تصميم نظام التعرف على الوجوه

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Design of a Face Recognition System

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Abstract

generally enjoys an innate ability to distinguish faces. The facial recognition system aims to enhance this technological capability by using a sophisticated program that scans people's faces by displaying their analysis and recognition, as the system uses sensitive cameras to take pictures of people's faces at close range in a stable position. A quick look from the person towards the camera is enough to record the contours of the face such as position, size, shape of eyes, nose, cheekbones and jaw, then the image is saved immediately. The bio metering software allows any user to analyze and evaluate the image. Unlike other biometric technology, technicians won't need long training, making facial recognition easy to use to protect the audience as well as extreme accuracy. In general, this system came to address the problems of the work of the security system in important departments and institutions that need a high degree of security as well as the review of employees their personal files kept in the registration unit of the department or its institution and this work is better than the problems that exist

Keywords: Face Recognition; FR.

Introduction

Face recognition(FR) of technological development and the information age that has conquered the world, and the shift from the use of ordinary means in various fields to others based on modern

technologies and digital data, tried to exploit the ability of God almighty and his wisdom in the creation of human beings different each individual has its characteristics that distinguish it and the most important of these characteristics face eyes ... Etc., the technique of distinguishing people is one of the most successful techniques in the field of image analysis and operations on them. The technique of facial recognition or facial fingerprinting is the result of tremendous progress in all areas, especially in the field of image technology and the development of the security system, and has received attention from many domains, both on the private and governmental institutions and on the individual scale. One of the branches of the bio system is the fingerprint of the face, God almighty honorable man and the creation of faces and their shape and their beauty so that they become familiar between people and differentiate them and get to know them even in the case of similarity, even if they are between the twins you find distinctive marks for each of them. God has given man the mind to recognize the faces he sees.

Proposal system

The steps of the work of modern systems for facial recognition programs: The triple dimension claims that it can solve this problem using the winding areas and the facial sway areas and the use of features that do not change with time. - Verification, i.e. the process of comparing the person in front of the camera with the images in the storage sites. This is done in a series of steps to finally recognize the face steps:

(1) Detection: Taking the image either by dual-dimensional images using electronic or three-dimensional scanners using video cameras.

(2) Alignment: After taking the picture, the system determines the position, size and direction of the head. If the detection was done using the computer's main camera, it can determine this in a two-dimensional image, the curvature between the face and the camera should not exceed 35 degrees.

(3) Measurement: The system program calculates curves and zigzags on the face with accuracy up to parts of the millimeter. It transforms that information into a template for the face.

Result
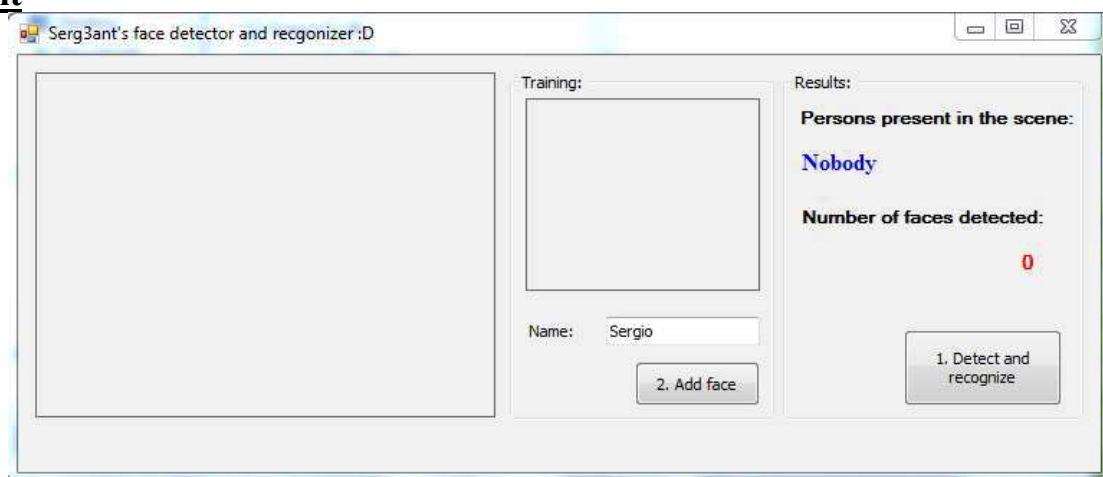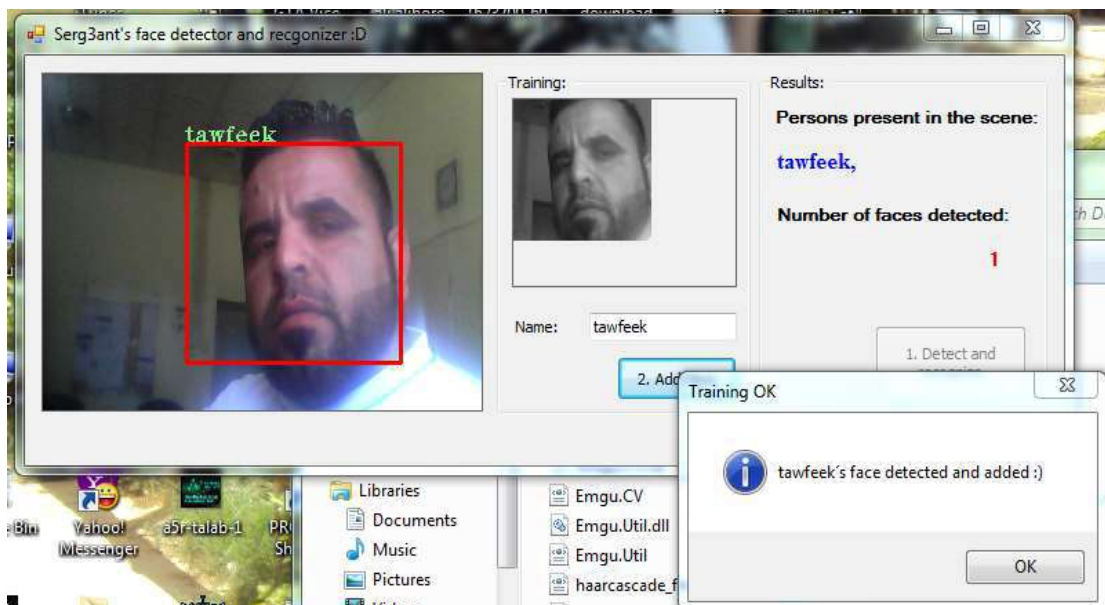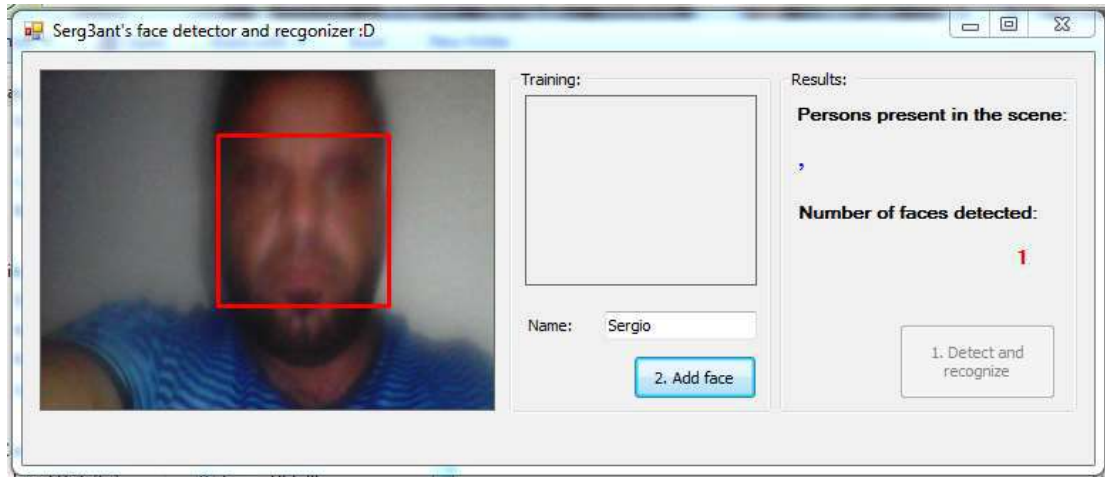
Conclusions

Facial recognition has received great attention from both industry and research circles. The reason for this interest is the ease with which you can handle the image that can be obtained from your own devices. Although the results have been influenced by several factors, such as the distance of the person from the camera and the resolution of the image.

Despite the success and development of these systems, they do not yet reach perfection because there are some factors that may hinder the process of facial recognition, including the following :

* glare resulting from wearing sunglasses.
* Long hair obscures the central part of the face.
* Low light that results in blurred images.
* Poor resolution and clarity of remote images.
* Changes in the physiological characteristics of the face either for old age or otherwise.
* Changes in the work environment reduce match accuracy.
* The risk of misuse of people's privacy when registering in the case of uncooperative users and induction capabilities.

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