Abstract

The evolution of the new technology supports the online transactions to be held with the assistance of different payment cards. Credit card frauds have become increasingly rampant in living years and critical for banks to enhance fraud detection so as to protect their cardholders from financial loss. The simple way to detect such kind of fraud is to decipher the spending pattern on each card and to highlight any irregularity with respect to the "standard" spending pattern. In this paper we try to review Hidden Markov model which works on such technique. The HMM, trained with the normal behavior of a cardholder needs an enough number of normal transactions and fraud transactions for learning fraud patterns. To make it more effective we have enclosed the provision of determining the IP address of intruder machine along with its time stamp. The simulation analysis include different real dataset to identify the fraud and discover the intruder. Form our model it is proven that it works with more efficiency than existing models.

**Index Terms**

Computer Science  
Security
Keywords

Hidden Markov model, spending pattern, fraud transaction, credit card, time stamp, financial loss.