**Introduction to Robotics CSc 4120**

**Fall 2021**

Module #: 4&5

Kit # :22

Student 1: An Nguyen

Note 1: Only one document needs to be prepared per team. So, both team members, please upload the same document, as a PDF file, in Google Classroom towards your Assignment Submission.

Note 2: Do not try to edit this Google Doc document. Please download this file and either edit in Microsoft Word or Google Doc. Once completed convert it to PDF (click File and save it as PDF) and upload the same.

Note 3: DO NOT UPLOAD MULTIPLE VERSIONS.

Answer the following questions briefly (1-2 paragraphs max where each paragraph is about 5-6 lines max). Keep your answers short and upto the point.

1. What was the goal for this module? For Module 4 the goal was to incorporate two different pieces of code, have the robot recognize faces as well as colors. For Module 5, to test out the code for movement and to determine good and bad cases for the code.
2. What work did you conduct as a part of this module? Combine code for module four and test and answer questions for module 5.
3. How was the work divided between student 1 and 2 (only for Teams)? Individual
4. Student 1: What did you learn from this module? I did not learn very much from module 4 besides some of the capabilities of a simple and small camera. For module 5 I learned a lot about the movement and sensing abilities of the gopigo3 robot.
5. Student 2: What did you learn from this module?
6. Answer Yes/No -- Did you upload your materials supporting this module? The materials must be a video (phone capture OK but must be fairly steady) of demonstrating the outcome on your robot.

Yes

Module 5 Answers

For the simple stop and go code there are some weaknesses. 2 situations that the robot performs poorly are, when there is an obstacle but the obstacle is low and therefor goes under the sensor. Another weak point is when the obstacle is actually on the left and right of the sensor but will still get in the way of the movement of the robot. Of course there are some other issues like the robot can fall of a table and has no way of sensing if the surface continues. It performs well when there is a relatively tall structure that is flat and even in front of the robot.

For the part were the robot senses structures, there are some weaknesses as well. If the pathway is narrow or there is an obstacle close by, the robot needs to turn in order to sense the objects and can collide with them.Just like the simple stop and go, low structures or obstacles would not be sensed by the robot.