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IMPROVISING ATM SECURITY VIA FACE RECOGNITION

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Abstract: To enhance the security of the ATM. To avoid ATM robberies and the wrong person misusing the ATM so that they can lead a secure and reliable life. The system is to support the intelligence system. Without hesitation, use ATMs to make the world a conversion community. Once the client inserts the cardboard into the ATM, a session is processed, so the system can start a face detection victimization camera placed close to the ATM and builds short-lived identity information of the clients, and the user face verification to perform on the ATM. A good user would use the traditional method because the invalid user cannot access the ATM card, they offer the secondary identification to the system mechanically, and the unauthorized person would continue the transactions. The objective of the proposed study in this paper is to prevent ATM fraud as well as secure transactions from the user side.

Keywords: ATM, face recognition, LRR, OTP.

I. INTRODUCTION

The ATM security authentication technique is dependent on pin-based verification. Factors such as urgency, memorization of pins, speed of interaction, un- intentional pin sharing affect the system diversely. Cards with magnetic chips are easy to clone. Security and vulnerability are opposite sides of the same coin, an automated machine becomes vulnerable due to the weakness of its security. Automated Teller Machine manufacturers go on adding and strengthening security features of Automated teller machine so that customers can carry out banking transactions hassle-free and without any fear of siphoning amounts from their accounts the same frauds work with similar speed to crack the innovative security feature so that they can access over the Automated teller machine to exploit the accounts of bank customers.

II. PROBLEM STATEMENT

Automated Teller Machines are widely used nowadays by people. Presently, ATM systems use no more than an access card which usually has a magnetic stripe (magstripe) and a fixed Personal Identification Number (PIN) for identity verification. Some other cases utilize a chip and a PIN which sometimes has a magstripe in case the chip fails as a backup for identification purposes. This method is not very secure and prone to an increase in criminal activities. The need for a novel, simple as well as secure method of access is thus imperative. In the present work, a PIN is generated by the user and this PIN is made available to the ATM system by the means of a Subscriber Identity Module (SIM) in the user's Mobile Phone. This PIN can be trapped by any user and can lead to fraud. The user can use the face system and another way is OTP, to maintain privacy.

III. RELATED WORK

Second section deals with the literature review. TABLE 1. refers to the survey that was done all these references are from an effective point of view. In this, the atm has to enhance the security level with an advanced level of technical issues. ATM has very advanced technology which is currently using Fingerprints recognition to detect fingerprints that are unique to all and a major use of it is safe transactions. The feature commonly used is eye detection to verify the true user and the latest technology is used cardless atm means in which the chip was not present, while the misplaced issue not happen in the future. OTP was also getting the high using technology that protects from unauthorized transaction verification for the user which was provided by the bank.

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TABLE I

Title Of Paper	Author	Year of Publish	Findings
Facepin: Face Biometric Authentication System for Atm Using Deep Learning [30]	A Kowshika, P.Sumathi , K S Sandra, et al.	2022	An automatic teller machine security model that would combine a physical access card and electronic facial recognition using Deep Convolutional Neural Network. If this technology becomes widely used, face recognization techniques used, and details would be protected as well as their accounts.
Cardless Transaction of ATM Machine with Asecurity of Facial Recognition and OTP with Shuffle Keypad.[9]	Dhamale Omkar, Auti Sahil et al.	2022	An ATM with this system authenticates users by looking at their faces. Every human has a different facial feature, making it possible to identify the individual specifically. The user must scan his face with the sensor before the system takes it and searches the database.
Face Recognition Open CV Based ATM Security System [2]	A.D. Gujar, N.B Sawant, T.L Hake, et al.	2022	The step of feature extraction involves identifying the distinctive elements of the camera image. Check out if all of your facial features are visible. This feature vector effectively represents the face. in order to protect ATMs against theft and prevent ATM robberies. It takes the place of the ATM system used traditionally
Face Recognition Based New Generation ATM Machine [24]	B.Prasad, D. Sahithi, et al.	2021	The usage of nothing involves more than a PIN and access card to confirm uniqueness. By stealing cards, PINs, customer account information, and other security measures, ATMs that use face recognition systems show how easy it is to make false claims and treat people unfairly they use cardless transactions where misuse of a card or stolen card will not by user
The Biometric Cardless Transaction with Shuffling Keypad using Proximity Sensor [25]	Ahsana Hassan, A.George, et al.	2020	The usage of nothing involves more than a PIN and access card to confirm uniqueness. By stealing cards, PINs, customer account information, and other security measures, ATMs that use face recognition systems show how easy it is to make false claims and treat people unfairly.
Enhanced Security for ATM Machine with OTP and Facial Recognition Features[6]	Manikandan , Suriya, et al.	2020	The technology creates magnetic cards with fixed pins and a number of security frames. An SMS-based One-Time Password (OTP) is added to a biometric security technique that uses biometrics to protect one or more of the customer's bank accounts. This approach is carried out using a biometric authentication system.
Security System Atm Machine with One-Time Passcode on M-Banking Application [26]	R. Munadi, A.Irawan , et al.	2019	The technology creates magnetic cards with fixed pins and a number of security frames. An SMS-based One-Time Password (OTP) is added to a biometric security technique that uses biometrics to protect one or more of the customer's bank accounts. This approach is carried out using a biometric authentication system.
ATM Card Security using Bio-metric and Message Authentication Technology [27]	M.Dutta, T.Khatun, et al.	2018	It tries to emulate a cardless payment system in which the user's fingerprint serves as the new card and the user uses it to transact, they use to need a fingerprint as they are unique for all, which the admin can take while opening the account

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IV. PROPOSED SYSTEM

The proposed system deals with the idea of an ATM security system based on facial detection that has been developed as a viable security solution for the public. The work's primary focus is designing and implementing an ATM security system that uses face detection and the LRR algorithm. Our proposed approach overcomes the shortcomings of the current system. The system will provide you the opportunity to process any transaction. First-time users will be prompted to "Detect Face" and if the system finds a match with an image stored in the bank's database, they can proceed with the transaction; otherwise, it will be declined after a few warnings.

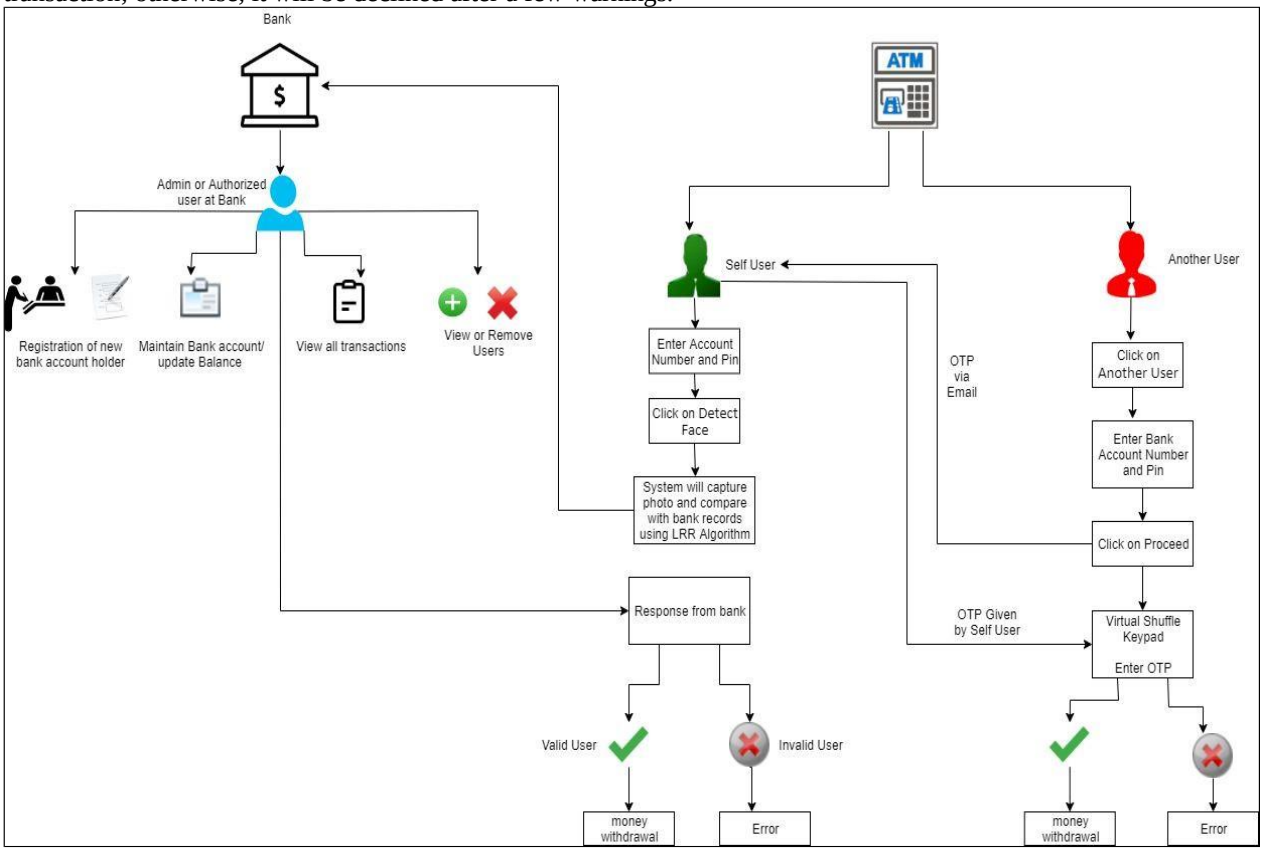

Fig 1: System Architecture Fig 1 refers to the proposed work on the ATM via using userand bank authentication.

V. CONCLUSION

Thus the study presented in this paper deals with ATM model that has a lot of reliability in providing security by mistreatment biometric authentication software package. By keeping the time passed on within the verification method to a negligible quantity we tend to even try and maintain the potency of this ATM system to a bigger degree. Bioscience suggests that distinguishing and authenticating account owners at the cash dispenser Machines provides the required and far anticipated answer to the matter of felonious transactions. During this paper, we've tried to proffer a solution to the abundant alarming issue of dishonorable transactions through cash dispenser Machines by bioscience that may be created attainable only the account holder is physically gifted. Thus, it eliminates cases of felonious transactions at the ATM points while not the information of the authentic owner. Employing a biometric feature for identifying is powerful, and it's additionally fortified once another is employed at the authentication level.

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