ABSTRACT

The rapid development of research on signal processing in the field of communication technology has received considerable attention in recent years, including speech recognition. The principle of speech recognition itself can be implemented in several aspects to overcome certain problems, including those related to voice recognition on CVT (Continuous Variable Transmission) motorbike engines before and after service. In this study there were 2 types of CVT engine sounds of 110 cc scoopy motorcycles which could indicate the type of damage. Mechanics or technicians tend to be faster in knowing damage to motorcycle engines by only listening to the sound of motorcycle engines during the motorcycle checking and maintenance process. Therefore, in this study using the backpropagation neural network method for the process of classifying the types of sounds on the Honda Scoopy 110cc CVT engine. The data to be used uses voice recordings with a total of 100 CVT engine voice data which are classified into 2 groups, namely 50 normal engine voice data and 50 damaged engine data. Based on variations in the combination of experimental testing on a sequence of 16 features with a total of 16 neurons, the value of the training test was 81.3%, the validation test was 100.00%, and the testing test was 90%. The data to be used is the sound recording data of the Scoopy 110cc motorbike.

***Keywords:** Classification, JST Backpropagation, 110cc Scoopy, CVT Motorcycle Engine*