

```

1 NTU FILTERED BAG:
2
3 ===== INSTALLATION INSTRUCTIONS =====
4
5 1) Download the sensor data dataset "2019_11_15_raw_data.zip" (4.5GB) and the "odom_and_localization.bag" dataset (26MB) from:
6 https://drive.google.com/drive/folders/1Ly1b5xEHCUJcc5Mar7Lc4PA9c4P8U087usp=sharing
7
8 2) Clone two packages to your ROS catkin workspace, by running the following commands:
9 cd ~/catkin_ws/src
10 git clone https://bitbucket.org/davidsbp/lslidar_ci6
11 git clone https://bitbucket.org/davidsbp/semfire_dataset_ntu
12
13 3) Decompress the main dataset (20.2 GB) with the following comand:
14 "unzip 2019_11_15_raw_data.zip -d ~/catkin_ws/src/semfire_dataset_ntu/dataset/"
15 (This command must be run in the folder which contains the zip file.
16 Leave the decompression running - it will take a long time - on the background and move on to steps 4-6).
17
18 4) Install the lslidar decoder pkg (to allow for LIDAR pointcloud visualization) dependencies with this command:
19 sudo apt install ros-melodic-angles ros-melodic-pcl-ros ros-melodic-diagnostic-updater ros-melodic-eigen-conversions
20
21 5) Install the dataset runtime dependencies with this command:
22 sudo apt install ros-melodic-urdf ros-melodic-robot-state-publisher ros-melodic-image-transport ros-melodic-image-transport-plugins ros-melodic-depth-image-proc
23
24 6) Now compile your ROS workspace with these commands:
25 cd ~/catkin_ws
26 catkin_make
27
28 7) after 3) is finished, please verify that you placed the downloaded datasets inside the folder "semfire_dataset_ntu/dataset"
29
30 8) run the dataset with the command:
31 "roslaunch semfire_dataset_ntu run_dataset.launch" (for Rahel and Alagappan)
32
33 For Vinitha and Sreedevi, run instead:
34 "roslaunch semfire_dataset_ntu run_dataset.launch with_odom_and_loc:=true"
35
36 and then...
37 "roslaunch semfire_dataset_ntu vinitha_odom_and_loc.launch" (for Vinitha)
38
39 or...
40 "roslaunch semfire_dataset_ntu sreedevi_odom.launch" (for Sreedevi)
41
42
43 After everything loads, you should see the line below:
44 "[PAUSED ] Bag Time: 1573807399.538277 Duration: 0.000000 / 828.799365"
45
46 and you can safely ignore this one:
47 [ERROR] [1593449043.819104835, 1573807399.538276667]: Tried to advertise a service that is already advertised in this node [/rviz/compressed/set_parameters]
48
49 Now press the space key to start the dataset!
50
51
52 9) visualize the data of the sensors in rviz (automatically loaded), and use "rostopic list" in the terminal to check the topics and "roslaunch tf view_frames" to see the existing transformation frames of the system.
53
54
55 10) now start developing your solution and test it on top of this dataset.
56 PLEASE DO NOT MODIFY THE EXISTING LAUNCH FILES. YOU SHOULD ADD YOUR OWN ONES!!!
57
58
59
60
61
62 ===== RUNNING =====
63
64 repeat 8, and run together with your additionally created launch files/nodes.
65
66 If your PC is running slow, you can try lowering the dataset rate (e.g. "-r 0.5" instead of "-r 1" in the run_dataset.launch file)

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