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Credit Card Fraud Detection Using Face Recognition System for E- Commerce

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Abstract:Online commerce has now become the most used way of financial transactions. Privacy can be compromised during ele ctronic purchases. That's why we introduced a new way to prevent theft in online commerce to protect information through a tw ostep verification mechanism. The main step of authentication is OTP verification. If OTP is checked, the face must be recognize d.Enter the details and send the authorization of real and fake work to the bank. The new credit card scanner has some health, p roductivity and other useful features. The purpose of the app is to reduce credit card fraud through facial recognition. Customer s can get the most convenient and efficient electronic business process. Customers get the highly accessible and most efficient electronic banking program.
Keywords: Machine Learning, Fraud Detection System

I. INTRODUCTION

'Fraud' in credit card transactions is unauthorized and unwanted usage of an account by someone other than the owner of that account.Care must be taken to avoid such abuses and the behavior of this negative behavior can be learned to reduce and prevent si milar situations in the future. In other words, credit card fraud can be defined as the situation where some person uses someone else'scredit card for personal reasons. Fraud research involves monitoring the activities of groups used to predict, understand or avoi d unethical behavior.

II. LITERATURE SURVEY

A. Kuldeep Randhawa et. al. 2018

Credit Card Fraud Detection Using AdaBoost and Majority Voting . As per author Credit card fraud is a serious problem in financial services. Billions of dollars are lost due to credit card fraud every year. There is a lack of research studies on analyzing real-world credit card data owing to confidentiality issues.

B. N Malini et. al. 2017

An efficient method of fraud detection has become a need for all banks in order to minimize chaos and bring order in place. There are several techniques like Machine learning, Genetic Programming, fuzzy logic, sequence alignment, etc are used for detecting credit card fraudulent transactions.

C. John O. Awoyemi et. al. 2017

Hybrid technique of under-sampling and oversampling is carried out on the skewed data. The three techniques are applied on the raw and preprocessed data.

D. B.Pushpalatha et. al. 2017

Most common techniques used to make the fraud detection model. Incidentally, detection and prevention of credit card frauds are one of the vital problems in the digital world that need exact transactions analysis. One method for detecting fraud is to check for suspicious changes in user behavior.

E. You Dai et. al. 2016

Focused on designing an online credit card fraud detection framework with big data technologies, by which achieved three major goals: 1) the ability to fuse multiple detection models to improve fraud system.

III. SYSTEM ARCHITECTURE

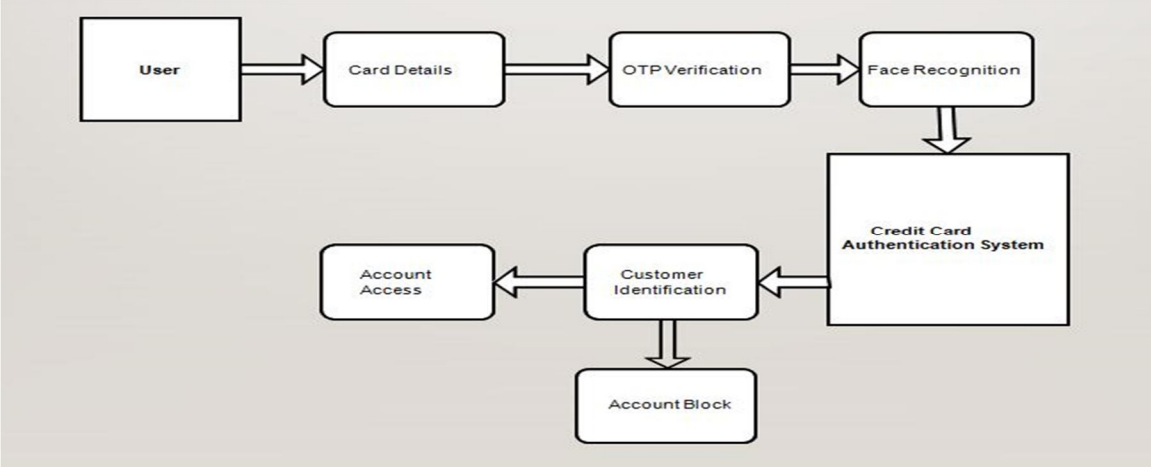

Fig-1. Block Diagram of Proposed System

In a proposed system, we are proposing experiment on credit card fraud prediction system with limited set of supervised data. The aim of the project is to develop user has to recognition to authenticate a valid user. Initially, the credit card details and then be verified with the bank OTP will with the bank database. After the verification process the OTP is verified user be generated and sent to the user. Once face will be requested for face authentication. Using webcam will be captured and in encrypted image will be sent for authentication database for authentication to the bank database. At the use for the image will be decrypted and further, it will authentication purpose. For clustering data CNN algorithm is used. Python language is us the image programming and for processing the image OpenCV libraries that LBP algorithm are used that is integrated in Python. After is matched with this used for face authentication. If the face is matched with the image stored in the database then the users credit card limit will be checked and checked and if it fulfils the requirement, the user is allowed for transaction or else the transactions aborted.

A. Advantages and Disadvantages

1) The detection of the fraud use of the card is found much safer that the existing system.
2) This system prevents the threats of frauds.
3) Credit card generally refers to a card that is assigned to the customer (cardholder), usually allowing them to purchase goods and services within credit limit or withdraw cash in advance.
4) Credit card provides the cardholder an advantage of the time, i.e., it provides time for their customers to repay later in a prescribed time, by carrying it to the next billing cycle. Credit card frauds are easy targets.
5) Without taking any chances, a sizeable sum can be taken away quickly and secretly without the owner's awareness. Because fraudsters always attempt to pass off fraudulent transactions as legitimate, it is incredibly difficult to identify fraud.

B. Entity Relationship Diagrams-

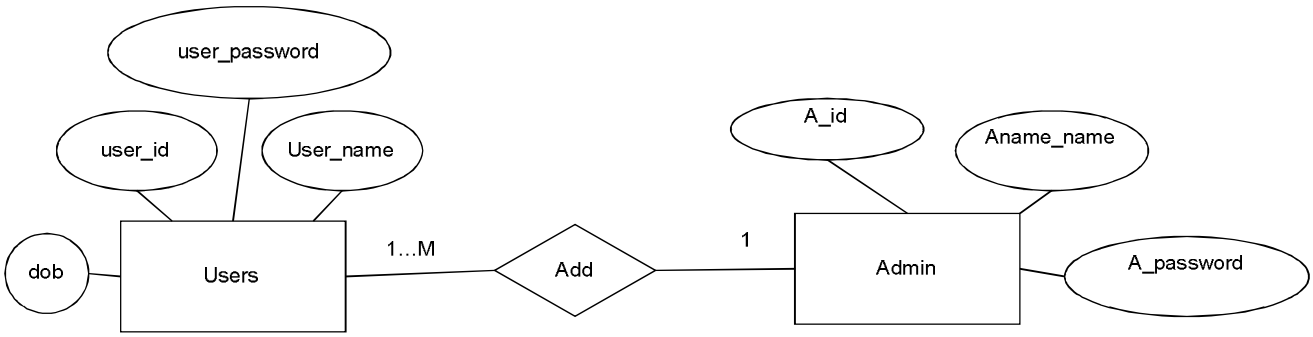

Fig-2. ER- Diagram

An entity-relationship model (ER model, for short) illustrates how various items of interest link to one another in a particular field of knowledge. The fundamental building blocks of an ER model are entity types, which categorise the objects of interest, and relationships between instances of those entity types.

In order to describe the data that a business must remember in order to conduct business operations, an ER model is commonly constructed in software engineering. The ER model is changed into an abstract data model as a result, which describes a data or information structure that may be used in a database, often a relational database.

VI. CONCLUSION

Credit card fraud becomes a serious concern to the world. Fraud brings huge financial losses to the world.This urged Credit card companies have been invested money to create and develop techniques to reveal and reduce fraud. The prime goal of this study is to define algorithms that confer the appropriate, and can be adapted by credit card companies for identifying fraudulent transactions more accurately, in less time and cost.

VII. FUTURE WORK

This system will provide more security and will help in reducing the on line credit frauds but still it needs a lot of improvement as the system will not be able to differentiate between similar faces. Also, the rate of comparison of the real time clicked image with the image stored in database should be fast enough so that the user does not have to wait for a long period of time while doing transaction. Having dealt with all the issues this system will provide a better security and will widen up the scope in on line credit card payment.

VIII. ACKNOWLEDGMENT

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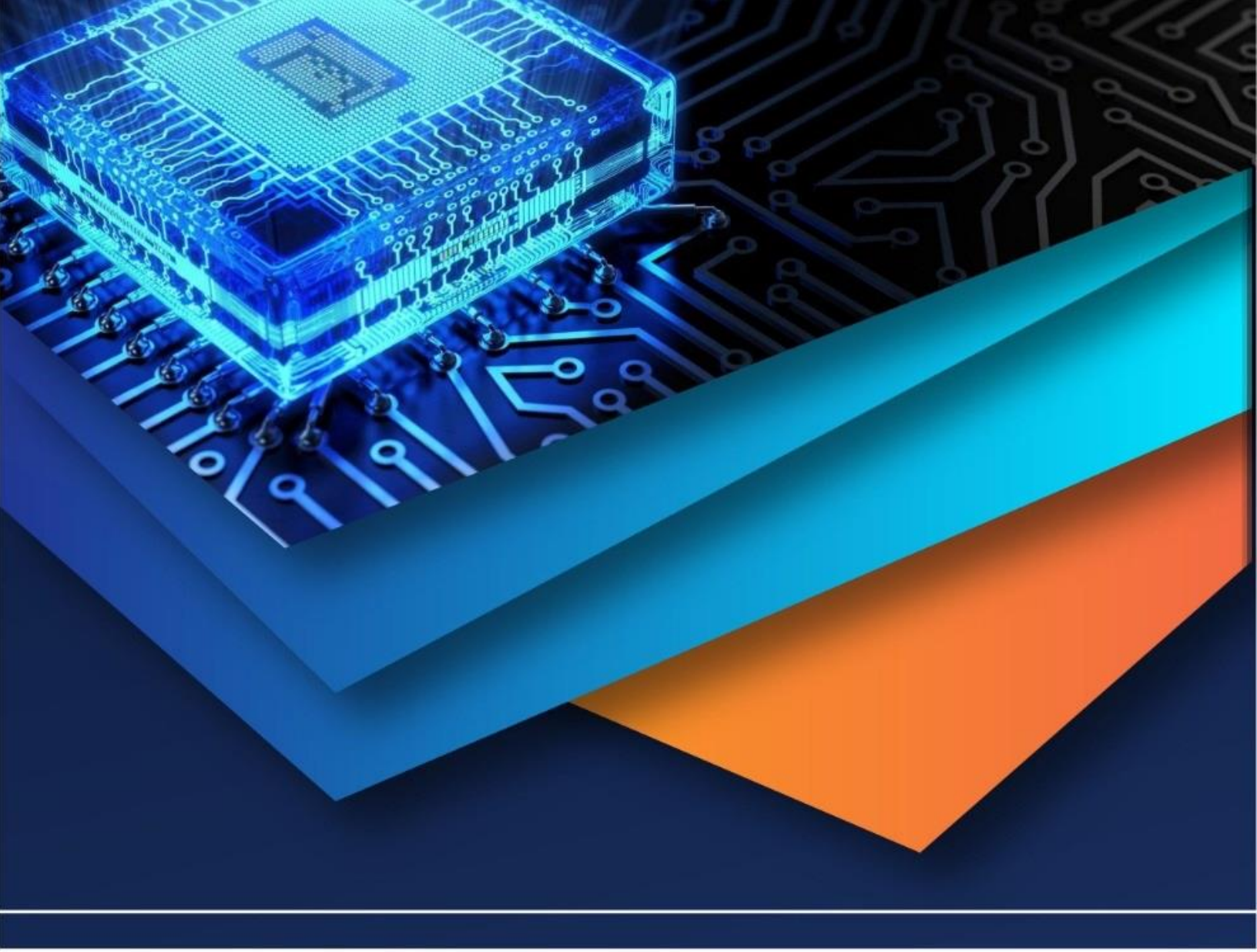
REFERENCES

[1] K. Sim, V. Gopalkrishnan, A. Zimek, and G. Cong -‘‘A survey on enhanced subspace clustering,’’ Data Mining Knowledge Discovery, vol. 26, no. 2, pp. 332–397, 2019.
[2] S. Mcskimming -‘‘Trade-based money laundering: Responding to an emerging threat,’’ Deakin Law Rev, vol. 15, no. 1, 2020.
[3] Nitu Kumari, S. Kannan and A. Muthukumaravel - “Credit Card Fraud Detection Using Genetic-A Survey” published by MiddleEast Journal of Scientific Research, IDOSI Publications, 2014
[4] Satvik Vats, Surya Kant Dubey, Naveen Kumar Pandey - “A Tool for Effective Detection of Fraud in Credit Card System”, published in International Journal of Communication Network Security ISSN: 2231 – 1882, Volume-2
[5] S.H. Projects and W. Lovo, —JMU Scholarly Commons Detecting credit card fraud: An analysis of fraud detection techniques, ‖ 2020. [2] S. G and J. R. R, —A Study on Credit Card Fraud Detection using Data Mining Techniques,‖ Int. J. Data Min. Tech. Appl., vol. 7, no. 1, pp. 21–24, 2018, doi: 10.20894/ijdmta.102.007.001.004
[6] V. N. Dornadula and S. Geetha —Credit Card Fraud Detection using Machine Learning Algorithms, Procedia Compute. Sci., vol. 165, pp. 631–641, 2019, doi: 10.1016/j.procs.2020.01.057.
[7] A. H. Alhazmi and N. Aljehane - A Survey of Credit Card Fraud Detection Use Machine Learning, 2020 Int. Conf. Computes. Inf. Technol. ICCIT 2020, pp. 10–15, 2020, doi: 10.1109/ICCIT-144147971.2020.9213809
[8] M. Kanchana, V. Chadha, and H. Jain - Credit card fraud detection, ‖ Int. J. Adv. Sci. Technol., vol. 29, no. 6, pp. 2201–2215, 2020, doi: 10.17148/ijarcce.2016.5109. [14] A.
[9] RB and S. K. KR, —Credit Card Fraud Detection Using Artificial Neural Network, Glob. Transitions Proc, pp. 0–8,2021, doi: 10.1016/j.gltp.2021.01.006



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