INFO0948: Midterm feedback

INFO0948 team

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Here is some general feedback on the midterm reports.

Milestones and assumptions

- Use the correct map. Many groups are using the house map from last year, which is fine for developing the exploration algorithm. But use the new map for developing the rest of the project as the milestones have changed.
- Think about the noise level. The youBot evolves in a simulated environment. We decided not to add noises to the sensors or the actuators. This being said, the odometer will still be sensitive to numerical noise due to the integration of the velocity or the acceleration. This numerical noise might be sufficient to create issues in the estimation of the position and needs to be taken care of carefully.
- Turn around tables. You can assume that the youBot will have enough space to turn around every table on the map.
- Be careful when using colors. You can assume that we will not change the colors of the environment elements (ground, walls, sky, tables, objects). However, we recommend being very careful when using colors as a feature to detect objects. Indeed, colors can slightly change due to a different illumination induced by a different map.
- Explore the map in about 5 min. We don't evaluate the project with a stopwatch in our hands but we want your youBot to execute the tasks within a reasonable time. For example, the average time to explore the entire map is around 5 minutes.

Written report

- Include a diagram of the state machine. As requested in the report instructions, you must add a diagram of the state machine. This will help you to organize the text of the report to describe the different states.
- Give us information about every *main* state of your state machine. For example, for the exploration of the map, you probably need to (i) choose an objective, (ii) generate a path between your current position and this objective, (iii) follow that path using a controller, and (iv) decide when to stop the exploration.

- Help us understand what you did. We recommend being specific on which algorithms you developed and which algorithms you borrowed from the literature. This will help us to appreciate the work that you did.
- Cite your sources. It is fine to use functions that you found online but do add a reference in your report and explain if you had to modify the functions.
- Don't include empty sections in the report. If a section is empty, it does not make sense to include that section in the report.
- Create a pleasant report. We ask you to create a report that respects the template provided and is easy to read. For example, if you have a figure with a width larger than the width of a column, use the environment `figure*` to avoid having text overlaying the figure.

Video

- Avoid complex setups to record your video. We recommend using a simple setup: (i) record the activity on your screen when the robot executes the tasks and (ii) add a voice comment using a video editor.
- Add text comments to the video. For example, to help us understand in which state your youBot is, it might be useful to add the current state of your youBot in the Matlab window (command window, figure, or otherwise).
- Respect instructions. It seems straightforward but we ask you to respect instructions regarding the content or the form of your written report and video.