

91.549, Robotics II
Fall 2003
Prof. Yanco

Lab 6: Advanced Vision

Out: Thursday, 16 October 2003

Due: Thursday, 23 October 2003

Overview: In this lab, you will write vision code in C and write the appropriate interface to Pyro.

Part I: Look at the existing vision code to learn how it was written. There is nothing to turn in for this part.

Part II: Set up your own directory for vision code. See the Advance Vision Pyro Module for information on how to do this. There is nothing to turn in for this part.

Part III: Two-color filter. All of the code in the Pyro system will only allow you to filter for a single color. Write code that will allow you to filter for two separate colors, then run the blob code on both of the identified colors. This should allow you to identify other robots (searching for a blob with red and black) or a soccer ball (searching for a blob with white and black).

One way to approach this is by writing a function that takes r,g,b values for two separate colors and filters them into one of the color channels. You could choose to demark one color with one color value in the filtered channels (say 50) and another color for the second (say 200) – this will allow you to see the different colors being filtered before they get put together in a single blob.

To demonstrate your program, show me the camera window while the program is running. Turn in your commented code.