

# Building an intelligent and autonomous robot



Abstract: Robotics 1. Obstacle Sense And Anti-Falling Robot. The objective is to design an intelligent and autonomous robot. This work is a small scale prototype model which can be used with great versatility in other robotics applications. This obstacles sensing and anti falling sensor robot senses the edges and obstacles. A set of infrared sensors avoid it falling from heights and Ultrasonic sensor is interfaced with controller so that when it senses obstacle it will send signals to the controller so that appropriate action is taken by controller.

Movements and directions are displayed on a local liquid crystal display (LCD) interfaced with 8-bit processor. 2. Dtmf Based Rescue Robot. The objective of the project is for Rescue operations. ROBOT is based on 8 bit controller. It is interfaced with GSM modem, DTMF decoder circuitry, LCD and DC motor Control to perform rescue operation. The user has to first make a call from his mobile to the GSM modem in the above system. This call is identified by the controller using GSM modem and it accepts this call by sending the appropriate command to the GSM modem.

Once the call is answered by the system, the user can press appropriate keys on his mobile keypad to perform Rescue operation. When the user presses a key, the corresponding DTMF signals are received from GSM modem. This DTMF signal from GSM modem is given to DTMF decoding circuit which decodes it and finds out the key pressed and feeds it to the controller. Depending on this key, the controller will Perform Specific Action 3. Automatic Color Sensing Robot. 4. Voice Controlled Intelligent Wheelchair. 5. The Design And Implementation Of An Autonomous Campus Patrol Robot.

The main aim of this project is to develop a computer controlled hi-tech car with RF camera. We have a camera in our system through which we can see the video. A car, which will be having the camera. The police can keep track of the gangster's movements by seeing the video, which is displayed in the computer. The computer is placed in Police Car so that they can control the device from a particular distance and keep track of their movements so that if the police come to know where they are, they can easily attack and catch them .

The Car can be moved in all directions such as left, right, forward and reverse to get their positions properly. Using this car we can find the Bomb place also since human beings cannot go to find that bomb and also the explosion time is not known. 6. Line Follower Robot With Intelligence. The main aim of this project is develop a Robot vehicle which will find out its lane using proximity sensor. We can implement this robot where ever we want routine work for long time.

The path is tracking by proximity sensor. According to sensor output signal the microcontroller controls the vehicle by using (forward/reverse/stop) DC motor which are placed in vehicle. If there is no path the microcontroller will stop the vehicle. The buzzer will indicate the status of the vehicle in the form of sound and the LCD will display the current moving direction (forward/reverse/stop) of the vehicle. #56, II Floor, Pushpagiri Complex, 17th Cross 8th Main, Opp Water Tank, Vijaynagar, Bangalore - 40.

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[email protected]com Abstract: Robotics 7. Use Of A Cellular Phone In Mobile Robot Voice Control. Advanced Robotic Pick And Place Arm And Hand

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System. This is the most advance version of “ Pick n Place Robot” using visual perception, perhaps and most popular and widely used in recent industries. A person from a remote place can comfortably control the motion of robotic arm without any wire connection.

Again there are two systems one at the transmitter side in which a software program written in Embedded C generates control signals. These signals are encoded and transmitted by RF transmitter chip. At another end RF receiver chip will demodulate these signals and decoder will decode it & finally Microcontroller will take desired controlling action on robotic arm. #56, II Floor, Pushpagiri Complex, 17th Cross 8th Main, Opp Water Tank, Vijaynagar, Bangalore - 40. Ph : 080 - 23208045 / 23207367, 9886173099, mail ID : [email protected]com