

Falling is something that can happen to humans and if ignored can be harmful to life. Increasing age becomes one of the factors a person falls down. Falling that occurs in the elderly should be wary because it can affect the body's performance and health problems, such as dehydration, hypothermia, decubitus ulcers and even death. Due to the negative impact that may occur then required a classification of conditions that can cause a fall. This problem will be solved using Image Processing technology. Image Processing will help check whether people fall or not.

In this final project built an Image Processing system using speed of motion method. Motion is a key source of information from the image sequence which is a classification dataset that uses video. The speed of motion in the video is different, some are fast, slow, or both. By knowing the speed of motion of the object then obtained information that can be used to determine the condition of the object.

The results of tests that have been done show that the built system informs that the average motion speed from one frame to another frame for falling condition is 590.88458 and for daily living living condition (adl) is 164.6082. Accuracy for falling condition is 50% and normal condition 50%.

Keywords: speed of motion, fall, elderly