

ABSTRACT

The use of speech recognition as part of home automation, especially for smart homes, is an interesting thing that is still being developed. That is because human needs for comfort, convenience, quality of life and better safety. Speech recognition that was built in this study, is used as a device to control smart home devices by identifying the commands spoken by users, especially in a state of clean speech. The command used is a predetermined consecutive word. For the extraction of voice commands the MFCC algorithm is used and for the process of matching spoken words with templates using the DTW algorithm. DTW algorithm can find the difference between 2 time series that have different lengths of time. The results of the accuracy of this system by using these algorithms were successfully carried out by 86.67% with an average time required to identify the commands of 5.28 seconds.

Keyword: Home Automation, Speech Recognition, MFCC, DTW