

Finding Influential Articles on the Topic of DNA Cryptography in Cloud Computing in the Field of Computer Science and Artificial Intelligence

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Abstract

This article finds influential articles to continue research for the benefit of society in the field of computer science and artificial intelligence on the topic of research DNA cryptography in cloud computing. Two articles are identified as influential articles. Experimental results are presented using word co-occurrence and bibliographic coupling networks, citation network analysis tools.

Keywords: Influential Articles, DNA Cryptography, Cloud Computing, Citation Network Analysis

I. INTRODUCTION

All over the world researchers are continuing research on many topics of their interest for the uplift of the society and nation. Many researchers are not able to communicate with each other and not able to know what is going on in their field of research. This may lead to repetition of the same work by different researchers and it is waste of time and money and funds. To avoid repetition of the same research work one can use this type of analysis. But, what will be the future research to be done and how to know the future development in the field can be identified by picking the articles that influence the field can be done by citation network analysis (CNA).

Zhang, et al.,[5], CNA to find the influential papers is introduced. The concept involved in CNA is explained in it. Selvakumar and Bavithiraa applied CNA and identified influential papers and succeeded in [3,4].

A. The motivation of this work

The research works of [3,4,5], motivates to identify the influential articles, before researching a field on a particular topic. This will avoid the repetition of the same work by different authors.

B. Main Result of this article

In this article, two influential articles are identified using CNA to research future development.

In section 2, the influential articles are identified using CNA. Present and future development are discussed in section 3. Finally, conclusive remarks and future research are provided.

II. CITATION NETWORK ANALYSIS

In this section how the influential papers will be identified is explained on the topic of DNA cryptography in cloud computing in the field of computer science and artificial intelligence.

First, take the data from the web of science to the topic of DNA cryptography in cloud computing in the field of computer science and artificial intelligence. This data set contains 87 articles. The network of the 87 articles is of the form given in Fig.1. And, on using CNA tools, two influential articles are identified from the networks of 87 articles and it is given in Fig.2. The influential articles are shown in Fig.2. is viewed as a star graph and it is given in Fig.3. The middle node of the star graph refers to the influential article and the end nodes are the reference papers cited in its reference section.

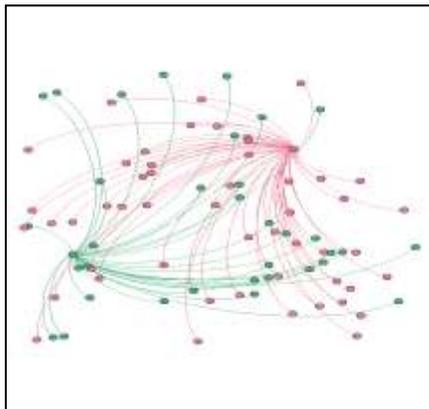


Fig. 1: Network of the 87 articles

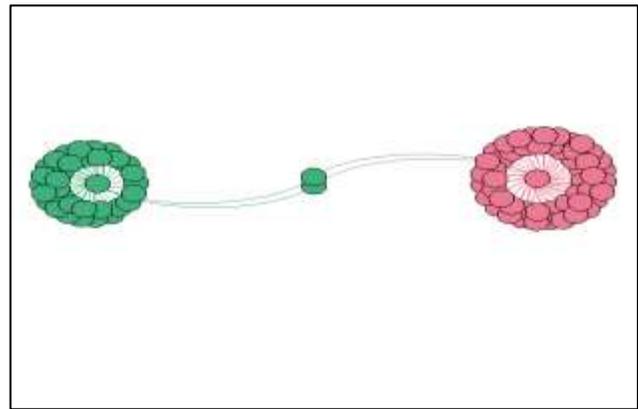


Fig. 2: Influential Articles



Fig. 3: Star graph of the influential articles marked at all nodes of the graph.

The influential articles are,

- 1) Chidambaram N, 2020, Iet Image Process, V14, P3143, doi: 10.1049/iet-ipr.2018.5654
- 2) Clarify A, 2020, Ieee Access, V8, P128548, Doi 10.1109/access.2020.3008644.

These two articles provide present and future developments in this area of research.

III. PRESENT AND FUTURE DEVELOPMENTS

To search, call and compile anywhere, anytime Multimedia files, versatile image storage solutions (hardware and virtual devices) are preferred. In the middle of the security of the suggested image through static data encryption, cloud data security remains a major concern for end users according to the leading market. Analyst reports. on the other hand, global institutions and individuals are interested in using the storage services provided by. Be offered multiple CSPs to enjoy the desired benefits of the cloud platform.

The work proposed by Nithiya et al. in [2] has formulated a well-intentioned security framework that guarantees the highest level of security for all types of color images. The experimental results show that the proposition. The frame is guaranteed impenetrable and unbreakable security and privacy for RGB images with DNA coding and dual chaos. The cloud storage has been connected to the encryption process and therefore has an integrated platform for encryption and cloud placement been engaged in this work. Encrypted images reached average Entropy of 7.997253 and a correlation of 0.002813. Various statistical and differential analyzes have tested resistance to attack.

Future work will focus on developing a standard Multimedia encryption solution and subsequent cloud interface for device-specific applications.

A hybrid, secure and robust HEVC cryptosystem based on DNA sequences, chaotic maps, and Mandelbrot sets is proposed in [1] by Abdulaziz clarify et al.. Arnold card was chosen as the most suitable card for our cryptosystem due to its high-security performance, developing a simple and appropriate strategy for chaotic card selection. to choose the most suitable chaotic map. In the proposed cryptosystem, the encryption process is used independently on each of the three video image channels to further increase data protection and security efficiency. The proposed cryptosystem has proven superior performance for video security flux. The encrypted video frames sent by our The proposed cryptosystem cannot be decrypted by the attacker while using the encryption process randomly created secret sequences and chaotic keys Cards. Also, the advantage of the large keyspace of the proposal Cryptosystem eliminates the effects of brute force attacks. In-depth security scans are offered for the Cryptosystem, visual analysis, histogram analysis, Quality analysis, correlation analysis, noise effect analysis, Differential analysis, attack analysis, entropy analysis, etc. These evaluation indicators which are studied and studied offer higher values than related previous work. In addition, it has been proven that the proposed crypto-system offers a more robust and secure means of communication with different types of multimedia content such as pictures and videos.

In the future, we will be able to use parallel streaming and permutation concepts to further improve the computation speed of the proposed cryptosystem. We also intend to design a multi-level security system for reliable HEVC communication by merging watermarks and steganography Algorithms to strengthen video streaming security in IoT multimedia applications. In addition, we want to develop an intelligent and secure video streaming security system based on new trends in deep learning techniques.

IV. CONCLUSION

This article finds two influential articles on the topic of DNA cryptography in cloud computing in the field of computer science and artificial intelligence using CNA. One can know the present and future development of research in this field. This avoids the repetition of works in different research centers by different researchers.

Future work from the reference [2], the influential paper, will focus on developing a standard Multimedia encryption solution and subsequent cloud interface for device-specific applications. In the future, from the reference [1], the influential paper we will be able to use parallel streaming and permutation concepts to further improve the computation speed of the proposed cryptosystem.

ACKNOWLEDGMENT

This research work was carried out in HRDC, University of Kerala, Thiruvananthapuram, India, and Anna University Chennai, University College of Engineering-Nagercoil, India.

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