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Face recognition using image processing with raspberry pi

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ABSTRACT

Face Recognition is concerned with finding whether or not there are any faces in a given image and, if Present, returns the image location and content of each face. Security and surveillance are the two important aspects of human being. In this paper we propose face detection and recognition system that will capable of processing images very fast while acquiring very high true positive face detection rate. Most face detection algorithms are designed in the software domain band have a high detection rate, but they often require several seconds to detect faces in a single image, a processing speed that is insufficient for real-time applications. This Paper describes a simple and easy hardware implementation of face detection system using Raspberry Pi, which itself is a minicomputer of a credit card and is of a very low price. The system is programmed using Python Programming language. Both real time face detection and face detection from specific images, i.e. Object Recognition, is carried out and the proposed system is to provide a high security system using face recognition on Raspberry Pi board and send an alert to the authorized person email, this will increase the security of our Project.

Keywords: Face Recognition, Haar cascade Algorithm, Local Binary Patterns Histograms (LBPH) Algorithm, Raspberry Pi.

INTRODUCTION

In associations, enterprises and many organizations are taking the whole participation utilizations RFID techniques, registers, Moodle based understudy ID recognizable proof and unique finger impression modules. In Registers, the whole participation will be figured and reports will be assembled toward the end.

It requires greater investment for computation. RFID innovation disentangles customized remote utilizing advanced inactive and dynamic with distinguishing pieces of proof suitable per users. In brief span, worth's of dispersion and usage for a RFID card based passage bunch framework can be fairly costly. An RFID based passage bunch framework has the capability of genuinely abusing human's sec unity or protection. RFID procedures at last impacts programming that permits each individual to be broke down by essential information base. This kind of condition will be under assault of programmers. In the event that the RFID per user and recipient are not legitimately coordinated then less read rate can happens. Biometric time and neamess framework is one of the most precise prerequisite in biometric innovation.

Unique finger impression acknowledgment based participation administration framework is a running field today, yet acknowledgement of singular unique finger impression from an arrangement of selected fingerprints is a period taking procedure. Most unique finger impression based participation frameworks store the fingerprints of a client in the unique mark module database. The unique mark framework does not uncover any information about the first unique mark of the client. This suspicion has now been appeared to be false, numerous calculations have been expressed that can reestablish unique mark pictures from

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