

Embedded PROJECT ABSTRACTS

(IOT (Internet Of Things, Automotive, Biomedical, Robotics, Biometric, Eco- Friendly, Biomedical, GSM, GPRS, BLUETOOTH, ZIGBEE), Raspberry Pi.



Bio Metric

1. **ATM Terminal Design Is Based On Fingerprint Recognition**

For the traditional ATM terminal customer recognition systems only rely on bank cards, passwords, and such identity verification methods which measures are not perfect and functions are too single. For solving the bugs of traditional ones, the author designs a new ATM terminal customer recognition system. The chip of S3C2440 is used for the core of microprocessor in ARM9, furthermore, an improved enhancement algorithm of fingerprint image increase the security that customer use the ATM machine.

2. **Finger Print Authentication Based Smart Vehicle Security System**

In modern day vehicles, vehicle anti-theft system is of prime importance. The vehicle anti-theft system presented here consists of multiple layers of protection with one complementing the other, rather than the conventional anti-theft system where a particular system is only being used. The first layer of protection in the system is a Fingerprint recognition, based on which the doors are opened. The Fingerprint matching is done by utilizing the Minutiae based Fingerprint recognition scheme. Also to prevent thieves from breaking the glass and getting inside the vehicle, vibration sensors are used in all the windows with a threshold level to prevent false alarms. Once inside, the vehicle is turned on only with the mechanical keys along with correct key number entry on the combination keypad present, failing to do so for three successive times will result in vehicle getting immobilized by cutting the fuel supply and an alert message is sent to the mobile number of the owner. Further to prevent the seizure of the vehicle, Tyre pressure sensor is also being used which also alerts the owner through a mobile message. The seized vehicle can be tracked using a GPS tracker which is also being attached. The different layers of protection defined are controlled by an ARM 7 based controller acting as the central node. The whole system was tested using a test set up by mimicking the vehicle door, vehicle immobilizer etc. with equivalent motors whereas Fingerprint data was received from Matlab based GUI application. The experimental results proved the functionality of the anti-theft system in working environment. Index Terms: Vehicle anti-theft, Fingerprint recognition.

3. **Pc Login System Using Finger Print Recognition**

Biometrics technology, which uses physical or behavioral characteristics to identify users, has come to attract increased attention as a means of reliable personal authentication that helps establish the identity of an actual user. Among various modalities of biometrics, fingerprints are known to have the longest history of actual use in law enforcement applications with proven performance. This paper surveys the state of the art in fingerprint identification technology. The current trend of fingerprint sensing and identification algorithms are presented first in detail in order to show how fingerprint-based systems work and then some topics with regard to fingerprint identification are discussed. These include actual examples of fingerprint-based personal identification systems, large-scale fingerprint identification systems (AFIS), international activities on standardization and performance evaluation, and a “Fingerprint User Interface” (FpUI), which is a new type of application of this technology used to enhance human-machine interactions.

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4. Terminal Design Is Based On Fingerprint Recognition

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