Abstract

Facial expressions is a form of response that appear to show a person's response in communication. With face expressions, someone will know the other person's response in non-verbal about what he or she said. Therefore, the ability to recognize the face expressions is one of the social competence form.

This final project is a study about the ability of Local Directional Pattern and Support Vector Machine in the process of face expressions recognition in real time. Local Directional Pattern using the approaches based on appearance so that is more suitable for real time system. This is because the approaches based on appearance has a simpler computation than approaches based on geometric features.

The result of study show the system reach 88.92% of accuracy ability in detecting the human face expression with best direction kernel response value parameter (k) for Local Directional Pattern is 3 and the best number of region to divide the face image is 7×7. The result of study also show the mapping of kernel in Support Vector Machine that suitable for real time system is the linear kernel.

Keywords: automatic face expressions recognition, local directional pattern, support vector machine, real time, kernel direction