EE 144 - Lab 5

Week of May 8

Lab assignment

A key feature in many household robots is the ability to autonomously "dock" to a charging station, when their batteries are running low. In this project, your goal is to design a system for vision-based autonomous docking. You can place colored cylinders in any configuration that you prefer, in order to help the robot detect and navigate to the desired location. The robot should be able to start from anywhere in the room and with any orientation, detect the docking station, and navigate to it. The robot should stop at a pre-defined (x, y) position with an error of at most 2 cm.

Your implementation should allow the robot to start from any location in the room from which there is a clear path to the docking station, navigate to the desired location, and stop within 2 cm from the pre-specified position.

Submission

You have two weeks to complete this lab. You will be working in **two-person teams**, and you should report your work in a team lab report, due two weeks after the start of your lab session. In your submission you should also include your **commented** code, as described in the instructions.