International Journal of Computer Engineering in Research Trends
Multidisciplinary, Open Access, Peer-Reviewed and fully refereed
Review Paper Volume-8, Issue-1, January 2021 Regular Edition E-ISSN: 2349-7084

Review of green e-commerce security

Sritha Zith Dey Babu[1*], Rajat Goyal[2], Vishesh Chaudhary[3], Ayush Pal[4], Saurabh Verma[5]
[1,2,3,4,5*]*Dept.of Computer Science, University Institute of Computing, Chandigarh University,India*
**Corresponding Author: srithazith019@gmail.com*

Available online at: http://www.ijcert.org

Received: 30/12/2020 *Revised: 17/01/2021* *Accepted: 23/01/2021* *Published: 29/01/2021*

Abstract: Data Science is the backbone of future technology. It is already developing at an exponential rate but there still a lot of future scope for the same. Data Science uses many scientific calculations and algorithms to extract meaningful and useful data from structured or unstructured data.¬ Data Science is completely based upon statistics and data analysis. But also there is a bad for every good in the same way with the emerging technology, the ratio of cybercrime is also increasing at an exponential rate. Every day new technology emerges and on the next day, bad people find a way to get a profitable way out of it. At present time one of the most vulnerable technology is E-Currency. On regular basis, hackers hack the bank accounts of general people and steal money just because the person doesn't have much knowledge about it. Sometimes it also happens from the server-side. E-Currency is simply virtual money. And anything related to computer science can't be full-proof. There must be a loophole and the hackers make use of it until it is discovered and sorted. The research aims to integrate data science with E-Currency to make it more secure. The LIFO encryption techniques come under data science user neural networking for encryption and the decryption of the data. Neural networking is the neuron of data science. We can understand its complexity by knowing the fact that it mimics the human brain, which is considered the most complex thing in this universe. Neural networking used extremely complicated mathematical algorithm to predict the future as well as the past and this is what makes it one of the most complex studying fields at present time. It is one of the most secured techniques present till now and it is being used in many sectors like banking, army data transmission, aeronautical science, etc. The private hash key generated between the sender and receiver will be most secured and will help in money transfer without a single chance of data breach. All the data will be stored in the hidden layer which is next to impossible to pass through. Because the neural network will give only output and there will be infinite inputs for the same output.¬ Thus, it will be safer to use E-Currency and make it a part of our day-to-day life.

Keywords: E-commerce, Data streaming, Supervised data, Neural network, Structured data

1. Introduction

In the advancement of technology, Data Science plays a pivotal role in the field of E-commerce. Electronic commerce has expanded rapidly over the past five years and is predicted to continue at this rate, or even accelerate. In the near future the boundaries between "conventional" and "electronic" commerce will become

Increasingly blurred as more and more businesses move sections of their operations onto the Internet. (Dr. C. Eugine Franco, 2016). As a part of the revolution in information technology, e-commerce has been widely used in the world trade in general and Indian economy in particular. (Himani Aggarwal, E-Commerce in India, 2020). The article has used the secondary materials extensively. E-commerce is about selling products and services through the means of internet communications. (Habib Ullah Khan, 2018). It reveals that the speed of

growth of e-commerce in India is satisfactory but lower than China and USA. (Nitin Kumar, 2018). Data science that underpins machine learning, artificial intelligence, structured and unstructured data which has been great revolutionary technology in today's world. In ECommerce itself has certain business strategies and tactics to attract customers or customers. (Alief Maulana, 2020). This is a primary data-based study, which collected the opinion of customers as well as operators about the impact of e-commerce strategies on the level of e-commerce utilisation. (Khan, 2019). Social media to the internet of things devices which has been generating huge data from its users and then data science analyse and process the big data for predicting the needs for its users and improve the overall experience. The anytime and anywhere access facility provided by e-commerce platforms, characterized by asynchronous communication between firms and potential consumers, allows considerable flexibility in making transactions with greater interactivity (Himani Aggarwal, 2020). Machine learning is the most prominent method that we have used to secured the method of online transactions that are also known as e-cash systems. The main reason for using this technology is because no one can decrypt this code without the permission of a bank. So, this technology is more secure than others. E-commerce is one of the biggest consumers of data science than others. In this short communication, we are presenting such innovative and dynamic sites utilizing artificial intelligence along with its sub-sets of machine learning drive by deep learning. (Farahnaz Behgounia, 2020). However, banks need data to extend their business in this field even though they draw more customers for gaining its popularity. The benefits of such an instrument for e-commerce businesses were identified by a literature review, and the extent to which the benefits are achieved by retail e-commerce sites was investigated by a Web- and e-mail-based survey producing 458 usable responses from e-commerce managers plus responses from second-ary participants at 58 of the surveyed firms. (Youlong Zhuang, 2014). Additionally, many of the banks still prefer inferior technology due to a lack of funds. As enterprises exploit business opportunities via the Internet, they have discovered that not only they need a reliable and scalable IT infrastructure to support their online business, but also they must have the capability to deploy new online applications rapidly and integrate e-commerce to their already existing business model. (Hasan Amca, 2016). Nowadays, the ratio of cybercrime is increasing at an alarming rate due to a lack of security. So, the main reason for using this technology is to secure the data of customers and hence providing them an additional layer of security that encrypts the data and cannot be easily accessible to all. While the benefits for producers are that promotional costs can be reduced so that the selling price can be more competitive. (Romdonny, 2019). The LIFO encryption increases the time complexity to infinity which makes it impossible for a hacker to extract the hash key and hence fails to decrypt the data. In the neural network the collaboration with the LIFO method, the data is being distributed into a hashed file with different layers and is being shuffled that encrypts the data, that hash file is only accessible to the administrator which then can unjumble and decrypt the data. Securing the data is a crucial part and the contribution of neural network has been made it very accessible to use with the new methods and new technology could be introduced. A neural network is either a system software or hardware that works similar to neurons of human beings. There are different kinds of technologies like deep learning, machine learning as a part of artificial intelligence. A neural network consists of both input and output layers, as well as a hidden layer to see the changes in units input into the output so the output layer can utilize the value.

$$f(\text{bug number}) = \text{Initial data size} + \sum_{n=3}^{last\ input} (Initial\ data\ size) n \cos\frac{n\pi\ final}{length} + bn \sin\frac{n\pi\ final}{length}$$

Here, bug number indicates the total values of bug of full stack developed website which is constraint function. Initial data size is the first element of array indicates first product which integrate the summation of data size and it's cosine term with PI multiply final value of array.

2. Related Work

There are different kinds of pattern like facial recognition and so on and several other applications like data analysis, handwriting, and signal processing these all are handled by neural networking. The main power of neural networks is the ability to recover meaningful data from imprecise data that is used to detect trends and extracting patterns that are impossible to check by computers and humans. Being the worlds most demanded technology neural network has already come into action in different sectors where there is huge confidential data involved using this technology in the market. E-commerce plays an important role in the functioning of this market. Holding a market of almost $1.5 trillion a year, E-commerce has been used by almost 40% of the total internet users, and it is considered as the most convenient way to make online purchases of products and services, E-commerce is commonly known as an electronic medium to carry our commercial transactions. basically, the sale and purchase of goods through the internet. Though e-commerce is not readily used by many users because of trust, knowledge, and security reasons, it's making a spike in its growth and also growing urban

to the rural sector. It covers many terms of business-like sharing business Information, conducting business through telecommunication, maintain business relationships when connected to a network. through E-commerce huge number of transitions are made online and security has been found to be average, but as involves a lot of theft of money, so our new technology has been introduced to make it better. It would enable them to assess the success or failure of past projects and would help in making new decisions about how and where to expand their e-commerce endeavors. (YOULONG ZHUANG, 2014). The approach taken was a qualitative approach, a case study method and data collection with literature review, online journal research and observation of the problems that were the subject of research. (A Jannah, 2020). But the threats in e-commerce need to be controlled as in our proposed model we just make it the most secure mode to conduct out online transactions. Therefore, it aims to be useful for both researchers and for potential future investors. (Muhammed Kursad Ozlen, 2014).

3. Methodology

The main normal selection wheel algorithm is mainly based on the recursion prototype of set integration: Where we have developed this based on our own methodology. Here, we have classified the data set taken from Kaggle. After that, all the procedures are mentioned in the diagram.

1) Start
2) Take the malignant of business data
3) Put the malignant as stream linked list
4) Update the list with LIFO as step 5 formula
5) $f\left(\underset{\sim}{bug_{number}}\right) = \underset{\sim}{Intial_{data_{size}}} + \sum_{n=1}^{\underset{\sim}{last_{input}}} \left(Initial\_data_{size_n} \cos\frac{n\pi final_{numbe}}{Length_{array}} b_n \sin\frac{n\pi final_{number}}{Length_{array}}\right)$
6) Compare with step 3
7) For(data_length=n; bug_number=9;n++)
8) Print the value of bug
9) Repeat step 4
10) Compare step 3, 5
11) Intersect the value with step 4
12) Print the bug number

Here the last input is locating actually data pointer address and data size actually reseizing all the terms and pickels by which researcher can set the terms as to modify it later. The proposed formulae locates sin and cos as the value of neutral number of data where sin can predefined the bast to land data encapsulation and cos vice-versa. Hence, the proposed algorithm has used with Nasclim for reviewing the most predictable of data leakage. In Nasclim data size can be reduced and redefined but can't be reedited either not by general nor admin. The main methodology brain is the formula which we have already mentioned at step 5 of our proposed algorithm. The algorithm is main called by the research work is PRC algorithm especially formulated by for data bug finding.

4. Results and Discussion

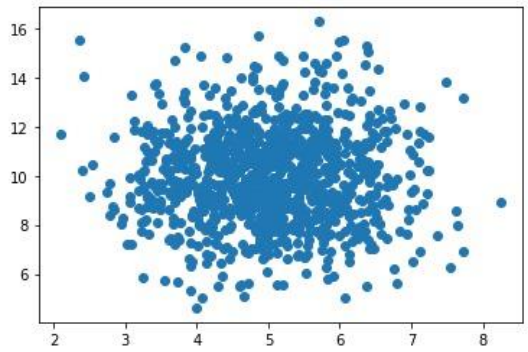

Figure.1. Input data scatter value

Here, all the points are intercepting each other with centripetal aspect. Next aim is to clear the area and coverage with differentiating the points.

The field value has been developed with three tester and evaluator value of hash data code which has introduced already with the number of unique marks.

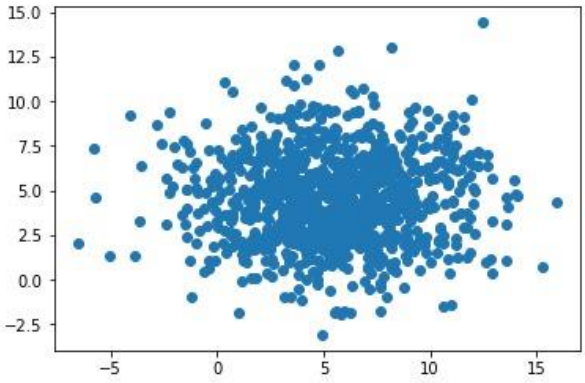

Figure.2. Integrated data scatter value

Hence, all the points are departure the centripetal value and integrated the boundary points.

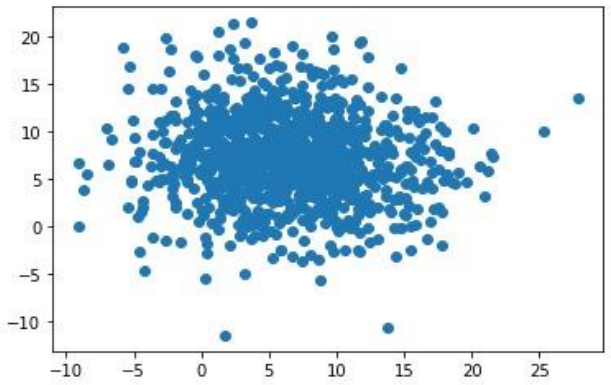

Figure.3. Output streamed data

Finally, the slope shows clear percentage value of every data elements by which one can easily determine the process of plotting.

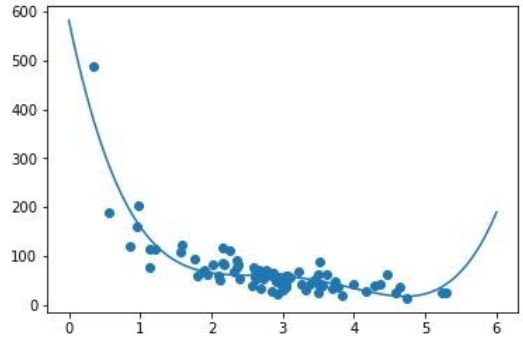

Figure.4. Output data plot

5. Conclusion and Future Scope

In our proposed technology we have enhanced the security of E-commerce, e-cash which had been less secured from a long time will now be the safest mode of payment as when carrying an online transaction, the data is shuffled and will be transferring in a hashed file which uses method encryption and the collaboration of Data science with Neural network had made it more trustable by adding an extra layer of encryption. This technology can be most useful for digital market as more people engage in the electronic form of payment; this will create more start-up and job in the e-commerce sector. A steady majority of common people are establishing their business online. E-commerce acting as a backbone of modern marketing. Revolutionising in the IT sector is commerce is tremendously changing lives by contributing to the economy of the country. That had led to the strengthening if the economy that ultimately leads to the development and innovation od new technology. Data science is an emerging technology of today's world a lot of data scientist has been working continuously for the development of technology in the field of data that have solved many complicated modern issues.

References

[1] A Jannah, H. H. (2020). E-commerce in Supply Chain. *IOP Conference Series: Materials Science and Engineering*, 789.

[2] Alief Maulana, A. R. (2020). STRATEGI E-COMMERCE. *ResearchGate*, 1.

[3] Dr. C. Eugine Franco, B. R. (2016). ADVANTAGES AND CHALLENGES OF E-COMMERCE CUSTOMERS AND BUSINESSES: IN INDIAN PERSPECTIVE. *International Journal of Research*, 7-13.

[4] Farahnaz Behgounia, B. Z. (2020). Machine Learning Driven An E-Commerce. *ResearchGate*, 61-70.

[5] Habib Ullah Khan, S. U. (2018). Possible impact of e-commerce strategies on the utilisation of e-commerce in Nigeria . *International Journal of Business Innovation and Research*, 231-246.

[6] Hasan Amca, A. J. (2016). E-COMMERCE: HOW CAN BUSINESSES BENEFIT FROM E-COMMERCE? . *ResearchGate*, 1.

[7] Himani Aggarwal, S. J. (2020). E-Commerce in India. *ResearchGate*, 36-60.

[8] Himani Aggarwal, S. J. (2020). E-Commerce in India. *ResearchGate*, 36-60.

[9] Khan, H. U. (2019). Possible impact of e-commerce strategies on the utilisation of e-commerce in Nigeria. *ResearchGate*, 231-246.

[10] Muhammed Kursad Ozlen, E. M. (2014). Perceived Benefits of E-Commerce among Manufacturing and Merchandising Companies. *International Journal of Academic Research in Economics and Management Sciences*, 23-33.

[11] Nitin Kumar, J. A. (2018). Challenges and Opportunities of E-Commerce in India: Pathway for Sustainable E-Commerce. *ResearchGate*, 13-21.

[12] Romdonny, J. (2019). Benefits of E-Commerce in Marketing Creative Industrial Products. *BIRCI-Journal*, 267-270.
[13] Youlong Zhuang, A. L. (2014). An Instrument for Measuring the Business Benefits of E-Commerce Retailing. *International Journal of Electronic Commerce*, 65-99.
[14] YOULONG ZHUANG, A. L. (2014). An Instrument for Measuring the Business Benefits of E-Commerce Retailing. *International Journal of Electronic Commerce*, 65-99.

