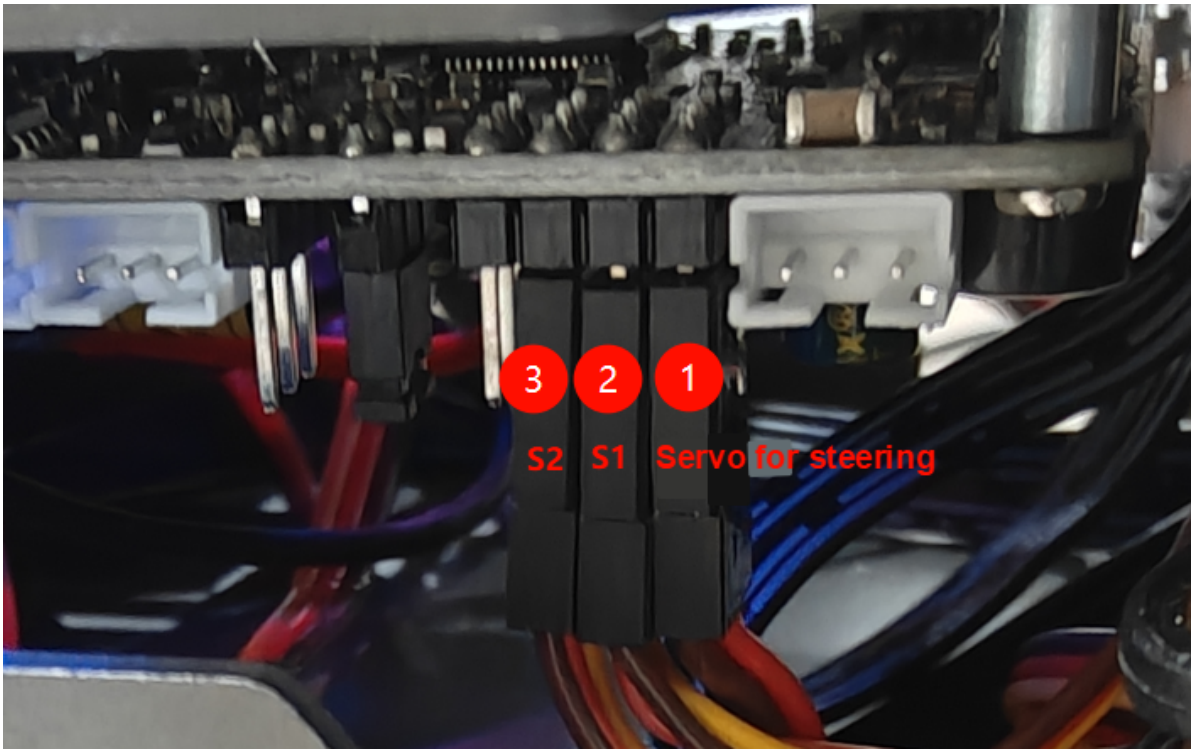
USB Camera, PTZ Users (Must Read)

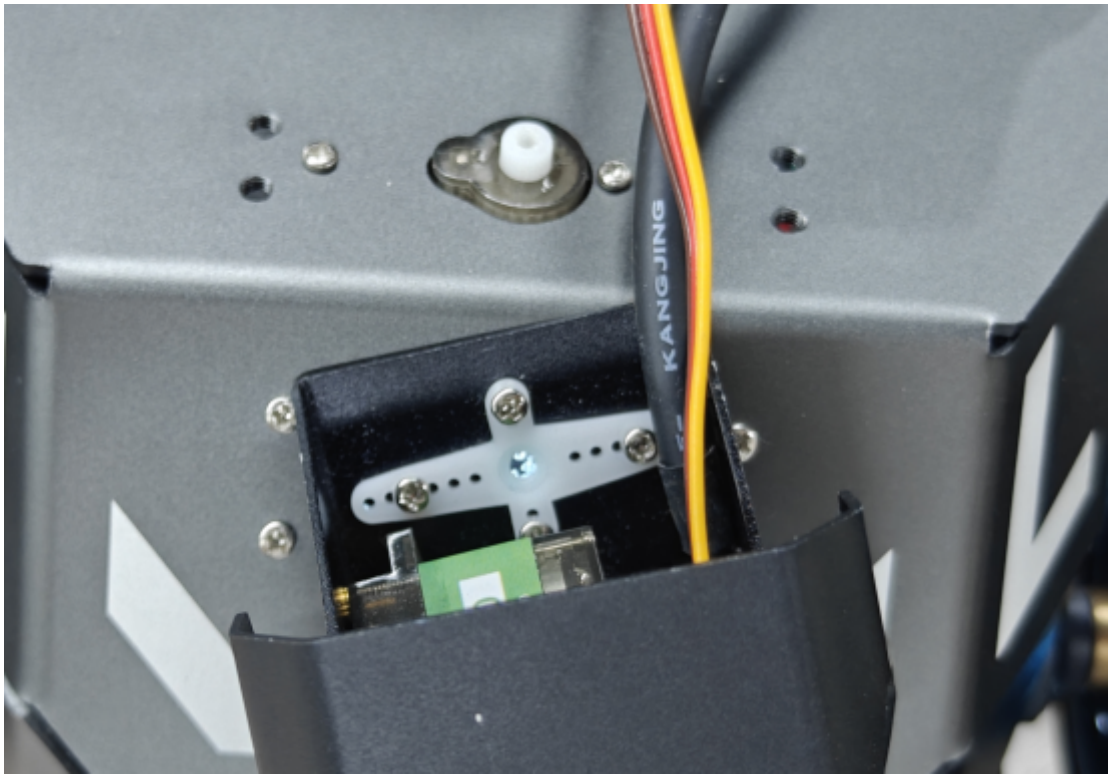
> Note: For the ROSMASTER-A1 robot's PTZ, perform the following steps before assembly to initialize the angles.

1. Installation

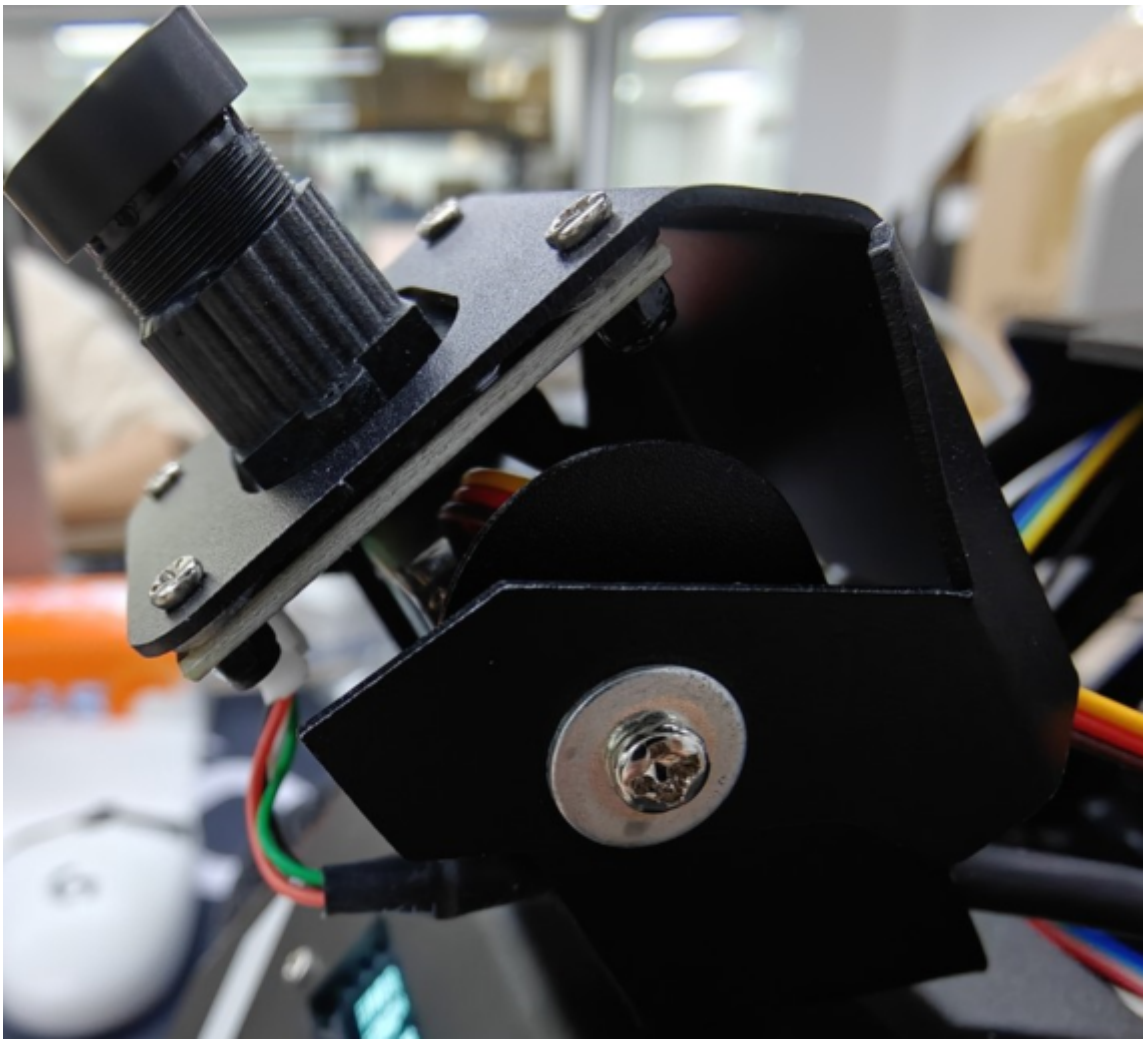
1. With the robot powered off, connect the corresponding servo cables (S1 for the horizontal servo, S2 for the vertical servo).



2. Leave the PTZ servos disassembled. Power on the robot. The S1 and S2 servos will reset to their initial angles.



3. Install the PTZ servo. Be careful not to adjust the horizontal servo gear angle at this point. Turn off the power to the robot and tighten the screws.



2. Initial Value Settings

2.1 Servo Initial Values in the Auto-Startup Program

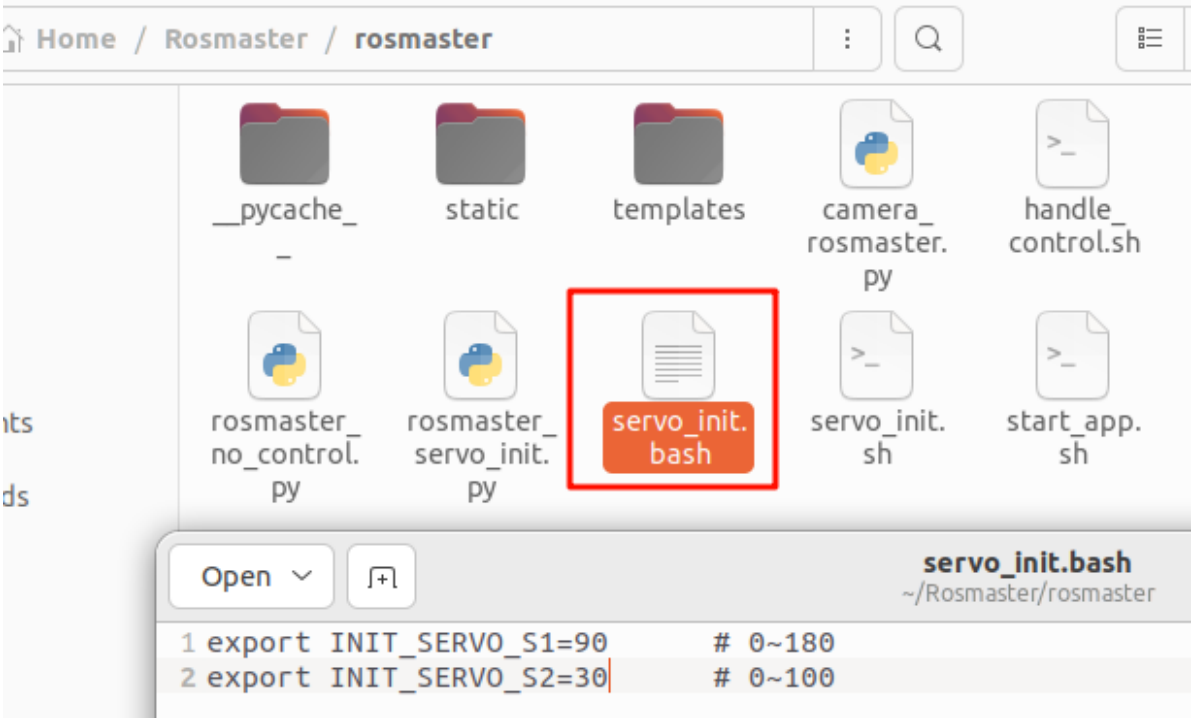
Each time the robot is powered on, the driver board sets the PTZ to an initial angle of (90,90). After entering the system, the Servo Initial Position Program automatically starts and sets the PTZ to a preset angle of (90,30).

⚠ Due to the servo's inherent structure, the gears will inevitably be offset by an angle. Therefore, setting it to 90 degrees does not necessarily result in the camera being horizontally centered.

Modification method:

- ORIN users:

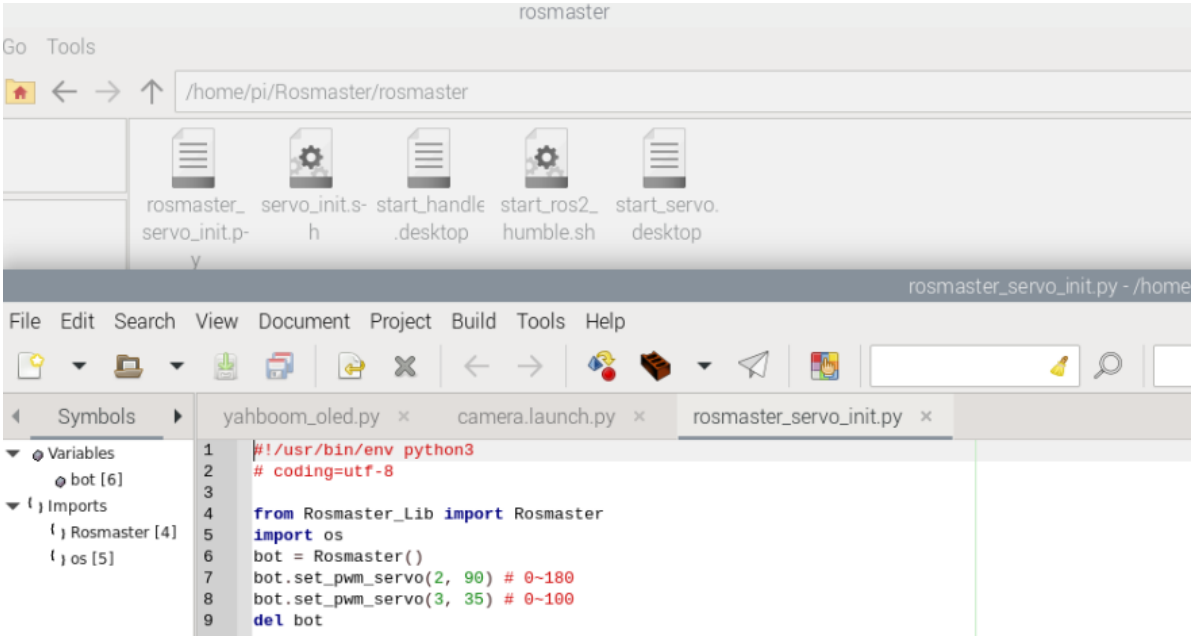
You can modify the parameters in `/home/jetson/Rosmater/rosmaster/servo_init.bash`.



This configuration will be applied to the `Servo initial position program` and the `Power-on auto-start joystick control program`.

- pi5/jetson nano users:

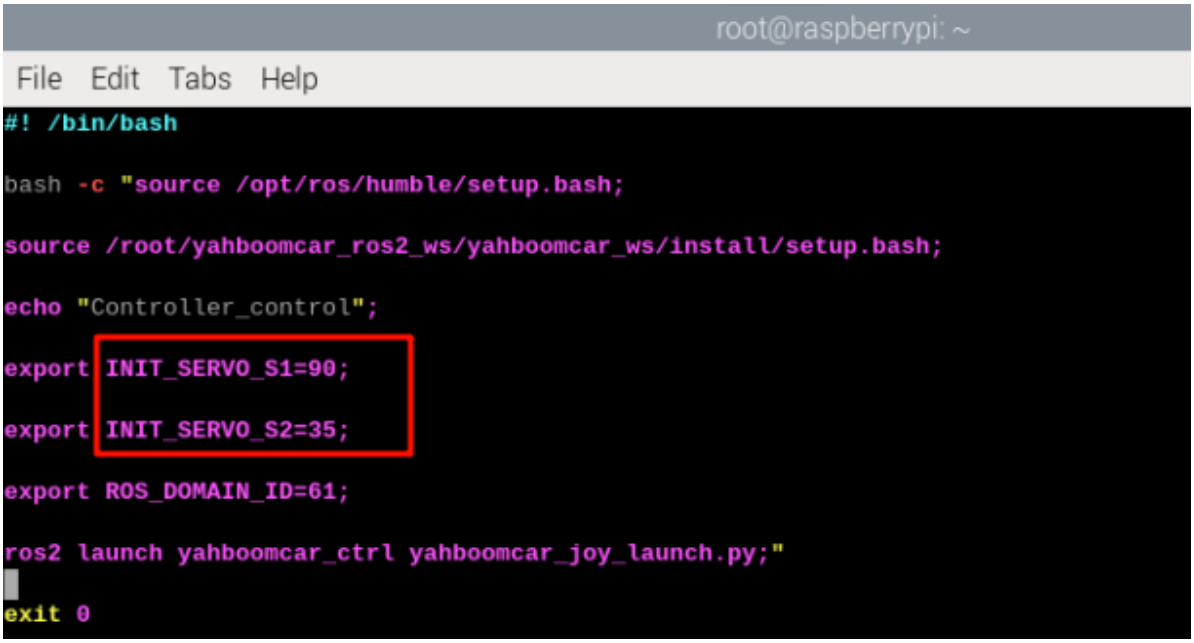
You can modify the parameters in `/home/pi/Rosmaster/rosmaster`.



This configuration will be applied to the `Servo Initial Position Program`

After entering Docker, **(If you don't understand the operation, please refer to the Docker tutorial)**

```
vim run_handle.sh
```



Save the file and exit.

This configuration will be applied to the `Handle Control Program that starts automatically at startup`

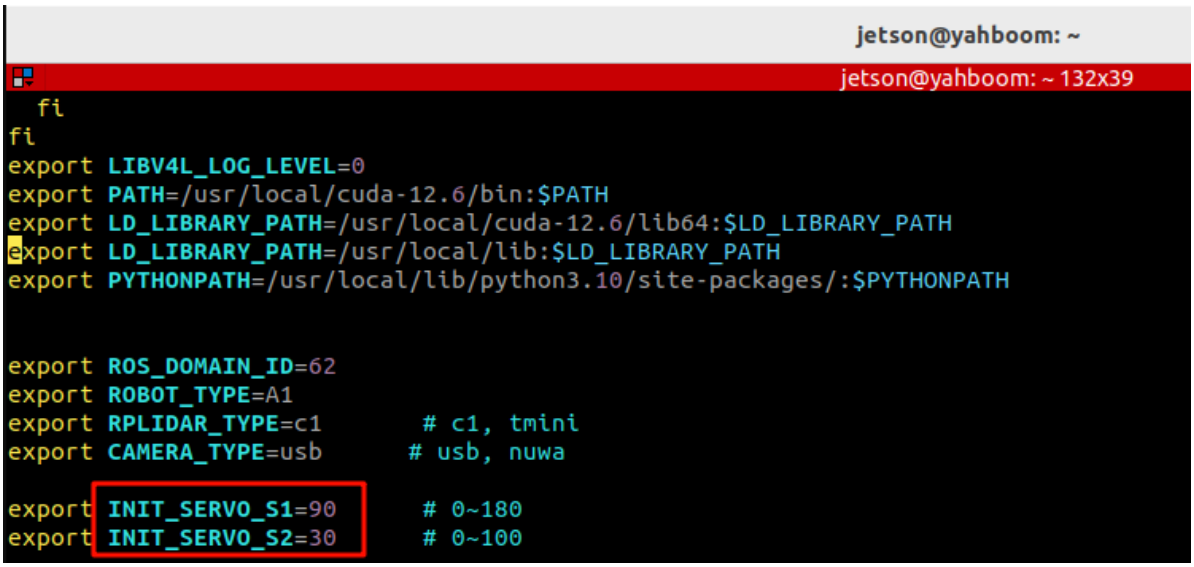
2.2 Initial Servo Values in Vision Cases

In most vision tracking/following cases, the servo is reset to an initial value when it is started. This is done by retrieving the servo angles preset in the environment variables.

Modification method:

- ORIN users:

```
sudo vim ~/.bashrc
```



- pi5/jetson nano users:

After entering Docker, **(If you don't understand the operation, please refer to the Docker tutorial)**

```
sudo vim ~/.bashrc
```

Save the file and exit.

This configuration will be applied in the `Visual Tracking/Following Example`