##### 人脸识别和数据库比对的试验

（四）人脸数据库的建立以及人脸识别的搭建

Machine learning regarding to face recognition:

Sqlite3 数据库的搭建

OpenCV face recognizers

OpenCV has three built-in face recognizers:

EigenFaces – cv2.face.createEigenFaceRecognizer()

FisherFaces – cv2.face.createFisherFaceRecognizer()

Local Binary Patterns Histograms (LBPH) – cv2.face.createLBPHFaceRecognizer()

Experiment 1:

Eigenfaces face recognizer

experiment 2:

Fisherfaces face recognizer

This algorithm is an improved version of the last one. As we just saw, EigenFaces looks at all the training faces of all the people at once and finds principal components from all of them combined. By doing that, it doesn't focus on the features that discriminate one individual from another. Instead, it concentrates on the ones that represent all the faces of all the people in the training data, as a whole.

experiment3:

Local binary patterns histograms (LBPH) Face Recognizer

1,OpenCV module

2,Prepare training data

3,Data Preparation for Face Recognition

OpenCV comes equipped with three face recognizers.

EigenFaces: cv2.face.createEigenFaceRecognizer()

FisherFaces: cv2.face.createFisherFaceRecognizer()

Local Binary Patterns Histogram (LBPH): cv2.face.LBPHFisherFaceRecognizer()

create our LBPH face recognizer

face\_recognizer = cv2.face.createLBPHFaceRecognizer()

or

face\_recognizer = cv2.face.createEigenFaceRecognizer()

or

face\_recognizer = cv2.face.createFisherFaceRecognizer()

Now that we have initialized our face recognizer and we also have prepared our training data, it's time to train. We will do that by calling the methodtrain(faces-vector, labels-vector) of face recognizer.

face\_recognizer.train(faces, np.array(labels))

finally:

Prediction

result:

we have face recongized in three different models of cameras