Arduino obstacle avoiding, voice control and bluetooth control robot

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Abstract: Electronic devices including mobile phones are considered as essential things at present. Robots are also used for several tasks. With the development of both the electronic engineering and computer science fields, the robots are designed by researchers and businessmen with well advanced features. Some robots are designed for some specific tasks and some are not. All those robots are very expensive. A normal person cannot buy such robots. As such, though some robots are designed with obstacle avoiding features, they are also expensive. The aim of this project is to design a low-cost obstacle avoiding robot which can be controlled by voice and mobile phones. Further, Arduino microcontroller, motor drivers, a Bluetooth module, Ultrasonic sensor and SQ11 mini DV camera are used in this work. This robot could be controlled by voice and Android smartphones. It is obvious that the Bluetooth facility should be available in the android smartphone. Using the android phone, the movement of the robot could be controlled using selected keys. Likewise, the movement of the robot could be controlled by voice (Selected words) as well. It should be noted that this robot can change its path if it finds an obstacle on its path. To avoid the obstacle, the robot could be controlled by voice or smartphone as well. Therefore, the specific features of this robot are that while this could automatically avoid obstacles, it could be controlled by voice and smartphones at the same time and it is very cheap.

Keywords: Arduino, Bluetooth controller, MIT app inventor, Robotics