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ECE498 Final Project
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Final Project Progress Report 2

How many of your measurable and quantifiable goals have you met as described in your project proposal?

The team met their safe goal of developing some test programs to help complete the midterm assignment, however they were not able to meet the moderate goal of completing the midterm.

Revise your project plan and resubmit.

For the final project the team will complete the midterm 1 assignment using RRT* and LQR for path planning. State space and action space functions will be made to convert the list of points leading from the start to the goal into directions for the jetbot.

First the team will develop RRT path planning by simulating the aruco message markers with a test program. Once the path planning is successful the team will move on to getting the state space and action space, and state transition function to convert the list of points into a list of movements for the jetbot. Then the list of movements will be passed to the jetbot using a ROS2 node. At this point the jetbot should be able to avoid obstacles and path plan as long as the goal and obstacles are in view of the jetbot on start.

To expound upon midterm one the team will modify the existing code to use an RRT* and LQR path planning algorithm and ensure its success using test programs. If possible the team would also like to incorporate dynamic obstacle avoidance after the static obstacle avoidance has been implemented.

The team is dividing the work of the project by the conversion modules, but the members are constantly in communication with each other to ensure consistency in the project. Additionally, GitHub is being used for version control.