EE 144 - Lab 6: Penalty kick

May 22

The goal of this lab project is to have the robot "kick" a ball into a goal. The setup for this task is shown in the following figure:

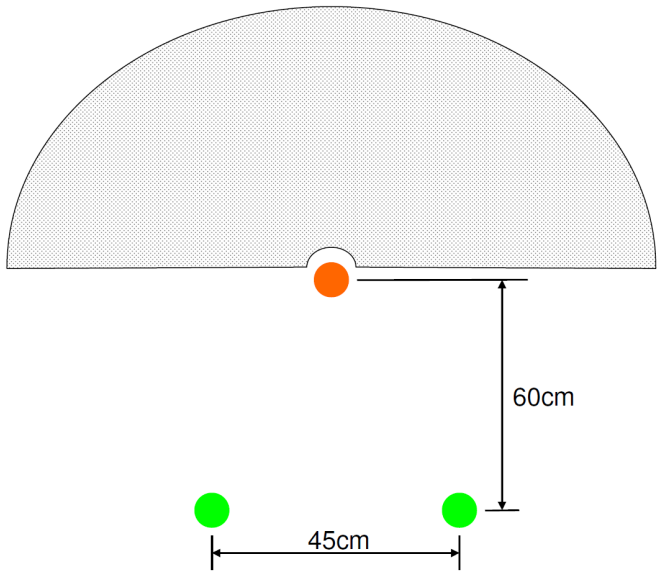

Figure 1: Penalty kick setup

The goal is made up of two posts (green cylinders), and the ball is a bright orange one, both of which can be detected in the images using color. The robot is initially placed at an arbitrary position and orientation somewhere behind the ball (shaded area). The robot should detect the ball and the goal, and then follow an appropriate trajectory to "kick" the ball into the goal.

You are free to design any strategy for accomplishing this task. A lab report will be due **June 9th**, describing your approach, your code, and your results. Additionally, at the end of the quarter a competition between all teams will be held. The teams will be judged based on accuracy (percentage of goals scored), with the robot starting from a number of different initial locations. In case of ties, the time to score the goal will be the tie-breaker (shorter times are better).

The members of the first two teams will get extra credit (details to be announced in class).