Rosbag with ImageLabel

Overview

Ros is a working space for robot model training.

Usually it can be divided into two parts: Node and Topic.

Install Ros in Linux system and setup all environment before you proceed this part.

This is a set of tools for recording from and playing back to ROS topics. It is intended to be high performance and avoids deserialization and reserialization of the messages.

https://github.com/ros/ros_comm

> 💡 codes below in orange is where you may need to modify

Setups before running

- Install ros and setup environments
- Install image_view package

```
sudo apt install ros-melodic-image-view
```

- Run image_view and download mjpegtools

```
roscd image_view
rosmake image_view
sudo apt-get install mjpegtools # maybe ingnored if you installed
```

Basic Steps

- Run the ros

```
roscore
```

- Open another tap at terminal
- Check the rosbag info

```
rosbag info (path to rosbag)
```

- If the rosbag is in compressed format (compressed image), you need to repulish this bag file before proceed to next step. If not, skip this step.

```
rosrun image_transport republish compressed in:=stereo/side_right/image_raw raw out:=stereo/side_right/image_raw
```

- Check whether the bag file is uncompressed

```
rosnode list
rosnode info (republisher file) #check there are rosout files
rqt_graph
```

- Run the bag file

```
rosbag play (path to rosbag)
```

- Create a launch file (independent file) manually and write as follows where the orange background parts need to be modified

```
<launch>
    <node pkg="rosbag" type="play" name="rosbag" required="true" args="/home/erian/Desktop/t-junction_image.bag"/>

    <node name="extract" pkg="image_view" type="extract_images" respawn="false" required="true" output="screen" cwd="ROS_HOME">
        <remap from="image" to="/stereo/side_right/image_raw"/>
    </node>
</launch>
```

> 💡 Modify the path for bag file args= xxx

> 💡 Modify the path for remap image. Path = topic of this rosbag

- Run launch file

```
Rosbag play (path to the rosbag)
Rosrun inage_view image_saver _sec_per_frame image:=<image topic> theora
```

```
roslaunch export.launch
```

- After all image loaded, create a directory to store jpg data

```
cd ~
mkdir test
mv ~/.ros/left*.jpg /home/erian/Desktop/image_18Aug/1 final location path
```

- Export mp4 files

```
cd ~/test
ffmpeg -framerate 25 -i frame%04d.jpg -c:v libx264 -profile:v high -crf 20 -pix_fmt yuv420p output.mp4
```

Key Points

```
rosrun image_view image_saver
```

```
rqt_graph
```

```
rosrun image_view image_saver _sec_per_frame image:=<image topic> theora
```

```
rosbag info bag path
```