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Voice Activated Command for Automotive Applications Using a Raspberry PI

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Abstract:

Implementation of automation controls using voice commands is intended to increase the level of technology comparable to developing countries. Voice activation systems using user voice recognition are electronic devices installed to control the direction of a moving car without the use of a control device or switch. It only uses voice recognition to turn this system on. With this system, some applications can be used or activated by voice commands only. Therefore, users can focus on driving without interruption. The main objective of the project was to develop a system that would help users with limited mobility to control applications. However, the project can be divided into two parts which are the hardware and software development. Among the hardware used include the Raspberry Pi, motor driver, direct current motor, microphone and liquid crystal display. This project was developed using the Raspberry Pi as the primary control over the application. The driver motor will distribute the same voltage power to the direct current motor to function while receiving the signal from the Raspberry Pi. Besides, the microphone device is used to record the user's voice while giving instructions, and the liquid crystal display will display the direction of rotation of the motor when the motor is moving like moving forward, backward, left and right sides.