16. ASHIKA MAHESH

CREDIT CARD FRAUD DETECTION SYSTEM USING GGREGATION STRATEGY AND FEEDBACK MECHANISM

Abstract:

The credit card fraud detection with hidden markov model and anti- k nearest neighbor algorithm didn't solve the problem pf concept drift. Therefore, in order to solve the problem of concept drift, fraud detection system using aggregation strategy and feedback mechanism was used. There are mainly 4 stages in the methodology. First is preprocessing data in which raw features are taken and classified into 3 similar groups low, medium and high and after that each transaction behavior are aggregated using a sliding window. From that four amount-related features and time-related features are extracted and labelled as normal or abnormal by using label function. After the preprocessing stage Clustering behavioral patterns comes in which we classify all normal features of a group. After that Classifying behavioral patterns and assignment comes in which we first cluster all the abnormal feature and train a set of classifiers which contains behavioral patterns and abnormal features by random forest method. After that we update cardholders' behavioral profile by a feedback mechanism. A rating score is updated with each classifier and if the prediction is wrong the feedback mechanism is given back in which rating score is decremented. So, if there is a sudden change in pattern it is also analyzed by feedback system and update the cardholder's profile.