

ABSTRACT

Activities carried out by humans are very diverse. This diversity makes humans create an electronic device to facilitate or maximize the activities. Along with technological developments, electronic input device also growing. Starting from the lever, button, remote to the touch screen can be used as an input tool to control electronic devices. Today many technologies are developed where humans can use gestures or body movements as an electronic input device.

The kinect device is camera who has features RGB (Red, Green, Blue) images, depth images and human skeleton tracking. Through a combination of depth image and human skeleton tracking features, users can see the human body skeleton detected by the camera. The skeleton data is used as a reference for the movements of humans. In this final project, human movements testing will be classified with the support vector machine method to get the activity results from the movements performed in accordance with the list of activities that have been made previously. The results of the identified activities then used as input tools for electronic devices.

The kinect camera that used for human activity recognition with the classification of body movement using support vector machine method obtain optimal range at 2 meters and 100% result in all activities tested by replacing the variable parameter values in support vector machine method.

Keyword: Human Activity Recognition, Home Automation, Machine Learning, Support Vector Machine.