Ubiquitous Language

Glossary

Term	Description
Face Recognition based Attendance	The primary goal of this project is to build a face recognition-based attendance monitoring system for employees working in any organization to improve and upgrade the current attendance system to make it more efficient and effective than before. The employee should be in an area containing light so that the detection can be clearly made. The facial recognition feature embedded in the attendance monitoring system not only ensures accurate attendance but also eliminates flaws. Using a system to overcome defects not only saves resources but also reduces human intervention in the overall process by delegating all complex tasks to the system.
Training	Here, machine train images and follows serval steps. At first, traverse images directory then converts images to grayscale or RGB, resize images, appending faces and their ID, images to NP array, identifying faces an each image and at last train their faces with respective ID.
Preprocessing	In the 2nd stage, for identify users all images preprocessing happen. First, camera capture real-time photo of users, then system start skin segmentation process, next crop capture image, detect face and at the end scaled capture image.
Feature Extraction	In this 3rd stage all extraction happen. At first apply CLAH, then classify, next apply Principal Component Analysis for extractions and at the end compare extracted features with train dataset image.
Face Recognition	This is last stage for the system. Here, at first happen subject selection processing, next recognition phase, here calculate the distance to our face is less than equal 0.6 or not. If it's not, then this means the person is unknown, so we change the name to unknown and don't mark the attendance. If yes, we mark attendance.
Marking Attendance	First, we open our Attendance file which is in csv format. If the user in the camera already has an entry in the file, then nothing will happen. On the other hand, if the user is new then the name of the user along with the current time stamp will be stored. We can use the datetime class in the date time package to get the current time.
Users	In general, employes/students are the users of this systems.
Admin	A user with additional rights who is in charge of the administration of the software and the platform. So, she/he provides updates for the software as well for the technical part of the platform.