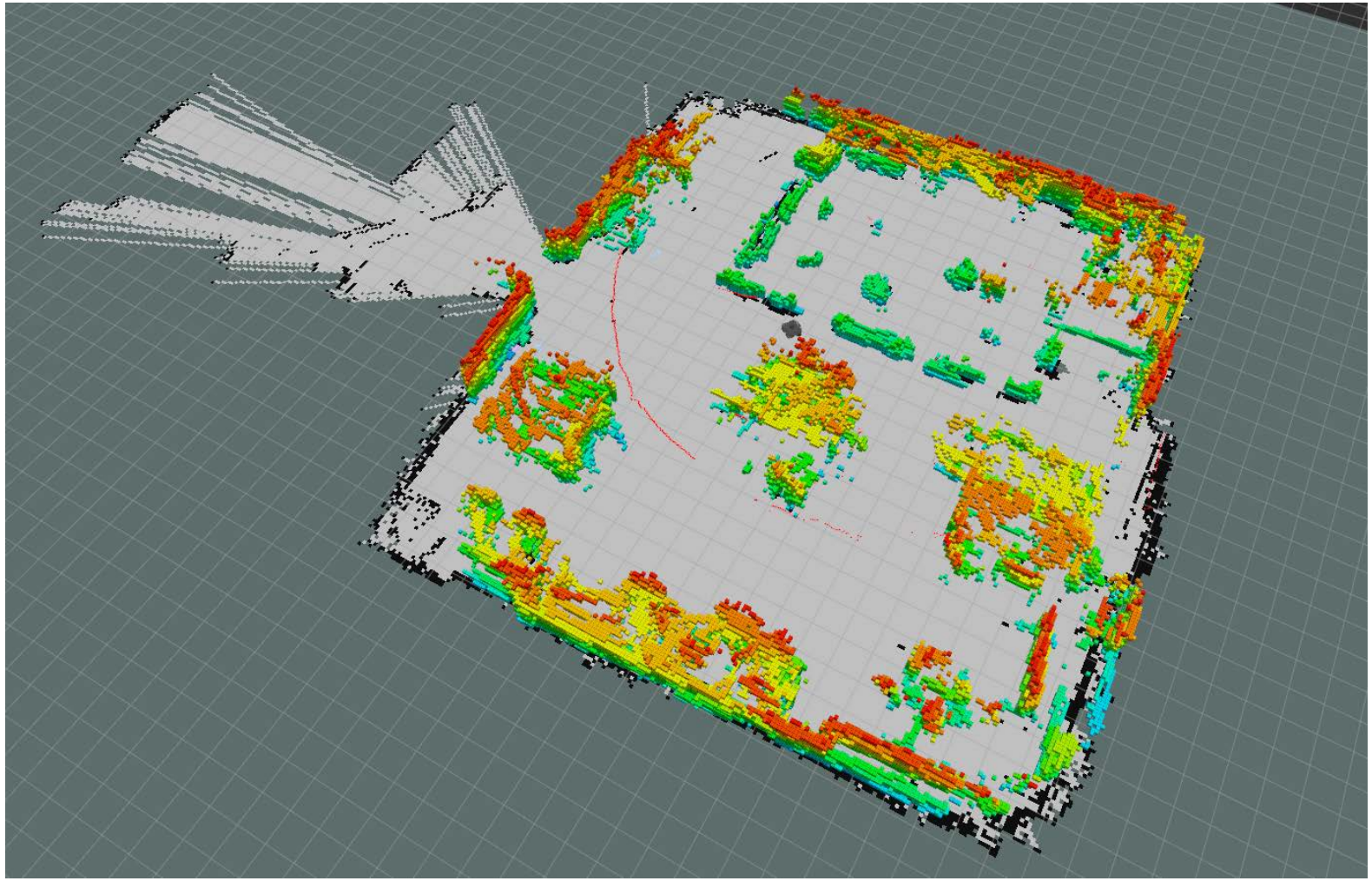
Project #3



Project #3

Map: Robotics Realization Lab's map (2D map has been uploaded into Canvas)

Search Algorithm: A*

Vehicle: Deferential drive robot with two wheels

The diameter of the robot: 400mm (just like turtlebot2)

Software: V-rep or Gazebo

Deliverables:

- Two source codes (A* for project # 2 and A* for project # 3)
- Simulation results
- Text file including the velocity, $(\dot{x},\dot{y},\dot{z},\dot{\alpha},\dot{\beta},\dot{\gamma})$, information of the robot with respect to time as instructed by sample text file (2 Hz: two samples per second)
- Readme file

- **Due date:** April 15

Rubric

1- Implementing A* for project 2 (source code) : **2 points**

2- Implementing A* for differential drive vehicle (source code with proper commenting): **5 points**

3- Left wheel's and right wheel's rotational velocity in a txt file: **3 Points**

4- Readme.txt file with instruction : **1 point**

5- Implementation on real robot (Turtlebot): **4 points**

Note: Students who prefer to implement project 4 on real robot (Baxter) can ignore step 5