Semantic understand and command follow(Text Version)

1. Course Content

1. Learn the basics of how the large model understands user instructions.
2. After running the large model program, users can interact with the robot through text. The text then generates a large model and uses multimodal visual processing to accurately understand user instructions and speech. Finally, the robot performs the specified actions according to the user's instructions and responds to the user.

2. Preparation

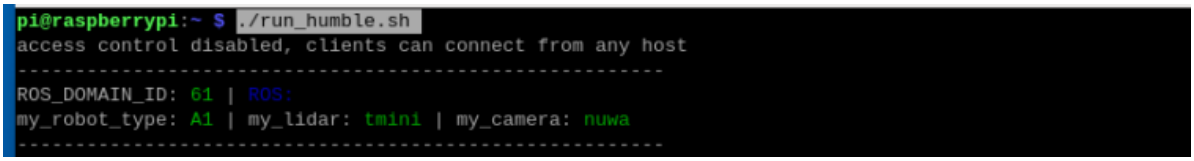
2.1 Content Description

This course uses the Raspberry Pi 5 as an example. For Raspberry Pi and Jetson-nano boards, you need to open a terminal on the host computer and enter the command to enter the Docker container. Once inside the Docker container, enter the commands mentioned in this course in the terminal. For instructions on entering the Docker container from the host computer, refer to **[01.Robot Configuration and Operation Guide] -- [5.Enter Docker (For JETSON Nano and RPi 5)]**. For Orin boards, simply open a terminal and enter the commands mentioned in this course.

2.2. Entering the Car Docker

Enter the following command in the host terminal to enter Docker:

```
./run_humble.sh
```



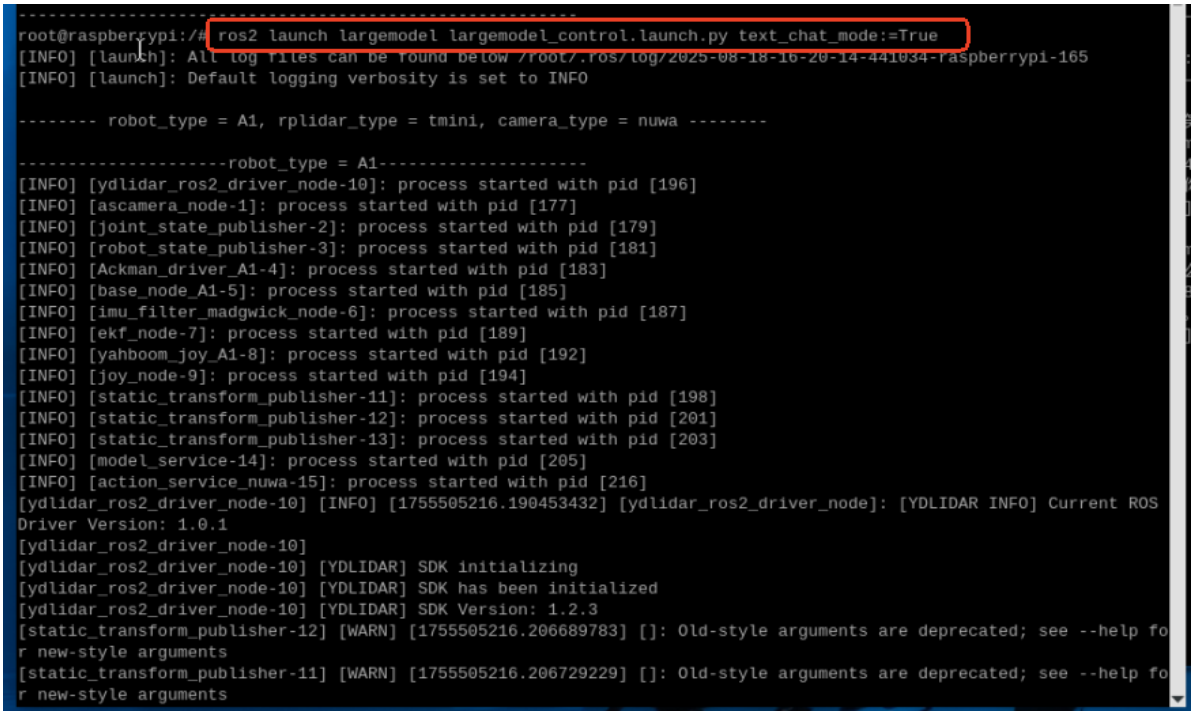
3. Running the Example

3.1 Launching the Program

For Raspberry Pi 5 and Jetson Nano controllers, you must first enter the Docker container. For the Orin , this is not necessary.

Open a terminal in Docker and enter the command:

```
ros2 launch largemodel largemodel_control.launch.py text_chat_mode:=True
```



Open another terminal and enter the same Docker container terminal. For detailed steps, see **[3. Docker Submission and Multi-Terminal Access]** in the Docker course.

```
ros2 run text_chat text_chat
```

Subsequently, enter conversation commands in this terminal.

3.2 Test Case

Here are some reference test cases; users are welcome to create their own conversation commands.

- Tell me a joke about a kitten and a puppy.
- Please quickly move forward 1 meter, then slowly back 0.5 meters like a turtle, then turn 30 degrees left and 90 degrees right.

3.2.1 Example 1

Open a terminal on the virtual machine and enter a test case. After the model has thought about it, it will respond to the user and execute the action according to the user's instructions.

3.2.2 Example 2

Similar to Example 1, enter Example 2 in the terminal. The model will respond and execute the action according to the instruction.