



TECHNO INDIA
UNIVERSITY



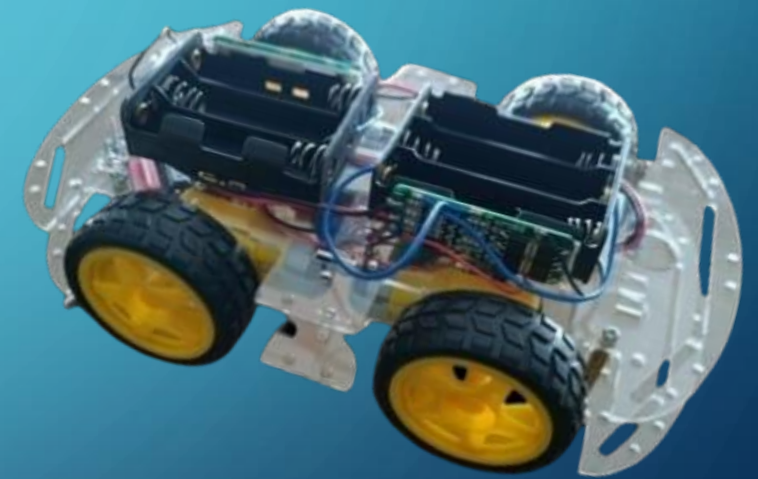
GESTURE CONTROL CAR

IOT Program
2025



PROJECT NAME: GESTURE CONTROL CAR

DESCRIPTION: A gesture control car is an intelligent remote-controlled car controlled by hand gestures with the help of a sensor-enabled glove. Rather than the usual buttons, the car is controlled by gestures such as tilting or rotating the hand to go forward, backward, left, or right. The new technology provides an interactive and futuristic means of controlling toy cars, making the user experience more intuitive with easier commands. Perfect for kids and technology fans, gesture control cars combine fun and learning, and may feature LED lights, obstacle detection, and rechargeable batteries for increased convenience and thrill.





EXPLANATION

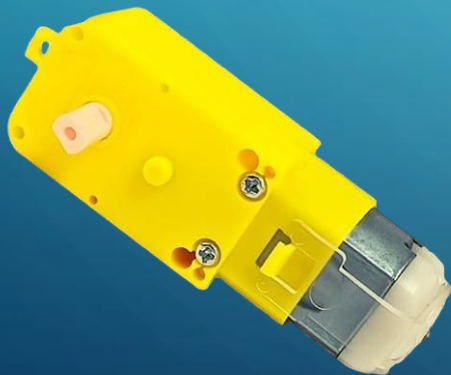
1. **Assistive Technology:** Gesture control cars can be designed for people with disabilities, promoting independence and accessibility.
2. **Industrial Automation:** Gesture control systems can be used to control machinery, improving safety and efficiency in industrial settings. Also we can use it in the shopping mall to carry products.
3. **Gaming and Entertainment:** Gesture control cars can provide immersive gaming experiences, enabling new forms of interactive entertainment. Gesture control technology can be used to create interactive and engaging toys for kids, promoting learning and fun through hand gestures.
4. **Rehabilitation and Therapy:** Gesture control systems can be used for motor skill rehabilitation and cognitive therapy, helping patients regain motor skills and improve cognitive function.
5. **Driving Ideas:**
 - A. Driving Instruction: Gesture control cars can be used by driving instructors to provide feedback and guidance to trainees, enhancing the learning experience.
 - B. Improved Safety: Gesture control can enable instructors to intervene in emergency situations, improving safety during driving lessons.



COMPONENTS

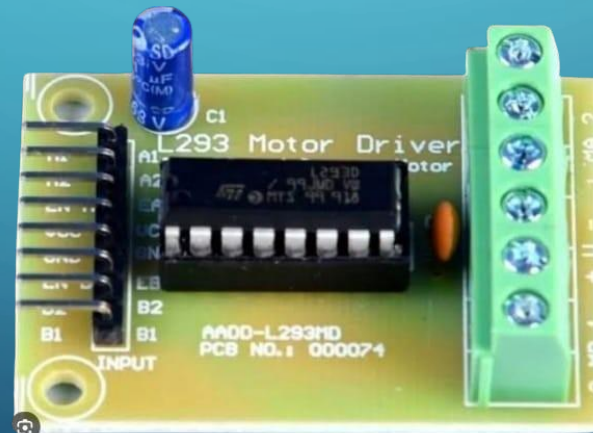
BO MOTORS

A BO (Battery Operated) motor is a compact DC motor commonly used in DIY robotics and small electronic projects. It provides moderate torque and speed, making it ideal for lightweight vehicles like gesture control cars.



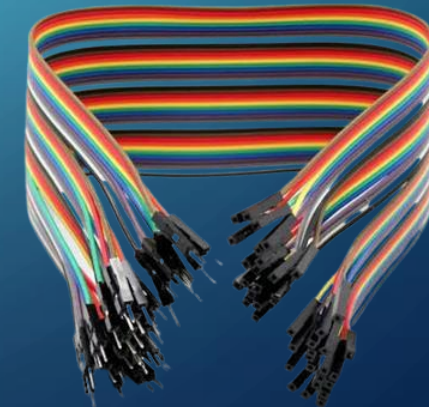
MOTOR DRIVER

The L293 motor driver is an integrated circuit that controls the direction and speed of DC motors. It allows bidirectional current flow, enabling forward and reverse motion.



JUMPER WIRE

Jumper wires are small electrical wires used to make quick, temporary connections between components on a breadboard or circuit. They come in male-to-male, male-to-female, and female-to-female types for versatile use.





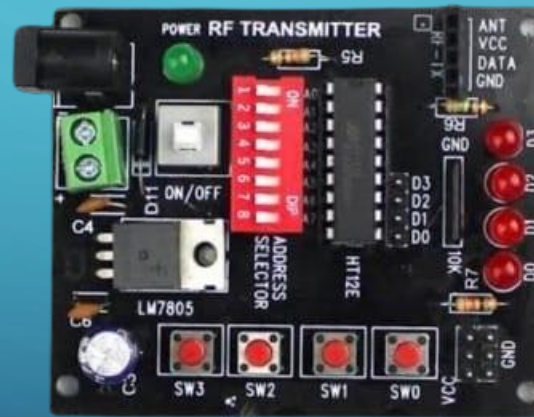
RECEIVER

An **RF receiver** is an electronic device that receives radio frequency signals sent by an RF transmitter. It decodes the signals and sends them to the microcontroller for further action.



TRANSMETER

An RF transmitter sends radio frequency signals wirelessly to an RF receiver. It is used to transmit control commands from the gesture device to the car.



LITHIUM ION BATTERY

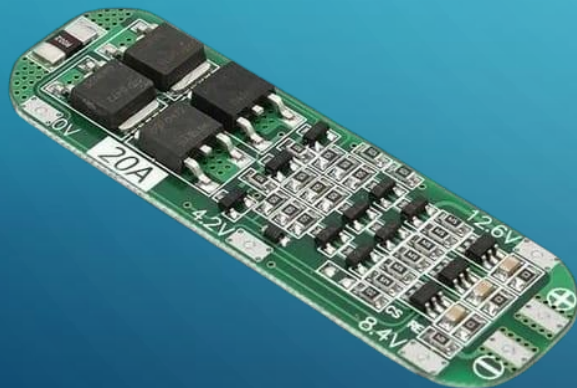
A lithium-ion battery is a rechargeable power source known for its high energy density and long cycle life. It is commonly used in portable electronics and electric vehicles.





BMS BOARD

A BMS (Battery Management System) board protects rechargeable batteries by monitoring voltage, current, and temperature. It ensures safe charging/discharging and extends battery life.



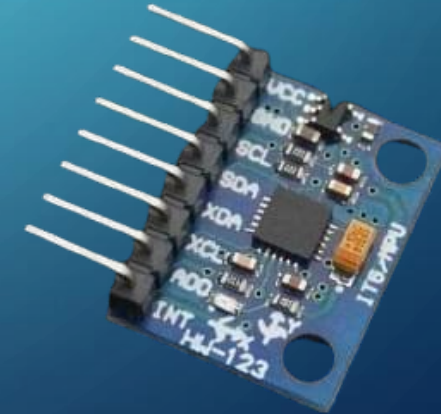
ARDUINO

Arduino is an open-source microcontroller platform used for building electronic projects. It reads inputs, processes data, and controls outputs based on programmed instructions.



GESTURE CONTROL

Gesture control (MPU6050) is a technology that interprets hand or body movements to operate devices without physical contact. It offers an intuitive and touch-free way to interact with electronics.





TECHNO INDIA
UNIVERSITY



THANK YOU

Do you have any question?

