VARUVAN VADIVELAN INSTITUTE OF TECHNOLOGY

NAAN MUDHALVAN: IBM

TECHNOLOGY: DATA SCIENCE

PROJECT TITLE: INNOVATION FOR CREDIT CARD FRAUD DETECTION

ABSTRACT :

Credit card fraud causes many financial losses for customer and also for the organization. For this reason, in the past few years, many studies have been performed using machine learning techniques to detect and block fraudulent transactions
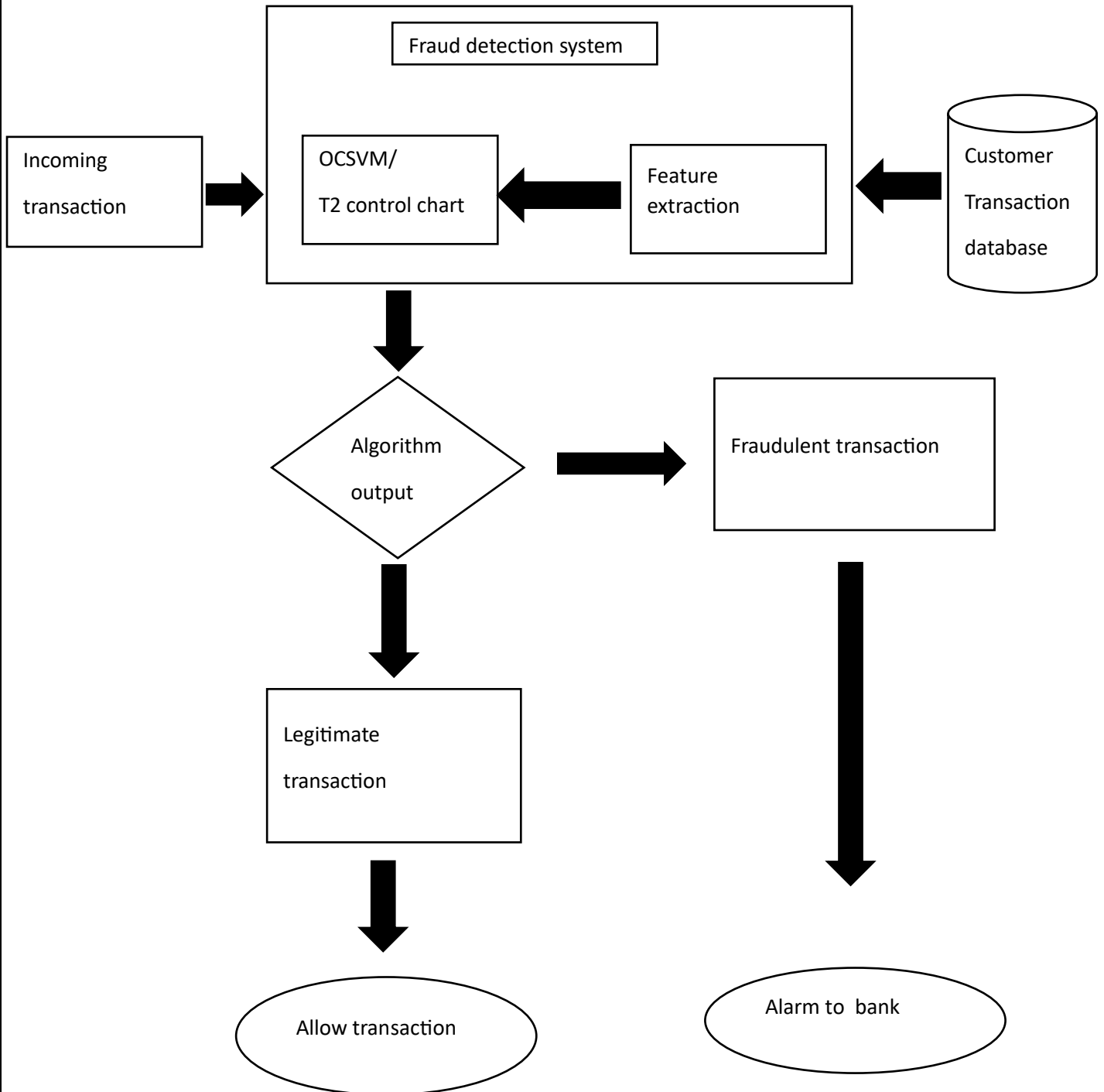
INTRODUCTION :

Credit card fraud is the use of another person's credit card for personal gain without the knowledge of the cardholder or the organization responsible for issuing the card. . Credit cards have been widely used for online buying as e - commerce has grown & expanded, which has resulted in a significant increase in credit card fraud.

METHODOLOGY:

This chapter discusses the methodology adopted in this study to classify the non-fraudulent transactions from the fraudulent transactions for innovation .

INNOVATION FOR FRAUD DETECTION:

Fraud detection system

Incoming transaction → OCSVM/ T2 control chart ← Feature extraction ← Customer Transaction database

Algorithm output → Fraudulent transaction

Algorithm output → Legitimate transaction

Legitimate transaction → Allow transaction

Fraudulent transaction → Alarm to bank

TYPES OF FRAUD:

• Offline credit card fraud

• Online credit card fraud

Offline credit card fraud:

This kind of fraud is done physically which means that the plastic card is stolen by fraudsters and using the card in stocks or supplies or stores or for different purposes as an actual owner.

Online credit card fraud:

This kind of fraud is popular and it is very dangerous, the credit card's information is stolen by the fraudsters to be used in future online transactions by internet or by phone.

PREDICTIVE MODEL FOR FRAUD DETECTION:

DECISION TREE :

Machine Learning technologies use advanced data analysis algorithms. The most popular algorithm used in Machine Learning applications is called the decision tree model. Decision trees work very quickly and smartly, mainly when used to mine and analyse large 24 amounts of data.

Credit Card Fraudulent Transactions in India:

A fraudulent card transaction is an unauthorised transaction that is carried out with your credit card. The thief either physically steals your credit card, or steals your card information via phishing credit card skimming and uses it to make payments, or withdraw cash.

REDUSE STEPS FOR FRAUD DETECTION:

To reduce vulnerability to credit card fraud, businesses should invest in fraud prevention tools, implement strong security measures, train employees to recognize and prevent fraud, and stay informed about the latest fraud trends and best practices.

CONCLUSION :

We present in this paper two real time data driven fraud detection approaches without anomalies in the training set using one class support vector machine (OCSVM) [18] using the optimal kernel parameter selection and T 2 control chart [19]. Numerical results have shown that the proposed approaches lead to a high-level of detection accuracy and a low false alarm rate.