ABSTRACT

The machines can not recognize facial expression like human being. Machine's ability to recognize facial expression can be done by machine learning based on images. This thesis construct Indonesian female expression database. Database which constructed then classified into basic human emotion such as as anger, disgust, fear, happy, surprised, and sad. Classification stages include feature extraction from the raw pixel image by subtraction between expression non-netral and average faces neutral. Having obtained the raw pixels of all expressions, the feature vector is formed. This feature vectors as the data used for classification. Classifier using SVM (Support Vector Machine). Accuracy prediction which used all the data of JAFFE by 88.52 % and 93.75 % for IFFE-2D. Further testing by separating one person from each of the facial database, so that the value of the average prediction accuracy of JAFFE by 34.71 % and 30.42 % for IFFE-2D. The testing is done by inserting three facial model data from different facial database. This test was conducted to determine the effect of the data from different facial database for accuracy value. The value prediction accuracy domination JAFFE by 88.00 % and 88.94 % for IFFE-2D.

Keyword: IFFE-2D, JAFFE, facial expression, SVM