

Study on Fraud Transaction Detection System

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Abstract: *Fraudulent transactions are very common problem in banking systems internationally, accounting for \$5.1 trillion dollars every year. Many financial institutions are facing the common problem of being targeted by transactions of fraudulent nature and its becoming more and more obvious that advanced technology, such as Machine Learning (ML) is needed to counter such acts. Machine learning is the most effective technique against these complex bank frauds when approaches relying on fragmented and siloed data, rules-based approaches or traditional point-solutions are not only costly but also not as effective as needed. Complex algorithms powered by ML can be used to reduce manual investigations in Financial Institutions. Volume of these transactions is huge, lots of current solutions do not focus on big data the proposed model will work on big data with the help of 'Apache Spark' using latest machine learning technology. The proposed model will try to find pattern in given data set and flag the transaction as fraudulent or not with probability score and then banking system can decide further course of action. We are also going to include different machine learning algorithms used to detect fraudulent transactions and provide a comparative study between those algorithms to show which is more effective.*

Keywords: Machine Learning, Algorithms, Credit Card, Fraud Detection, Transaction

REFERENCES

- [1]. <http://www.xajzkjdx.cn/gallery/489-april2020.pdf> -Credit Card Fraud Detection Using Machine Learning by Abhay Goel, Agrim Mathur, Akanksha Tripathi, Dr. K.K.Aggarwal
- [2]. <https://arxiv.org/pdf/1706.01953.pdf> -Credit Card Fraud Detection through Parenclitic Network Analysis by Massimiliano Zanin, Miguel Romance, Santiago Moral and Regino Criado
- [3]. <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.259.16&rep=rep1&type=pdf> -Application of Credit Card Fraud Detection: Based on Bagging Ensemble Classifier by Masoumeh Zareapoor, Pourya Shamsolmoalia
- [4]. <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.483.1235&rep=rep1&type=pdf> -Credit Card Fraud Detection Using Hidden Markov Model by Shailesh S. Dhok
- [5]. https://www.researchgate.net/publication/336800562_Credit_Card_Fraud_Detection_using_Machine_Learning_and_Data_Science -Credit Card Fraud Detection using Machine Learning and Data Science by S P Maniraj, Aditya Saini, Swarna Deep Sarkar Shadab Ahmed
- [6]. <https://www.ijert.org/research/credit-card-fraud-detection-IJERTCONV9IS04018.pdf> -Credit Card Fraud Detection by Munira Ansari, Siddhesh Jadhav, Hashim Malik, Zaiyyan Khan
- [7]. <https://www.ijert.org/papers/IJCRT2106161.pdf> -Credit Card Fraud Detection System by Shashank Singh, Meeenu Grag
- [8]. <https://www.ijert.org/improved-credit-card-fraud-detection-using-machine-learning> -Improved Credit Card Fraud Detection using Machine Learning by M. Ramya, S. Ajith Kumar, K. Anandh Raja
- [9]. <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.218.7191&rep=rep1&type=pdf> -Credit Card Fraud Detection Using Meta-Learning: Issues and Initial Results by Salvatore J. Stolfo, David W. Fan, Wenke Lee and Andreas L. Prodromidis
- [10]. https://www.researchgate.net/publication/265746027_Credit_Card_Fraud_Detection_Using_Self-Organizing_Maps -Credit Card Fraud Detection Using Self-Organizing Maps by Vladimir Zaslavsky, Anna Strizhak.