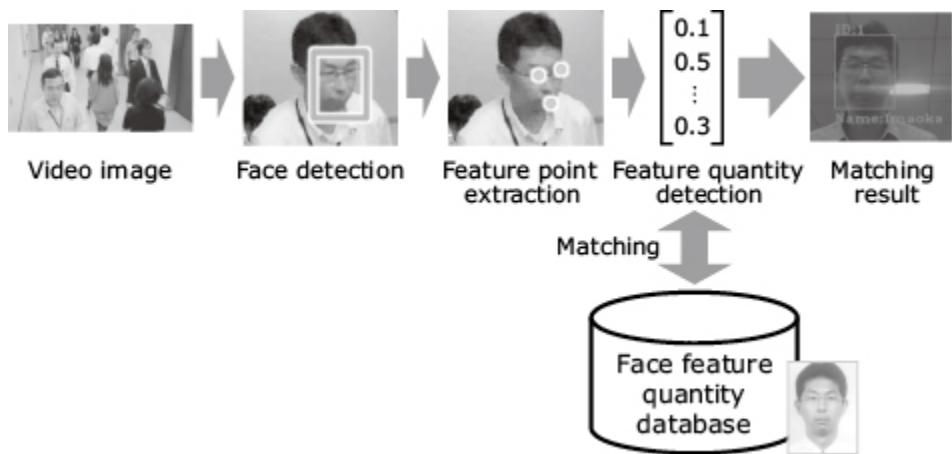
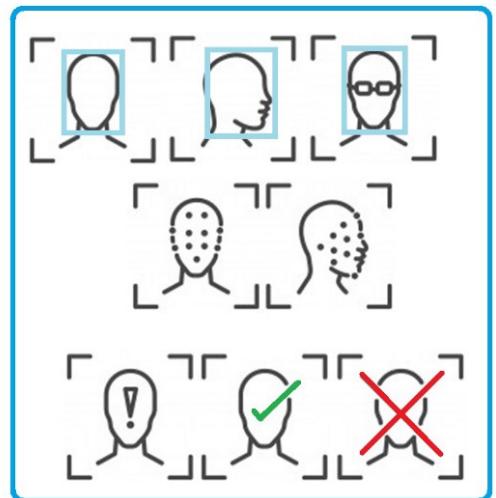
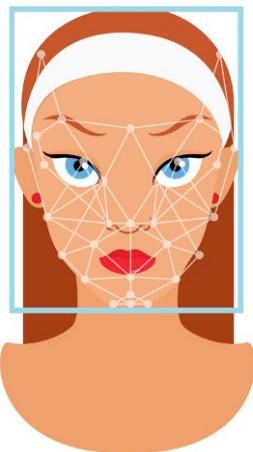


Face Recognition

Definition and Use-cases

**FACE
Recognition:
FACE ID**



Introduction

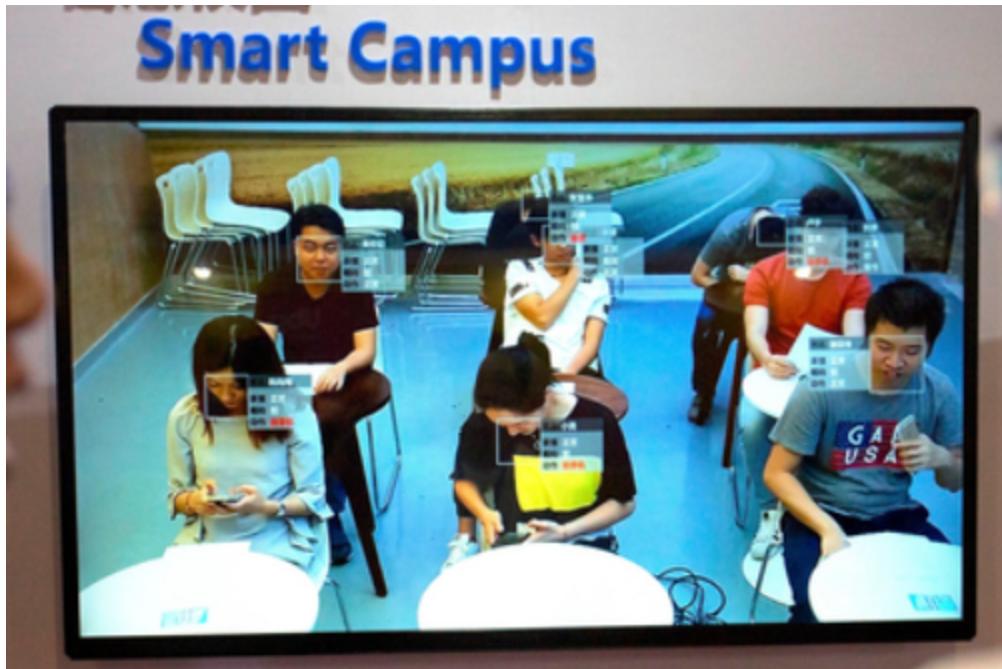
Facial recognition aims to identify an Individual's Identity based on their Face. Facial Recognition systems are used to point out individuals in any Images, Videos or in Real Time.

Facial Recognition is a subdomain of Object Recognition in Image Processing. It can be considered as a Biometric Software which maps the unique features of input Image and compares with previously fed Images. Which ultimately Identifies the faces and assigns the label according to the given data. This technology has various application ranges.

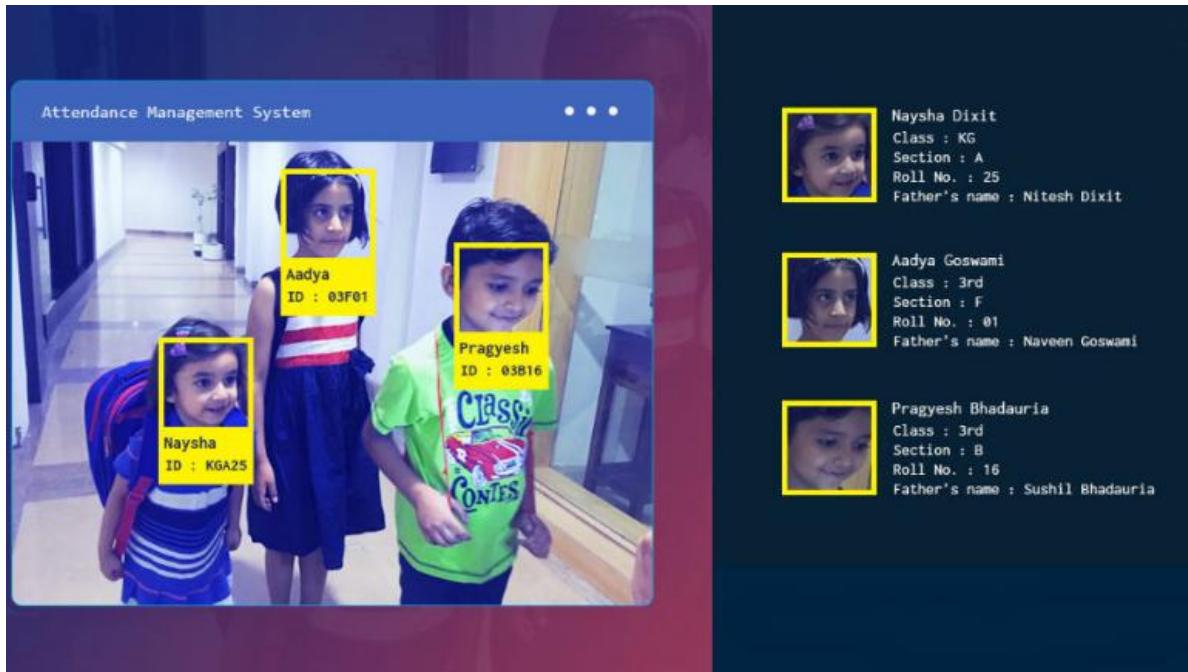
Use Cases

As the core idea behind the system is Identify an Individual from their face, It has a lot of use cases. Here are a few of them..

Attendance System



- Face recognition system recording student's attendance in the campus and generating report.



- Face recognition system recording kid's attendance in school and generating the recognised face data along with their basic information.

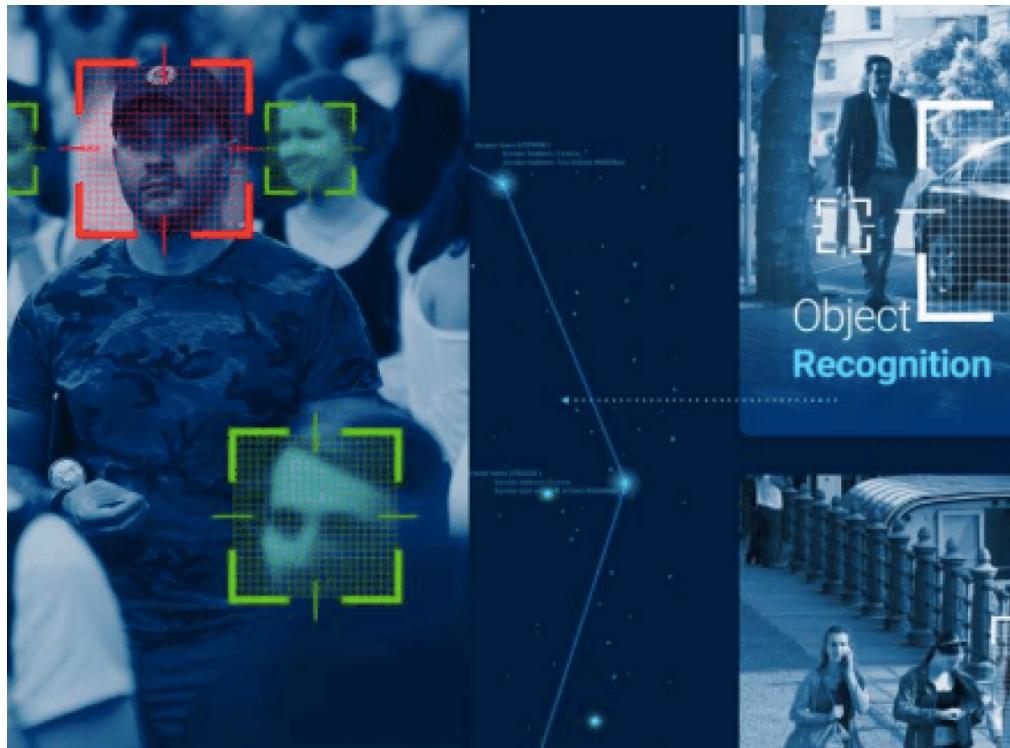


- Attendance being recorded by the supervisor at the construction site using the facial recognition system.

Attendance using facial recognition can be used in various sectors such as Education sector, Corporate sector and in Industries. There are some benefits of using Facial recognition systems over traditional attendance systems or one with a fingerprint scanner.

1. **Time Saving for Human Resource:** As it is fact that Time is invaluable it becomes very time saving to take attendance using Facial Recognition. Attendance takers just need to click the picture of the whole mass such that their faces are clearly visible and the system will provide the attendance report on the spot with some parameters like the one who are absent, un-recognized or new faces along with total headcount.
2. **Efficiency and Accuracy:** As the traditional systems were vulnerable to Human errors and malpractice, Facial Recognition increased the efficiency by providing reports in real-time and it keeps record of each and every activity practiced in the system which can track any malpractice or human error.
3. **Easy Integration and management of records:** As the records and data saved by the Facial Recognition system would be in digital format it becomes very easy to Integrate or use that data with any other systems or softwares such as payroll applications and human resource or analytics tools.

Other Use Cases



- City surveillance system deployed by the Law Enforcement Agencies to keep track of the black-list people roaming in the city using a face recognition system.
1. **Securing Premises using Face Recognition systems:** In an organization which needs to provide authorized and controlled access to some location in the premises such as bank vault, server rooms etc where some confidential information exists, facial recognition systems assist to provide authorized and monitored access. The system has a white-list of the authorities who have access to some classified location.
 2. **Immigration Checkpoints use Face Recognition systems for Border Control:** Border controls today are equipped with databases which contain information of criminals or black-listed people from various crime investigation agencies. Such data is used by the facial recognition system to recognize such criminals and deal with them.

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- 3. Law Enforcement Agencies use Face Recognition systems to keep eye on activities of people with criminal records and for surveillance:** Government agencies can keep a track on people with criminal record who are roaming freely around the city and also tracking people's activity who have been freed from prison recently.
 - 4. Ride Sharing companies can use facial recognition systems to keep track of customers picked by the drivers:** A layer of security and verification is being added with the help of facial recognition to the ride hailing companies. Such a system verifies the right passenger and the right driver for the particular ride which ensures the passengers safety.
 - 5. Using IOT Facial recognition systems can be used to give authorized access to the house or any Vehicle:** In the world of home automation, facial recognition systems provide authorized access to the home appliances like authorized access to the office room in house or opening the car door when a recognized face is detected etc.