

Predict Transaction Fraud using ChaosNet: An Exemplification from the Plastic Money Transactions

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Abstract: Online transactions are in high demand right now, possibly due to their efficiency and ease of being used. It is a form of digital commercial transactions in which customers buy commodities or services through the World Wide Web. Payment systems can be managed to complete using a variety of devices, such as desktops and laptops, smartphones, etc. To pay for web - based products or services, customers could use credit and debit cards or even digital wallets. This research seeks to identify falsehoods and probable fraudulence in Credit Card based transactional processes. This investigation seeks to determine outright lies and potential fraud in Credit Card, also termed as Plastic Money based transactions. ChaosNet, an Intelligent Artificial Neural Network built with Generalized Luroth Series spatial information, now has this capability. Chaos has been clearly and accurately unearthed in the central nervous system at several temporal and spatial scales. Chaos is present across several synthesized synaptic simulation models, such as the Hindmarsh-Rose model, and turbulent exploding is observed in some brain neurons. Although Chaos is present throughout many Artificial Neural Networks such as Recursively Generating Neural Network models, no ANN exists for classification tasks that is entirely composed of chaoticity. ChaosNet employs the topographic syntagmatic property of Chaotic GLS neurons to solve categorization problems with cutting-edge effectiveness on a data reservoir with a relatively low training sample quantity. By assembling a specific quantity of training information, this synthesized Neural Networking Model can undertake categorization activities. ChaosNet uses some of the best network attributes confined to neurons in the human brain, which deduce from specific neurons' powerful Chaotic interaction, to resolve complex multiclass classification on par with some or stronger than conventional Artificial Neural Networks. It has been demonstrated that it requires far fewer training sets.

Keywords: Credit Card; Blockchain; ChaosNet; GLS Neurons; Artificial Neural Network

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1. Introduction