***SRS***

***of mini-project***

***“CREDIT CARD FRAUD DETECTION”***

GROUP - NEW ICONS

MEMBERS - 1.Pooja Jagdale

2.Rutuja Kashid

3.Aarati Shelake

**MINI-PROJECT**

**Title: CREDIT CARD FRAUD DETECTION**

**AIM:-**The aim of this mini project is to identify fraudulent credit card transactions .

**PURPOSE:-**

* This project intends to illustrates the modelling of dataset using machine learning with Credit Card Fraud Detection Problems includes modelling past credit card transactions with the data of the ones that turned out to be fraud.
* Our objective here is to detect 100% of the fraudulent transactions while minimizing the incorrect fraud classifications.
* **MAIN FOCUS:-** We have focused on analysing and pre-processing data sets as well as balancing the unbalanced data using different methods.

**INTRODUCTION:-**

* “Fraud” in credit card transaction is unauthorized and unwanted usage of an account by someone other than the owner of the account.
* Credit Card Fraud can be defined as a case where a person uses someone else’s credit card for personal reasons while the owner and the card issuing authorities are unaware of the fact that the card is being used.

EXISTING SYSTEM:-

* It is not able to get the accuracy , that how many transactions are fraud.
* Not able to analyse all the authorized transactions and the suspicious ones.
* As the transaction patterns often change their statistical properties over the course of time ,it is difficult for existing system to find the accuracy.

PROPOSED SYSTEM:-

* It provide accuracy in finding out the fraudulent transactions and minimizing the number of false alerts.
* Detect anomalous activities.

**METHODS USED:-**

* Resampling methods :- The resampling methods are used to adjust the class distribution of data as the minority class is not equally represented.
* Three method demontrated in this project

1. Oversampling
2. Undersampling
3. SMOTE

* Final model build on SMOTE technique.
* K-Nearest Neighbour Classifier :- It is a lazy learning instance based on classification algorithm which is widely implemented in both supervised and unsupervised learning.
* Decision tree :- Used to predict the class of dataset.

**ADVANTAGES:-**

* The very nature of this project allows for multiple algorithm to be integrated together as modules and their results can be combined to increase the accuracy of the finale result.
* Attempts has been made to improve the alert feedback interaction in case of fraudulent transaction.
* Machine learning algorithms are employed to analyse all the authorized transactions and report the suspicious ones. These reports are investigated by professionals who contact the cardholders to confirm if the transaction was genuine or fraudulent.

**FUNCTIONAL REQUIRMENTS :-**

**“**Functional requirements describe what a project should do. ” Functional Requirements of our project are explained below:

**•** Detect anomalous activities.

**•** Find the numbers of fraud credit cards and normal credit cards was used

which are present in dataset or given information.

**•** Attempts has been made to improve the alert feedback interaction in

Case of fraudulent transaction.

**SOFTWARE TOOLS:-**

**• GitHub –** Upload and make changes in the source code.

**•**  **Microsoft Office-** Microsoft word and excel.

**•** **Development Tools-** RStudio

**•** **Programming Language-** R language

**DEPLOYMENT:-**

**Operating System Server:-** Window 10

**HARDWARE SPECIFICATION :-**

**• Processor:-** Intel Core i5A

**• RAM:-** 8 GB

**• Hard Disk:-** 1 TB