OBJECTIVE:

Our objective is to develop an ML- model which detects fraudulent and non-fraudulent transactions via credit cards.

IMPLEMENTATION:

The label for the model depends on a binary classification of fraudulent (1) and non-fraudulent (0) values. Thus, we proceeded to implement this model using the Logistic Regression algorithm.

We initially went for exploratory data analysis and then pre-processing of the data.

We checked for noise, outliers and imbalances in the dataset. The noise was not found in the data set and outliers were removed. The new shape of the dataset was recorded and was split into a ratio of 7:3 for the training and test dataset.

The imbalance was recorded on the training dataset and then further balanced. This balanced dataset was the used to train the model for making future predictions.

APPLICATION OF IDEA:

The idea of this model can be used in business and finance sectors quite very efficiently where there is a transaction of large amount.

This would insure to build a safer interface for the truncation from source to destination account.

Also, this will help to detect fraud in no time along with the destination details of the scammer.

FINAL RESULT:

The accuracy of the model is of about 93%.

Recall score is 89.36%.

FUTURE BUILD OF MODEL:

This model can future be integrated with other algorithms like SVM, random forest, etc to create a hybrid machine learning model in order to achieve a higher rate of accuracy.

This model can further be deployed for a wide range of use and easy accessibility for society. The columns which were not used as a feature in the model like source account number and destination account number will be used to detect the origin of the fraud.