

# Project Proposal of Credit Card Fraud Detection

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## 1 Introduction:

Banks, merchants, and credit card processor companies lose billions of dollars every year in credit card fraud. Credit card data can be stolen by criminals using a variety of methods. Bluetooth-enabled data skimming devices can be placed on the card reader on the pump that dispenses your petrol. The data might be stolen in a mass breach by hackers of a large retailer, as was the case with Target and Home Depot in recent years. Sometimes the criminal is simply the clerk at the checkout line at the grocery or in a restaurant, where the victim's card is swiped through a small device or surreptitiously jotted down. For this in our project, we will use machine learning to credit card fraud Detection to reduce the loss of billions of dollars every year in credit card fraud.

## 2 Data Description:

In my project, I will use a simulated credit card transaction dataset containing legitimate and fraud transactions from the duration 1st Jan 2019 - 31st Dec 2020. It covers credit cards of 1000 customers doing transactions with a pool of 800 merchants. It contains 555719 rows with 22 columns.

data sources: <https://www.kaggle.com/kartik2112/fraud-detection>

### 2.1 Goals:

In my project, I will use machine learning to credit card fraud Detection to reduce the loss of billions of dollars every year in credit card fraud.

## 3 Tools:

We have many machine learning algorithms that can help us classify abnormal transactions. The only requirement is the past data and the suitable algorithm that can fit our data into a better form. We will use Classification algorithms of supervised learning. There are many different classification models in machine learning:

- Logistic Regression.
- K-Nearest Neighbor.
- Random Forest Classification.

Libraries used:

- Pandas 1.3.4
- Numpy 1.21.2
- Matplotlib 3.4.3
- Scikit-learn 0.24.2