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ABSTRACT

The project aims to create an innovative wheelchair that combines voice and gesture control. It enhances a standard manual wheelchair by integrating technology for improved patient care. Key features include voice recognition, gesture detection, and real-time health monitoring. The wheelchair's design addresses the needs of individuals with both upper and lower limb disabilities, promoting independence and well-being. The wheelchair prototype features a sophisticated control system, combining voice recognition processed through an Arduino microcontroller with a speech recognition module, allowing precise motor movements in response to user commands. Additionally, flex sensors are incorporated for gesture detection, enabling intuitive wheelchair control and enhancing the overall user experience.

The integration of Ultra-sonic Sensor, Arduino UNO, LCD Display, WIFI Module, and the IoT platform underscores the technological prowess employed in this innovative wheelchair design.

KEYWORDS:

Ultra-sonic Sensor, ESP32 WIFI Module, Arduino UNO, LCD Display, Bluetooth Module, Relay 4-pin chamber.