

ABSTRACT

The emergence of the COVID-19 pandemic has affected all aspects of human life around the world. All types of crowding activities are restricted by the government, including sports competitions such as Taekwondo. Therefore, a taekwondo competition in the speed kicking category was formed which was carried out online where this was less effective.

Looking at the problems that have an impact on taekwondo sports competitions, a solution is needed so that athletes can continue to do championships offline without the need for many judges. A tool for classifying the type of right foot kick movement is made which is expected to be able to assist the jury in providing an assessment. This tool can classify foot kick movements in taekwondo sports. Then send the results of the classification of foot kick movements directly to the user through an application on a smartphone so that the jury can see the results directly.

Machine Learning algorithm used is K-Nearest Neighborhood using kurtosis feature extraction. The results of the training test show that the training accuracy level is 97.55%. The results of testing tools in the field produce different levels of accuracy for each person. Tool testing on Athlete 1 resulted in an accuracy rate of 88.33%, equipment testing on Athlete 2 of 68.33%, and equipment testing on Athlete 3 of 73.66%.

Keywords: Taekwondo, KNN, Machine learning, Raspberry pi