

Analysis on Credit Card Fraud Identification based on KNN and Outlier Detection

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Abstract: Popular payment mode which is credit card is acquired both offline and online that provides us with its great advantage of cashless transaction. A credit card is a convenient financial product that can be used for everyday purchases such as gas, groceries, and other goods and services. It becomes very easy, suited and groovy to make payments and other transactions through credit card. Credit card fraud is also growing along with the development in technology. Along with improvement in the global communication the economic fraud is remarkably increasing in the global communication. It is being recorded every year that the loss due to these fraudulent actions is billions of dollars. These activities are carried out so gracefully which looks similar to authentic transactions. Therefore, to have a systematized method of fraud detection has become a need for all banks in order to minimize heu and cry and bring order in place. Thus techniques of KNN and outlier detection are implemented to optimize the best result for the fraud detection problem. These methods are proved to slash the false alarm rates and enlarge the fraud detection rate. KNN and Outlier detection are quiet familiar area of research. Outlier Detection is absolutely important task in various application domains. Earlier outliers were considered as noisy data and now it has become severe difficulty in various areas of research. The discovery of outlier is useful in detection of unpredicted and unidentified data in certain areas like fraud detection of credit cards, calling cards, discovering computer intrusion and criminal behaviors etc. Whereas KNN (k-Nearest Neighbor) is used for classification because of its interpretation and low calculation time.

IndexTerms - Credit card fraud, KNN, Outlier detection.

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