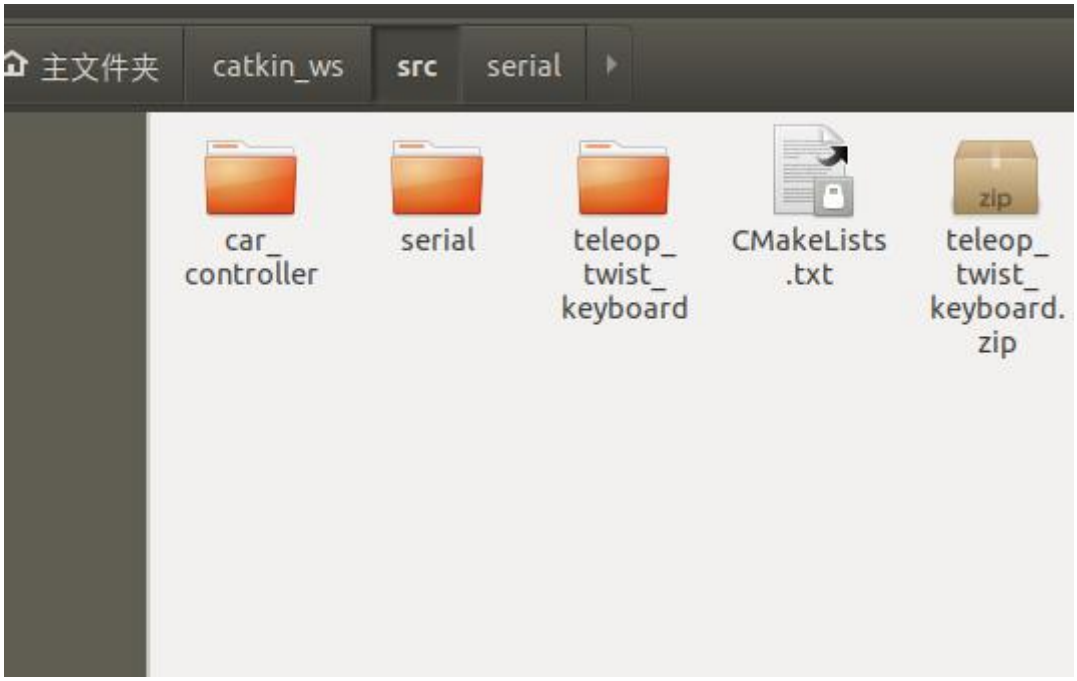
把键盘包 teleop_twist_keyboard.zip 解压成文件夹

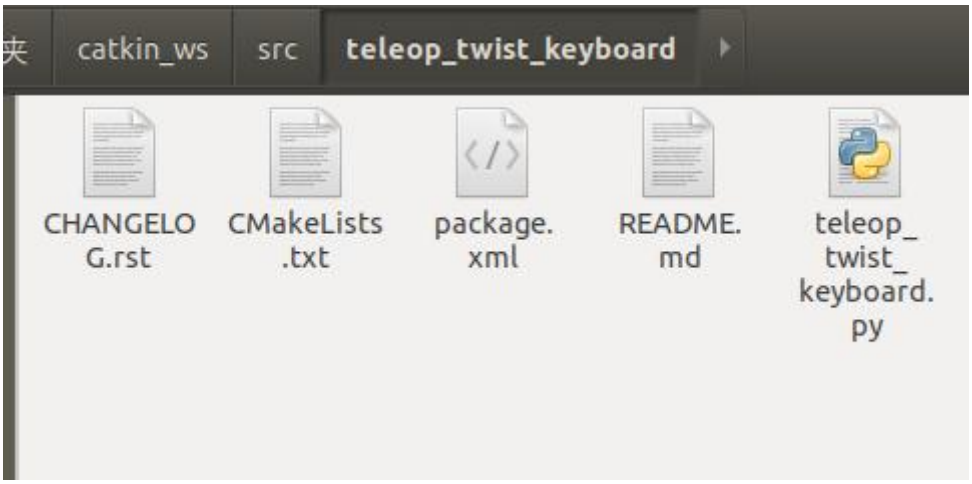
复制文件夹 car_controller 和 teleop_twist_keyboard 到工作空间,即 catkin_ws/src 文件夹里



进入键盘包文件夹里右键 teleop_twist_keyboard.py 文件

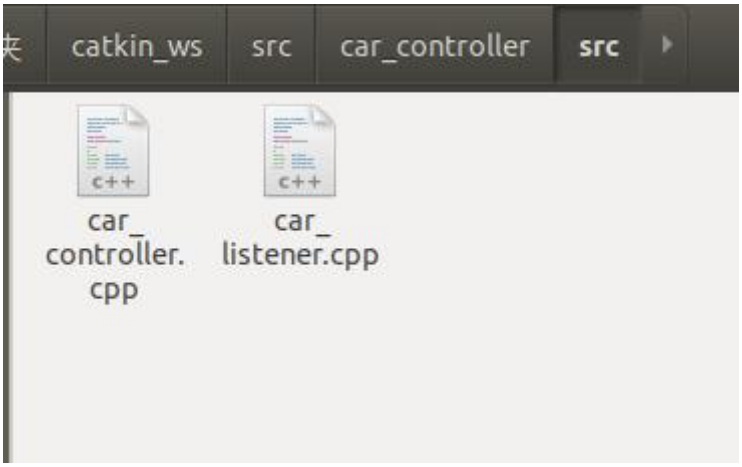
打开属性>权限

将允许作为程序执行文件前面的√给打上



同理，进入 catkin_ws/src/car_controller/src

把那两个文件也设置为可执行文件



如果没有安装串口功能包 serial

安装串口功能包

1、先在终端输入 roscore

2、打开新终端，再输入，rosparam list

3、再输入 rosparam get /rosdistro 就能得到版本

4、安装串口依赖包 sudo apt-get install ros-melodic-serial

5、查看是否安装成功 roscd serial

6、若成功会显示 opt/ros/melodic/share/serial$

查看本机串口信息 ls -l /dev/ttyUSB0

查看串口设备 dmesg | grep ttyUSB0

权限问题

运行 roscore，运行节点看是否能打开串口。如果提示 Unable to open port，是由于权限不够引起的，进行如下操作

创建文件:（若使用的是 ttyACM 将 ttyusb 替换即可）

sudo gedit /etc/udev/rules.d/70-ttyusb.rules

在打开的文件中添加

KERNEL=="ttyUSB[0-9]", MODE="0666"

或者

KERNEL=="ttyUSB*", OWNER="root", GROUP="root", MODE="0666"

若不行则 sudo chmod 666 /dev/ttyUSB0

串口权限

运行指令

打开新终端

cd ~/catkin_ws //进入工作空间

catkin_make //编译（每次修改都需要编译）

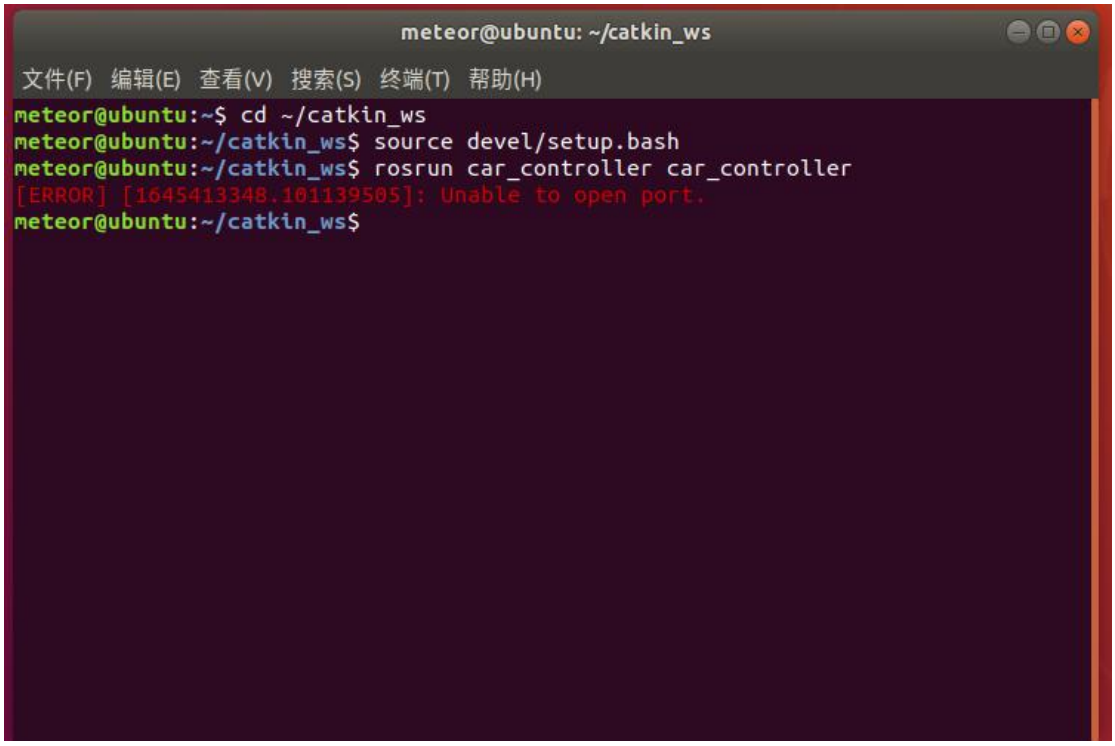
设置环境变量

source devel/setup.bash

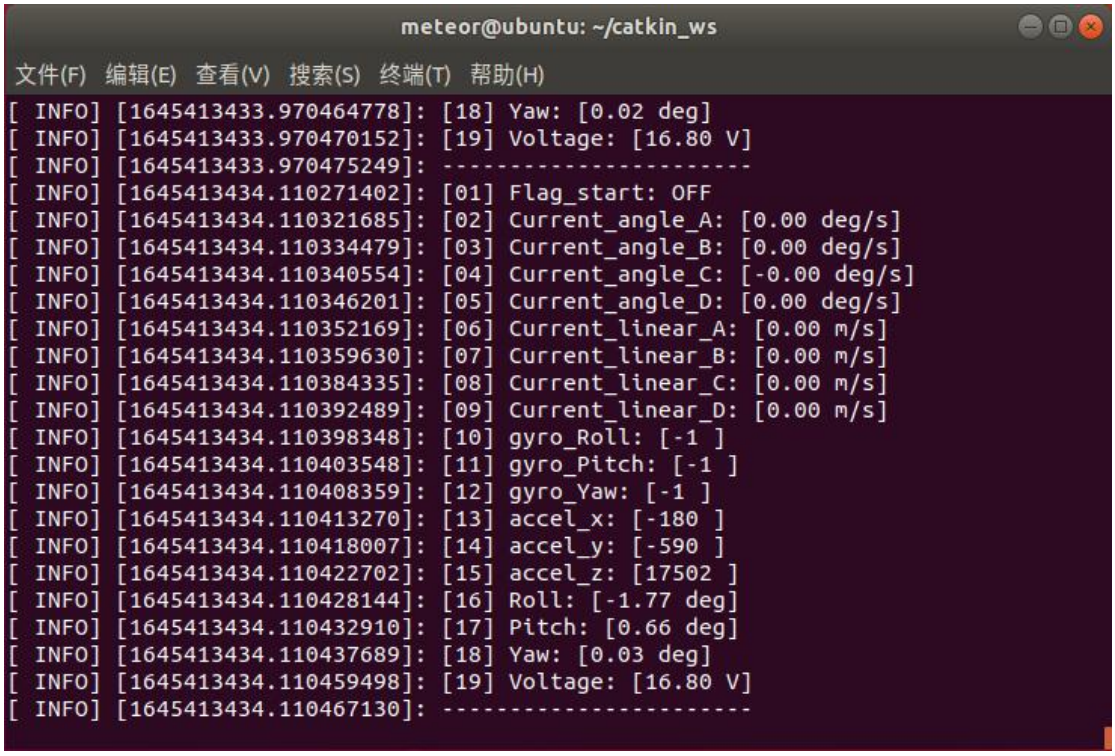
运行小车控制程序

rosrun car_controller car_controller

若没有连接到串口会有提示



若正常连接会有数据显示，有时候串口堵塞，需要重新运行启动指令



打开新终端

cd ~/catkin_ws //进入工作空间

设置环境变量

source devel/setup.bash

Rosrun teleop_twist_keyboard teleop_twist_keyboard.py 运行键盘包

打开新终端

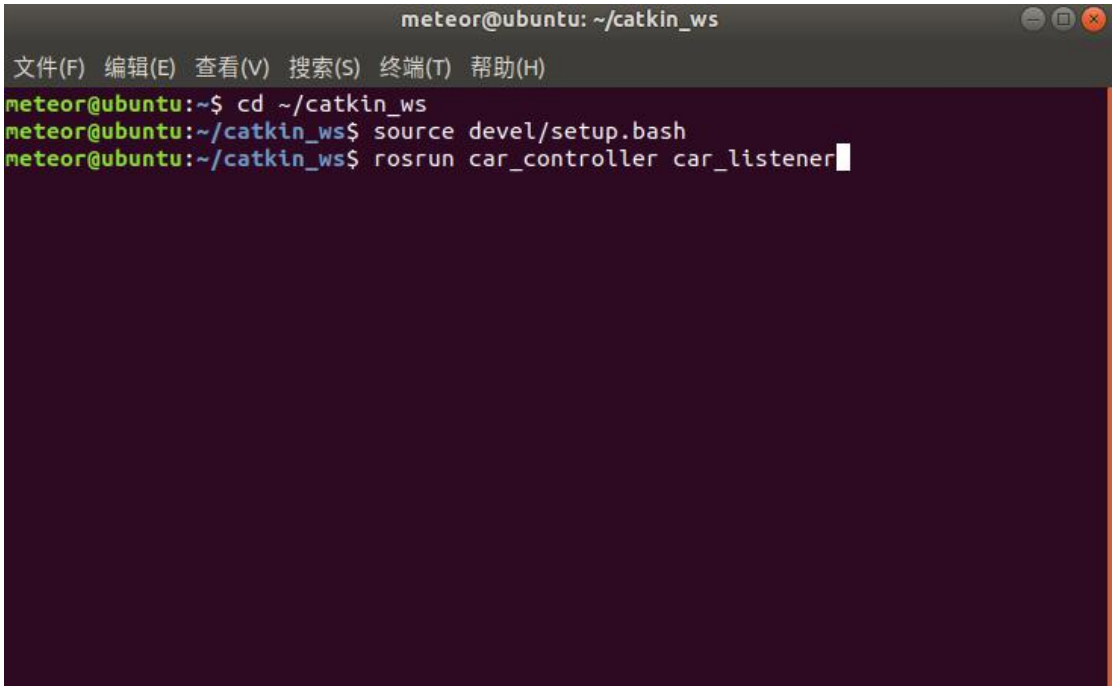
cd ~/catkin_ws //进入工作空间

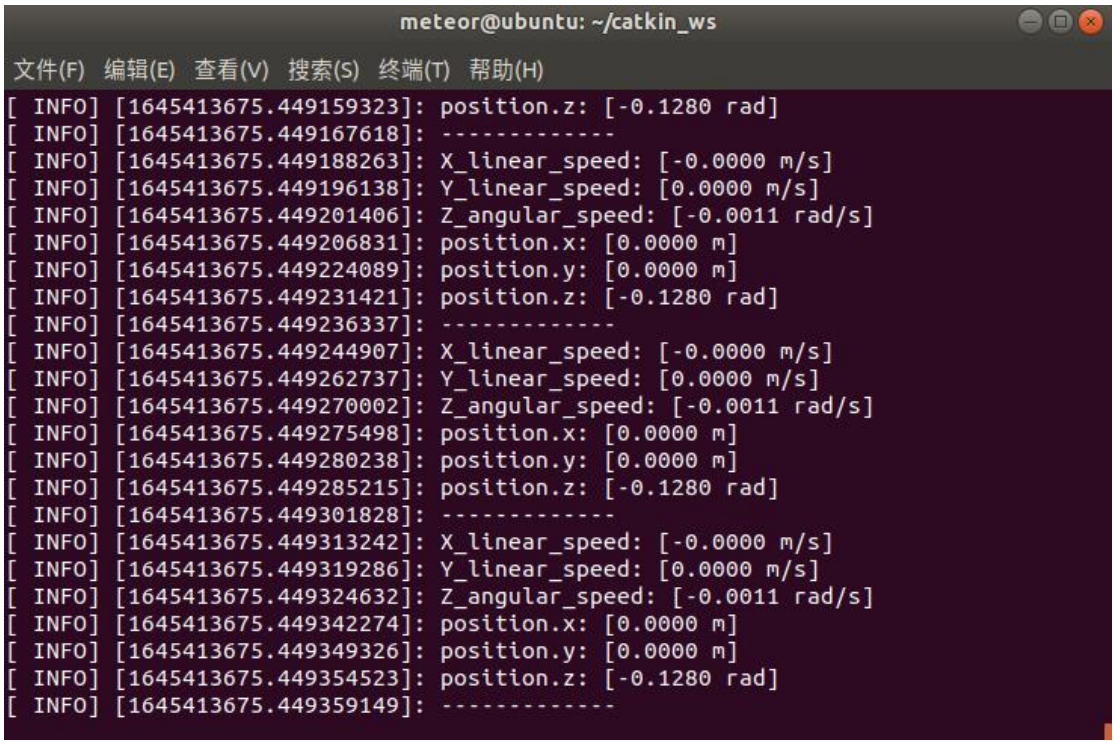
设置环境变量

source devel/setup.bash

运行小车控制程序中的订阅话题

rosrun car_controller car_listener


meteor@ubuntu: ~/catkin_ws
文件(F) 编辑(E) 查看(V) 搜索(S) 终端(T) 帮助(H)
meteor@ubuntu:~$ cd ~/catkin_ws
meteor@ubuntu:~/catkin_ws$ source devel/setup.bash
meteor@ubuntu:~/catkin_ws$ rosrun car_controller car_listener


meteor@ubuntu: ~/catkin_ws
文件(F) 编辑(E) 查看(V) 搜索(S) 终端(T) 帮助(H)
[INFO] [1645413675.449159323]: position.z: [-0.1280 rad]
[INFO] [1645413675.449167618]: -------------
[INFO] [1645413675.449188263]: X_linear_speed: [-0.0000 m/s]
[INFO] [1645413675.449196138]: Y_linear_speed: [0.0000 m/s]
[INFO] [1645413675.449201406]: Z_angular_speed: [-0.0011 rad/s]
[INFO] [1645413675.449206831]: position.x: [0.0000 m]
[INFO] [1645413675.449224089]: position.y: [0.0000 m]
[INFO] [1645413675.449231421]: position.z: [-0.1280 rad]
[INFO] [1645413675.449236337]: -------------
[INFO] [1645413675.449244907]: X_linear_speed: [-0.0000 m/s]
[INFO] [1645413675.449262737]: Y_linear_speed: [0.0000 m/s]
[INFO] [1645413675.449270002]: Z_angular_speed: [-0.0011 rad/s]
[INFO] [1645413675.449275498]: position.x: [0.0000 m]
[INFO] [1645413675.449280238]: position.y: [0.0000 m]
[INFO] [1645413675.449285215]: position.z: [-0.1280 rad]
[INFO] [1645413675.449301828]: -------------
[INFO] [1645413675.449313242]: X_linear_speed: [-0.0000 m/s]
[INFO] [1645413675.449319286]: Y_linear_speed: [0.0000 m/s]
[INFO] [1645413675.449324632]: Z_angular_speed: [-0.0011 rad/s]
[INFO] [1645413675.449342274]: position.x: [0.0000 m]
[INFO] [1645413675.449349326]: position.y: [0.0000 m]
[INFO] [1645413675.449354523]: position.z: [-0.1280 rad]
[INFO] [1645413675.449359149]: -------------