

How to build Ros auto navigation robot

1. Integrate Arduino With ROS - Cài đặt thư viện chạy ros cho arduino

Install Arduino on Ubuntu :

<https://linuxconfig.org/how-to-install-arduino-ide-on-ubuntu-20-04-focal-fossa>

Integrate Arduino With ROS

<https://automaticaddison.com/how-to-publish-wheel-encoder-tick-data-using-ros-and-arduino/>

Install roserial library

http://wiki.ros.org/roserial_arduino/Tutorials/Arduino%20IDE%20Setup

Install the Arduino libraries directly in the Arduino IDE. Just open the Library Manager from the IDE menu in Sketch -> Include Library -> Manage Library. Then search for "roserial". This is useful if you need to work on an Arduino sketch but don't want to setup a full ROS workstation.

If get Error: Rosserial Arduino Compilation Error: No <CSTRING>

Fix: <https://answers.ros.org/question/361930/roserial-arduino-compilation-error-no-cstring/>
(Changes) File - ros/msg.h

1. Change -> `#include <cstring>` to `#include <string.h>`
2. Change -> `std::memcpy()` to `memcpy()`

Sample code on arduino:

https://drive.google.com/drive/folders/1ksDj1biBuC6Qr_EI2uYZBbZ6A6tt1AK2?usp=sharing

2. Install on RPI3:

3. N
4. N
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