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VOICE RECOGNITION SYSTEM VIA FEATURE EXTRACTION

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AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

In our daily life, speech is our main way of communication in order to communicate with other people in our daily life such as lectures, news and conversations. Speech provide the most natural way of sending information into free space to the receiver. Voice recognition has been integrated heavily in these modern days without us realizing it. For example, Google Assistant became the world's most popular voice assistant in electronic devices that we used daily such as smartphones. There are many more personal assistants that uses voice recognition as input and of course there are challenges during integrating these. Some of the advantages of voice recognition is for those visually impaired or unable to speak properly due to some illness. This project is to develop a voice recognition system using feature extraction and matching techniques. Main objective of this project is to develop a system of voice recognition by comparing several feature extractions that is already out there. Some of the common feature extraction thus far is Mel Frequency Cepstral Coefficients (MFCC), Perceptual Linear Prediction Coefficients (PLP) and Linear Prediction Coefficients (LPC), Linear Predictive Coding Cepstral Coefficients (LPCC). The result obtained during testing shows promises that the system is able to identify the words tested with majority percentage. The system is able to classify the words with majority number of observations.

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