INTRODUCTION
Speech recognition is a computerized process of recognising the spoken language of human based on speech signal automatically, it is one of the technology that adopted in smart tools such as smartphones over the past several years. With the assistance of speech recognition, it is possible to reduce the reliance on control a device using legacy input devices, users are allowed to speak a word instead of typing on the keyboard.

OBJECTIVE
In order to provide an accurate automatic speech recognition system, existing speech recognition solutions build up by several prestige firms are cloud based. The reason behind the assist of cloud computing is the limitation of computation power on smart devices. To tackle the problem, gigantic data analysis and sophisticated mathematical calculations are processing on cloud servers. Therefore, internet, one of the key element of modern automatic speech recognition should be excluded in order to guarantee the stability of the instruments, and refrain from interference coming from communications. However, there are very few solutions and research has been done to implement speech recognition without internet connection.

METHODOLOGY
The command recognition conducts training and testing. It uses MFCC to extract human voice features and stores as one of the templates. Then it uses DTW to find out the smallest distance by warping between input signal and template. If the signal is correct, the defined command will be sent to a car by Bluetooth to execute the corresponding reaction.

RESULTS
The voice recognition system can successfully recognize the input commands spoken by the users with around 98% accuracy rate.

To make use of the feature of high computing power in a computer, voice recognition is processed in the computer; then the computer sends the recognized command via Bluetooth to the robot car for further execution. The processing time is shortened to within a second.

A user-friendly GUI is provided for the users to train the recognition system by recording their own template signals. Graphs of the features of the signals are displayed in the GUI.

CONCLUSION
To summarize, this project successfully develops an internet-free command recognition system and the operation through a simple MATLAB model. It has also helped to enhance our understanding of ASR systems and gained valuable experience.

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