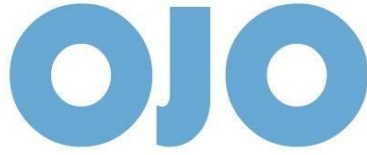


9th Week Report



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This week we continued our work on overall behaviour of the robot with collision avoidance part and started the implementation of image processing on Raspberry Pi. Also we continued improving and optimizing the mechanical features of the robot. In addition, we improved our mockup robot.

Collision Avoidance

After implementing the maneuvers of the robot, what we have left now is the collision avoidance. For this part a new collision detection library is created and the part for the ultrasonic sensors is implemented and some tests are runned.. Detection for IR Sensor will also be implemented very soon.

Image Processing

This week we started to implement our codes for Image Processing on Raspberry Pie. For this purpose, we started with the leave signal firstly. After the implementation , we tested the leave signal and got successful results. Moreover, since frame rate of our feed was not sufficient as we desired, some improvements have been made on frame rate. Lastly, for the image processing on raspberry pi, we are implementing a multithreading approach which is needed for fast response.

Physical Design

Our progress on the physical design of the robot continued this week. First, we decided what kind of holders we need in overall and made a list of the systems and components that require holders. Then, we worked on where to place all of these on the chassis. We optimized our design in terms of neatness. After this, we started to design the rest of the holders. We are planning to finalize the designs, have them cut and mount all of them until next week.

Mockup Robot

We placed the 7-segment display and its circuit on the mockup robot. Now, we are able to give the leaving the line signal from the mockup. This provides a more comprehensive test opportunity.