

Description

This is a code for eye blink detection using OpenCV's Haar Cascade Classifier. The code captures video frames using the webcam and then performs face detection and eye detection on each frame. The face detection is performed using the face_cascade classifier, and the eye detection is performed using the eye_cascade classifier. Both classifiers are trained using XML files (haarcascade_frontalface_default.xml and haarcascade_eye_tree_eyeglasses.xml, respectively). The captured video frames are converted to grayscale and then filtered to remove impurities.

The code then detects the face in the image and draws a green rectangle around the detected face. The region of the image containing the face is then fed to the eye classifier for eye detection. If the classifier detects two eyes, the code displays the message "Eyes open!" on the screen. If the code detects less than two eyes, the code displays the message "Blink detected" in the console and restarts the algorithm. The algorithm can be started or stopped by pressing the 's' or 'q' key, respectively.