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# Arduino Mobile Robot With Gesture Control

**E. Sajjan[1], Ch Sagarika[1], K Raju[2], B Akshitha[3], B Ashwini[4]**
Assistant Professor, Dept. of Electronics & Communication Engineering[1]
UG Students, Dept. of Electronics & Communication Engineering[2,3,4,5]
Christu Jyothi Institute of Technology & Science, Jangaon, Telangana, India
esajjan888@gmail.com,sagarikachidurala6@gmail.com,kouderaju8@gmail.com,
akshithabotla321@gmail.com,ashubalaboina20@gmail.com

**Abstract**: *This project presents a gesture controlled mobile robot using Arduino technology and wireless communication technology controlled entirely through hand gestures , eliminating the need for mobile phones or physical remotes. The user just needs to wear a gesture device in which a sensor is included. The sensor will record the movement of hand in a specific direction which will result in the motion of the robot in the respective directions. The robot and the Gesture instrument are connected wirelessly through Bluetooth. User can interact with the robot in a more friendly way due to the wireless communication. We can control the robot using accelerometer sensors connected to a hand.*

*The sensors are intended to replace the remote control that is generally used to run the robot. It will allow user to control the forward, backward, leftward and rightward movements, while using the same accelerometer sensor to control the throttle of the robot. Movement of robot is controlled by the differential mechanism. The mechanism involves the rotation of both forth & rear wheels of left or right side to move in the anticlockwise direction and the other pair to rotate in the clockwise direction which makes the robot to rotate about its own axis without any kind of forward or backward motion. The main advantage of this mechanism is the robot with this mechanism can take sharp turn without any difficulty. The design and implementation of a gesture control robotic arm using flex sensor is proposed. The robotic arm is made to imitate the human hand movements using a hands.*

**Keywords**: human hand movements



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