CMSC 143: Introduction to Object-Oriented Programming with Robots

Lab 1: Personal Robots

Due September 7, 2009

This lab introduces you to your robot, IDLE (the Python programming environment), and the wiki[1].

Learning Objectives

- Become familiar with the IPRE robot kit.
- Learn how to start IDLE and save programs.
- Learn how to issue robot commands.
- Learn how navigate the myro wiki.

Lab Report

Submit an electronic copy (PDF) on moodle of your lab report. It should include the following four sections.

Getting to Know Your Robot

1. What COM port did you use to connect to your robot (keep in mind this will change often)?

2. What is the name of your robot (after you named it)?

3. What is the version of the fluke firmware?

4. What is your robot's battery voltage?

5. What does the bottommost button on the gamepad button do?

6. What information does the `getGamepad(``count'')` provide?

Calibration

Use the `calibrate()` function to calibrate your robot's motors. How effective was the calibration?

Self Portrait

Use the robot's camera to take your picture and save it to a file.

Scribbling

Use your robot to draw a square, a 5-point star, or another shape using (a) the gamepad and (b) a function you write, saved in a module. Along with your program, use your robot's camera to take pictures of both drawings and include those in your report. Write a paragraph or two reflecting on the differences between these two approaches.

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[1] http://wiki.roboteducation.org