Docker-Vscode Environment Setup

This example uses Windows as an example to configure VSCode to access a Docker container. The steps for accessing Docker in Ubuntu are essentially the same.

1. Remote Configuration

1.1. Determine the current IP address of the robot

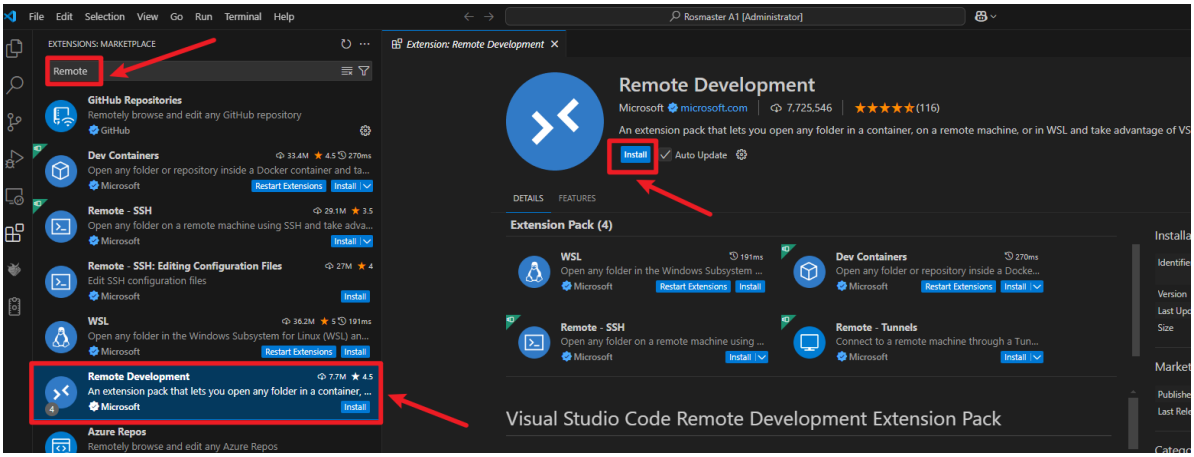
Use the OLED screen on the robot to determine the current IP address. Your Windows computer must be connected to the same network as the robot motherboard to remotely access the Docker server through VSCode.

1.2. Download and install VSCode

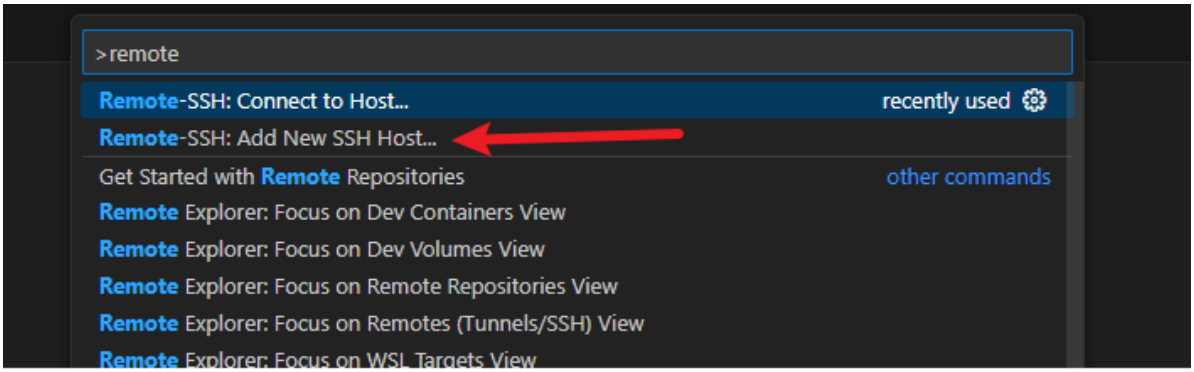
VSCode official website: https://code.visualstudio.com/. Download the Windows version for installation.

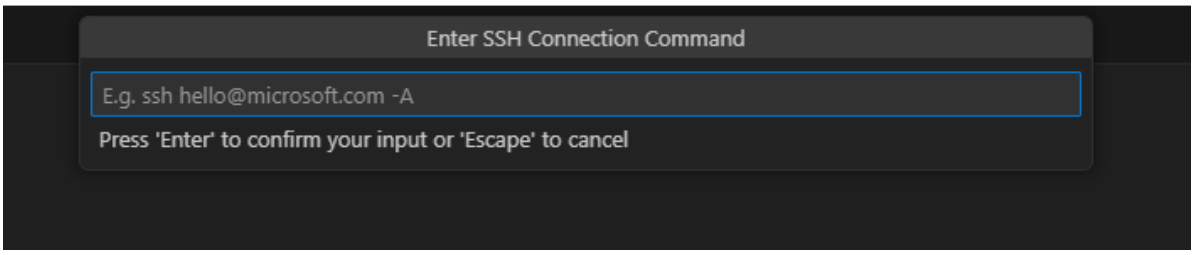
1.3. Configure VSCode for SSH remote login to the host machine

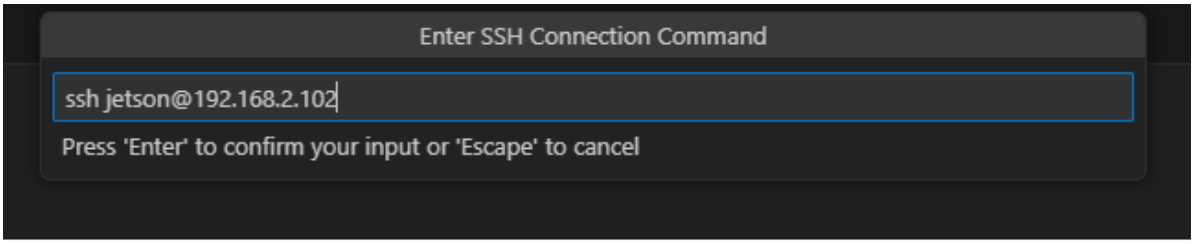
1. Open VSCode, click the arrow icon on the bottom left, then enter "remote" in the search box. Select the Remote Development plugin and click Install to install the plugin.

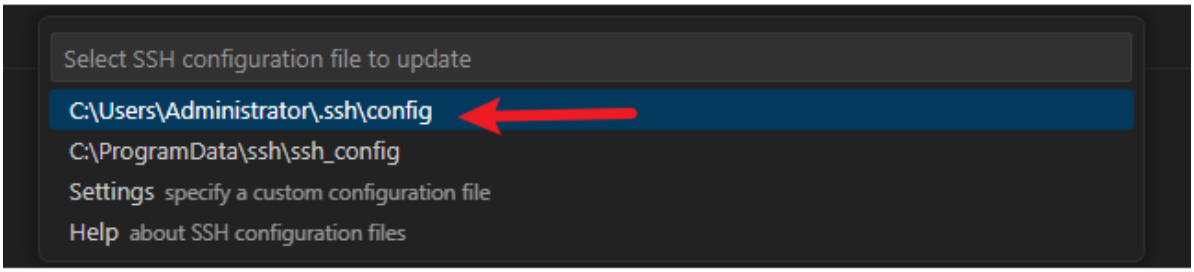


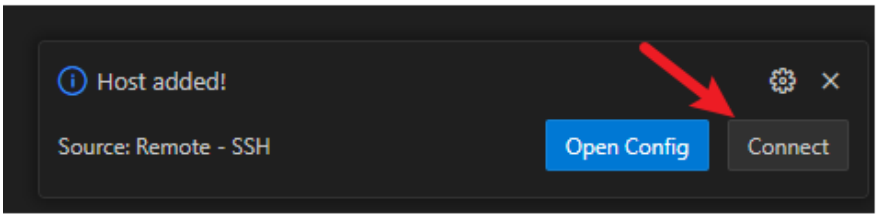
2. In VSCode, press the shortcut keys [Ctrl + Shift + Open the command prompt window, enter "remote," and follow the instructions below to log in to the remote host machine [Xiaoche].

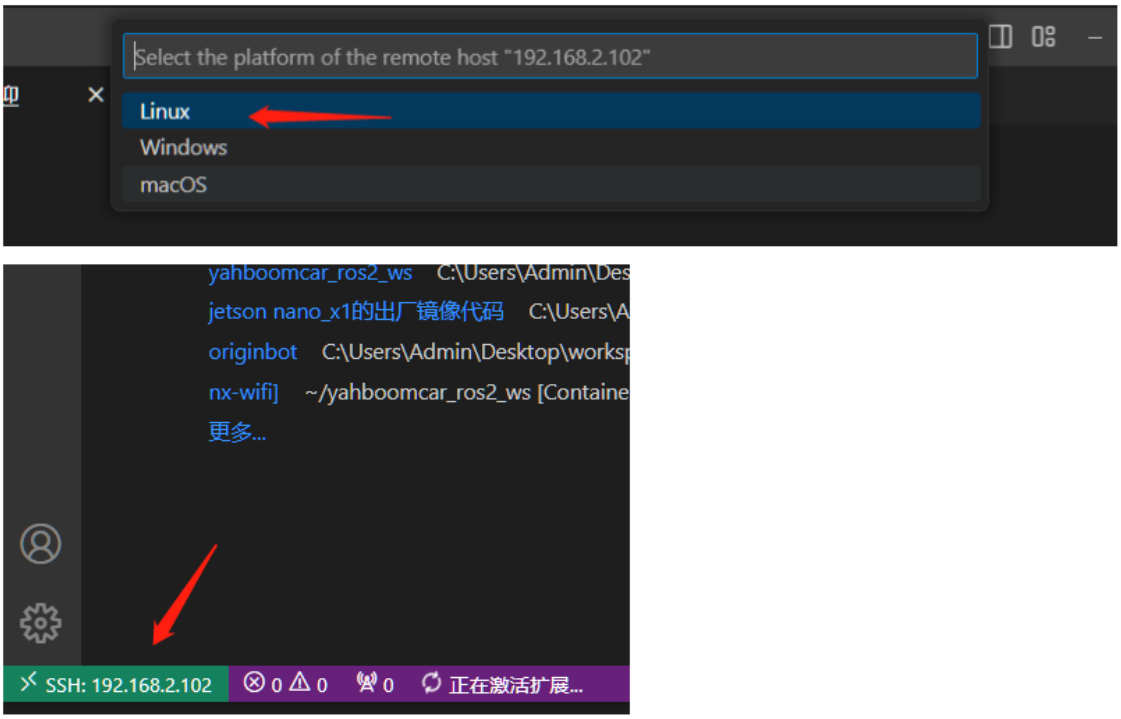

>remote
Remote-SSH: Connect to Host...
recently used
Remote-SSH: Add New SSH Host...
Get Started with Remote Repositories
other commands
Remote Explorer: Focus on Dev Containers View
Remote Explorer: Focus on Dev Volumes View
Remote Explorer: Focus on Remote Repositories View
Remote Explorer: Focus on Remotes (Tunnels/SSH) View
Remote Explorer: Focus on WSL Targets View


Enter SSH Connection Command
E.g. ssh hello@microsoft.com -A
Press 'Enter' to confirm your input or 'Escape' to cancel


Enter SSH Connection Command
ssh jetson@192.168.2.102
Press 'Enter' to confirm your input or 'Escape' to cancel


Select SSH configuration file to update
C:\Users\Administrator\.ssh\config
C:\ProgramData\ssh\ssh_config
Settings specify a custom configuration file
Help about SSH configuration files


Host added!
Source: Remote - SSH
Open Config
Connect



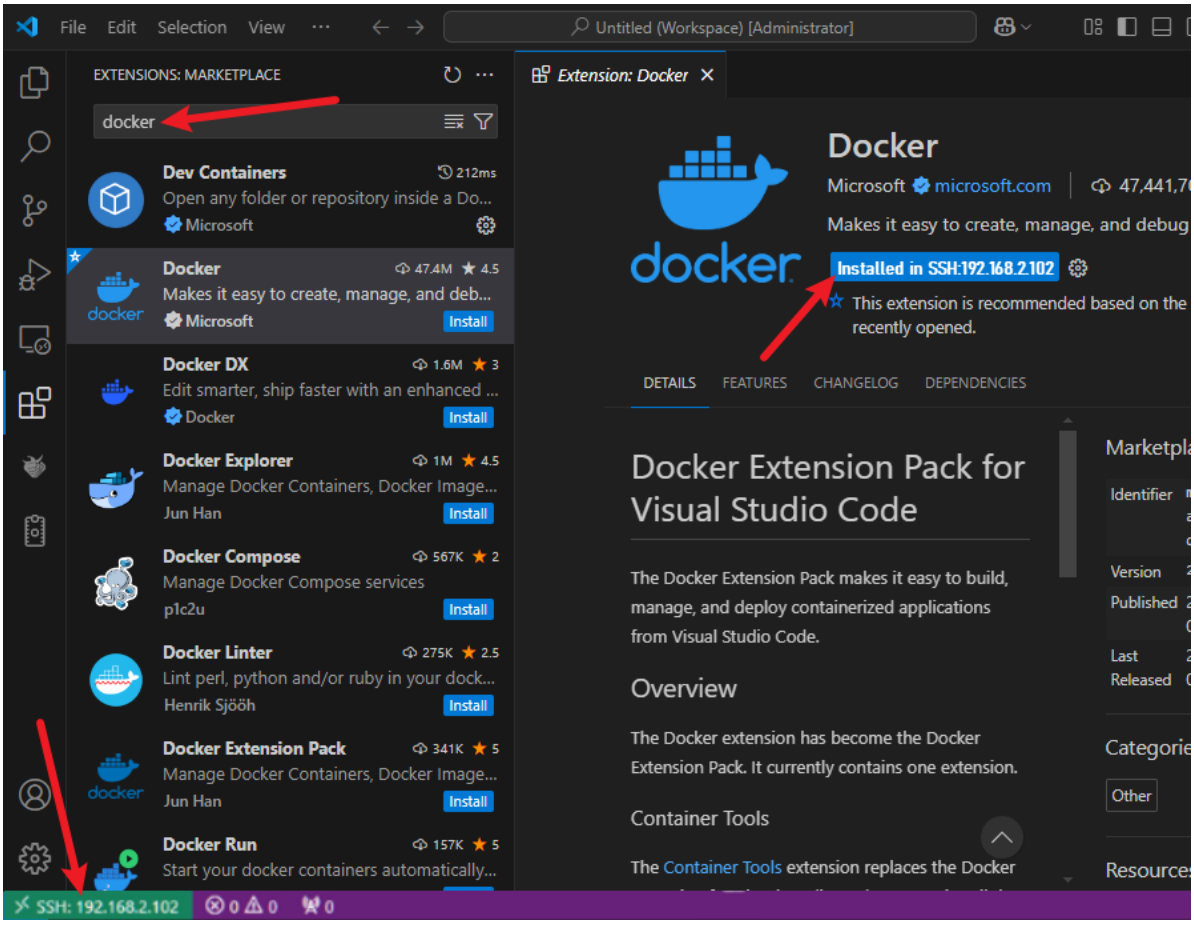
If you see the screen above, it means you've successfully logged in to the host machine remotely.

2. Configure the Docker environment on Xiaoche

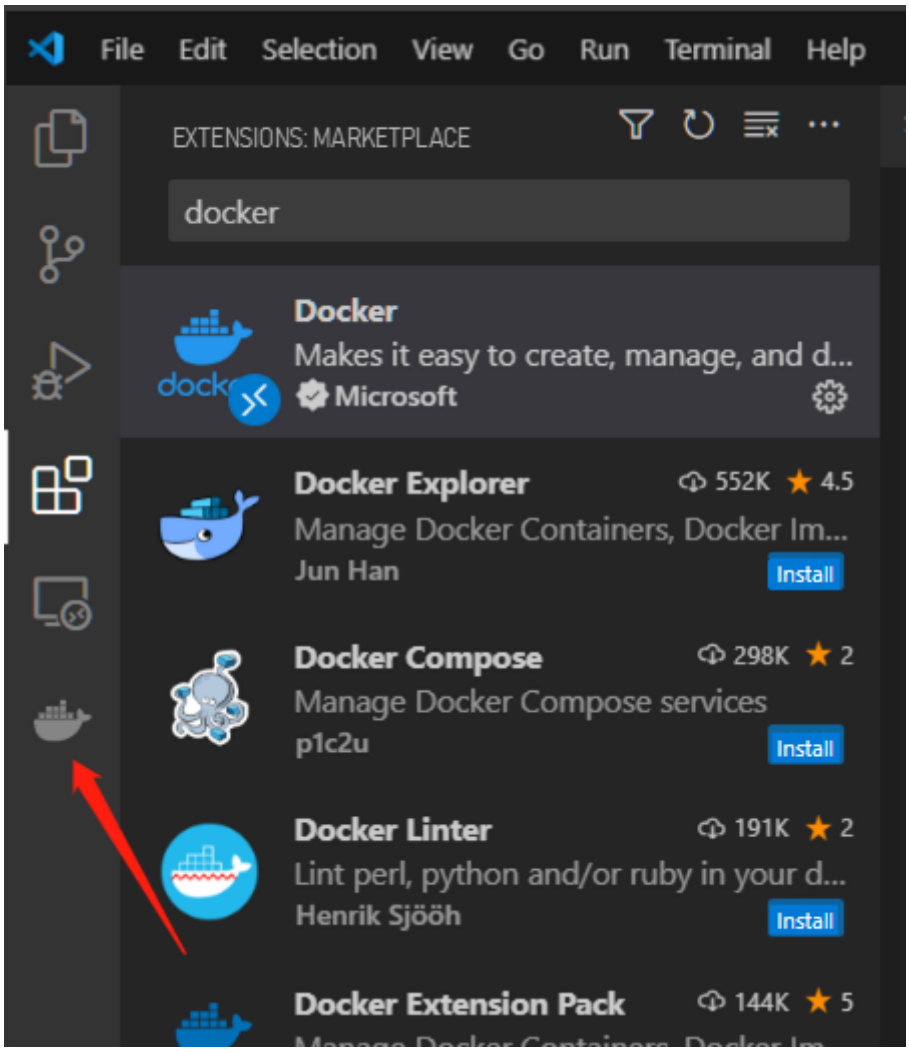
You need to log in to Docker beforehand. If you don't know how to log in to Docker, please refer to the tutorial in the previous Docker series.

2.1. Configuring a Docker Environment on the VSCode Remote Host

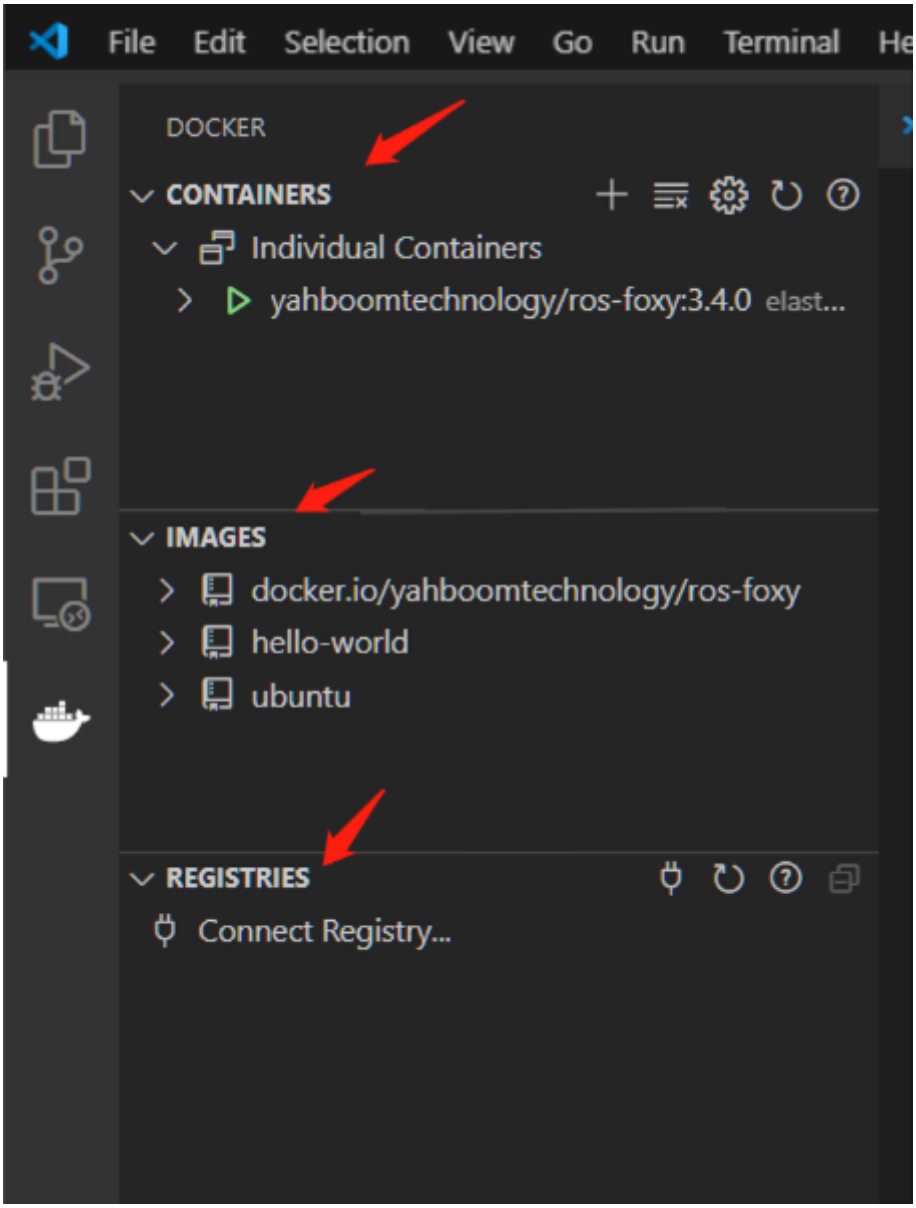
1. Install the Docker plugin on the remote host [Xiaoche]



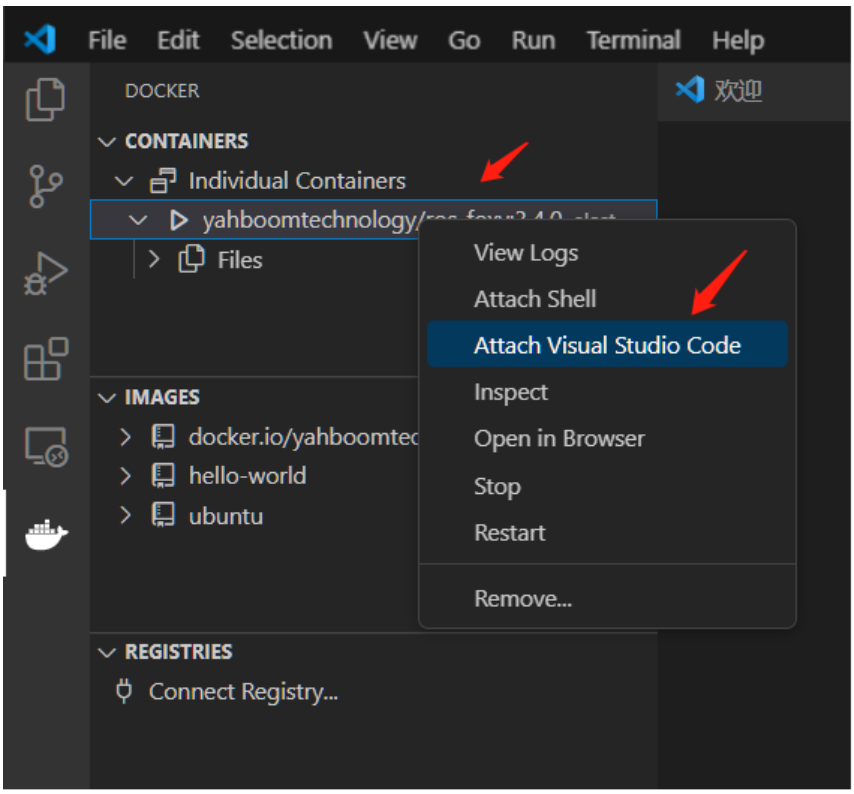
2. After installation is complete, a Docker icon will appear in the left navigation bar.

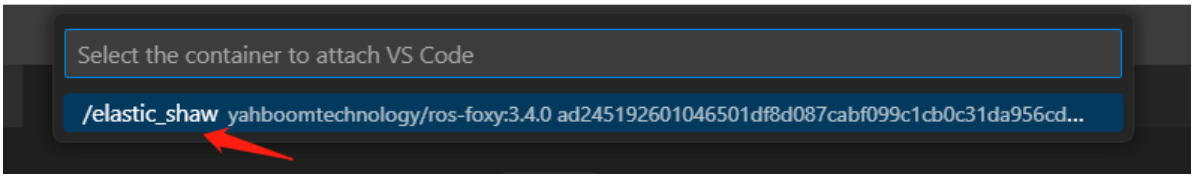


3. Click the Docker icon.



4. Right-click the running container and follow the instructions below:

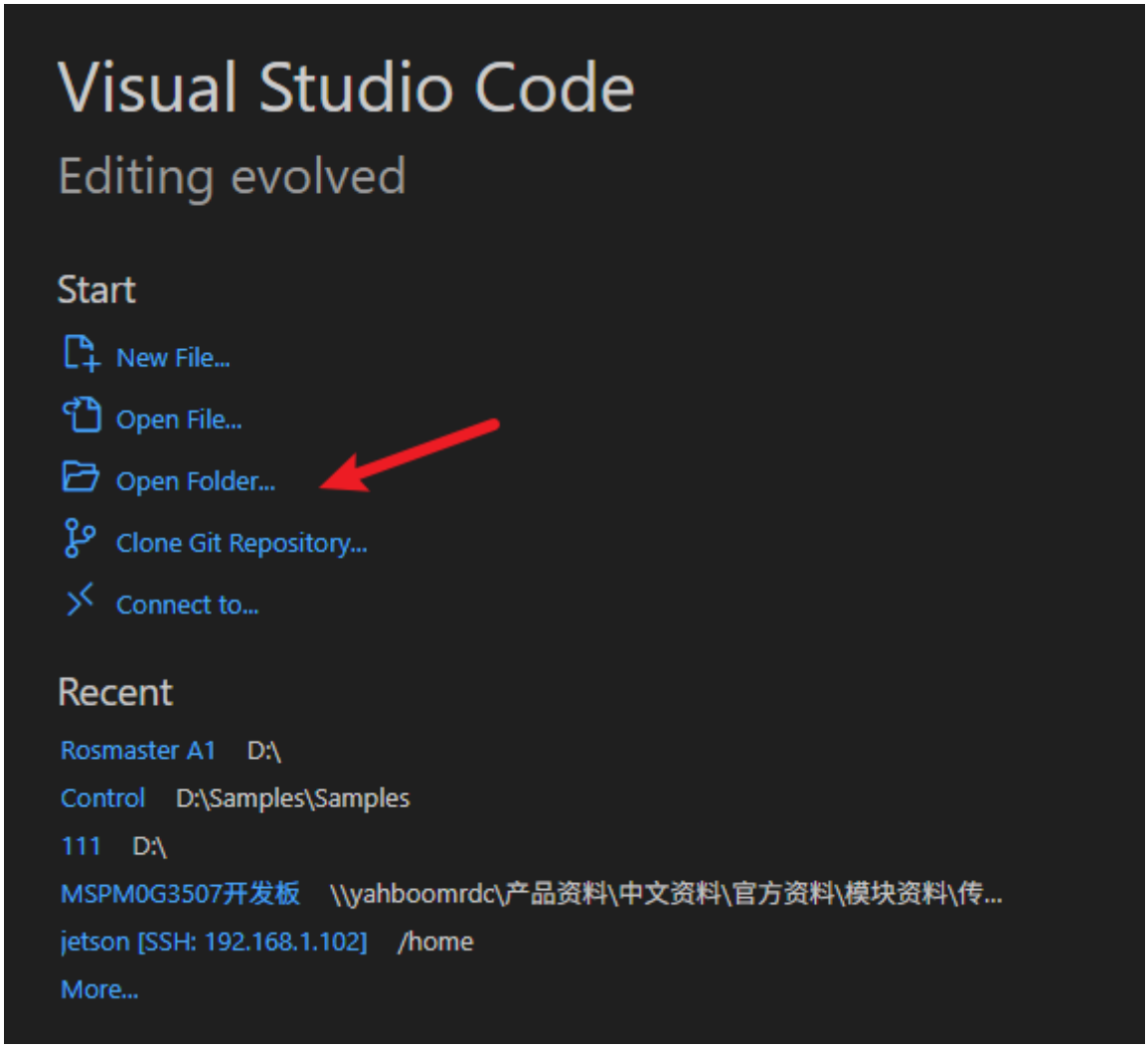


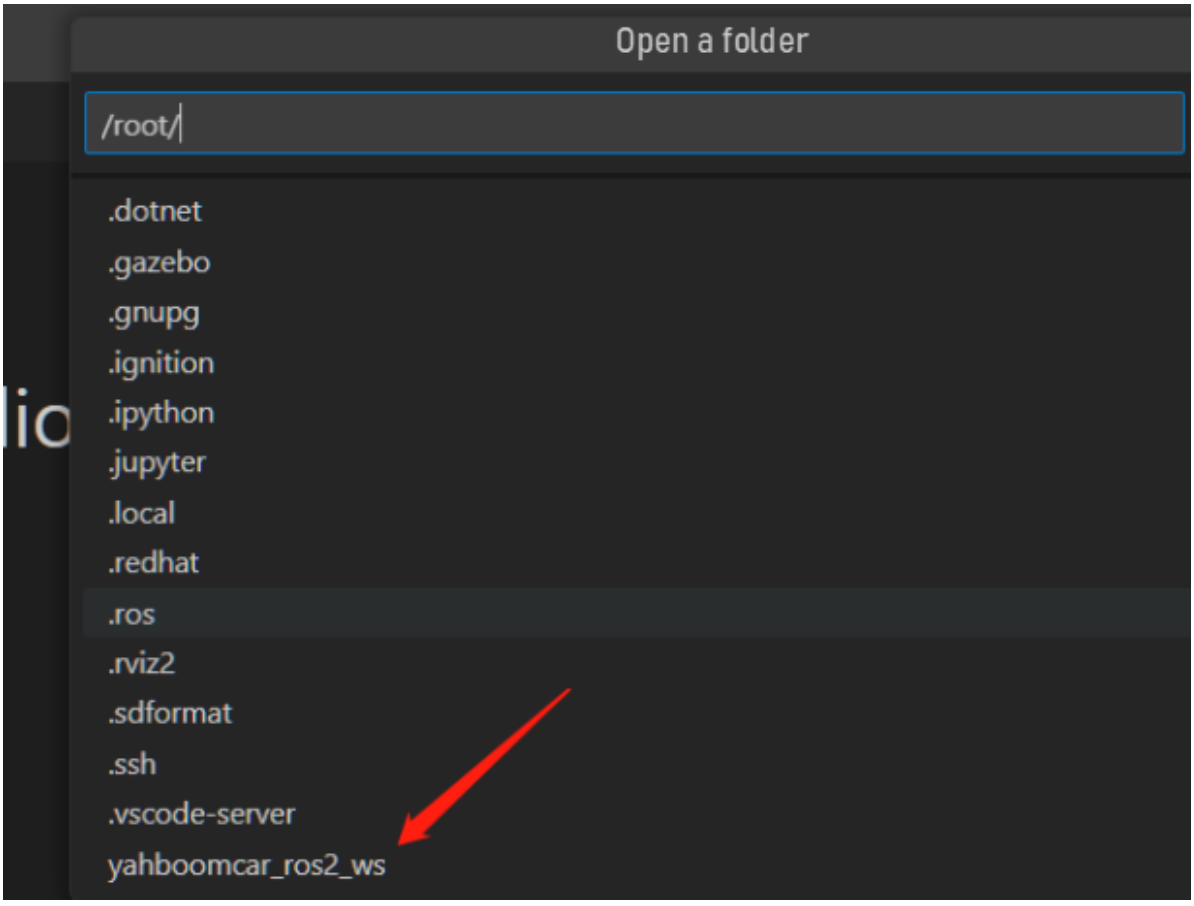


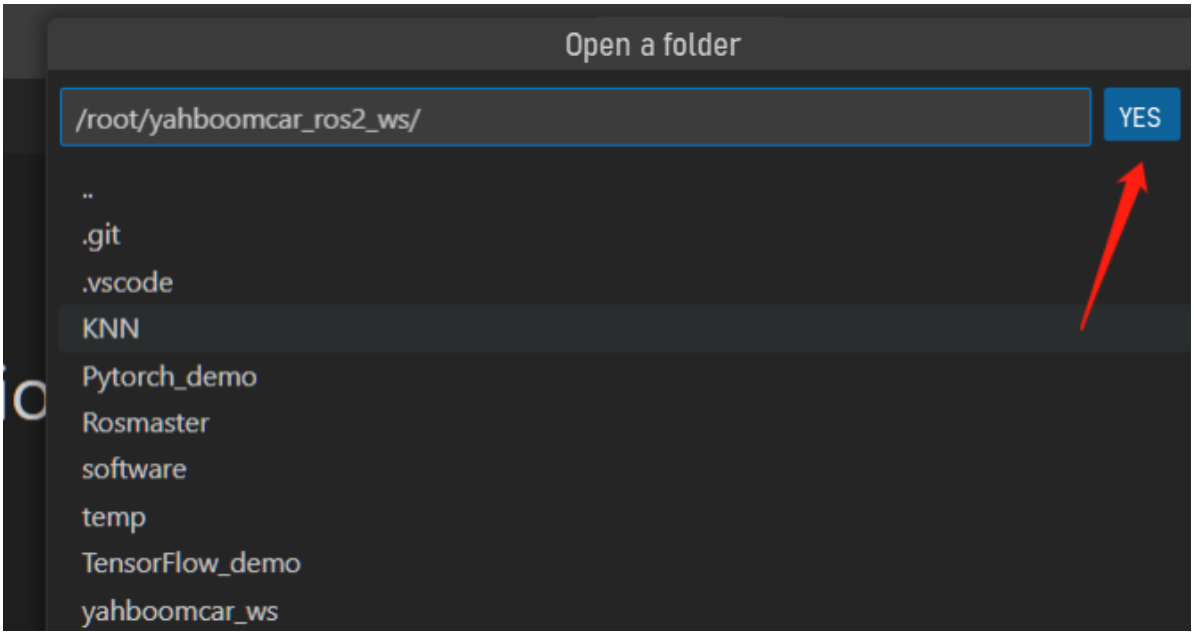
5. A new window will open, and you'll see the following message, indicating you've entered the container.

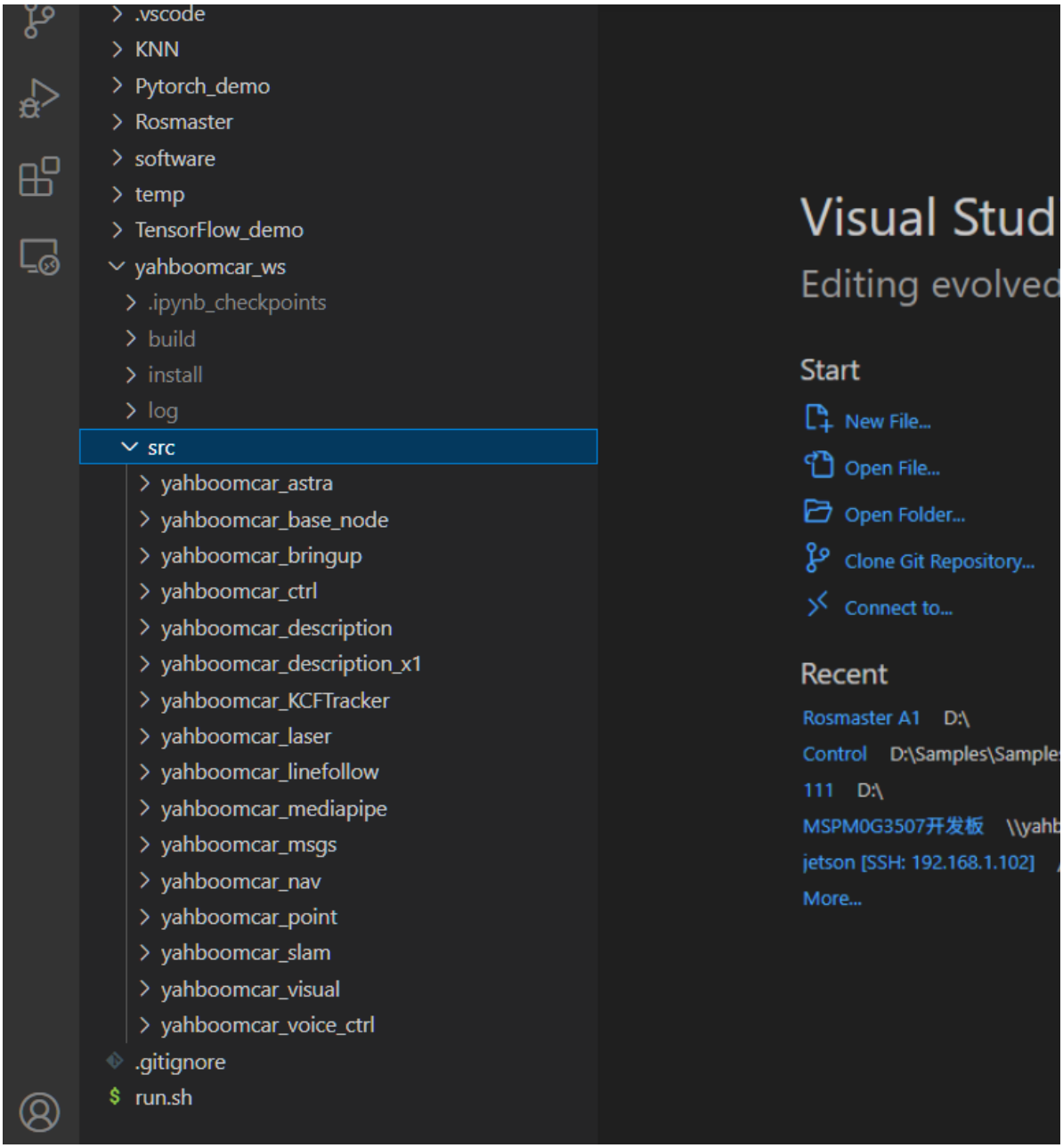
6. Open the folder

```
/root/ # This is the robot's project path.
```

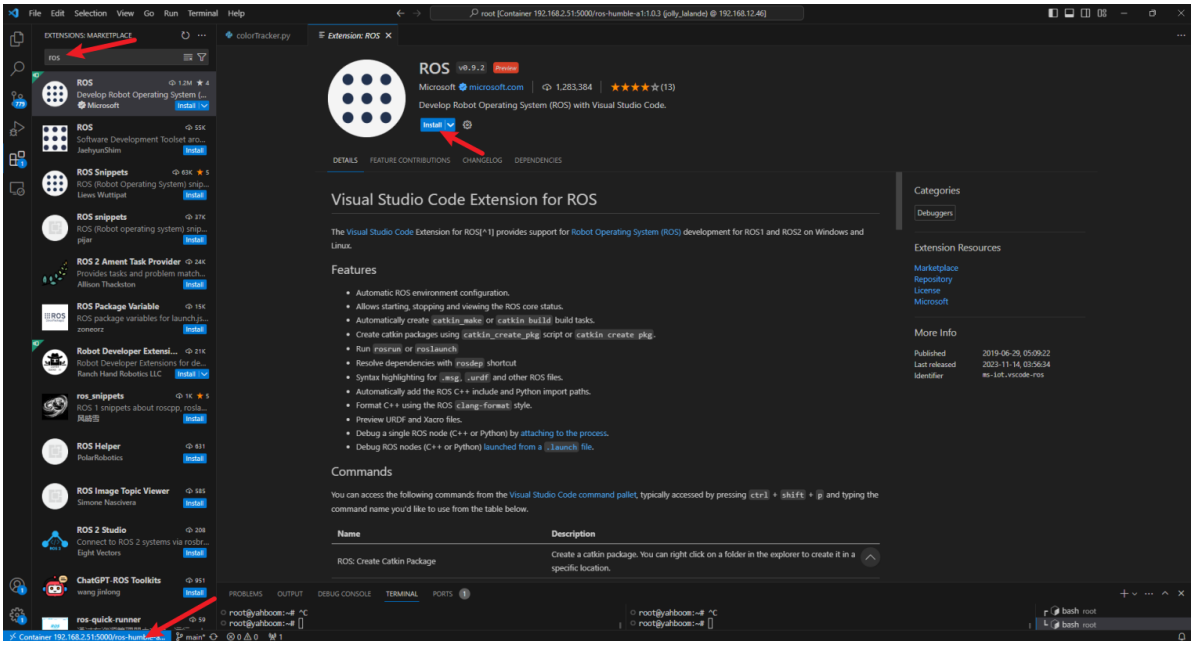

Visual Studio Code
Editing evolved
Start
New File...
Open File...
Open Folder...
Clone Git Repository...
Connect to...
Recent
Rosmaster A1 D:\
Control D:\Samples\Samples
111 D:\
MSPM0G3507开发板 \\yahboomrdc\产品资料\中文资料\官方资料\模块资料\传...
jetson [SSH: 192.168.1.102] /home
More...


Open a folder
/root/
.dotnet
.gazebo
.gnupg
.ignition
.ipython
.jupyter
.local
.redhat
.ros
.rviz2
.sdformat
.ssh
.vscode-server
yahboomcar_ros2_ws





7. Similarly, you can install the required plugins in the container to facilitate development.



After completing the above steps, you can start working with the code files in the container for development and learning.