

Cv-bridge

It is a package to convert camera image(video feed) from simulation environment which are published onto a ros topic to usable form for cv purposes.

A world file with a drone attached with a camera is already there and it is publishing to webcam/image_raw topic. Clone iq_sim package also from the darknet_ros tutorial.

I am using python3 and it works with opencv >2.5

Installation

You need ros plugins for gazebo in order to publish sensor messages to ros nodes.

```
sudo apt install ros-melodic-gazebo-ros ros-melodic-gazebo-plugins
```

Install these prerequisite packages with : `sudo apt-get install python-catkin-tools`

```
python3-dev python3-numpy
```

```
sudo apt-get install python3.7-dev
```

Uninstall your existing opencv and install via

```
pip3 install opencv-contrib-python
```

```
cd catkin_ws
```

```
catkin config -DPYTHON_EXECUTABLE=/usr/bin/python3
```

```
-DPYTHON_INCLUDE_DIR=/usr/include/python3.6m
```

```
-DPYTHON_LIBRARY=/usr/lib/x86_64-linux-gnu/libpython3.6m.so
```

```
catkin config --install
```

```
cd src
```

```
git clone -b melodic https://github.com/ros-perception/vision_opencv.git
```

Now type: `apt-cache show ros-melodic-cv-bridge | grep Version`

Output will be something like this: Version: 1.13.0-0bionic.20200320.133849

Note the version 1.13.0

```
cd src/vision_opencv/
```

```
git checkout 1.13.0 (Your version)
```

```
cd ../../
```

```
catkin build cv_bridge
```

source install/setup.bash --extend (This one you have to run every time before you going to run codes with cv_bridge or add the appropriate path in your .zshrc)

Now to check if everything is correctly installed:

Type python3 in terminal and

```
>>from cv_bridge.boost.cv_bridge_boost import getCvType
```

If this doesn't give any errors you are good to go.

Tips

I am attaching a sample program to convert video and display using imshow()

In that code i subscribed from /webcam/image_raw . Change that topic name to get images from the desired topic.

http://wiki.ros.org/cv_bridge/Tutorials/ConvertingBetweenROSImagesAndOpenCVImagesPython

For more information.