

## **Endpoint detection enhancement for speaker dependent recognition.**

### **ABSTRACT**

The automatic speech recognition (ASR) field has become one of the leading speech technology areas today. Various methods have been introduced to develop an efficient ASR system. The Neural Network (NN) approach is one of the more popular methods that is widely used in this field. Another Multilayer perceptron (MLP) model which is popularly used in the ASR field is the NN model. However, the current problems faced by MLP and most NN models in the ASR field is the long duration of training. Furthermore, the robustness of the isolated digit recognition is not trivial because it has been widely used in many applications. This study focuses on improving the training time and robustness of the MLP neural network for the Malay isolated digit recognition system by proposing variance endpoint detection to accelerate the convergence time of the NN and to produce the highest recognition accuracy. The proposed endpoint method have shown very promising results over experiments carried out. The overall performance for the Malay data set is 99.83% with a convergence time of 82 seconds.

**Keyword:** Automatic speech recognition; Multilayer perceptron; EndPoint detection; Artificial neural network