How to Create a Customized Haarcascade.xml – OpenCV Using Linux

Run in Linux shell

sudo apt-get install aptitude

sudo apt-get install git

cd anaconda3

mkdir classifier

mkdir negative_images

mkdir positive_images

mkdir samples

git clone https://github.com/mrnugget/opencv-haar-classifier-training

Copy the following file to anaconda3 directory (Python3):

https://github.com/RubensZimbres/Repo-2018/blob/master/OpenCV/Mergevec3.py

(**for Python 2:**
https://github.com/mrnugget/opencv-haar-classifier-training/blob/master/tools/mergevec.py
)

Put your negative images in negative_images directory

Put your positive images in positive_images directory

Run the following code in Spyder that will resize all your images in folders and convert to grayscale:

https://github.com/RubensZimbres/Repo-2018/blob/master/OpenCV/open_resize_IMG

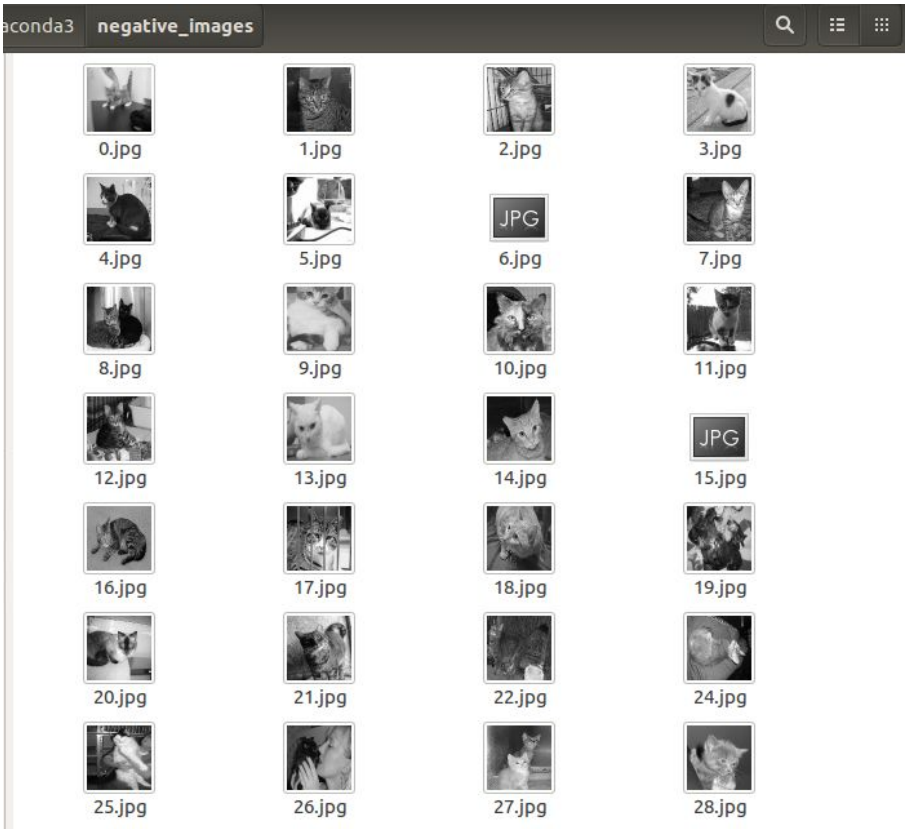
```python
import cv2
import os

folder='/home/theone/anaconda3/positive_images'

for filename in os.listdir(folder):
    img = cv2.imread(os.path.join(folder,filename), cv2.IMREAD_GRAYSCALE)
    img2=cv2.resize(img,(50,50))
    cv2.imwrite('/home/theone/anaconda3/positive_images/'+filename,img2)

folder='/home/theone/anaconda3/negative_images'

for filename in os.listdir(folder):
    img = cv2.imread(os.path.join(folder,filename), cv2.IMREAD_GRAYSCALE)
    img2=cv2.resize(img,(50,50))
    cv2.imwrite('/home/theone/anaconda3/negative_images/'+filename,img2)

```

Run:

find ./negative_images -iname "*.jpg" > negatives.txt

find ./positive_images -iname "*.jpg" > positives.tx

Your images folder will look like this:

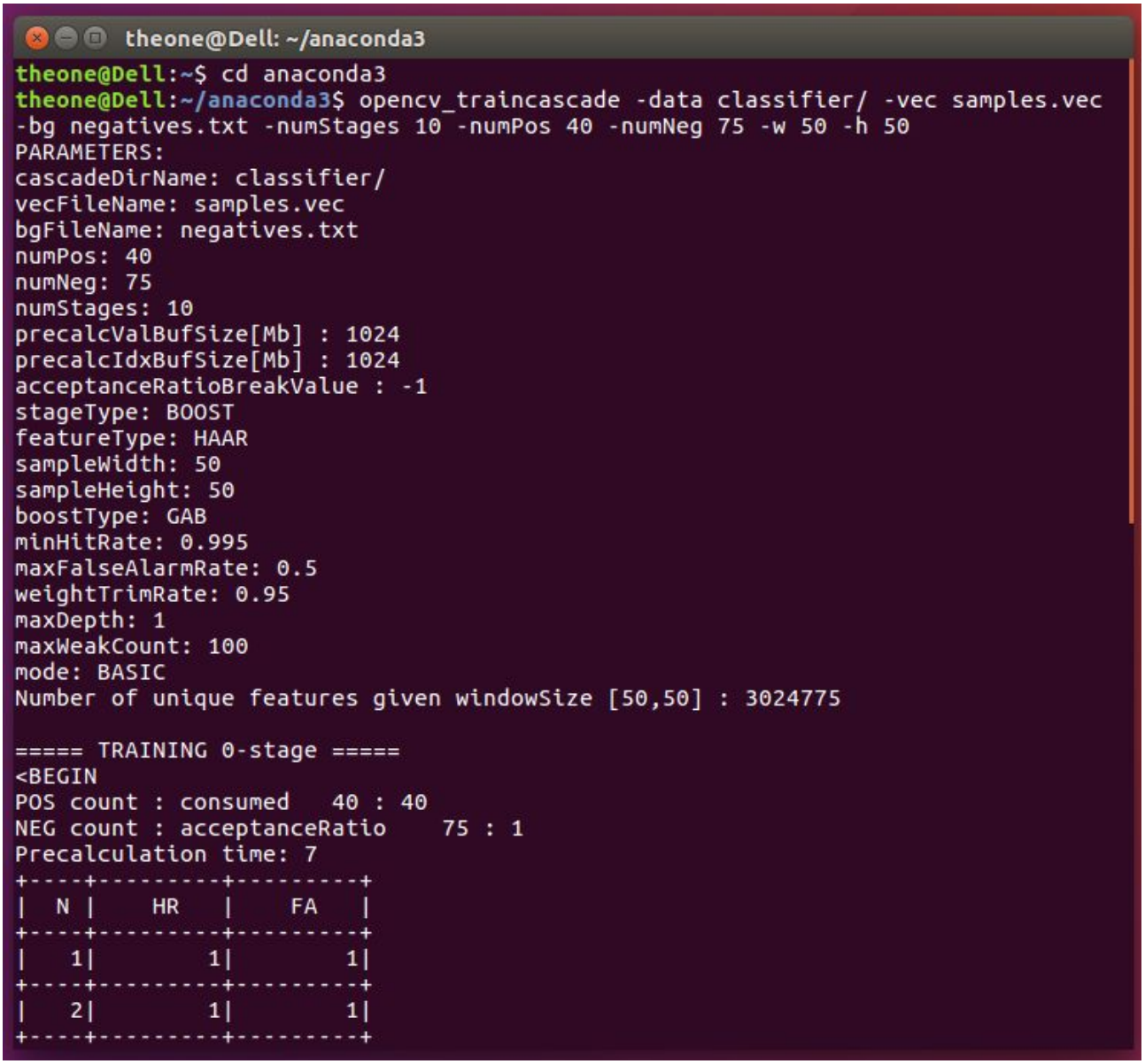


Run in Linux shell:

perl opencv-haar-classifier-training/bin/createsamples.pl positives.txt negatives.txt samples 75 "opencv_createsamples -bgcolor 0 bgthresh 0 -maxxangle 1.1 -maxyangle 1.1 -maxzangle 0.5 -maxidev 40 -w 50 -h 50"

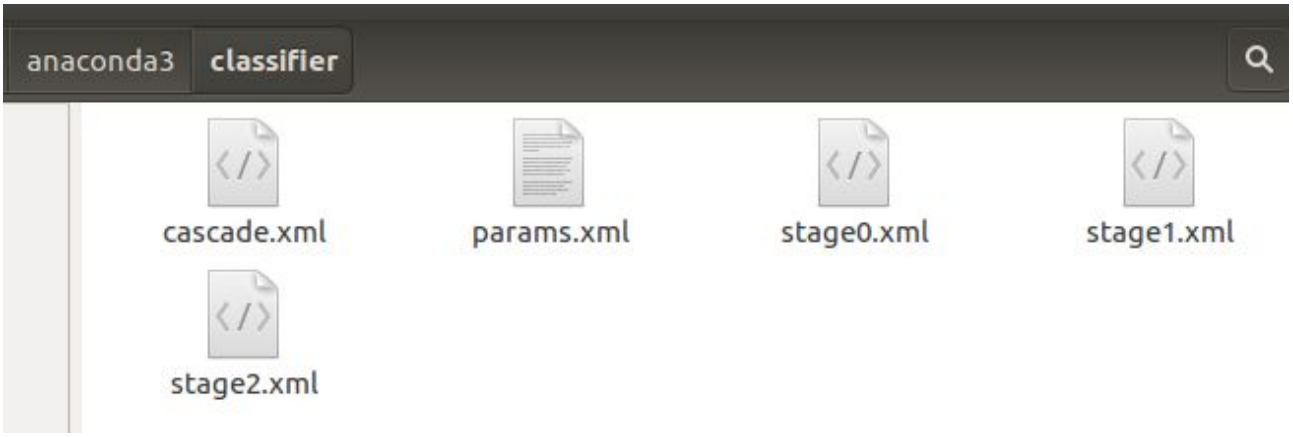
python mergevec3.py -v samples/ -o samples.vec

opencv_traincascade -data classifier/ -vec samples.vec -bg negatives.txt -numStages 10 -numPos 40 -numNeg 75 -w 50 -h 50



YOU'RE DONE !

Your haarcascade file is at classifier directory:


anaconda3
classifier
cascade.xml
params.xml
stage0.xml
stage1.xml
stage2.xml