowledge.

This human facial expression application combine Gabor Wavelet as feature extraction technique and Backpropagation Neural Network to recognize human facial expression.

Image that be inserted for this system are grayscale face image in .TIFF format. This image then extracting by Gabor Wavelet on 22 fiducial point, in order to take the important feature for recognizing human facial expression.

This research perform that combining of extraction feature technique Gabor Wavelet and Backpropagation Neural Network to result in application of human facial expression recognition with the best in accuration rate of 77.13 %.

Keywords: feature extraction, backpropagation, fiducial point, gabor wavelet