FACE RECOGNITION SMART ATTENDANCE USING CNN

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Abstract : While humans can recognize faces without any problems, facial recognition is a difficult recognition problem on a computer. Face recognition attempts to recognize faces based on two-dimensional images that are three-dimensional and change appearance with lighting and face. Facial recognition takes four steps to complete this calculation task. First, face detection is used to distinguish faces from background images. In the second step, segmented face images are based on the calculation of face exposure, image size and photographic features such as lighting and grayscale. The purpose of the associative process is to provide the correct localization of the face in the third step, facial feature extraction. Features such as eyes, nose and mouth are realistic and scaled to represent the face in the image. Then, in the fourth step, the face feature vector thus generated is mapped to the face database.

INTRODUCTION

The main idea here is to compare the detected face with a familiar face. In detection we only need to determine if there is a face in the image, but in recognition we need to determine whether it is a face. The face is an important part of our social life and plays an important role in self-expression and emotion. As we can recognize many faces that we have learned throughout our lives, we can also recognize faces even years later. These skills are very powerful, but vision can change drastically due to changes, age and influences such as changes in beard, glasses or hair. What we believe we have accomplished is the development of a face recognition system that uses simple and direct methods and techniques that is fast, powerful, simple and capable of recognizing large numbers of facial video images.

Computers that detect and recognize human faces have applications in many fields, including crime detection, computer security, image and film processing, artificial intelligence, object intelligence, and human-computer interaction. Face detection is a computer technique used in many applications to identify human faces in digital images. Face detection also refers to the process of finding and recognizing faces in the human brain. two.

PROBLEM DESCRIPTION

Over the years, face detection and recognition has grown from an esoteric field of computer science to a hot one, and the use of theses among image analysis and comprehension algorithms is better and more successful. Due to the nature of the problem, computer vision is not only a subject of computer science, but also a subject of neuroscience and psychology, since the degree of increase in computer graphics and scientific understanding is believed to make it possible. Find out how our brain works and how it works. General instructions for the face recognition issue (in computer vision) might be as follows: Take an important photo or video of the scene, identify or identify one or more user data stored on that site's face.

III.FIGURES
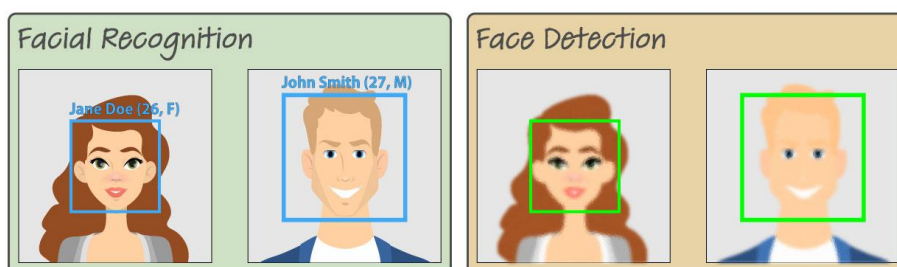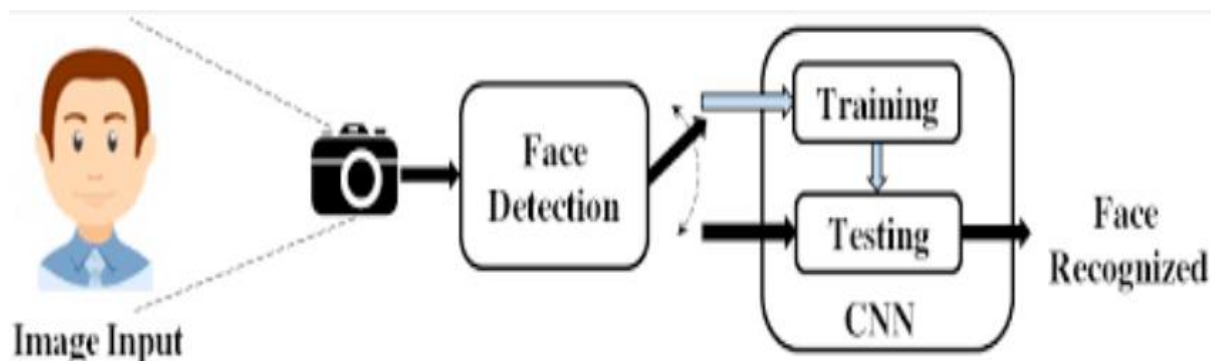
IV.LITERATURE SURVEY

Face recognition, which is one of the most effective methods of image analysis and understanding, has gained importance in recent years, especially in recent years. There are at least two reasons for this difference: first, widespread industry and legal filings, and second, the availability of tools after 30 years of research. Although the current identification machines have reached a certain level of development their success is limited by the conditions created by many applications of the or exposure is still a serious problem. In other words, the current system is not close to human understanding This article presents important research data on static and photographic face research.

There are two main reasons for writing this survey: First, to provide a fresh review of the existing literature, second, to provide some insights for research on facial blows. To provide a comprehensive assessment, we not only separate the authentication methods available but also provide a detailed description of the methods represented in each category. It also covers topics related to such as psychological research, physical assessment, lighting issues and physical changes.

V. CONCLUSIONS

Facial recognition is often associated with expensive high-end security applications. Today core tech has been created and the price of the device has dropped. Some applications of facial recognition technology are now affordable, reliable and accurate. Identify the person quickly and easily. The community has great uses in many areas such as crime investigation, security. If you are training someone and you are trying to recognize them immediately, the real face recognition is easy because the same camera, the same background, they are very beautiful, the lighting will be the same. and you look at them Direction will be the same. So you will most likely get good results during this time. But when you try to describe them from different directions, or from different rooms or outside, or at different times of the day, it tends to yield bad results!