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15-494 Cognitive Robotics
2/14/20

Lab 4 Writeup

Problem VI:

My answers are all within the “cozmo_kin.py” file -- each modification I made is preceded by a comment reading “Problem VI”.

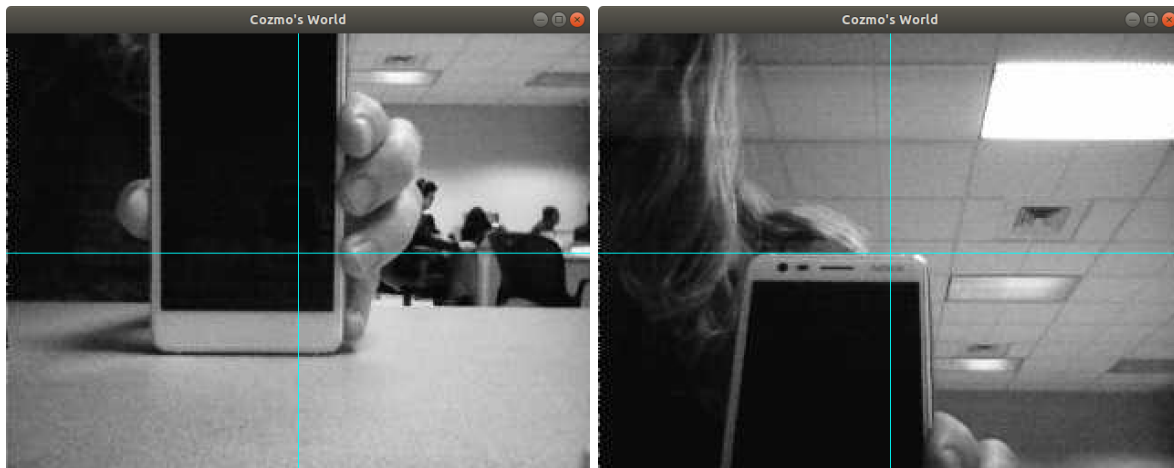
Problem VII:

The values I found, from running my “KinematicsCalculations” FSM, for the distance ahead of the robot of an object 100mm in front of the camera, are as follows:

Angle (degrees)	Distance (mm)
-10	101.83
0	104.77
10	104.86
20	101.32
30	94.59
40	85.08

Problem VIII:

With my phone, which is 150 mm tall, at an x-distance of 200 mm and y-distance of 0 mm, my “InverseKinematics” FSM rotates as follows (before and after):



The rotation is a bit less accurate when there is some displacement along the y-axis (pictures not included).