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# Voice Controlled Wheelchair

**Anil A R[1], Devaraj M P[2], Guruprasad S S[3], Kumaraswamy D[4], Dr. S V Rajashekararadhya[5]**
Students, Department of Electronics and Communication Engineering[1-4]
Professor & HOD, Department of Electronics and Communication Engineering[5]
Kalpataru Institute of Technology, Tiptur, India

**Abstract:** *This research paper presents the design, simulation, implementation, and evaluation of a novel Voice- Controlled Wheelchair system based on the ESP32microcontroller and Bluetooth communication technology. The project aims to enhance accessibility and mobility for individuals with physical disabilities by leveraging voice commands for intuitive wheelchair control. The system integrates components such as the ESP32microcontroller, Bluetooth HC-05 module, motor drive IC and lithium-ion battery, facilitating seamless communication, efficient motor control, and real-time feedback. The hardware implementation is completed, and the Proteus simulation environment was utilized to develop and test the system's functionality, performance, and reliability before physical deployment.*

**Keywords:** Voice-Controlled Wheelchair, ESP32, Bluetooth Communication, Accessibility, Mobility Enhancement, Hardware Implementation, User Independence, Safety Improvement, Quality of Life, Real-Time Feedback, User Experience



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