

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010



PROJECT REPORT ON

**“VOICE CONTROLLED WHEELCHAIR WITH
OBSTACLE SENSOR & THERAPY UNIT”**

Submitted in partial fulfillment of the requirements for the award of degree

**BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING**

Submitted By

Name	USN
GAGAN K	4AL19EC031
HARSHITHA R SHETTY	4AL19EC034
JEEVAN C M	4AL19EC038
MADHU K	4AL19EC043

**Under the Guidance of
Mrs. VIJETHA T S
Assistant Professor
Department of E&C Engineering**



**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY**

A+ ACCREDITED BY NAAC & NBA (ECE)

MOODBIDRI – 574 225.

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ABSTRACT

For people who are physically challenged with the lower limb, performing daily activities, even simple basic tasks can be impossible or very distressing. People who have lost their lower limb and unable to move themselves often face difficulties even while walking due to body imbalance.

The proposed system aims at assisting people with physical disabilities and old aged people who are not able to move independently because of their weakness. The proposed system allows the handicapped people to live their life independently to an extent. Voice recognition technology is a new way of human interaction with machine. This project uses voice recognition for the controlling of wheelchair. It uses the voice recognition module which is interfaced with motors to take input commands from the user and move the wheelchair. Also, the proposed system is interfaced to control the wheelchair using the android app which is used in smartphone. An Arduino microcontroller circuit and DC motors are used for the movement of wheel chair and IR. Sensors to detect any obstacles present in the way of direction. This model presents the design of an automated wheelchair with voice control. The main objective of this campaign is to promote voice control of wheelchairs for individuals who need it. The system's safe mobility is enhanced by additional features including obstacle identification that reduce the likelihood of accidents while travelling. This gadget also features a component for therapy that helps the user's limbs avoid becoming numb after extended rest. For those who are physically challenged, this project offers new hope. Every patient wants to be as mobile as possible, especially those with conditions like multiple sclerosis and quadriplegia. These patients can use a variety of mobility equipment, but since they cannot operate a joystick or manual wheelchair, they have no autonomous means of transportation. This voice-activated wheelchairs to help patients of this type. The wheelchair's mobility is managed by the user's speech. With minimal effort, this wheelchair may be maneuvered in the desired direction. To utilize this wheelchair, the user simply needs a little less training.