

VANJEE 720 Lego-Loam compilation

1、 Installation Environment

ROS(ubuntu 18.04 melodic)

Gtsam(Georgia Tech Smoothing and Mapping library, 4.0.0-alpha2)

```
wget -O ~/Downloads/gtsam.zip https://github.com/borglab/gtsam/archive/4.0.0-alpha2.zip
cd ~/Downloads/ && unzip gtsam.zip -d ~/Downloads/
cd ~/Downloads/gtsam-4.0.0-alpha2/
mkdir build && cd build
cmake ..
sudo make install
```

Pcap(sudo apt-get install libpcap-dev)

2、 Source code path

LeGO-LOAM:

```
src/LeGO-LOAM
```

Vanjee 720 16-line radar driver:

```
src/vanjee_lidar_720
```

3、 compilation

Here we take Jetson nano as an example. The installation environment is ubuntu 18.04 and the ROS version is melodic.

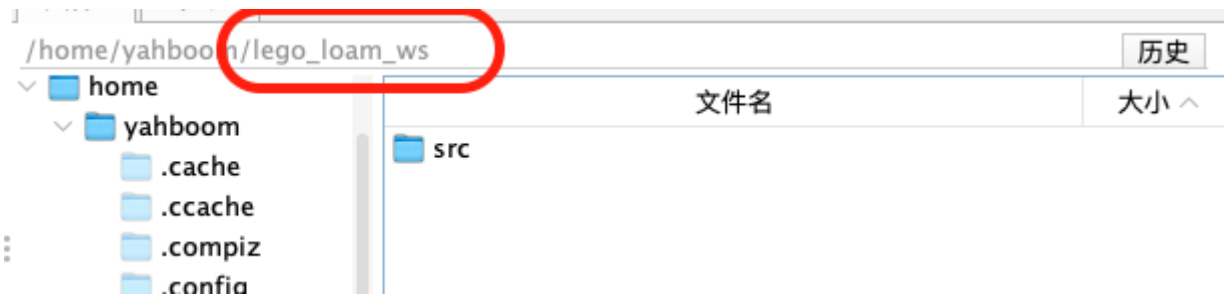
You can remotely log in to the Jetson nano motherboard through the shell tool. Regarding the use of the shell tool, everyone will use it by default.

Enter the command in the terminal:

```
mkdir lego_loam_ws && cd lego_loam_ws
```

```
yahboom@yahboom-desktop:~$ mkdir lego_loam_ws && cd lego_loam_ws
yahboom@yahboom-desktop:~/lego_loam_ws$
```

Place the entire src folder under the lego_loam_ws folder on the jetson nano motherboard.



Enter the command in the terminal:

```
catkin build
```

```
yahboom@yahboom-desktop:~/lego_loam_ws$ catkin build
-----
Profile:          default
Extending:        [env] /opt/ros/melodic
Workspace:        /home/yahboom/lego_loam_ws
-----
Build Space:      [exists] /home/yahboom/lego_loam_ws/build
```

Note: The catkin build command is executed under the ~/lego_loam_ws/ directory.

Note: The following error occurs during compilation

```
lio_sam/lio_sam_imuPreintegration: error while loading shared libraries:
libmetis.so: cannot open shared object file: No such file or directory
```

Then enter the command in the terminal

```
sudo apt-get install libparmetis-dev
```

The picture below shows the result of compilation.

```
.....
Finished <<< vanjee_lidar [ 3 minutes and 9.6 seconds ]
[build] Summary: All 6 packages succeeded!
[build] Ignored: None.
[build] Warnings: 3 packages succeeded with warnings.
[build] Abandoned: None.
[build] Failed: None.
[build] Runtime: 23 minutes and 21.2 seconds total.
[build] Note: Workspace packages have changed, please re-source setup files to use them.
yahboom@yahboom-desktop:~/lego_loam_ws$
```

Install some necessary toolkits:

```
sudo apt-get install ros-melodic-octomap-ros
sudo apt-get install ros-melodic-octomap-server
sudo apt-get install ros-melodic-octomap-rviz-plugins
sudo apt-get install octovis
sudo apt-get install pcl-tools
sudo apt-get install libasio-dev
sudo apt-get install ros-melodic-serial
```