**FACE DETECTION BASED ATTENDANCE SYSTEM BY IMAGE PROCESSING USING RASPBERRY-PI OVER IOT**

**ABSTRACT:**

In proposed system face detection based attendance system by image processing using raspberry-pi. We have used image processing concept to detect each and every student is present or not. Face recognition system is widely used for human identification due to its capability to measure and subsequently identifies human identification. Open CV/ Python library is formulated as given images of a scene identify or verify one or more persons in the scene using a stored database of faces. Thus, the images are extracted and allowed to match with the database images. If the images are matched, then it will sends the image to the an email id. So this image of the person can be viewed by online user.

The design of the face recognition system using Raspberry pi can make the smaller, lighter and with lower power consumption, so it is more convenient. Because of the open source code, it is free to do software development on Linux. The developed scheme is cheap, fast, highly reliable and provides enough flexibility to suit the requirements of different systems. Camera module is Pi camera interfacing to the raspberry pi module. It issued for capturing an image and send captured image to the Raspberry pi module.

 Raspberry pi module is small computer board. When image taken by the raspberry pi. At the first time when we capture the image to create a data base, raspberry pi module captures to create a data base in the system and this data base is compared with the live captured image. If the given roll no. and images are matched then it indicates the person is present or else absent. This message is displayed on LCD. And it will sends the message to an email id. Among the other bio-metric techniques, face recognition approach possess one great advantage which is user friendliness. This system used in offices/school/colleges to take an attendance by using this smarter way.

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