

ABSTRACT

Table tennis is one of small ball sports branches, that so many people are interested with it. In table tennis practice, the athlete used so many balls as a training tool. It takes extra effort for players after practice to collect the scattered balls that has been used. There are many tools created to make it easier to collect the balls, but the process of collecting them is still manual because it uses the power of the player itself.

To decrease the effort of player, we need an automatic system for collecting table tennis balls. This will be manifested by designing autonomous robots for collecting table tennis balls. This robot will use image processing in detecting table tennis balls. This process is used for determining the distance between the robot to the ball, and also become a reference while making path planning.

This robot will collect table tennis balls that are scattered based on the path that has been made. By that way, the player doesn't need to spend extra effort to take the scattered balls. By this research we hope it can achieve accuracy in detecting spheres and a range of up to 80%.

Keywords : table tennis, autonomous robot, image processing