

# Smart Wheel Chair using IOT

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**Abstract:** *The microcontroller based wheelchair using android is a device designed to assist individuals with mobility impairments. The system utilizes an Android application installed on a smartphone to control the movement of the wheelchair. The smartphone communicates with a microcontroller via Bluetooth, which is responsible for processing the received commands and controlling the movement of the wheelchair's motors. The system includes obstacle detection sensors that detect any obstacles in the wheelchair's path and prevent collisions.*

*The microcontroller based wheelchair using android is a device that combines modern technologies to help individuals with mobility impairments. It utilizes an Android application and a microcontroller to control the movement of the wheelchair. Here are some more details about this innovative device:*

*Android Application: The Android application is installed on a smartphone and acts as a remote control for the wheelchair. The user can use the application to move the wheelchair forward, backward, left, and right. Additionally, the application provides the user with real-time feedback on the wheelchair's battery level, speed, and direction.*

*Microcontroller: The microcontroller is responsible for processing the commands received from the smartphone and controlling the movement of the wheelchair's motors. The microcontroller is programmed to interface with the wheelchair's motors and control their speed and direction.*

*Improving the quality of life for the elderly and disabled people and giving them the proper care at the right time is one the most important roles that are to be performed by us being a responsible member of the society. It's not easy for the disabled and elderly people to maneuver a mechanical wheelchair, which many of them normally use for locomotion.*

*Hence there is a need for designing a wheelchair that is intelligent and provides easy maneuverability. In this context, an attempt has been made to propose a thought controlled wheelchair, which uses the captured signals from the brain and eyes and processes it to control the wheelchair. Electroencephalography (EEG) technique deploys an electrode cap that is placed on the user's scalp for the acquisition of the EEG signals which are captured and translated into movement commands by the arduino microcontroller which in turn move the wheelchair*

**Keywords:** Smart wheelchair