ABSTRACT

In recent years, there are many studies competing to improve accuracy and performance, either using new methods or developments from previous research to recognizing facial micro-expressions. However, some of the micro-expression recognition methods still have limitations in increasing the accuracy and performance. In facial expression recognition, there are three basic techniques: pre-processing, feature extraction, and feature classification.

In this research, we will improve the micro-expression recognition method using Local Binary Patterns (LBP) as feature extraction and using Support Vector Machine (SVM) as a feature classification on images, for pre-processing techniques using Median and Gabor filter. The Median filter functions to normalize the colour and noise patterns in the images. Meanwhile, the Gabor filter is used to increase the edges of the image and the contrast lighting of the image. Implemented of the proposed system, verification this study was carried out on the SMIC Database. The micro-expression recognition system that has been tested was produces accuracy value of the data comparison process of (50:50, 60:40, and 80:20), the parameters that affect this research are gamma and max iteration. The highest accuracy is 100% and the lowest accuracy is 34%.

Keywords: *image processing, facial expression, micro-expression, SVM Classifier, Median Filter, Gabor Filter, SMIC Database.*