EMOTION EXPRESSION AT THREE DIMENSIONAL FACE MODEL USING NAIVE BAYES AND FUZZY LOGIC

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ABSTRACT

Type of emotions such as happy, sad, angry, surprised, and disgust have been known for a long time and become an important aspect of human behavior. However, the application of emotion has not been used in human and computer interaction. Therefore a good human interaction and computer system should be able to recognize, interpret and process human emotions. Research in the field of emotion is a complex process because it can change dynamically. Therefore, the study of text-based emotion mostly done due to text forms is relatively simple compared to other forms such as visual or sound.

Various methods have been used to make the process of recognition of human emotions, such as SVM (Support Vector Machine), VSM (Vector Space Model), and Cauchy Naive Bayes. As for the process to produce emotional responses, method that have been used is Fuzzy Logic. In this research will be discussed visualization of emotional expression on the face of three-dimensional model using Naive Bayes and Fuzzy logic. A combination of both methods can produce emotional expressions of an Indonesian-language text.

Results of Naive Bayes text classification accuracy for yield 64.83%. While the results of a Fuzzy Logic facial parameter values are dynamic, so they can show facial expressions that contain more than one type of emotion. From the distribution of questionnaires to obtain accurate values for facial expression 66.4%

Keyword : emotion, expression, three dimensional face model, naive bayes, fuzzy logic.