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Transaction Fraud Detection (Anomaly Detection) Using Machine Learning

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Abstract - *In today's world the credit card fraud is the biggest issue and now there is need to combat against the credit card fraud. Credit card fraud is the process of cleaning dirty money, thereby making the source of funds no longer identifiable." On daily basis, the financial transactions are made on huge amount in global market and hence detecting credit card fraud activity is challenging task. As earlier (Anti credit card fraud Suite) is introduced to detect the suspicious activities but it is applicable only on individual transaction not for other bank account transaction. To Overcomes issues of we propose Machine learning method using `Structural Similarity', to identify common attributes and behavior with other bank account transaction. Detection of credit card fraud transaction from large volume dataset is difficult, so we propose case reduction methods to reduce the input dataset and then end pair of transaction with other bank account with common attributes and behavior.*

Keywords- Credit card fraud, applications of machine learning, fraud detection.

1. INTRODUCTION

Up to five world GNPs (Gross Domestic Products) were scrubbed up last year by credit card fraud. AI credit card fraud is to detect the suspicious act Fighting Dude, the Tivs. The fight against credit card fraud generally allows most businesses to fill in the fraud. Financial transactions to monitor correctly the accounts and activities of their customers necessities. If it seems suspicious to find details, that's it. Required for further investigation to report to the government. Inside the transaction Credit card fraud databases are checked when fraudulent information is detected. Here we use the algorithm for antisocial knowledge and machines to detect.

2. MOTIVATION

We can identify and group potential credit card fraud accounts.

3. LITERATURE SURVEY

1. Paper Name: Financial Fraud Detection with Anomaly Feature Detection
Authors : Dongxu Huang, Dejun Mu, Libin Yang, Xiaoyan Cai
Description : In recent years, financial fraud activities such as credit card fraud, credit card fraud, increase gradually. These activities cause the loss of personal and/or enterprises properties. Even worse, they endanger the security of nation because the profit from fraud may go to terrorism. Thus, accurately detecting financial fraud and tracing fraud are necessary and urgent. However, financial fraud detection is not an easy task due to the complex trading networks and transactions involved. Taking credit card fraud as an example, credit card fraud is detained as the process of using trades to move money/goods with the intent of obscuring the true origin of funds.

2. Paper Name: A New Algorithm for credit card fraud Detection Based on Structural Similarity
Authors: Reza Soltani, Uyen Trang Nguyen, Yang Yang, Mohammad Faghani, Alaa Yagoub, Aijun
Description: There are many methods of credit card fraud. Criminals can hide the source of money by using the funds in casinos or real estate purchases, or by overvaluing legitimate invoices. In general, a credit card fraud procedure is composed of three major steps: placement, layering and integration. Placement is the process of introducing the dirty money into the financial system by some mean. Layering is the processing of carrying out complex transactions to hide the source of the funds. Finally, integration is to withdraw the proceeds from a destination bank account. The purpose of performing complex layering is to confuse anticredit card fraud instruments.

4. SYSTEM ARCHITECTURE

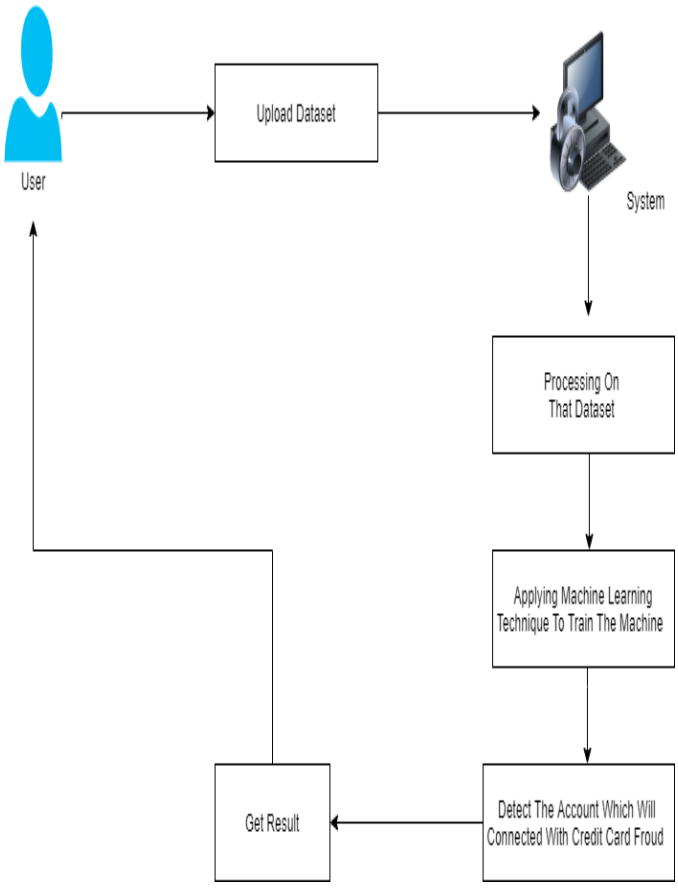

Fig 1-System Architecture

5. OTHER SPECIFICATIONS

Advantages:

• User friendly system.

• We can identify and group potential credit card fraud accounts.

Limitations:

• If details is incorrect format in database then it could be output getting wrong.

Applications:

• Online Bank

6. CONCLUSION

The proposed ML system is aimed at potential money-laundering groups between a great number of financial transactions. Strengthening the e-science framework, methods of case reduction, such as recognition and detection of matching transactions. Later, the balance score is used to narrow down the list of potential ML accounts. Next we can recognize and pool capacity by taking advantage of structural similarity ,Credit card fraud accounts. Our early experimental results suggest a high level accuracy in the identification of ML accounts.

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