ABSTRACT

Hand, Foot and Mouth Disease (HFMD) or in Indonesia usually called Flu Singapura is an infectious diseases caused by enterovirus virus 71 (EV 71). This disease has physical symptoms of vesicles that often appear in the palm of the hand. With this problem, designed an Android-based applications that can detect early HFMD disease based on input data in the form of palm images and additional symptoms. The Android-based application is using the feature extraction with Discrete Wavelet Transform(DWT) method and expert system with Decision Tree C4.5 Algorithm. From the results of tests that have been done, C4.5 algorithm gets the best performance on partition data 70%: 30% with an accuracy value of 100%, feature extraction method Discrete Wavelet Transform (DWT) gets the highest accuracy of 90% on level 1 decomposition with a value of k equal to 5 and obtained the highest level of accuracy of application performance at a distance of 30 cm with an angle of 0˚ at light intensity 300-500 LUX and angle 30˚ (Right) at light intensity 20-100 LUX with an accuracy value of 73, 33%.

Keywords: Hand, Foot and Mouth Disease (HFMD), Discrete Wavelet Transform(DWT), C4.5 Algorithm, Android