

Simple Robotics Project1

Measuring objects

In Class demo: End of class March 17th

Objective: to begin doing sensor/effector fusion, using sensor data to drive behavior in its simplest form

Task: Create a robot that measures a box

Details:

- The robot will start near an object in the world (A box)
- The robot needs to travel along the box
- The robot needs to measure the box as it goes using the encoders on the motors
- For a max grade of B+, report the single side length and end.
- For full possible points, turn around the box and measure the width of the box as well.
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Deliverables:

- a demo of the robot performing on Feb 22nd in class (end of class)
- The code in a github repo in which you make me a collaborator.
 - <https://sites.google.com/site/cartwightraspberrypiprojects/home/ramblings/tutorials/using-github>
 - password access doesn't work any more, so use an access token
<https://docs.github.com/en/authentication/keeping-your-account-and-data-secure/creating-a-personal-access-token>
- A short paper due (one per group) in class the following class.

Paper format:

Written in professional American English. (If you were interviewing for a job and the recruiter knew me you should be happy that this paper is used to show your communication skills. Aim it at the students taking this course next semester who don't know what they are doing (you last month)

Double spaced

Sections:

Introduction: What are you doing and why should I, the future robotics student, care

Robot hardware: How did you end up positioning your sensors, did you end up doing anything unusual etc. **Feel free to include a picture**

Robot software: what was your solution to the problem? Did you try any intermediate steps? How did it work? Include a link to your github repo with the code.

Conclusions: How well did your approach work? and What did you learn that you wish you knew going in? and finally if you had a little more time what would you change