

Credit Card Authentication for Fraud Detection

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Abstract - Human face detection is the most promising field of image processing that has a vast area of research oriented real life applications. In the real world the concept is widely used for the content annotation, access control, profiling and potential discrimination in the web world. There is always constructive scope of new inventions in the field of technology which is as vast as galaxy on its own. This leads to the better future. There has been a supportive development in the field of technology by the humans since the beginning of mankind. The motive was in rapid development and also in the advancement of technology to ensure the minimization of risk that is prone along with the new inventions which would make life easier, better and much faster. The main intention of face detection is to find out the human face in the given input. The Psychological process of locating the human face in the visual frame is also possible. Credit cards are widely used all over the world. People mostly use credit cards for huge transactions, as it provides great benefits, hence attract more people. But with these pros, there exists some cons as well, one of them is frauds. The purpose of frauds is to obtain the goods without paying for it. As per the survey, India was ranked among the top 5 companies in credit card frauds. In last 2 years, more than 2000 credit frauds have been filed. The traditional method of credit card transaction uses face and liveness detection for verification.

Keywords: Face detection, Technology, CNN, liveness detection.

I. INTRODUCTION

In the current scenario, credit card and debit card are becoming the most common type of payment mode. All the credit card related task is managed by credit card processor. Companies using credit card processing makes sure that transactions are processed correctly and on time. Many companies prefer online transaction because it benefits their business. Funds are transferred into account on time without putting much effort.

Since people are comfortable with cashless transactions, the demand of credit card is increasing rapidly. The main problem faced by the credit card users is to have a secure online transaction. Credit card fraud is a big challenge. The

proposed solution will make use of face detection and face recognition technology for making credit card transaction system secured and much better. One of the existing systems deals with securing payment process between the card issuer and the card reader terminal and it is thus ensures that card number is not known to any other entity, other than the two end points. There is another system that suggests, a detection model must be available to capture the possible anomalous transaction. There is a number of challenges like concept drift, class imbalance and verification latency in credit card fraud detection. Machine learning can also be used for detecting credit card fraudulent transaction using a real world dataset. Deep learning presents a programming resolution to the matter of MasterCard fraud detection that produces use of historic client knowledge in addition as real time group action details that area unit recorded at a similar time of group action. There is another system that makes use of two random forests to train the behavior features of normal and abnormal transactions. The system compares the two forests which differs in classifier and analyze their performance on credit card transaction. One of the existing systems makes use of Boat algorithm for detecting fraud transaction. There is another system which analyzes the periodic behavior of the time of a transaction using the Von Mises Distribution.

II. METHODOLOGY

Credit cards are widely used all over the world. People mostly use credit cards for huge transactions, as it provides great benefits, hence attract more people. But with these pros, there exists some cons as well, one of them is frauds. The purpose of frauds is to obtain the goods without paying for it. As per the survey, India was ranked among the top 5 companies in credit card frauds. In last 2 years, more than 2000 credit frauds have been filed. The traditional method of credit card transaction uses email for verification. The security of this system can be enhanced using face recognition. Various algorithms have been proposed for face recognition like CNN.

In the proposed model, we have used Local binary patterns for face recognition. The user had to enter credit card details, the webcam will turn on and capture images of each person will be clicked automatically and a folder will be created on his name and images will be stored on local server. If the valid person identifies then transaction will done

otherwise system send the email to authorized user (valid user).

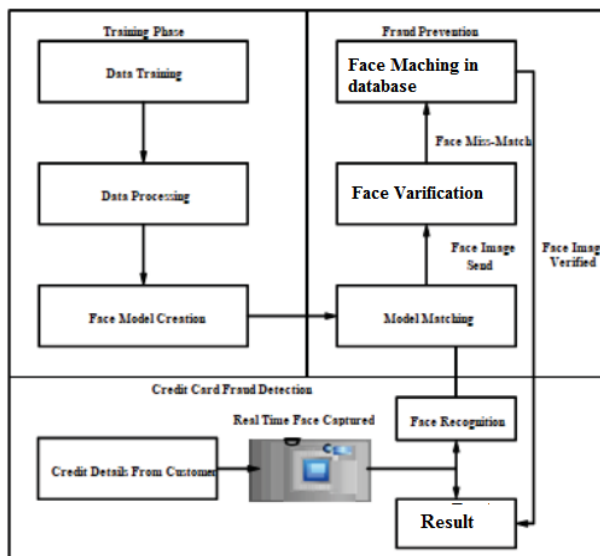


Figure 1: Proposed System

Credit Card Authentication

This may commonly occur when users give their credit card numbers to unfamiliar individuals or when cards are lost. Our Solution proposes a technique by which the image clicked by using webcam during the registration process image captured detect the face and with feature extraction face stored into the database. At the time of payment made by the user on E-commerce portal will be compared to the features from the dataset of the respective user. Face Features extracted from the images stored in administrator main database. Our goal is to compare the similarity of faces embedded in the credit card and respective user.

III. RESULTS AND CONCLUSION

The output of the implemented model is shown here. The image captured by webcam in real time is compared with the image stored in the database. A. The given screenshots shows us the face captured using webcam. The given screenshots shows us the face of the user is captured in real time and it is compared with the training set in the database. If the face matches, the transaction will be successful. Our proposed project has been designed for the purpose of reducing the credit card frauds that may occur during online payment transaction. There is no need of specialized hardware for installing this system. It just needs a computer and a camera for construction. The system is reliable and efficient mode of transaction process.

The camera plays a crucial role in the working of our project, therefore the image quality and also the performance of the camera must be tested time to time.

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