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Abstract

Credit card usage has been increased tremendously because of the popularity of E-commerce. As the usage of credit card grows the occurrence of fraudulent transactions also increases, thus comes the stipulation of fraud detection. Detection of fraudulent transaction using credit card plays a vital role in financial institutions. In the proposed work, fraud detection is done with data mining approaches. The parameters considered are transaction amount and transaction time. For every cardholder there is always a robust periodic pattern in the spending behaviour, centered on this fact the anomalies in the transaction are detected by analyzing the past history of transactions belonging to an individual cardholder. In this work two levels of detection methods are used. At the first level the fraud is detected by analyzing whether the new

incoming transaction is fraud or not by using distance-based method. At the second level the next transaction is predicted by means of label-prediction methodology and compared with the actual transaction, if there is deviation then it is detected to be a fraudulent transaction. If the particular transaction is considered as a fraud then the cardholder is asked to continue the transaction by asking a secret question, if the cardholder does not give correct answer then the transaction will not be allowed to continue further. The approach used in the proposed work has also decreased the false positive situation and hence it is ensured that genuine transaction is not rejected.

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Index Terms

Computer Science

Security

Keywords

Fraud Detection Distance-based Method Label-prediction Methodology.