

# AI Encyclopedia-Nutritional Analysis

Before running the function, you need to close the App and large programs. For the closing method, refer to [4. Preparation] - [1. Manage APP control services].

## 1. Function Description

After the program starts, ask the large model which fruit on the desktop has the highest vitamin content. After thinking, the large model will reply with the answer to the question, and the program will control the robotic arm to point to that fruit.

## 2. Startup

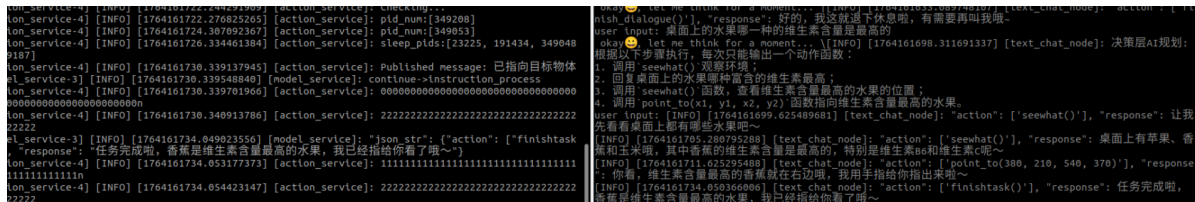
Taking the text version as an example, users with Jetson-Nano mainboard version need to enter the docker container first and then input the following command. Users with Orin mainboard can directly open the terminal and input the following command:

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

Then open a second terminal and input the following command:

```
ros2 run text_chat text_chat
```

Then input "Which fruit on the desktop has the highest vitamin content" in the text\_chat terminal and press Enter; if it's the voice version, wake up the voice module and directly say to the voice module "Which fruit on the desktop has the highest vitamin content?", then wait for the large model to think and reply, as shown in the figure below:



The image shows two terminal windows. The left window displays the output of the 'largemodel\_control' launch, showing the model's internal reasoning steps: 1. Using 'seewhat()' to observe the environment. 2. Identifying the fruit with the highest vitamin content on the desktop. 3. Using 'seewhat()' to identify the position of the fruit with the highest vitamin content. 4. Calling 'point\_to(x1, y1, x2, y2)' to point to the fruit with the highest vitamin content. The right window shows the output of the 'text\_chat' launch, where the user asks 'Which fruit on the desktop has the highest vitamin content?' and the model responds with 'The fruit with the highest vitamin content is banana, I have pointed it out for you~'.

Then the robotic arm will point to the banana:



### 3. Task Planning

1. Call `seehat()` to observe the environment;
2. Reply with which fruit on the desktop has the highest vitamin content;
3. Call the `seehat()` function to check where the fruit with the highest vitamin content is located;
4. Call `point_to(x1, y1, x2, y2)` to point to the fruit with the highest vitamin content.