Project13 Week2 (11.23-12.6)

This week, we completed most of the construction of two paper projects according to the original plan and timeline.

MengyangLi: During this time, I have mainly focused on replicating this project. Due to its complexity, I have spent a lot of time and encountered many issues. Next, I will introduce the tasks I completed this week, including:

* Resolved issues with downloading the TUM-VI dataset.

* The code could not run successfully on my computer due to insufficient memory.

* Transfer the downloaded dataset to Brown University's CCV (Center for Computation and Visualization).

* Attempt to rebuild the project on Brown University's CCV.

When download the datasets and then run the script. However, I faced issues with the TUM-VI dataset website being inaccessible for several days while trying to download it. I opened an issue on GitHub and sent an email to the original authors of the paper. Fortunately, the website issue has just been fixed, so this problem is also resolved.

Then, after downloading the required dataset for the project, I tried to run it on my computer, but when it reached 30%, a killed signal terminated the program. This error is usually due to insufficient memory to run such a complex project on my computer. Therefore, I opened htop to monitor the memory usage of my computer, and indeed, the memory usage was at 100% when the error occurred. Thus, I had to find a way to run the project

at Brown University's CCV. I first spent a lot of time transferring my folder from docker to CCV's Oscar account.

Then, I found that there was no pre-established environment suitable for running the project on CCV. I tried to install some dependencies, but couldn't due to lack of permission. I will seek help from the TA in tomorrow's TA session to resolve this issue.

So, my Future Plan is, in the next few days, to find the TA to help me learn how to build the project on CCV and run the scripts to get the test results. Then, carry out hands-on, practical experiments with UAVs. Then combine the methods and evaluate the performance comparisons, analyze the result, and prepare for the final presentation.

HonglingWu：After successfully built the project. I tried to verify the whole project on the supported Platform D435i(Depth/Stereo Mode), EuRoC Dataset, KITTI Dataset.

First, I downloaded the dataset Linmelab_sn943222072828.bag and decompress the bag. I successfully ran the launch files and launched rviz program.
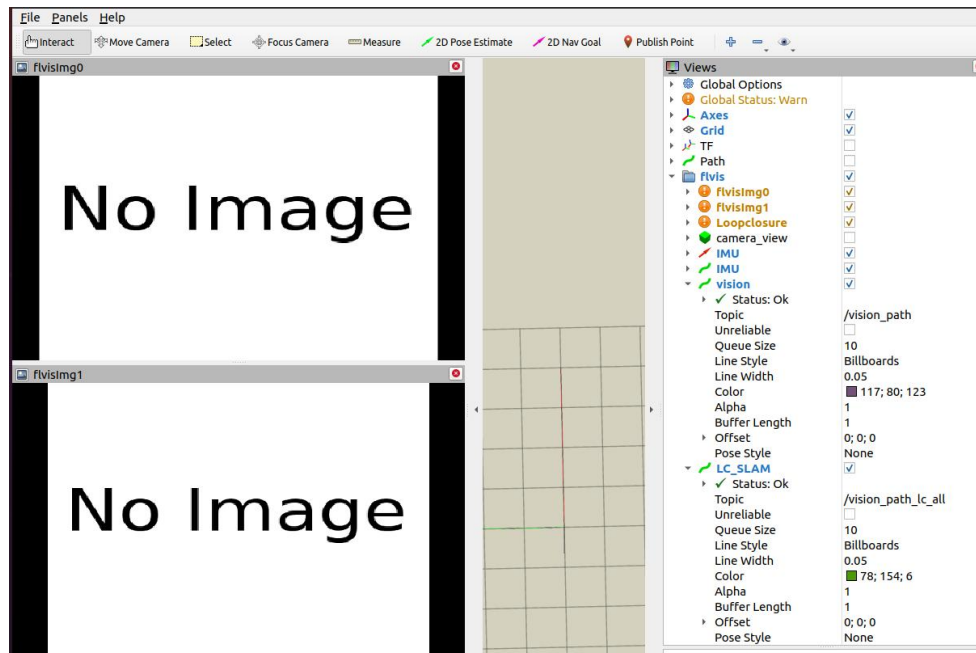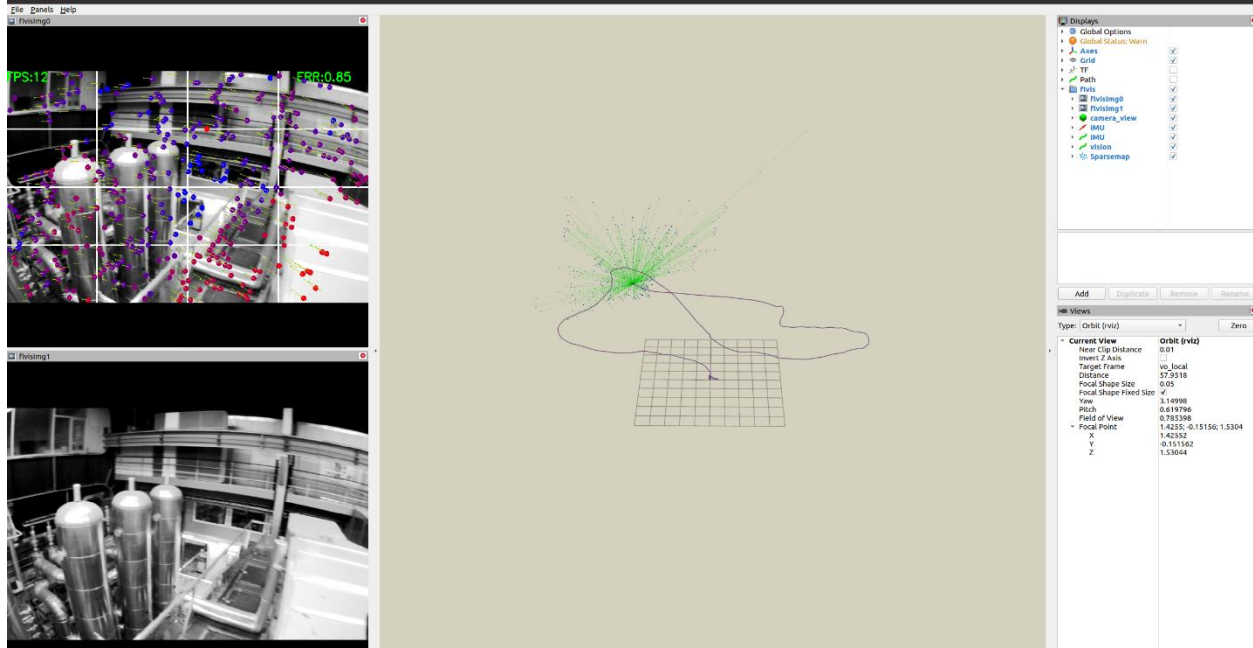
After that, I ran the dataset on rviz.
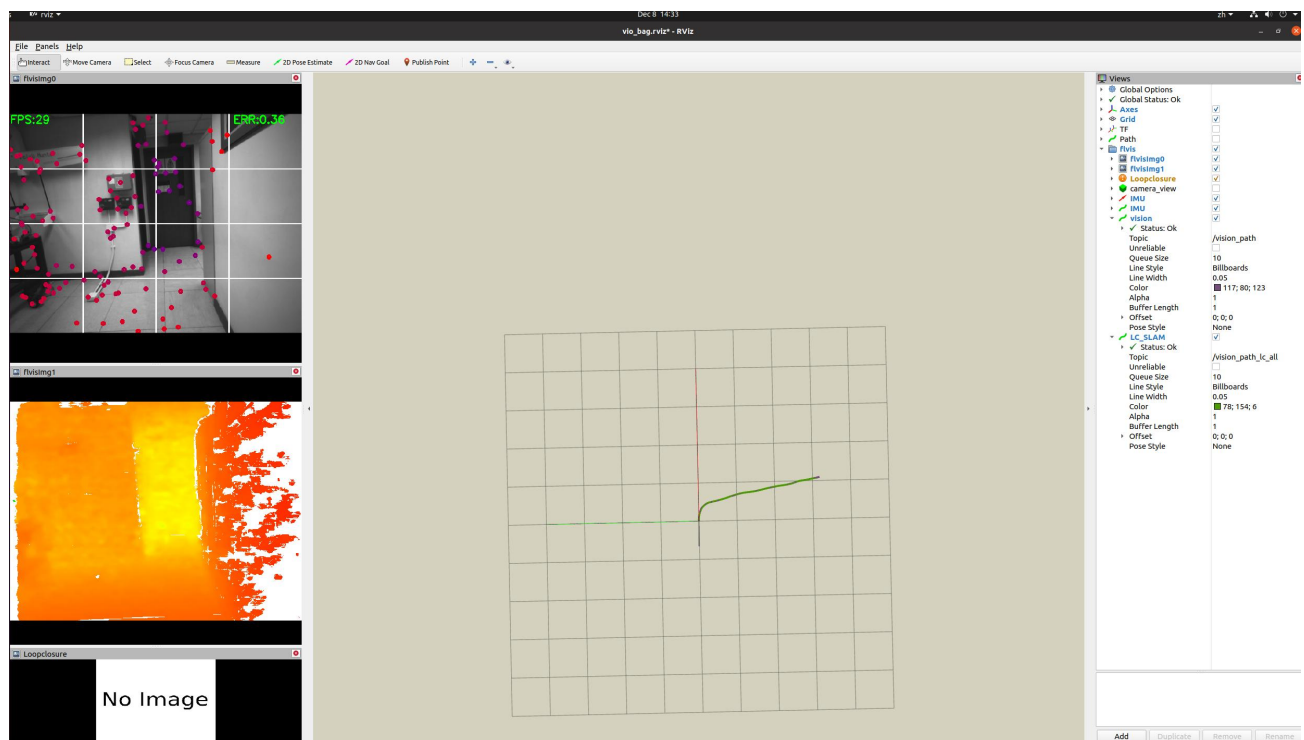
Then I download the EuRoC MAV Dataset and edit the corresponding bag name in flvis_euroc_mav.launch file to :

```
<node pkg="rosbag" type="play" name="rosbag" args="$(find flvis)/bag/MH_05_difficult.bag"/>
```

And also ran the launch files on rviz.

Final result: