

91.549, Robotics II
Fall 2003, Prof. Yanco

Lab 5: Robot Vision using Pyro

Out: Thursday, 9 October 2003

Due: Thursday 16 October 2003

Overview: In this lab, you'll use the built in vision functions that exist in Pyro to track and follow objects.

1. Read Introduction to Computer Vision and Pyro Functions for the V4L Camera on the Wiki.
2. Experiment with the sample code and function calls. Nothing to turn in for this.
3. Write code that will train on the color of a person's pants or skirt when the bumper is hit (if you're training on yourself, you might need someone to help you push the bumper). Once the robot has trained on the color, it should move towards the largest blob of that color, using the sonars to maintain a safe distance. For this part, turn in your code and show me the robot working.
4. Write code that will find a ball of a specified color (your robot should circle to find it), move towards the ball and pick it up in the robot's gripper. Turn in your code and show me the robot working.