

Task 1.2 – Explorer Bot

Please find the following files/folders within the folder that contains this Read Me file.

- The first folder is **Package**
 - Please find the following folder in this folder
 - task_1
 - Copy this **task_1** folder to **catkin_ws/src** folder. **task_1** is a ROS package which has an example model and some files to explain the simulation and modeling concepts in ROS.
- The second folder is **Tutorials**
 - Please find the following files in this folder:
 - [1.2.1 URDF Model Understanding](#)
You will learn how to create a robot model for simulation. Understand the concept of creating robot model using example given in this tutorial.
 - [1.2.2 Simulation Robot](#)
In this tutorial, you will learn how to launch your robot model inside the gazebo and RViz.
 - [1.2.3 Editing Simulator Environment](#)
You will learn how to create an environment (world) in gazebo and launch this world with robot model.
 - [1.2.4 Creating Map and Navigation](#)
In this tutorial, you will learn how to create a map of your virtual environment and use this map for automatic navigation in RViz. You also learn the various parameters used for autonomous navigation.
 - [Reading Material](#)
This file contains the links for references and books. Please go through these links and books mentioned in this file for better understanding.
- The Third Folder is **Final Task**
 - Please find the following folder in this folder
 - Designing Requirement
You will find files containing reference images in addition to the following two files in this folder:
 1. [Final Gazebo World Dimensions.png](#)
This image shows the dimension of your final world environment. Your final world environment must be created with these dimensions, and some sample images of final world are also given in this folder.
 2. [Robot Model Parameters.pdf](#)
Open this file and note down the dimensions defined in this pdf file to design a robot model. Your final robot model dimensions must be same as defined in this file. Refer to the images given in this folder to verify your design. Your final design robot should be similar to these reference images.

- [Problem Statement.pdf](#)

Open this file and read the problem statement carefully and complete the task defined in this file.

