ATM SECURITY SYSTEM USING WITH PYTHON RASPBERRY PI

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ABSTRACT

In this paper, the idea of designing and implementing a real-time ATM security project came up with ATM access scenarios by unauthorized users instead of authorized users. This project will provide access in some cases where an authorized user is unable to use an ATM for certain urgent purposes, in which case, OTP is sent to users via a registered phone number and the acting user must log in.

This approach will reduce the risk of using ATMs by ordinary people. Open CV is used as a platform and the python language is used for in-depth reading techniques and facial recognition Haar cascade is used for facial recognition.

KEYWORD: Camera, RFID reader, Motor, Raspberry pi, Python, Haar cascades.

1.INTRODUCTION -

In today's world of technology, the Internet of Things was rapidly developing and becoming popular. As IOT projects were used in various sectors of our society in government and the private sector. ATM machines and debit cards using debit and credit cards are introduced, installed and spread across a large percentage of our community. Also, crime and illegal access to the cards became a serious threat to both the financial sector and the people. Therefore, this project is about how to block an ATM and face detection is done using face Haar cascade, face recognition is done using a user at an ATM is found to be in real time when the other user is not authorized user of that card and OTP sent to the authorized user that the OTP must be entered by the user at the ATM machine to withdraw money. If the OTP installed by the user at the ATM is incorrect the notification message is sent to the authorized user immediately. In this IoT project, the raspberry pi is widely used as part of the Face discovery Haar camera used for accurate user photos to capture faces.TAG is used as

an ATM card. Relay motor. OTP and alert message sent to user via standard SMPP tracking message where code is written in python language in raspberry pi.[1]

2. IOT COMPONENTS-

2.1 Raspberry pi: The raspberry pi 3 contains the application, the integration plans and the implementation of the project also carry the documentation. In our project, raspberry pi 3 is used to store face detection code, face recognition and warning message module, and other IOT components.

2.2 RFID (Reader and TAG) RFID (Radio Frequency Identification) the RFID reader is used to track a tag, which contains user account data.

2.3 RFID (Radio Frequency Identification) Mark the RFID tag used to store user account information from reputable web sites using the RFID reader.

2.4 DC Motor (12 volts): In our project, DC MOTOR is used to rotate when user information is correct or OTP installed is correct.[2]

3. LITERATURE REVIEW

3.1. Aru, Okereke Eze, and Ihekweaba Gozie. "Face recognition technology used in ATMs.

3.2. This paper highlights the process of preventing ATM theft from unauthorized access by users. This paper discusses ATM security using biometrics where users should physically present their own Wiskott, Laurenz, et al. Springer, Berlin, Heidelberg, 1997.

3.3. This paper highlights the method of face matching using a coefficient size. This paper highlights the secure transmission of PIN numbers to users of mobile devices or other devices using the secure PIN protocol verification of cloud services. Rectangular gray is used to recognize the face of the person.

4. ALGORITHM OF PROPOSED SYSTEM

First, the user will swipe the ATM card. The live image is automatically captured with an ATM webcam, compared to images stored on a website. If it does, it will ask for a password and then for a fee, the transaction will be processed. The website contains data about the account holder like photo, face, mobile number, etc.[3]

5. DISCUSSION

We made the IoT model using the appropriate components with raspberry pi for the first time a user encounters a picture of various angles while issuing a debit or credit card. Photographs taken are stored and converted to gray-reduction images that occur while face recognition the user's gray image is split into multiple pieces and each piece is valued and stored. Collection images of users are also converted into a gray image and broken down into various pieces and prices. Based on the data stored on the user card the values provided for the approximate user picture compared to the respected values of the user image have been processed and retained during the card issuance.

6. OVERVIEW

System Architecture The structure of this defense system is made up of parts. Raspberry pi, Raspberry pi camera, RFID Reader, Display Monitor, DC Motor, Keypad.[4]

7. CONCLUSION

So an IOT project using a raspberry pi and its components for a specific face detection Haar throws the face of an ATM user is detected and detected if it is detected incorrectly and OTP is sent to the user if the incoming user enters the wrong OTP and the notification message is sent as a text message.

8. REFERENCES

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