
Abstract

Facial expressions are one of the ways people communicate to be able to convey one's emotions to their non-verbal communication opponents. Therefore, human facial expressions can be used in a variety of purposes, such as a trader can recognize the satisfaction of his customers. By applying face processing technology, the expression of a person is expected to be identified by using a machine, so that further processing can determine customer satisfaction cumulatively. This research is aimed at creating a system that can recognize human facial expressions. The system that is done by implementing the Viola-Jones method begins with the process of implementing the Haar-Like feature, Integral Image, Adaptive Boosting, up to implementing a Cascading scheme for its classifications. The system works using the Python programming language as well as using OpenCV library. The output of the system will show the classification of the face along with its expression and background which is considered a non-object image. The classification result is characterized by the emergence of a rectangle as a visual detector to display the expected object and equipped with an expression indicator. To determine the performance of the system, precision, recall, and accuracy are calculated based on the tests provided.

Keywords: viola-jones, haar-like features, integral image, adaptive boosting, cascade, python, opencv