

Assignment 1: Introduction to ROS

Hand in this assignment by archiving your code (use .zip format) and uploading it via the ELMS website.

1 ROS Installation

Install ROS Indigo on your personal machine. It is highly recommended that you install it under Ubuntu 14.04 LTS. Refer to: <https://amitrokh.github.io/CMSC498F/additional.html>

- Ubuntu 14.04 installation instructions: <http://www.ubuntu.com/download/desktop/install-ubuntu-desktop>
- ROS Indigo installation instructions: <http://wiki.ros.org/indigo/Installation>

Alternatively (although not recommended), if you are making a fresh install of Ubuntu + ROS you can use an image which will install Ubuntu together with ROS and all of the packages required for the class. You can get it here:

<http://download.ros.org/downloads/turtlebot/ubuntu-14.04.2-desktop-amd64-turtlebot-RC0.iso>

2 ROS Tutorials

Complete ROS beginner tutorials 1-18 found here: <http://wiki.ros.org/ROS/Tutorials>. Choose either Python or C++ for the Publisher/Subscriber and Service/Client tutorials (i.e. you don't have to do tutorials 11 and 14 OR 12 and 15).

After completing the tutorial write a node called `my_initials` (again, choose Python or C++) that will make the turtlesim write the first letter of your name. The output of turtlesim should be similar to the one shown on Figure 1. If the first letter of your name has curved parts (i.e. an "O") you can approximate them with right angles.

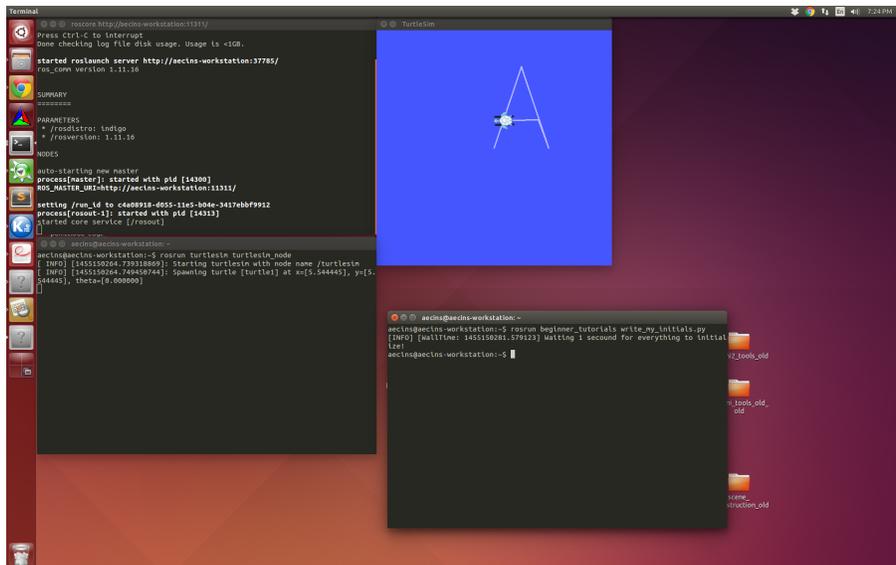


Figure 1: Example of letter "A" drawn using turtlesim

3 Turtlebot Bringup (extra credit)

Follow the http://wiki.ros.org/turtlebot_gazebo/Tutorials/indigo/Explore%20the%20Gazebo%20world and make the turtlebot move around the room in a simulator. Show how you did it to the TA during the office hours.