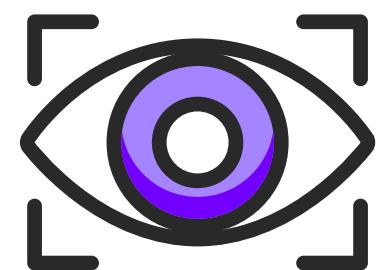


DETECTING EYES WITH PYTHON

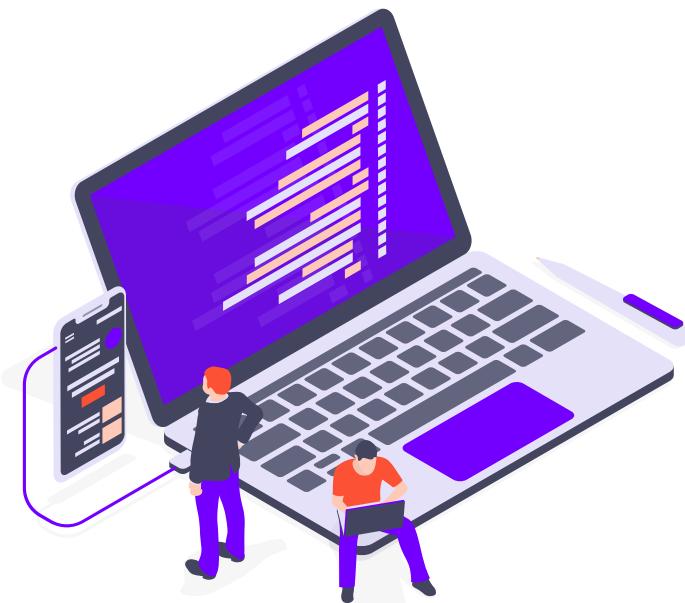
In less than 15
lines of code!





It's super easy!

In this micro-tutorial, you will learn how to detect eyes from an image using the **Haar Cascades**. For the extremely popular tasks, the classifiers/detectors already exist, for example: detecting things like faces, cars, smiles, eyes, and license plates.

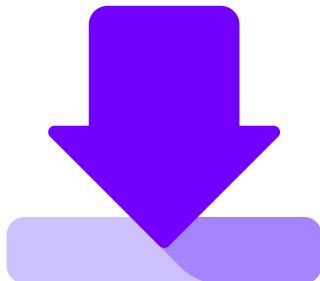


Installing the modules:

To install the OpenCV module and some other related dependencies, we can use the pip command:

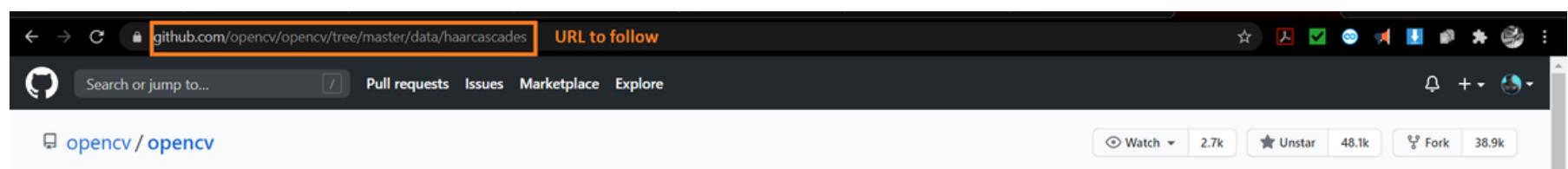
```
pip install opencv-python
```

```
pip install numpy
```

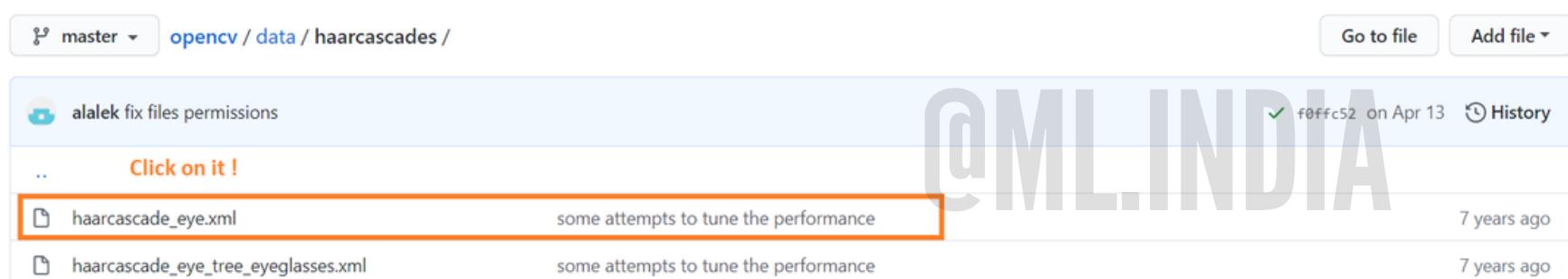


Downloading the Haar Cascade:

Step #1: Follow the URL - <https://github.com/opencv/opencv/tree/master/data/haarcascades>



Step #2: Click on haarcascade_eye.xml.



Step #2: Click on Raw and then press Ctrl+S. This will help you save the Haar Cascade file for eyes.

master [Go to file](#) ...

vpisarev some attempts to tune the performance Latest commit b7553d4 on Dec 19, 2013 History

1 contributor

12213 lines (12202 sloc) | 333 KB

Raw Blame

Click on it and then press Ctrl + S

```
1  <?xml version="1.0"?>
2  <!--
3      Stump-based 20x20 frontal eye detector.
4      Created by Shameem Hameed (http://umich.edu/~shameem)
5
6  ///////////////////////////////////////////////////////////////////
7
8  IMPORTANT: READ BEFORE DOWNLOADING, COPYING, INSTALLING OR USING.
9
10 By downloading, copying, installing or using the software you agree to this license.
11 If you do not agree to this license, do not download, install,
12 copy or use the software.
13
```

The code:

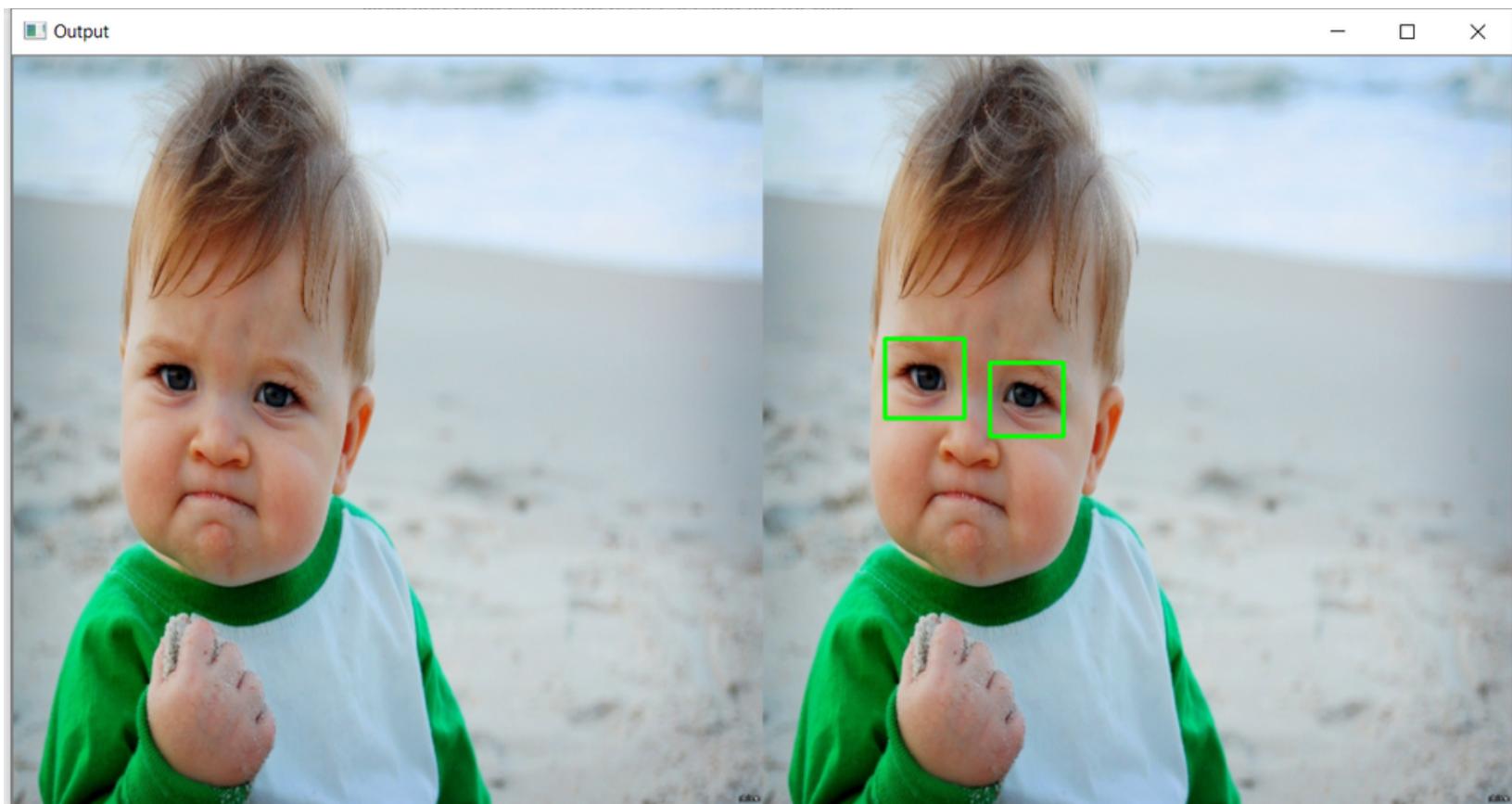
```
#dependency
import cv2
import numpy as np

# cascade file for eye stored in local directory
# or else mention the full path
cascade = cv2.CascadeClassifier('haarcascade_eye.xml')

img = cv2.imread('goodboy.jpg') #reading the image
img = cv2.resize(img, (500,500)) #resizing the image to 500x500
copy = img.copy() #copying the image
gray = cv2.cvtColor(copy, cv2.COLOR_BGR2GRAY) #converting the image to gray
eyes = cascade.detectMultiScale(gray,1.3,5) # for detecting the eyes in the image
for (ex,ey,ew,eh) in eyes: #dimensions for rectangle
    cv2.rectangle(copy, (ex,ey), (ex+ew,ey+eh), (0,255,0),2)
    #image, dim from, dim to, color of rect, width of rect

#cv2.imshow('Original',img)
#cv2.imshow('Eyes Detected',copy)
stack = np.hstack([img,copy]) #horizontal stacking of images.
cv2.imshow('Output',stack)
cv2.waitKey(0) #infinite delay
|
```

The output:





Content curators:

Bhavishya Pandit and Priyanka Kasture.

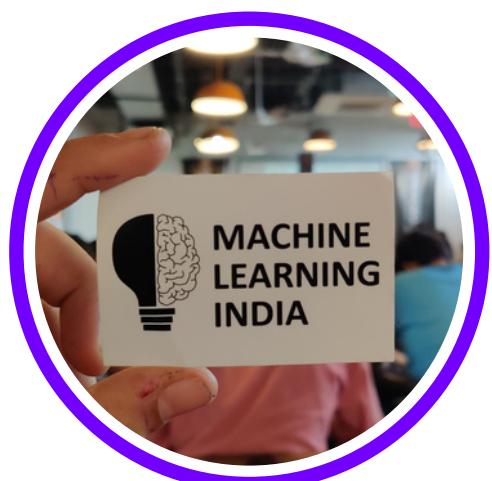
Important references:

- Haar Cascade Face and Eye OpenCV Python Tutorial
on <https://pythonprogramming.net/>.



Important note:

The links to these resources will be put up on our
Telegram. Channel ID: @machinelearning24x7.



Wasn't that **easy-peazy?**

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