示例3.2——百度语音识别与控制

功能1——本地语音输入，远程控制HiGo

参考：
百度语音识别 ros
http://blog.csdn.net/u011118482/article/details/55001444

步骤1、安装功能包
cd gohi_ws/src
git clone https://github.com/DinnerHowe/simple_voice.git
git clone https://github.com/aniskoubaa/gaitech_edu.git

步骤2、修改launch 文件
cd ～/gohi_ws/src/simple_voice/launch
gedit simple_voice.launch
 //---
添加
<node name="voice_teleop" pkg="gaitech_edu" type="voice_teleop.py" output="screen">
          <remap from="/cmd_vel" to="/mobile_base/mobile_base_controller/cmd_vel"/>
</node>

---//

步骤3、修改python脚本
cd ~/gohi_ws/src/gaitech_edu/src/turtlebot/voice_teleop
gedit voice_teleop.py

3.1修改订阅语音识别主题为/Rog_result

```
17          # Subscribe to the /recognizer/output topic to receive voice commands.
18          rospy.Subscriber('/Rog_result', String, self.voice_command_callback)
19          |
```

3.2修改 self.commands 为**中文列表**，如下
 //---
\# A mapping from keywords or phrases to commands
#we consider the following simple commands, which you can extend on your own
self.commands = ['停止',
'前进',
'后退',
'左转',
'右转',
]
rospy.loginfo("Ready to receive voice commands")
\# We have to keep publishing the cmd_vel message if we want the robot to keep moving.
while not rospy.is_shutdown():
self.cmd_vel_pub.publish(self.cmd_vel)
rate.sleep()

def voice_command_callback(self, msg):
\# Get the motion command from the recognized phrase
command = msg.data
if (command in self.commands):
if command == '前进':
self.cmd_vel.linear.x = 1.0
self.cmd_vel.angular.z = 0.0
elif command == '后退':
self.cmd_vel.linear.x = -1.0
self.cmd_vel.angular.z = 0.0
elif command == '左转':
self.cmd_vel.linear.x = 0.0
self.cmd_vel.angular.z = 2.0

```
elif command == '右转':
self.cmd_vel.linear.x = 0.0
self.cmd_vel.angular.z = -2.0
elif command == '停止':
self.cmd_vel.linear.x = 0.0
self.cmd_vel.angular.z = 0.0
```

---//

 步骤4、
ssh gohi.local
roscore &
roslaunch gohi_hw gohi_hw.launch

PC端：
打开另一终端
roslaunch simple_voice simple_voice.launch

5、遇到问题

```
core service [/rosout] found
process[voice-1]: started with pid [16709]
process[voice_teleop-2]: started with pid [16710]
  File "/home/ros/gohi_ws/src/gaitech_edu/src/turtlebot/voice_teleop/voice_teleo
p.py", line 32
SyntaxError: Non-ASCII character '\xe5' in file /home/ros/gohi_ws/src/gaitech_ed
u/src/turtlebot/voice_teleop/voice_teleop.py on line 32, but no encoding declare
d; see http://www.python.org/peps/pep-0263.html for details
[voice_teleop-2] process has died [pid 16710, exit code 1, cmd /home/ros/gohi_ws
/src/gaitech_edu/src/turtlebot/voice_teleop/voice_teleop.py /cmd_vel:=/mobile_ba
se/mobile_base_controller/cmd_vel __name:=voice_teleop __log:=/home/ros/.ros/log
/ad36b208-1b58-11e7-a84d-0016eb39d38e/voice_teleop-2.log].
log file: /home/ros/.ros/log/ad36b208-1b58-11e7-a84d-0016eb39d38e/voice_teleop-2
*.log
[INFO] [WallTime: 1491545546.113873] initialization system
```

解决方法：在voice_teleop.py添加
-*- coding: utf-8 -*-