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Detecting Abnormal Activities in ATM Centres

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Abstract: ***A given user enters the ATM, conducts the various tasks that are available, such as withdrawing cash, checking the balance in their bank account, and many other things. This is how an ATM of a particular bank operates in today's world, and it is not that difficult. In this study, we concentrate on what is overlooked amidst this normalised situation. A user may enter the ATM with his or her face partially or completely covered, making it impossible for the security camera that might be installed in that space to identify that person's facial features. In addition, there may be unlawful acts going on in the room without anyone taking urgent action to stop them or regulate them. Some users might bring illegal firearms into the ATM room, which might not even be seen by the installed CCTV camera. In this study, we want to enhance the facial recognition of ATM users such that their faces can be recognised even when partially or completely hidden. Then, if a certain user enters the room carrying an illegal weapon, a trigger should be sent to the neighbourhood police station. This is part of our effort to improve weapon detection.***

Keywords: Automated teller machine · ATM crime · Covered face · Surveillance camera.

I. INTRODUCTION

Without the assistance of a human teller, an ATM enables a bank's customer to check their account balance and withdraw cash at any time. A lot of ATMs also let you deposit cash or checks and transfer money between banks. A cashier, human clerk, or bank teller are not required while using an automated teller machine (ATM), which is a computerised telecommunications equipment that gives customers of financial institutions access to financial transactions in public settings. Modern ATM physical security focuses on using fraud detection tools to prevent thieves or fraudsters from using the money within the machine. The consumer asks for a withdrawal from the device, but it only prints a receipt and does not really disburse any money. After that, the customer presents the receipt to a salesperson to be exchanged for cash. The total amount of ATM withdrawals is restricted by an extra security precaution to a specific amount. This seeks to lower the number of fraudulent withdrawals. In a specific bank's automated teller machine, we typically notice a surveillance camera that is placed in a particular area of the room, with the help of which any illegal conduct that is observed during proctoring must be observed for a predetermined period of time before any action can be done.

II. BACKGROUND

The ATM, or automatic teller machine, is a computerised device constructed over an effective telecommunications network that enables financial institutions to combine financial transactions in the public sphere. It is primarily in charge of the cash dispensing process as well as checking account balances, among other things. This machine has various structures in various countries throughout the world. The first ATM was present in the USA in 1969. They make nominal contributions to the positive currency growth, which does not have a very significant impact. Due to its popularity among non-bank consumers, ATMs are thought to be a more lucrative banking service. The central processing unit, a pin pad, a secure cryptographic processor, a magnetic chip card, a vault, and the function keys make up its fundamental framework.

Risks in ATM The three basic forms of ATM scams include logical attacks, frauds involving cards and money, and physical attacks. Threats and crimes, however, are related.

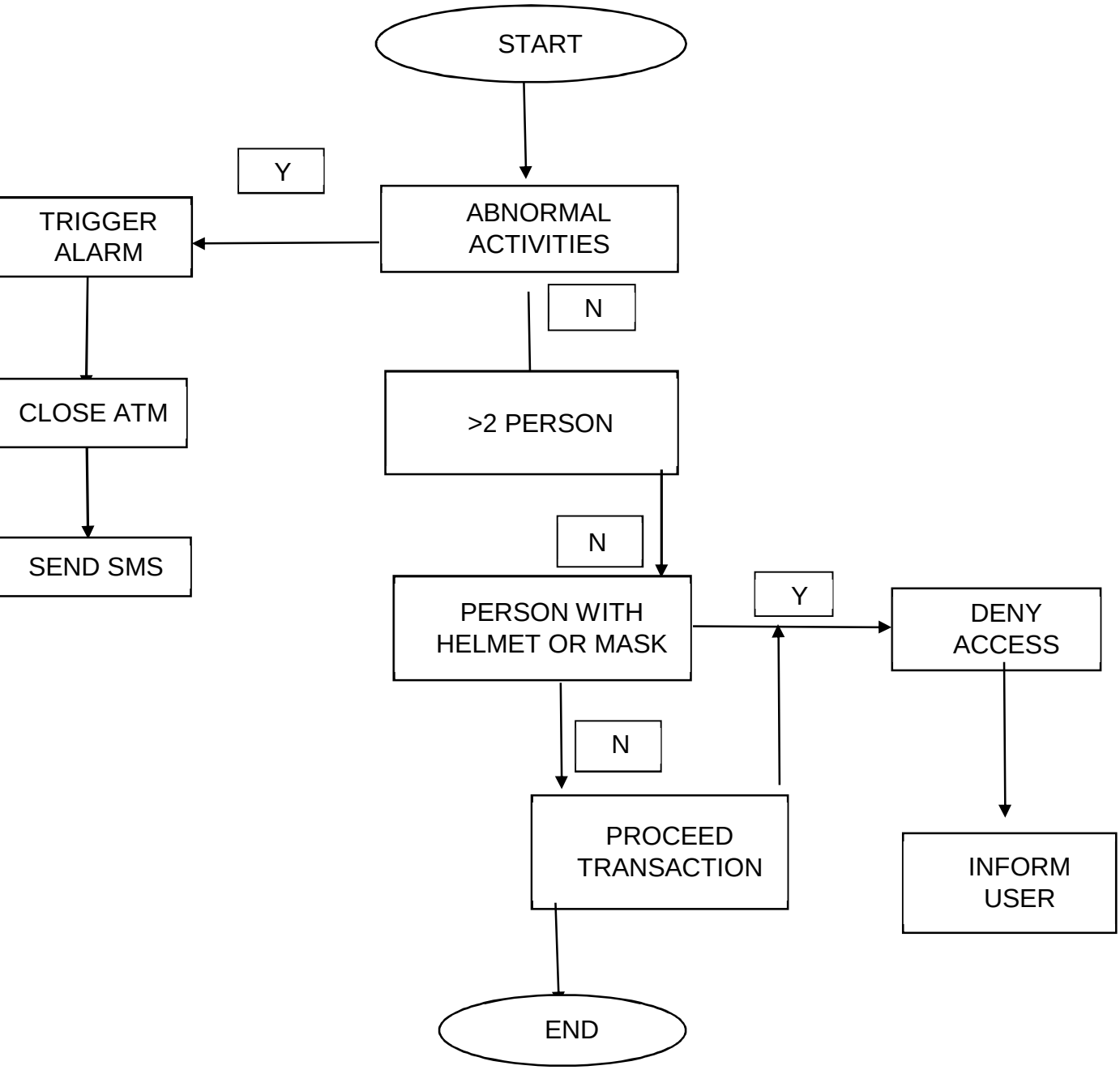
1) Personal identification number threats
2) Electronic data interception
3) Fraudulent electronic transactions.

III. PROPOSED SYSTEM

As depicted in the block diagram, when unusual activity is observed, a trigger alarm is sent to the closest police station, the ATM is then shut down, and an SMS is delivered. In other instances, entry is prohibited if there are more than two people present and if a particular user's face is obscured by facial coverings. If either of the aforementioned two circumstances occurs, the user is informed and the transactions are halted until the necessary adjustments are made.

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IV. FUTURE TRENDS

The security of the ATM can be increased in the future by putting this mechanism into place. As one of the most significant components of the banking industry, ATMs should eventually provide a more secure environment for transactions. Real-time data processing enables quicker and more rapid action than is now possible.

V. CONCLUSION

The model explains how to create a real-time face and weapon detection system in ATM centres and how to detect covered faces in a range of ATM environments. The model additionally provides alert triggers on theft identification or unauthorised entrances to the neighbouring police stations and checks the identification success rate. Given that signals are generated as soon as a weapon is found, the suggested method may enable law enforcement to apprehend criminals more quickly than at present.

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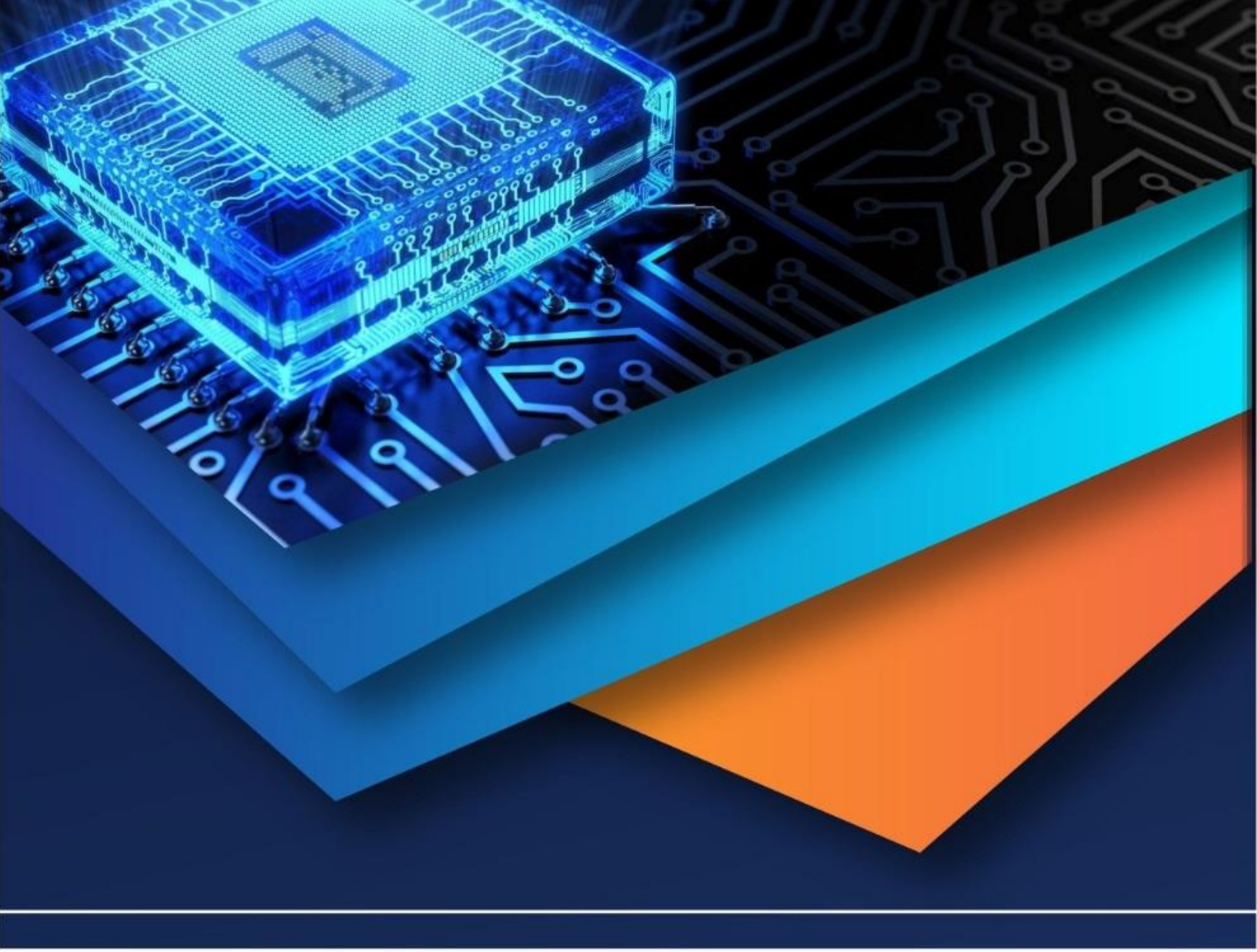
REFERENCES

[1] B. Klare and A. Jain, "Sketch to Photo Matching: A Feature-Based Approach," Proc. SPIE Conf. Biometric Technology for Human Identification VII, 2010.
[2] X. Tang and X. Wang, "Face Sketch Recognition," IEEE Trans. Circuits and Systems for Video Technology, vol. 14, no. 1, pp. 50-57, Jan. 2004.
[3] U Park, Y. Tong, and A. K. Jain. 2010. "Age-invariant face recognition". TPAMI (2010).
[4] Bogin, B, Varea, C, Hermanussen, M. & Scheffler, C. (2018). Human life course biology: A centennial perspective of scholarship on the human pattern of physical growth and its place in human biocultural evolution. American Journal of Physical Anthropology, 165(4), 834–854. 10.1002/ajpa.23357 [PubMed] [CrossRef] [Google Scholar]
[5] Coleman, S. R. & Grover, R. (2006). The anatomy of the aging face: Volume loss and changes in 3-dimensional topography. Aesthetic Surgery Journal,26(1S), S4–S9. 10.1016/j.asj.2005.09.012 [PubMed] [CrossRef] [Google Scholar]
[6] Donofrio, L. M. (2000). Fat distribution: A morphologic study of the aging face. Dermatologic Surgery, 26(12), 1107–1112. [PubMed] [Google Scholar]
[7] Hayes, S. (2016). Faces in the museum: Revising the methods of facial reconstructions. Museum Management and Curatorship, 31(3), 218–245. 10.1080/09647775.2015.1054417 [CrossRef] [Google Scholar]
[8] Albert AM, Ricanek K Jr, Patterson E. A review of the literature on the aging adult skull and face: implications for forensic science research and applications. Forensic Sci Int 2007;172:1-9.
[9] O'Toole AJ, Deffenbacher KA, Valentin D, Abdi H. Structural aspects of face recognition and the other-race effect. Mem Cognit 1994;22:208-24.
[10] Barer BM. Men and women aging differently. Int J Aging Hum Dev 1994; 38:29-40.

BIO DATA

The authors of this paper are pursuing their B.E. in Computer Science & Engineering from Mangalore Institute of Technology & Engineering, Moodabidri. This work is a part of their contribution towards final year project work under the supervision of Mr.Shreejith K B, Senior Assistant Professor, Department of Computer Science & Engineering.

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