**【学习VINS-MONO】环境配置、测试**

[Ubuntu18.04安装教程（很详细）\_ubuntu18安装-CSDN博客](https://blog.csdn.net/weixin_43233550/article/details/115417176?ops_request_misc=%257B%2522request%255Fid%2522%253A%2522170375722216800186584716%2522%252C%2522scm%2522%253A%252220140713.130102334..%2522%257D&request_id=170375722216800186584716&biz_id=0&utm_medium=distribute.pc_search_result.none-task-blog-2~blog~top_positive~default-1-115417176-null-null.nonecase&utm_term=ubuntu18.04%E5%AE%89%E8%A3%85%E6%95%99%E7%A8%8B&spm=1018.2226.3001.4450)

[unbuntu18.04安装ROS（自测成功安装）-CSDN博客](https://blog.csdn.net/weixin_45634390/article/details/135058500)

优化终端[csdn - 安全中心](https://link.csdn.net/?target=https%3A%2F%2Fzhuanlan.zhihu.com%2Fp%2F346665734)

[电脑本机连了VPN 在虚拟机中没有连接 如何虚拟机共享主机VPN连接-CSDN博客](https://blog.csdn.net/qq_27462573/article/details/130484723)

前置依赖

[ceres-solver/ceres-solver: A large scale non-linear optimization library (github.com)](https://github.com/ceres-solver/ceres-solver)

得先

装高版本的cmake

下3.27的好点（没必要这么高）建议3.15

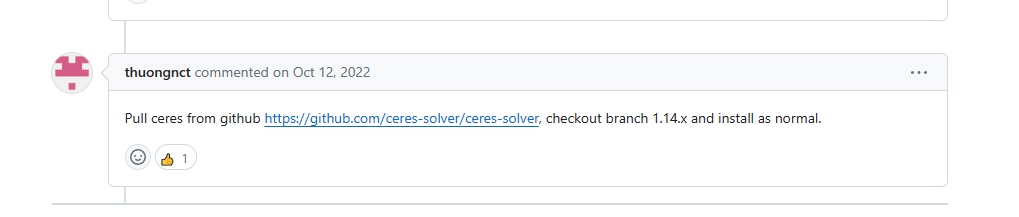
[linux/ubuntu 安装 cmake 3.15.3\_ubuntu之cmake 3.15.3下载、安装、使用-CSDN博客](https://blog.csdn.net/moumshi/article/details/101231502#:~:text=%E5%AE%89%E8%A3%85%E6%AD%A5%E9%AA%A4%20%E7%AC%AC1%E6%AD%A5%EF%BC%9A%E4%B8%8B%E8%BD%BD%20%E4%B8%8B%E8%BD%BDcmake%203.15.3%20%E5%8E%8B%E7%BC%A9%E5%8C%85%20cmake-3.15.3.tar.gz%20%3B,%E5%9C%B0%E5%9D%80%E6%98%AF%20https%3A%2F%2Fcmake.org%2Fdownload%2F%20%EF%BC%9B%20%E7%AC%AC2%E6%AD%A5%EF%BC%9A%E6%96%B0%E5%BB%BA%E6%96%87%E4%BB%B6%E5%A4%B9%20%E5%9C%A8%E5%90%88%E9%80%82%E7%9A%84%E5%9C%B0%E6%96%B9%EF%BC%88%E5%A6%82%E6%A1%8C%E9%9D%A2%EF%BC%89%E6%96%B0%E5%BB%BA%E4%B8%80%E6%96%87%E4%BB%B6%E5%A4%B9%EF%BC%88%E5%A6%82%20InstallCMake%EF%BC%89%EF%BC%8C%E5%B0%86%20cmake-3.15.3.tar.gz%20%E6%8B%B7%E8%B4%9D%E8%87%B3%E6%AD%A4%E3%80%82)

不要随意卸载原先的cmake

[CMake - Upgrade Your Software Build System](https://cmake.org/)

开始

catkin\_make 失败的话



Pull ceres from github <https://github.com/ceres-solver/ceres-solver>, checkout branch 1.14.x and install as normal.

**\*\*\*\*\*\*\*\*\*\*\*\*参考这个做的\*\*\*\*\*\*\*\*\*\*\*\*\***

[【学习VINS-MONO】环境配置、测试\_vins-mono gpu-CSDN博客](https://blog.csdn.net/qq_45306739/article/details/126589852?ops_request_misc=&request_id=&biz_id=102&utm_term=VINS-Mono&utm_medium=distribute.pc_search_result.none-task-blog-2~blog~sobaiduweb~default-1-126589852.nonecase&spm=1018.2226.3001.4450)

**这个是VINS-MONO的！！！！**

**运行**

roscore

source ~/catkin\_ws/devel/setup.bash #每个终端运行前都要加上这一句

roslaunch vins\_estimator euroc.launch

roslaunch vins\_estimator vins\_rviz.launch

roslaunch benchmark\_publisher publish.launch sequence\_name:=MH\_01\_easy.bag

rosbag play ~/catkin\_ws/Dates/MH\_01\_easy.bag

**【学习VINS-Fusion】环境配置、测试**

[HKUST-Aerial-Robotics/VINS-Fusion: An optimization-based multi-sensor state estimator (github.com)](https://github.com/HKUST-Aerial-Robotics/VINS-Fusion?tab=readme-ov-file#3-euroc-example)

参考

https://blog.csdn.net/qq\_45306739/article/details/126589852?ops\_request\_misc=&request\_id=&biz\_id=102&utm\_term=VINS-Mono&utm\_medium=distribute.pc\_search\_result.none-task-blog-2~blog~sobaiduweb~default-1-126589852.nonecase&spm=1018.2226.3001.4450

**Ros 配置同 mono**

**Build VINS-Fusion**

cd ~/catkin\_ws/src

git clone https://github.com/HKUST-Aerial-Robotics/VINS-Fusion.git

cd ../

catkin\_make

source ~/catkin\_ws/devel/setup.bash

测试

[kmavvisualinertialdatasets – ASL Datasets (ethz.ch)](https://projects.asl.ethz.ch/datasets/doku.php?id=kmavvisualinertialdatasets)

下载

MH\_01\_easy.bag

1. **Monocualr camera + IMU单摄像头**

source ~/catkin\_ws/devel/setup.bash

roslaunch vins vins\_rviz.launch

rosrun vins vins\_node ~/catkin\_ws/src/VINS-Fusion/config/euroc/euroc\_mono\_imu\_config.yaml

(optional) rosrun loop\_fusion loop\_fusion\_node ~/catkin\_ws/src/VINS-Fusion/config/euroc/euroc\_mono\_imu\_config.yaml

rosbag play ~/catkin\_ws1/Dates/MH\_01\_easy.bag

1. **Stereo cameras + IMU 立体摄像头**

source ~/catkin\_ws/devel/setup.bash

roslaunch vins vins\_rviz.launch

rosrun vins vins\_node ~/catkin\_ws1/src/VINS-Fusion/config/euroc/euroc\_stereo\_imu\_config.yaml

(optional) rosrun loop\_fusion loop\_fusion\_node ~/catkin\_ws/src/VINS-Fusion/config/euroc/euroc\_stereo\_imu\_config.yaml

rosbag play ~/catkin\_ws1/Dates/MH\_01\_easy.bag

1. **立体相机Stereo cameras**

source ~/catkin\_ws/devel/setup.bash

roslaunch vins vins\_rviz.launch

rosrun vins vins\_node ~/catkin\_ws/src/VINS-Fusion/config/euroc/euroc\_stereo\_config.yaml

(optional) rosrun loop\_fusion loop\_fusion\_node ~/catkin\_ws/src/VINS-Fusion/config/euroc/euroc\_stereo\_config.yaml

rosbag play YOUR\_DATASET\_FOLDER/MH\_01\_easy.bag

1. **KITTI 数据集测试**

Download [KITTI Odometry dataset](http://www.cvlibs.net/datasets/kitti/eval_odometry.php) to YOUR\_DATASET\_FOLDER. Take sequences 00 for example, Open two terminals, run vins and rviz respectively. (We evaluated odometry on KITTI benchmark without loop closure funtion)

source ~/catkin\_ws1/devel/setup.bash

roslaunch vins vins\_rviz.launch

(optional) rosrun loop\_fusion loop\_fusion\_node ~/catkin\_ws/src/VINS-Fusion/config/kitti\_odom/kitti\_config00-02.yaml

rosrun vins kitti\_odom\_test ~/catkin\_ws/src/VINS-Fusion/config/kitti\_odom/kitti\_config00-02.yaml YOUR\_DATASET\_FOLDER/sequences/00/

rosrun vins kitti\_odom\_test ~/catkin\_ws1/src/VINS-Fusion/config/kitti\_odom/kitti\_config00-02.yaml ~/Downloads/00/

图形用户界面

低可信度描述已自动生成

ROS2 版本

安装ceres

图形用户界面, 文本, 应用程序

描述已自动生成

cmake出错 可能是cmake 版本太低

图形用户界面, 文本, 应用程序, 电子邮件

描述已自动生成

$ ./bootstrap && make && sudo make install

cp sensing/gimbal/gazebo\_gimbal\_controller\_plugin.cpp /home/tlc/PX4-Autopliot/Tools/sitl\_gazebo/src/

cp sitl\_config/init.d-posix/rcS /home/tlc/PX4-Autopilot/ROMFS/px4fmu\_common/init.d-posix

cp sitl\_config/worlds/\* /home/tlc/PX4-Autopilot/Tools/sitl\_gazebo/worlds

cp -r sitl\_config/models/\* /home/tlc/PX4-Autopilot/Tools/sitl\_gazebo/models

cp -r sitl\_config/launch/\* /home/tlc/PX4-Autopilot/launch

Xtdrone VINS-fusion仿真

**参考**

[Ubuntu18.04 XTDrone 仿真环境配置 简记-接PX4速配 - 知乎 (zhihu.com)](https://zhuanlan.zhihu.com/p/547928013)

[Ubuntu18.04从零开搭PX4&Mavros&Gazebo环境并测试(极速版) - 知乎 (zhihu.com)](https://zhuanlan.zhihu.com/p/546055816)

[仿真平台基础配置 (yuque.com)](https://www.yuque.com/xtdrone/manual_cn/basic_config)

VINS-fusion依赖

**参考**

[【学习VINS-MONO】环境配置、测试\_vins-mono gpu-CSDN博客](https://blog.csdn.net/qq_45306739/article/details/126589852?ops_request_misc=&request_id=&biz_id=102&utm_term=VINS-Mono&utm_medium=distribute.pc_search_result.none-task-blog-2~blog~sobaiduweb~default-1-126589852.nonecase&spm=1018.2226.3001.4450)