

254774: Robotic technology
Assignment#1: ROS robot navigation

Based on lectures on ROS and navigation, create your own ROS package for robot navigation simulation with the following details:

1. Custom environments in Gazebo:
 - floor size at least 500 square meters
 - at least 5 rooms
 - at least 20 furniture items (table, chair, plant pots, etc.)
 - other things as you can imagine
2. A mobile robot:
 - Differential drive (or omnidirectional drive-- extra points)
 - about 0.5m (length) x 0.5m (width) x 1.0 (height)
3. Map from Lidar sensor
4. Autonomous navigation capability

Date:

- Submit – Powerpoint presentation file (with program structure/concept, pictures and videos) on January 10th, 2021 by 17.00pm
- Present: 10-minute oral presentation on January 12th, 2021 in class