Credit card fraud detection Dataset:

It is important that credit card companies are able to recognize fraudulent credit card transactions so that customers are not charged for items that they did not purchase.

Content

The datasets contain transactions made by credit cards in September 2013 by European cardholders. This dataset presents transactions that occurred in two days, where we have 492 frauds out of 284,807 transactions. The dataset is highly unbalanced, the positive class (frauds) account for 0.172% of all transactions. It contains only numerical input variables which are the result of a PCA transformation. Unfortunately, due to confidentiality issues, we cannot provide the original features and more background information about the data. Features V1, V2, … V28 are the principal components obtained with PCA, the only features which have not been transformed with PCA are 'Time' and 'Amount'. Feature 'Time' contains the seconds elapsed between each transaction and the first transaction in the dataset. The feature 'Amount' is the transaction Amount, this feature can be used for example-dependant cost-sensitive learning. Feature 'Class' is the response variable and it takes value 1 in case of fraud and 0 otherwise.

Inspiration

Identify fraudulent credit card transactions.

Steps to Perform the Model:

1.Load the dataset
2.Preprocessing.
- a) Print the first 5 rows of the dataset
- b) Check the features in the dataset
- c)Check the missing values
- d)Check the numerical features in the dataset
- e) Check the distribution of categorical columns

3.Seperate features and Labels
4.Split the dataset to train and test
5.Do normalisation if required
6.Model Building (ANN)
7.Compile the model
8.Make predictions
9.Find Accuracy score

10. Build the ANN models with increasing 2 dense layers to each model and compare the accuracy scores (Minimum 5 models Required)
11. Visualize train and validation Accuracy and Losses for every model.

Note: For any doubt's clarifications, Join the mentor session from 2:00 pm to 6:00 pm or reach us on Discord 10:00 AM to 5:00 PM.

Thanks, and Regards,
Innomatics.