
0.1 Introduction

As the vision segment of this project, the goal is to determine the method which leads to the best detection of the marbles within the simulated area. Describing a methods as the best is here determined by its ability to fulfill the given criteria.

From the criteria specified in section ?? its known that marbles of all colors must be detected adequately with the contrast between object and scene in mind, such that the agent can act intelligently based on this. Since it is the case that the agent needs a single value based on the marbles location in the camera image, the x -coordinate of the detected marble's center is chosen to be sent to the agent, combined with a boolean, telling rather or not a marble has been detected.

The methods chosen to test for marble detection are as follows.

- The Hough transform.
- Background projection combined with contour detection.