

High protection bank locker security system using live image and voice authentication

Priya Kumari, Pushpanaik, Raghavendra, Parameshwara, Divya M N

(ECE, RevaUniversity, India)

ABSTRACT

Encountering the real time challenges in the “security” arena and enhancing the existing criteria by designing an advanced technology. Implicit guarantee of your money in the bank being safe has always been the fact of concernment. This project ensures to promote encouraging the safety and secureness over the currently existing technologies.

INTRODUCTION

Bank is an organization which renders economic efficiency and extends financial services like issuing cash, saving belongings and further on. The critical aspect in an individual's life is saving and securing the money earned to pertain one's economic popularity. It is necessary to maintain the valuables under secure custody because burglars nowadays have a whole lot of modern-day equipment with them. As according to one citation, if one loses health it could be regained, but if one loses his valuable wealth it takes an excessive amount of time to remember it. To defend our valuables banks, provide some other advantages like offering their clients with protection lockers to store their valuables. The want for secure locker structures isn't only in banks however additionally in diverse different institutes like in Offices, stores, commercial enterprise institutions, monetary establishments, Petrol stations, Hotels and Hospitals. This need is increasingly felt in these days due to the increase inside the protection issues.

In current scenario, financial institution and locker robberies are often taking place, this indicates our locker is vulnerable to robbery since it has no ultimate safety rather than a lock and key. Currently, most of the banks use keys to open the lockers. One secret is with the purchaser and some other secret is with the financial institution manager. This machine is having a few drawbacks. There is a possibility of losing the important thing which make the device to be insecure and duplication of keys can also cause unauthorized get entry to of the locker. So, in order to conquer that we're introducing Locker Security System based totally on Face Recognition and GSM (Global System for Mobile) generation, which may be utilized in Banks, Security Offices and Homes for giving protection to highly-priced possessions. In this device, only the legal character can get admission to the treasured such things as cash, licenses and jewels from locker.

RELATED WORK

This section describes the survey of different technology that has been used in bank locker systems. In olden days, only mechanical locks were available which was not secured enough. As technology grows, modern electronic locks were introduced into the market to avoid further theft and unauthorized access. Password based locking system was one of the modern electronic lock system where password is used as the verification factor. Then comes ensuing electronic lock system that is associate degree RFID based mostly system.

In [1] and [2], the functionality of RFID based system is depicted wherein the main components are RFID tag and reader. The RFID value acts as the authentication factor. Later, the bioscience lock system came into existence as delineate

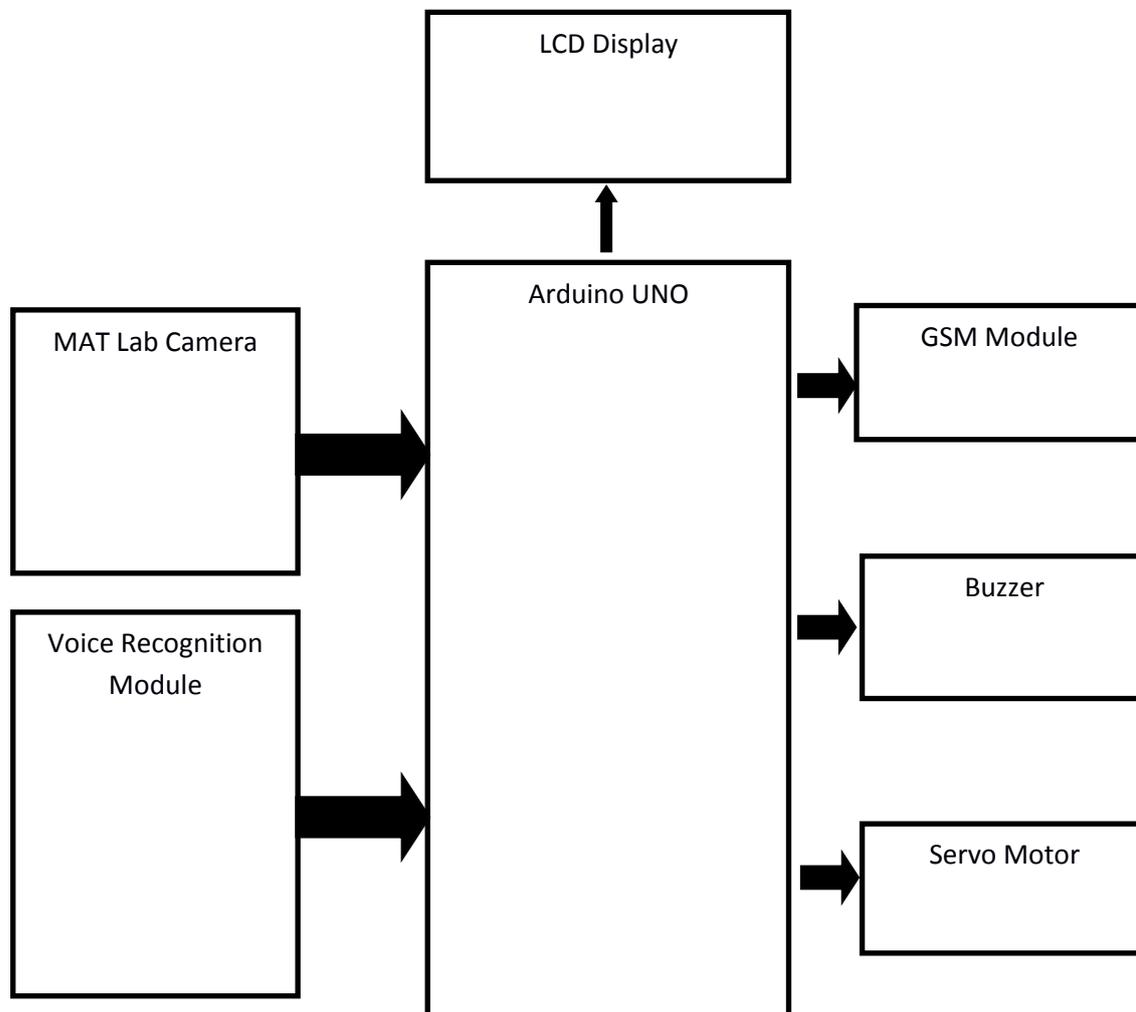
In [3], [4] and [5] like face recognition, fingerprint recognition, voice recognition, iris recognition and identification and work on the principle “what we are”. Here the non-public identification of every individual is employed because the issue for verification.

In [6], [7] and [8], An encryption-based lock system was introduced wherever the first positive identification was encrypted to come up with the new positive identification that is been accustomed unlock the door. This technique is mainly introduced to prevent hacking.

PROPOSED WORK

A security machine has been proposed with the usage of voice identity, face detection and GSM generation. The face reputation and voice popularity module act as comfortable locks which pick out and give access to the respective face and voice registered, denying every other unregistered to get admission in. The wireless digital camera is used to seize the image whose statistics is processed by means of the MATLAB. Where in, the AURDUINO holds the manipulation over the instructions. The mic is used for voice recognition. Motor motive force is used to open the door lock the use of DC motor. If the person is not actual, the information is despatched to the patron. Where, if the consumer accepts-the locker opens, and if now not the information can be transmitted to the police station and financial institution protection alert. Buzzer jewellery as and when the gaining access to individual is invalid and now not known.

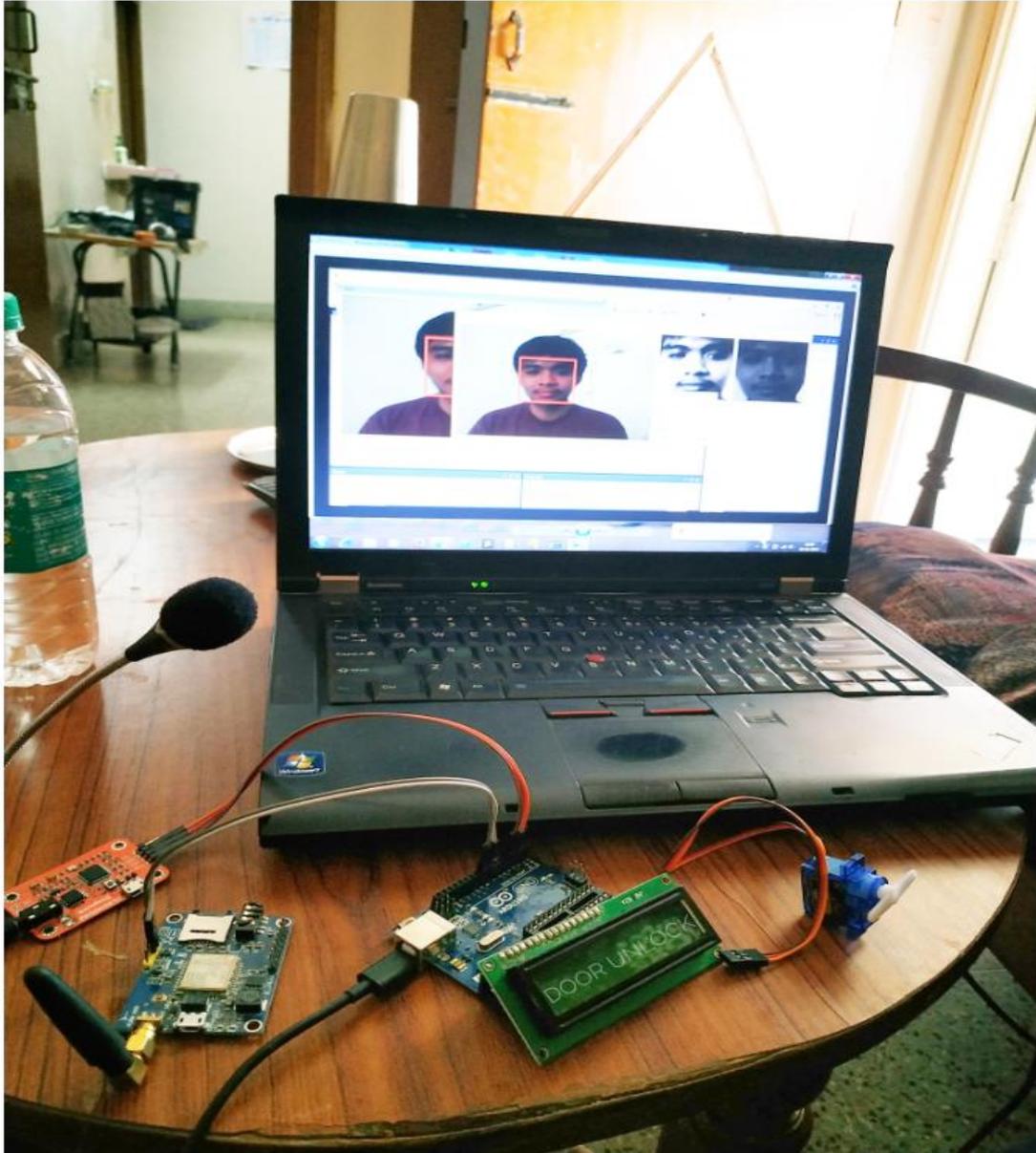
BLOCK DIAGRAM



The work is being carried out with various components as depicted in the block diagram. Arduino, is an open source single board microcontroller which is being used effectively in this work to develop a working software consisting of interactive objects. Servomotor, resembling the DC motor is determined for the planetary reduction and position feedback. The modem is used for making calls, read SMS etc through the simplest AT commands. The software aspects are carried over using the Arduino IDE features, hence reaching out to enhanced and optimal output.

RESULT:

The respective results are shown below where the security aspect is controlled by using the voice recognition and face detection modules which can be verified in the electronic display (LCD) and the other corresponding modules utilized.



CONCLUSION

Implicit guarantee of your money inside the bank being safe has usually been the reality of concernment. This project plays a first-rate function in maintaining the safety and security of the respective valuables, financial institution being the utmost priority. The proposed device is reliable, inexpensive with suitable layout. This undertaking High Protection Voice Identification based Bank Locker Security System with Live Image Authentication ensures to promote encouraging and improvised results, improving the safety and secureness over the presently present technologies.

REFERENCES

- [1] Divya R.S, “Super secure door lock system for critical zone”. International conference on network & advance in computational technology, 2017.
- [2] SrinivatsanSridharan. “Authenticated secure bio-metric based access to the bank safety lockers”, Department of computer science International Institute of Technology-Bangalore, 2014.
- [3] Amit verma, “Development of an intelligent system for bank security”, Department of ECE, ASET, Amity University Noida, U.P IEEE Paper, 2014.
- [4] Pradeep kumar, “An efficient multi stage security system for user authentication”, department ECE Amity university, 2016.
- [5] N. Anusha, “Locker security system using Facial Recognition & OTP”, computer science and engineering sathyabamma university chennai, 2017.
- [6] Sanal Malhotra, “Banking security system using Hand Gesture Recognition”, Department of ECE amity university uttarpradesh, 2015.
- [7] Avinash. D. Harale, “Iris as a Biometrics for Security System”, SKN sinhgad college engineering korthi, Maharastra, india, 2017.
- [8] K. Suganithi², “Survey of integrating Face and Iris biometrics for security motive using change detection mechanism”, International conference on science technology, 2017.