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| **Project Title** | Interacting-Bot | | |

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| **Introduction with Functional Block Diagram** | | | | |
| Interacting Bot is a movable robot which can be controlled using a video game controller. However if you are not comfortable in handling the robot or you are afraid that it might collide with other obstacles, No worries! We have got you covered. There are sensors present at right positions so whenever any other object comes in close radius of your robot, It will automatically change its direction towards a safer way without your intervention. Alternatively, if obstacles on all the sides cover it, then it will stop at its position until there is a clear path to proceed.    Moving forward Obstacle Direction changes    There is a screen attached on the topmost platform of the robot, which can interact with the surroundings in different ways. There is a camera attached at the top that makes it capable of finding QR Codes in the scene. If there is any QR code present, the bot will speak about the contents. This functionality can be used if you want to use the bot as an automated guide for a museum or library or any such place. So if it is passing by any area and it happens to notice a QR code, it will stop and dictate its contents to the listener with an interactive talking face on the screen.  <https://en.wikipedia.org/wiki/QR_code>    Image result for qr code  QR code present in the scene Interacting face read out the contents loud      It also possess a scene-detecting assistant, which analyses the scene, and points out what major objects are visible there. It also shows how much sure it is about the prediction in form of percentage. Such kind of functionalities can be used for assisting physically disabled people who cannot see. This bot can help them on understanding their surroundings in a better way. As in the below give picture it specifies what object are present and also specifies their position by outlining them.    https://cdn-images-1.medium.com/max/1500/1*zoS8E7Gooe_-3Hi43_R_Yg.jpeg    https://cdn-images-1.medium.com/max/1500/1*6pWgk9wWgPsOM4nExSM2mw.jpeg  On more salient feature of this bot is that it can provide you constant company. Yes! You can interact with it, ask questions and it will provide you with best possible answers. This feature can be extended to use it as an assistant in helping you remember your appointments, important dates, reminders etc. | | | | |
| **Discussions on Design with Illustrations; Circuit Connections** | | | | |
| We used a 3-layer structure for our moving Bot. Movement of the bot is facilitated by the use of three wheels, One in the front and two at the Rear part. Rear wheels are controllable and are connected to DC Motors while the front wheel is freely moving; therefore, the bot is Rear-wheel drive. The bottom layer mostly holds the driving and decision making components of the bot. Major components on this level are motor driver, Six ultrasonic sensors, raspberry-pi. This Bot can be moved in all eight directions and is controlled using a wired video game controller. | | | | |
| **Experiments and Results; Performance Analysis** | | | | |
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| **Summary and Future Work** | | | | |
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| **List of Components** | | | | |
| **#** | **Item Name** | **Qty.** | **Provided by**  **(Dept/Self/Guide)** | **Price (Rs.)** |
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