

TITLE : CREDIT CARD FRAUD DETECTION

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Literature Review:

Fraud Detection in Credit Card Transactions Using SVM and Random Forest Algorithms

Author: S K Saddam Hussain; E Sai Charan Reddy; K Gangadhar Akshay

For a large data collection, the Random forest method effectively produces better results and returns numbers that are correct. It has several uses and may be applied to both classification and regression. By simply picking the feature space subsample at each slice, it also lessens the correlation problems. Additional pre-processing steps might also be advantageous.

The SVM works well with structured and semi-structured data, such as text, photos, and trees, and it is fantastic when we do not have a clear understanding of the data. They often do not experience overfitting and perform well when there is a significant separation between classes. The SVM results are accurate, although they may have been improved if the data had been more properly cleaned.

The goal of this project is to combine the advantages of the algorithms to identify fraud in the provided dataset, so overcoming both of their drawbacks and providing a more precise and accurate

value. In order to display the accurate number of fraudulent transactions in the dataset, it averages the dataset.

Fraud Detection Techniques for Credit Card Transactions

Author: Yathartha Singh; Kiran Singh; Vivek Singh Chauhan

Given enough time and data, we ceased creating technologies that could even come close to achieving 100% accuracy in fraud detection. Similar to this difficulty, there could be room for development. The company's nature allows for the employment of many ways as modules and the mixing of the results to increase the accuracy of the present findings. This version may be improved by include more algorithms. However, the output of these algorithms will follow the same structure as the others. The module is simple to implement in code if this requirement is satisfied. This enables the business to attain a top-notch level of flexibility and versatility.

Credit card Fraud Detection

Even if there are various fraud detection methods, we cannot claim that this specific algorithm totally detects the scam. Our investigation leads us to the conclusion that the accuracy of the Random Forest and Adaboost algorithms is equivalent. The Random Forest method outperforms the Adaboost algorithm in terms of accuracy, recall, and the F1-score. Therefore, we draw the conclusion that the Random Forest Method detects credit card fraud better than the Adaboost algorithm.

It is evident from the data above that a variety of machine learning techniques are applied to identify fraud, however we can see that the outcomes are unsatisfactory. Therefore, in order to correctly detect credit card fraud, we would like to employ deep learning techniques.