

IGVC Milestone 5

Task matrix:

| Task | Completion % |
|----------------------------|--------------|
| Software Documentation | 80 |
| Improving the simulation | 50 |
| Control the robot movement | 100 |

Change of plan:

- ▶ Because of the situation with the Coronavirus, the team could physically access the robot.
- ▶ Focus more on documentation and simulation.
- ▶ Prioritize software development over hardware

Documentation:

Instruction instruction for building and running the simulation.

Resources A list of reference material for learning and editing the project.

- ▶ Included adjustments apply to the material

Improve experience for running and building software:

- ▶ Create a ROS launch file, which run multiple ROS nodes at the same time.
- ▶ Include a makefile to setup environment, build and run the project.

Control the robot movement:

- ▶ The robot moves and turns by adjusting the speed of two rear wheels.
- ▶ Create a custom ROS message to provide interface for controlling the robot movement.
- ▶ Currently used to manually control the robot.
- ▶ When the motion planning module can be integrate, the robot's movement can be automated.

Contribution discussion:

- ▶ Viet Dung Nguyen
 - ▶ Write the document for the simulator.
 - ▶ Streamline the process for building and running the simulator.
 - ▶ Update the plugin, which provided interface for movement control.
 - ▶ Consult about the implementation of other members work into the simulation.

Plan for the next milestone:

- ▶ Improve the documentation:
 - ▶ Included coding standard and practice for editing the project.
- ▶ Refactor the code:
 - ▶ Modularize the path filtering in order to hotswap filters.
 - ▶ Changing the parameters of the mapping module with a config file or environment variables.
- ▶ Assist other members with including their works into the simulation.

Questions?