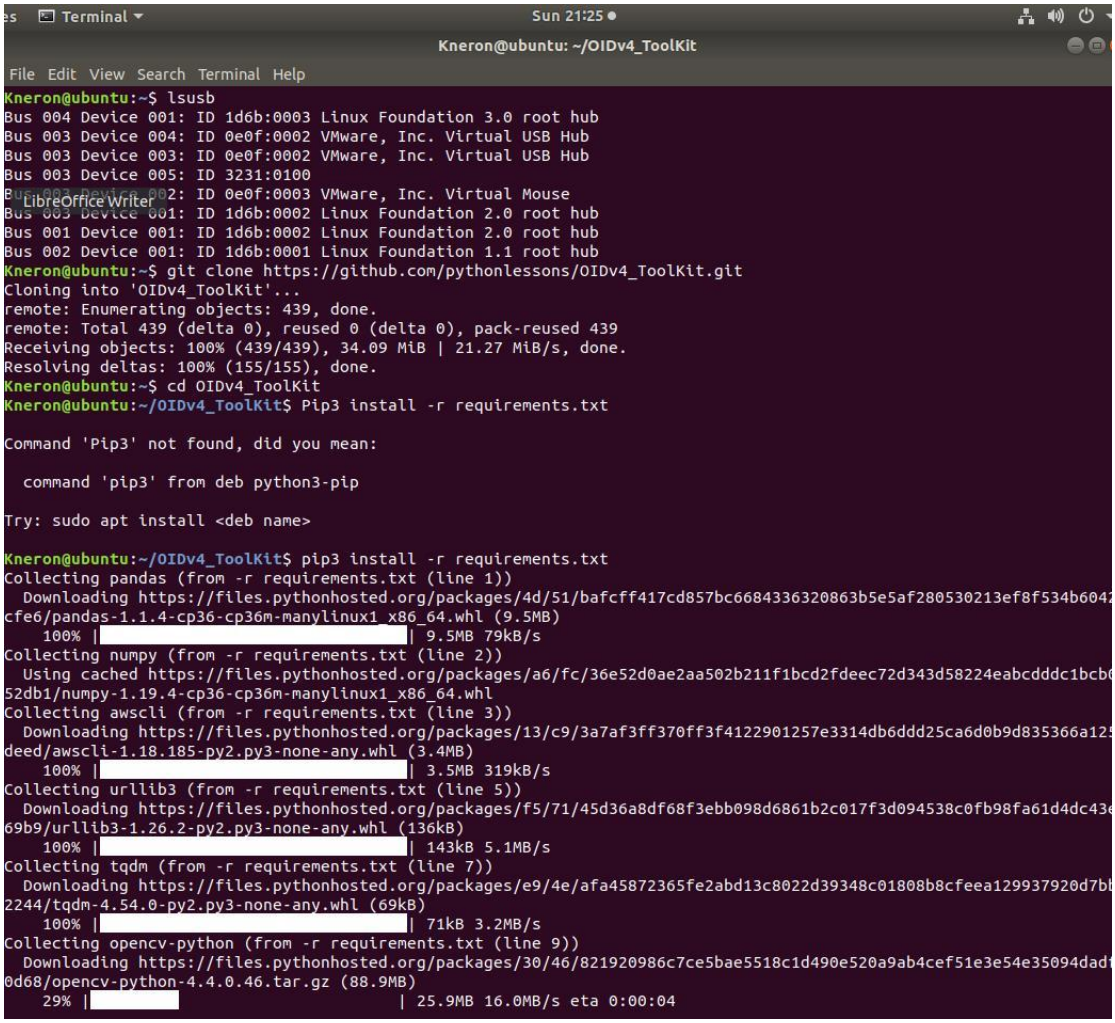
Download with: git clone https://github.com/pythonlessons/OIDv4_ToolKit.git

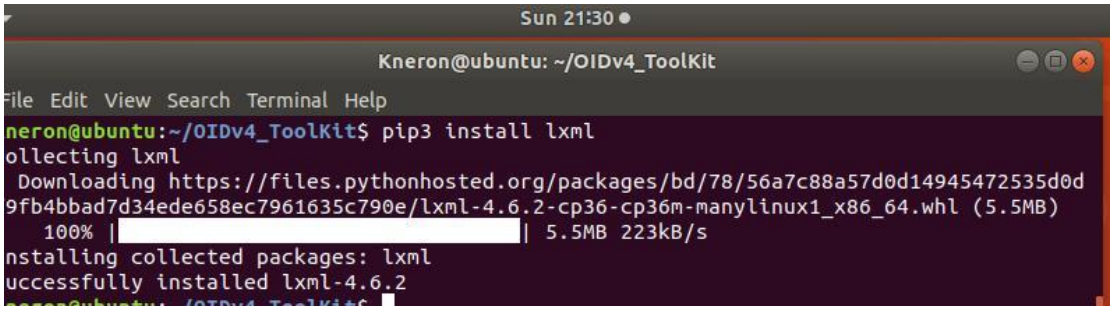
Go into folder: cd OIDv4_ToolKit

Install with:

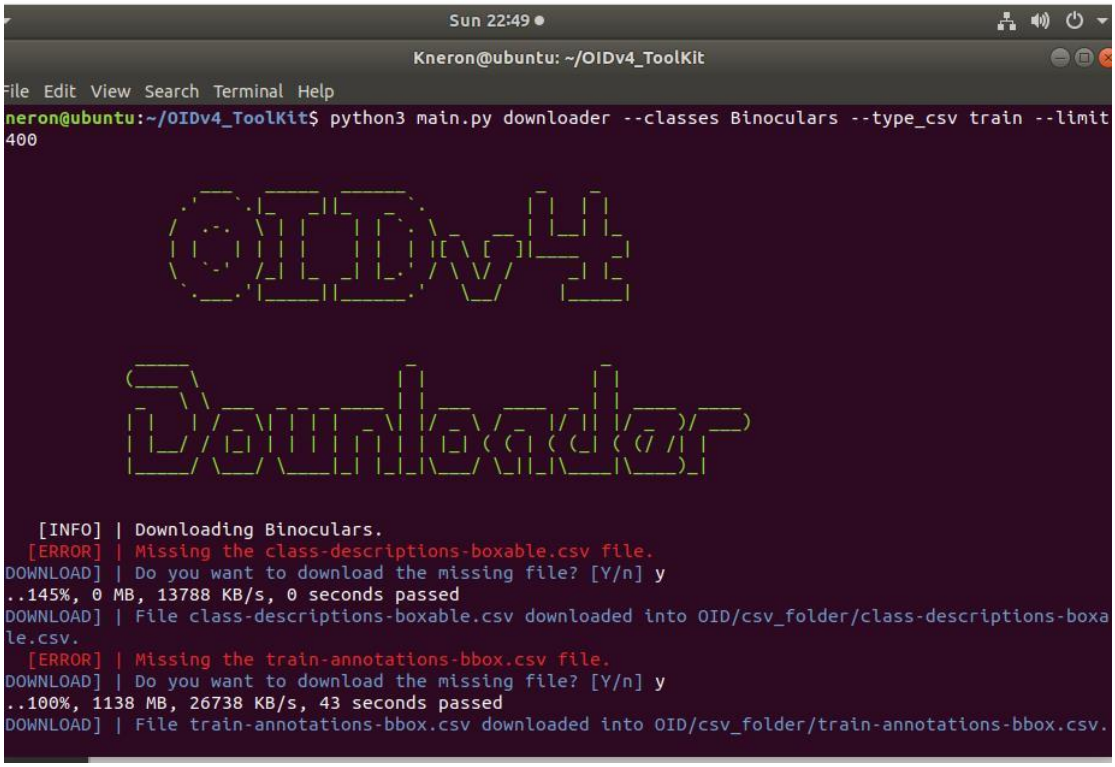
pip3 install -r requirements.txt

pip3 install lxml

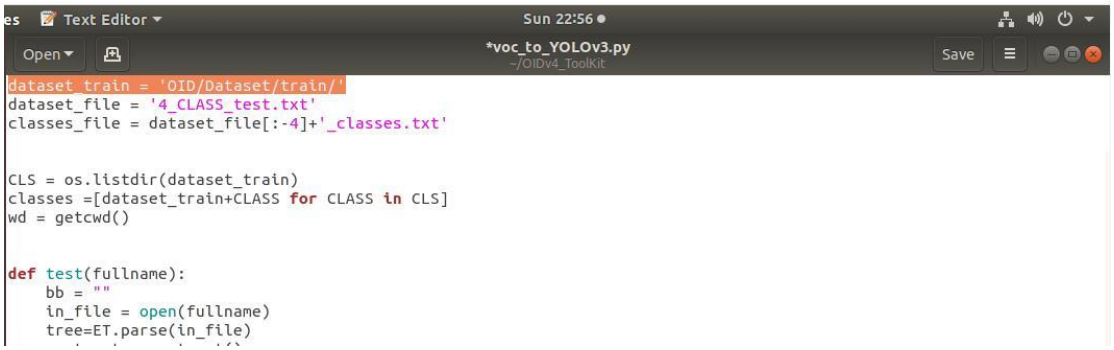




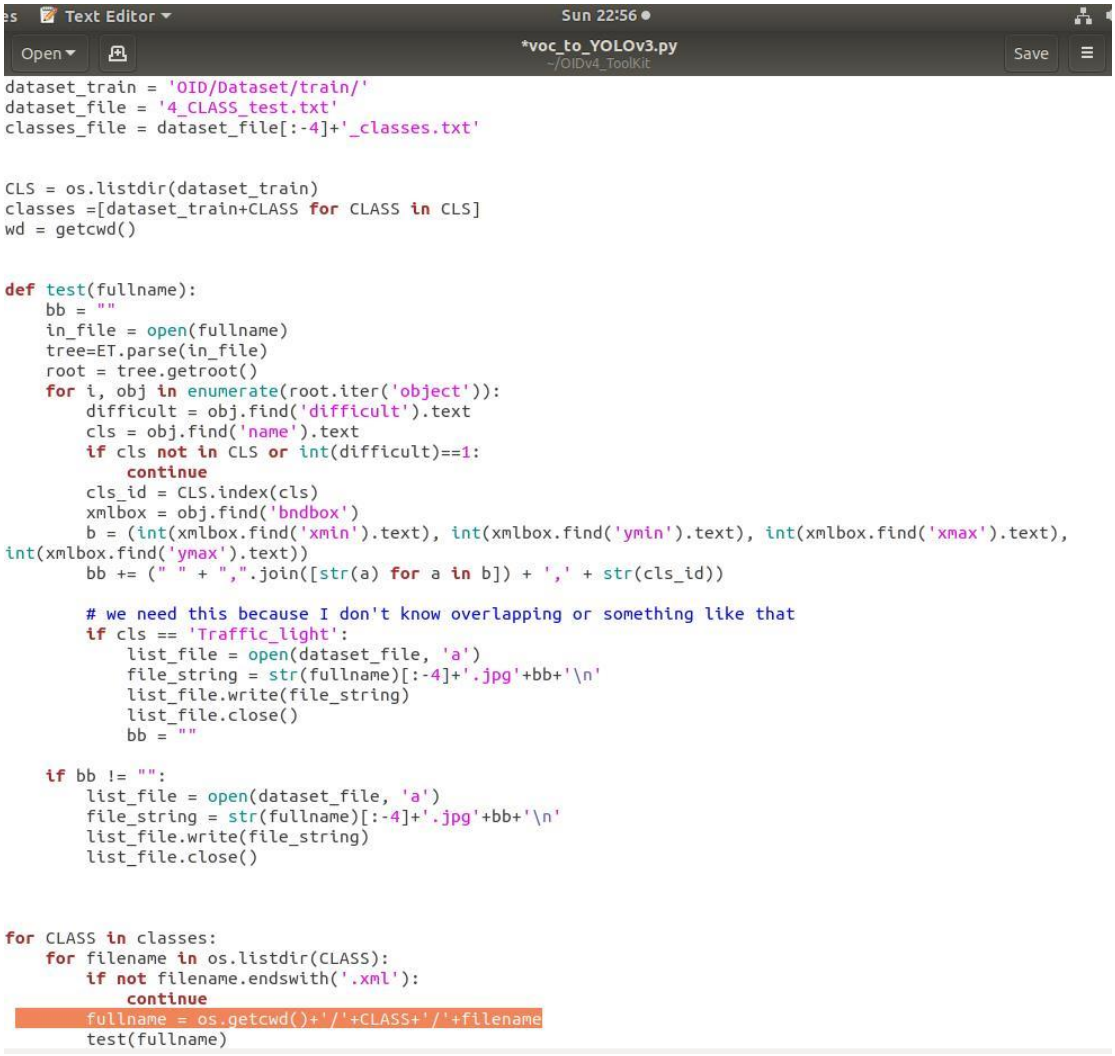
Download with：python3 main.py downloader --classes Binoculars --type_csv train --limit 400



Then open voc_to_YOLOv3.py and changed the marked part




Editor
Sun 22:56
*voc_to_YOLOv3.py
~/OIDv4_ToolKit
ain = 'OID/Dataset/train/'
le = '4_CLASS_test.txt'
le = dataset_file[:-4]+'_classes.txt'
istdir(dataset_train)
dataset_train+CLASS for CLASS in CLS]
d()
ullname):
e = open(fullname)
Client
se(in_file)
tree.getroot()
obj in enumerate(root.iter('object')):
fficult = obj.find('difficult').text
s = obj.find('name').text
cls not in CLS or int(difficult)==1:
continue
s_id = CLS.index(cls)
lbox = obj.find('bndbox')
= (int(xmlbox.find('xmin').text), int(xmlbox.find('ymin').text), int(xmlbox.find('xmax').
.find('ymax').text))
+= (" " + ",".join([str(a) for a in b]) + ',' + str(cls_id))
we need this because I don't know overlapping or something like that
cls == 'Traffic_light':
list_file = open(dataset_file, 'a')
file_string = str(fullname)[:-4]+'.jpg'+bb+'\n'
list_file.write(file_string)
list_file.close()
bb = ""
!= "":
st_file = open(dataset_file, 'a')
le_string = str(fullname)[:-4]+'.jpg'+bb+'\n'
st_file.write(file_string)
st_file.close()
in classes:
lename in os.listdir(CLASS):
not filename.endswith('.xml'):
continue
llname = os.getcwd()+'\\'+CLASS+'\\'+filename
st(fullname)



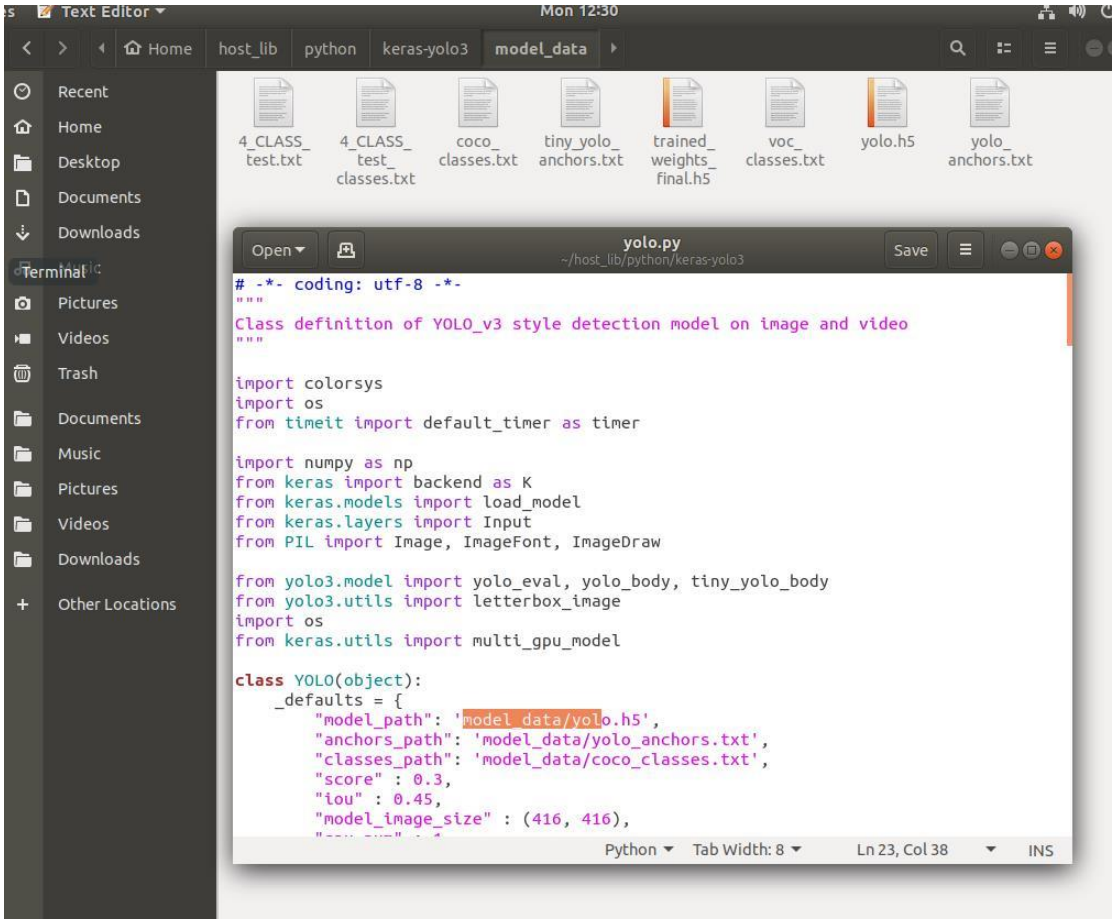

```
dataset_train = 'OID/Dataset/train/'
dataset_file = '4_CLASS_test.txt'
classes_file = dataset_file[:-4]+'_classes.txt'


CLS = os.listdir(dataset_train)
classes =[dataset_train+CLASS for CLASS in CLS]
wd = getcwd()


def test(fullname):
    bb = ""
    in_file = open(fullname)
    tree=ET.parse(in_file)
    root = tree.getroot()
    for i, obj in enumerate(root.iter('object')):
        difficult = obj.find('difficult').text
        cls = obj.find('name').text
        if cls not in CLS or int(difficult)==1:
            continue
        cls_id = CLS.index(cls)
        xmlbox = obj.find('bndbox')
        b = (int(xmlbox.find('xmin').text), int(xmlbox.find('ymin').text), int(xmlbox.find('xmax').text),
int(xmlbox.find('ymax').text))
        bb += (" " + ",".join([str(a) for a in b]) + ',' + str(cls_id))

        # we need this because I don't know overlapping or something like that
        if cls == 'Traffic_light':
            list_file = open(dataset_file, 'a')
            file_string = str(fullname)[:-4]+'.jpg'+bb+'\n'
            list_file.write(file_string)
            list_file.close()
            bb = ""

    if bb != "":
        list_file = open(dataset_file, 'a')
        file_string = str(fullname)[:-4]+'.jpg'+bb+'\n'
        list_file.write(file_string)
        list_file.close()


for CLASS in classes:
    for filename in os.listdir(CLASS):
        if not filename.endswith('.xml'):
            continue
        fullname = os.getcwd()+'/'+CLASS+'/'+filename
        test(fullname)
```

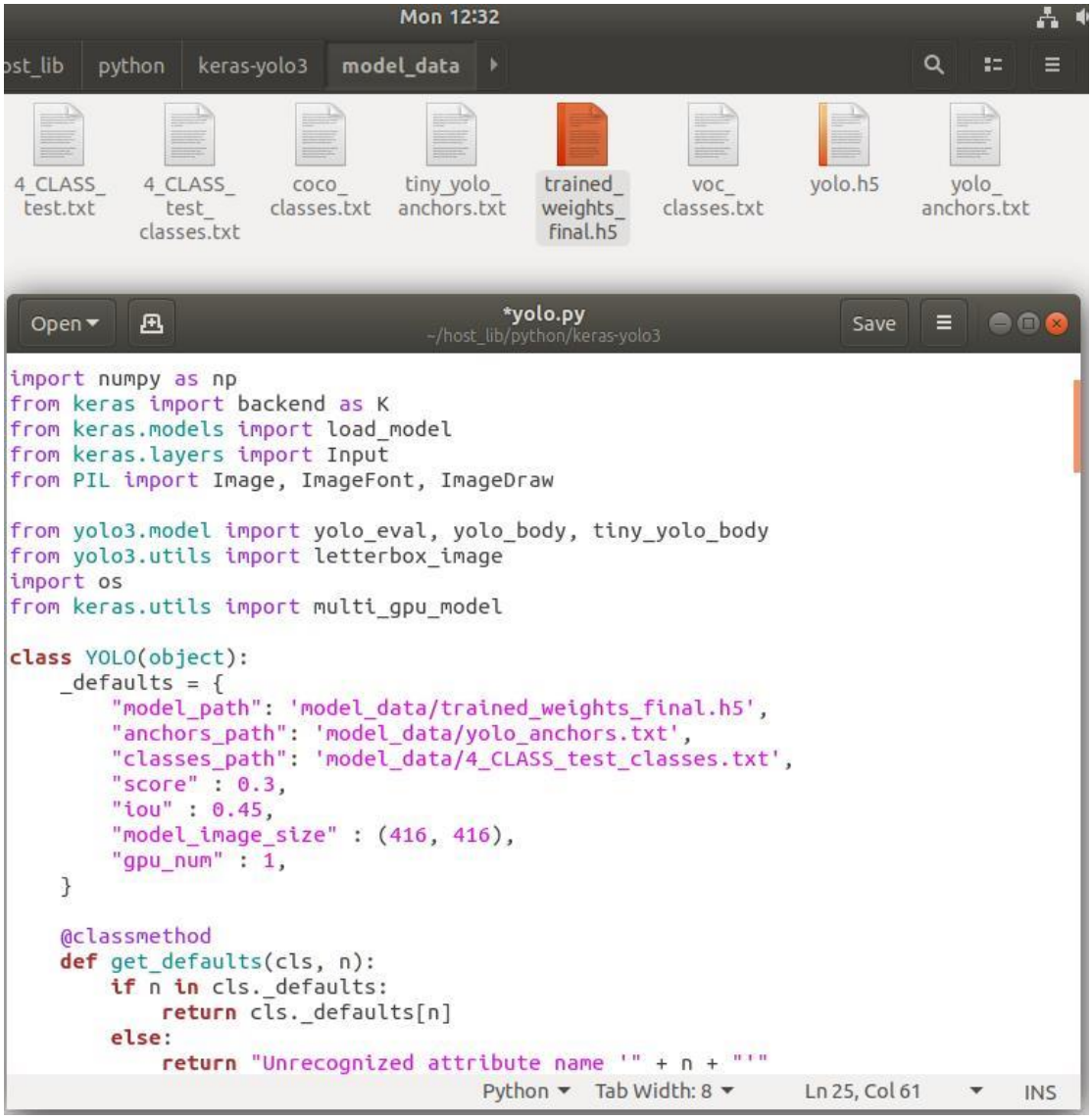
Copy 4_CLASS_test.txt and 4_CLASS_test_classes.txt in to Keras-yolo3/model_data

Download the training:

//drive.google.com/file/d/1xtQ6fvywdbbFs71gfW1252h6eorkwcpt/view

Open yolo.py and change the marked part

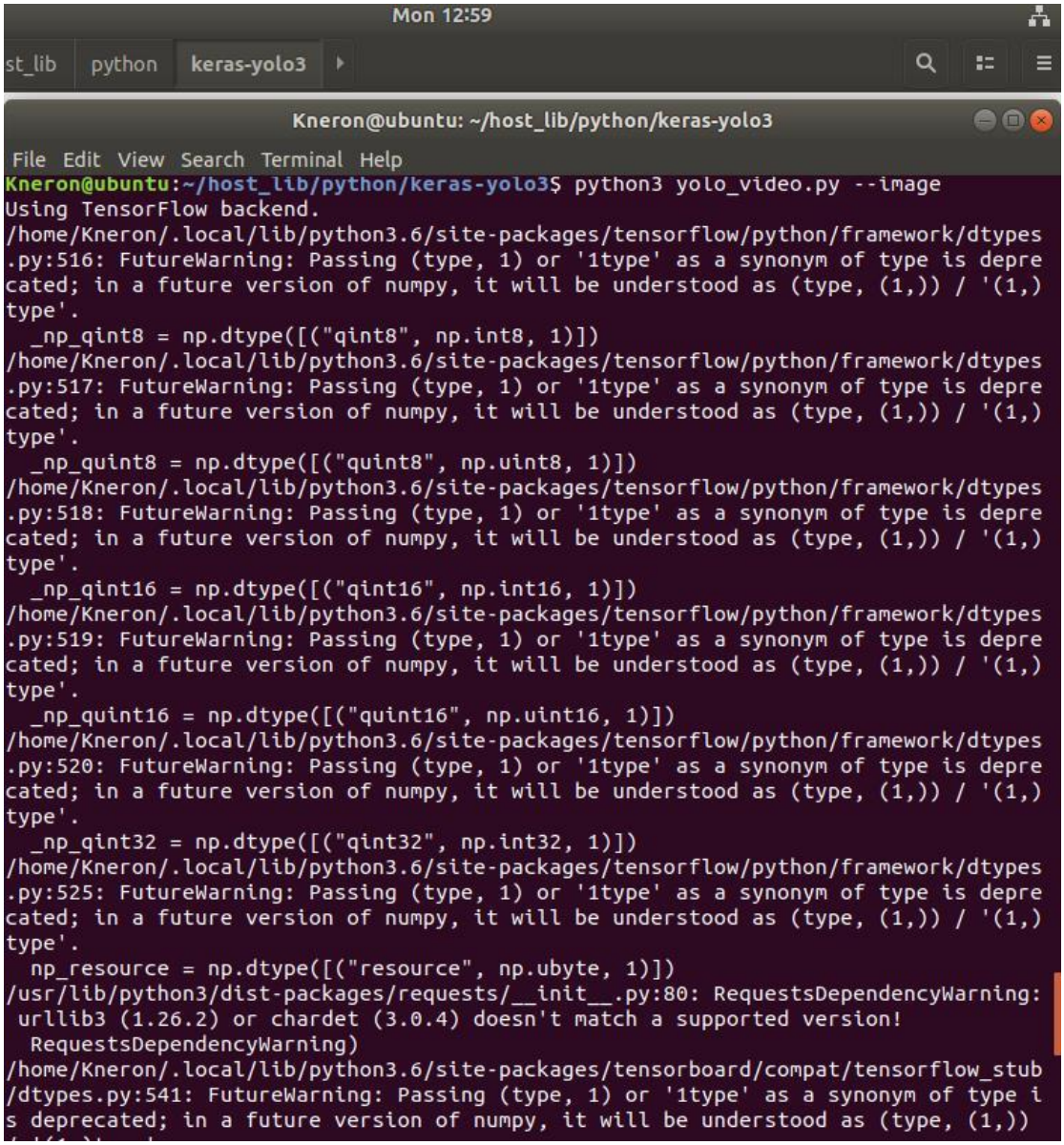

Text Editor
Mon 12:30
Home
host_lib
python
keras-yolo3
model_data
Recent
Home
Desktop
Documents
Downloads
Terminal
Pictures
Videos
Trash
Documents
Music
Pictures
Videos
Downloads
Other Locations
4_CLASS_ test.txt
4_CLASS_ test_ classes.txt
coco_ classes.txt
tiny_yolo_ anchors.txt
trained_ weights_ final.h5
voc_ classes.txt
yolo.h5
yolo_ anchors.txt
Open
yolo.py
~/host_lib/python/keras-yolo3
Save
-*- coding: utf-8 -*-
"""
Class definition of YOLO_v3 style detection model on image and video
"""
import colorsys
import os
from timeit import default_timer as timer
import numpy as np
from keras import backend as K
from keras.models import load_model
from keras.layers import Input
from PIL import Image, ImageFont, ImageDraw
from yolo3.model import yolo_eval, yolo_body, tiny_yolo_body
from yolo3.utils import letterbox_image
import os
from keras.utils import multi_gpu_model
class YOLO(object):
_defaults = {
"model_path": 'model_data/yolo.h5',
"anchors_path": 'model_data/yolo_anchors.txt',
"classes_path": 'model_data/coco_classes.txt',
"score" : 0.3,
"iou" : 0.45,
"model_image_size" : (416, 416),
Python
Tab Width: 8
Ln 23, Col 38
INS

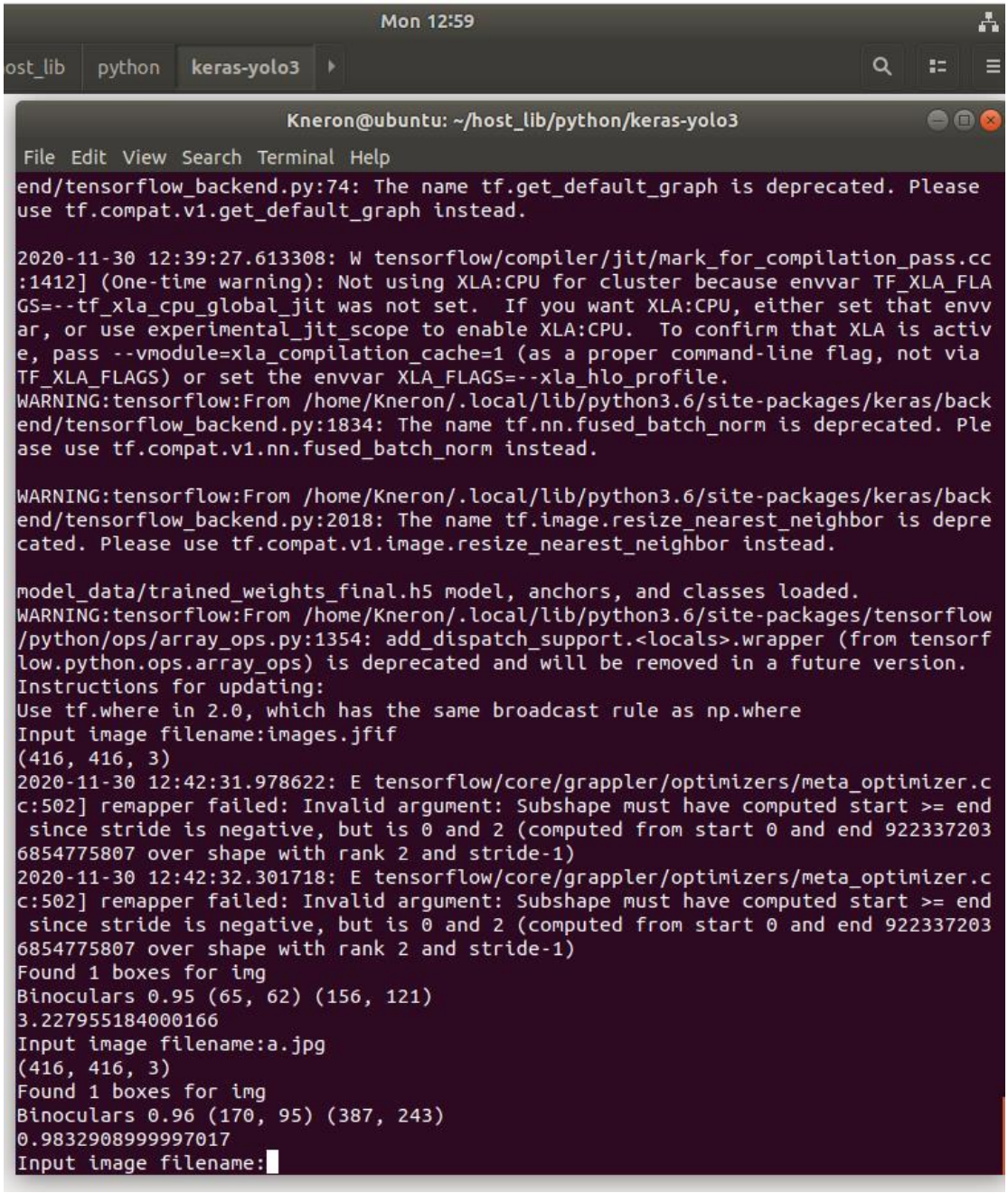


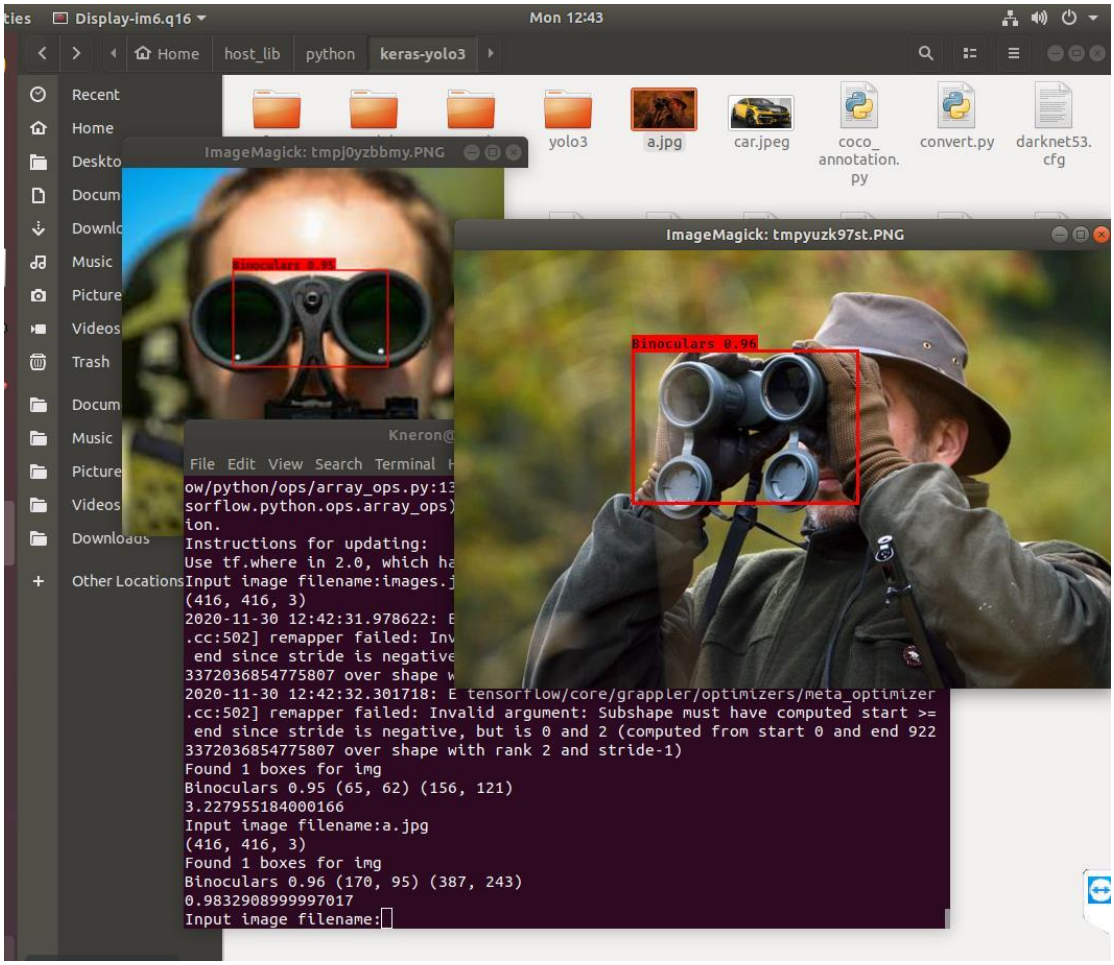
Download the binoculars picture in Keras-yolo3/model_data

Then testing with : python3 yolo_video.py –image

Enter the picture's filename as below


Mon 12:59
st_lib
python
keras-yolo3
Kneron@ubuntu: ~/host_lib/python/keras-yolo3
File Edit View Search Terminal Help
Kneron@ubuntu:~/host_lib/python/keras-yolo3$ python3 yolo_video.py --image
Using TensorFlow backend.
/home/Kneron/.local/lib/python3.6/site-packages/tensorflow/python/framework/dtypes.py:516: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; in a future version of numpy, it will be understood as (type, (1,)) / '(1,)type'.
_np_qint8 = np.dtype([("qint8", np.int8, 1)])
/home/Kneron/.local/lib/python3.6/site-packages/tensorflow/python/framework/dtypes.py:517: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; in a future version of numpy, it will be understood as (type, (1,)) / '(1,)type'.
_np_quint8 = np.dtype([("quint8", np.uint8, 1)])
/home/Kneron/.local/lib/python3.6/site-packages/tensorflow/python/framework/dtypes.py:518: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; in a future version of numpy, it will be understood as (type, (1,)) / '(1,)type'.
_np_qint16 = np.dtype([("qint16", np.int16, 1)])
/home/Kneron/.local/lib/python3.6/site-packages/tensorflow/python/framework/dtypes.py:519: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; in a future version of numpy, it will be understood as (type, (1,)) / '(1,)type'.
_np_quint16 = np.dtype([("quint16", np.uint16, 1)])
/home/Kneron/.local/lib/python3.6/site-packages/tensorflow/python/framework/dtypes.py:520: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; in a future version of numpy, it will be understood as (type, (1,)) / '(1,)type'.
_np_qint32 = np.dtype([("qint32", np.int32, 1)])
/home/Kneron/.local/lib/python3.6/site-packages/tensorflow/python/framework/dtypes.py:525: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; in a future version of numpy, it will be understood as (type, (1,)) / '(1,)type'.
np_resource = np.dtype([("resource", np.ubyte, 1)])
/usr/lib/python3/dist-packages/requests/__init__.py:80: RequestsDependencyWarning: urllib3 (1.26.2) or chardet (3.0.4) doesn't match a supported version!
RequestsDependencyWarning)
/home/Kneron/.local/lib/python3.6/site-packages/tensorboard/compat/tensorflow_stub/dtypes.py:541: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; in a future version of numpy, it will be understood as (type, (1,))


Mon 12:59
ost_lib
python
keras-yolo3
Kneron@ubuntu: ~/host_lib/python/keras-yolo3
File Edit View Search Terminal Help
end/tensorflow_backend.py:74: The name tf.get_default_graph is deprecated. Please use tf.compat.v1.get_default_graph instead.
2020-11-30 12:39:27.613308: W tensorflow/compiler/jit/mark_for_compilation_pass.cc:1412] (One-time warning): Not using XLA:CPU for cluster because envvar TF_XLA_FLAGS=--tf_xla_cpu_global_jit was not set. If you want XLA:CPU, either set that envvar, or use experimental_jit_scope to enable XLA:CPU. To confirm that XLA is active, pass --vmodule=xla_compilation_cache=1 (as a proper command-line flag, not via TF_XLA_FLAGS) or set the envvar XLA_FLAGS=--xla_hlo_profile.
WARNING:tensorflow:From /home/Kneron/.local/lib/python3.6/site-packages/keras/backend/tensorflow_backend.py:1834: The name tf.nn.fused_batch_norm is deprecated. Please use tf.compat.v1.nn.fused_batch_norm instead.
WARNING:tensorflow:From /home/Kneron/.local/lib/python3.6/site-packages/keras/backend/tensorflow_backend.py:2018: The name tf.image.resize_nearest_neighbor is deprecated. Please use tf.compat.v1.image.resize_nearest_neighbor instead.
model_data/trained_weights_final.h5 model, anchors, and classes loaded.
WARNING:tensorflow:From /home/Kneron/.local/lib/python3.6/site-packages/tensorflow/python/ops/array_ops.py:1354: add_dispatch_support.<locals>.wrapper (from tensorflow.python.ops.array_ops) is deprecated and will be removed in a future version.
Instructions for updating:
Use tf.where in 2.0, which has the same broadcast rule as np.where
Input image filename:images.jfif
(416, 416, 3)
2020-11-30 12:42:31.978622: E tensorflow/core/grappler/optimizers/meta_optimizer.cc:502] remapper failed: Invalid argument: Subshape must have computed start >= end since stride is negative, but is 0 and 2 (computed from start 0 and end 9223372036854775807 over shape with rank 2 and stride-1)
2020-11-30 12:42:32.301718: E tensorflow/core/grappler/optimizers/meta_optimizer.cc:502] remapper failed: Invalid argument: Subshape must have computed start >= end since stride is negative, but is 0 and 2 (computed from start 0 and end 9223372036854775807 over shape with rank 2 and stride-1)
Found 1 boxes for img
Binoculars 0.95 (65, 62) (156, 121)
3.227955184000166
Input image filename:a.jpg
(416, 416, 3)
Found 1 boxes for img
Binoculars 0.96 (170, 95) (387, 243)
0.9832908999997017
Input image filename:


Display-im6.q16
Mon 12:43
Home
host_lib
python
keras-yolo3
Recent
Home
Music
Picture
Videos
Trash
Other Locations
yolo3
a.jpg
car.jpeg
coco_annotation.py
convert.py
darknet53.cfg
ImageMagick: tmpJ0yzbbmy.PNG
ImageMagick: tmpyuzk97st.PNG
Binoculars 0.96
File Edit View Search Terminal
Input image filename:images.j
(416, 416, 3)
Instructions for updating:
Use tf.where in 2.0, which ha
2020-11-30 12:42:31.978622:
.cc:502] remapper failed: Inv
end since stride is negative
3372036854775807 over shape
2020-11-30 12:42:32.301718: E tensorflow/core/grappler/optimizers/meta_optimizer
.cc:502] remapper failed: Invalid argument: Subshape must have computed start >=
end since stride is negative, but is 0 and 2 (computed from start 0 and end 922
3372036854775807 over shape with rank 2 and stride-1)
Found 1 boxes for img
Binoculars 0.95 (65, 62) (156, 121)
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Input image filename:a.jpg
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Binoculars 0.96 (170, 95) (387, 243)
0.9832908999997017
Input image filename: