ABSTRACT

Musical instruments are one of the cultures that must be preserved. Teranika is one of the traditional musical instruments from the Majalengka area, which is made of clay. Currently, the manufacture of conventional musical instruments is still done manually, so there are still differences in the tone produced. Meanwhile, the quality of a musical instrument is determined by the accuracy of the technique. Therefore, we need a system that can accurately detect the method's accuracy.

The author designed a tone detection system for Teranika musical instruments to help artisans carry out quality control. This system will detect whether or not the musical instrument is successfully matched with the right tone and agent. The technique contained in this musical instrument is Do Re Mi Fa So La Si Do high. To overcome these problems, the author makes this tone detection system using the Discrete Wavelet Transform method and the Decision Tree classification.

The working principle of this system is that the recorded sound of musical instruments will be transmitted to this system. Then the sound will be processed as input and matched with the essential voice in the database. The output of this system produces samples according to the sampling frequency used. The test results show the best results at decomposition level 6, a thresholding value of 0.05, and a Fine Tree classification type with an accuracy of 87.5%.

Keywords: *Teranika, Discrete Wavelet Transform (DWT), Decision Tree, Accuracy, Computing Time.*