

Behavior

In the robot behavior, our strategy divided into attacker and goalkeeper. For the attacker, we try to let our robot can know the soccer's position and kick it to the opponent's goal. That is the main purpose of the attacker strategy. In the attacker strategy, it can divided into three parts, the first part is the initialization strategy information; the second part is to find the position of the soccer; the third part is to walk to the soccer and kick the soccer. In the initialization strategy information, when the strategy starts, all strategy information are initialized and make sure that there do not have any higher priority strategy is running. It also ensure the accuracy of strategic information. After the initial, it will automatically switch to the ball position strategy. In the strategy of finding the position of the soccer, the robot will use the camera to find the soccer in the view. In the strategy of tracking soccer, when the robot finds the position of the soccer in the field of vision, the strategy will converted into the strategy of tracking soccer. This strategy is mainly to let our robot walk to the soccer ball and decide the direction. So the robot can use different action to kick the soccer. After kicking the ball, the strategy will start finding ball again. For the goalkeeper, always knowing the position of the ball and blocking the opponent's shot are the main purpose of the strategy. This strategy divided into knowing the position of the ball and unknowing the position of the ball. When the ball is unknown, the robot will stand in the middle of the goal. At this moment, the robot will use its camera to search the ball that in its view or wait for the ball information from the teammates. When the ball is known, the goalkeeper will face its body to the ball then calculate the distance. Based on the distance, the robot will decide to kick the ball away or wait until the ball is closer. We still work on the strategy of attacker and goalkeeper, all the function is still the basic one. We will add more information to the strategy, hope to let the robot more efficient.