

Robotics 574 Fall semester

Section 001 2017

Hw2 – Conner Roberts

The assignment was to implement a PD controller, inside of a ros node, which uses a formula to guide a robot with sensors along a wall at a certain distance. It uses the formula to calculate which direction it should be turning and how fast the robot should be approaching the turns. The decisions involved during the coding was all about getting the node to run as smoothly as possible with the given stage. Deciding how far away the robot should be from the wall, how fast it should be going, as well as how much weight is given to the p and d constants. I believe that the program runs reasonably well. It seems a little slow at normal speed. But if you speed it up, relative to how fast the stage window is displaying the information, its seems to be fairly smooth. When using a separate terminal to set the ros namespace to the second robot while simultaneously publishing to the first robot the results can be a little mixed. They will sometimes get caught in a corner or near the other robot and spin in circles for a while before being able to break the loop. I was able to do all of the coding by myself with help of a textbook, and websites on the Internet such as the Ros tutorials website.