

ARO DEEP LEARNING LAB #2

Before you start you should already have done homework from deep learning lab #1.

(= you already have weights trained to detect barbies)

How to run script on bagfile

1) download the barbie_ws from lab website and add it in your catkin workspace or create a new workspace.

2) download the bagfile from: https://drive.google.com/file/d/1AxSM_TBJq3E9Ldx8FZeaQJQRp4d0vG9

3) Run following commands:

a) roscore

b) Because we are using bagfile we have to set rosp parameter use_sim_time

```
roscparam use_sim_time true
```

c) Bag file contains compressed image, so we need to uncompress them

```
roslaunch image_transport republish compressed in:=/camera/rgb/image_raw raw out:=/camera/rgb/image_raw
```

d) Run detector

```
roslaunch barbie_detection detector.launch
```

e) Play bagfile

```
rosbag play path_to_bagfile/2019-03-30-12-42-27.bag
```

HOMEWORK:

1) Estimate depth from all depths in bounding box

2) Fill in the part of the detector that gives you x,y,z in 3D coordinates. (line 131)

3) Set detector threshold properly

4) Upload detector.py and printscreen with detected barbie and corresponding 3D position from rviz to brute.

DEADLINE 23.4.2020

