# Impact on Textile Industry in terms of Data threat and Cyber Security in Covid-19 Situation

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***Abstract :*** India is a land of textiles. According to various surveys, there are thousands of people that are in this industry. The textile industry is facing several issues in their field. There is a great impact on Covid-19 in this sector. Clothes are an important part of human life. In this research, my main focus will be the crimes that happen through the internet. The purpose of this paper is to resolve the issues of "The textile industry using cybersecurity". Cybersecurity will provide protection to the database. More than 30 million people in the world are being given jobs by the industries. India has the world's second-largest industry to provide employment. The textile industry in India is one of the largest in the world. In terms of value, it contributes 7% of industrial output. In the textile industry, security threats are becoming a concern. Many businesses in business are beginning to use cloud computing for their IT infrastructure services.

***IndexTerms*** **- Cybersecurity, Data Security, Cryptography, Ciphertext, Covid-19, Database, Cloud Computing.**

## I. INTRODUCTION:

The industries are giving employment to more than 30 million people in the world. India has the second-largest industry in the world to provide employment. India's textile industry is one of the world 's largest. It contributes 7 percent of the industrial output in terms of value. Security threats are becoming a concern in the textile industry. The purpose of the study is to provide a clear picture of the threats to textiles and to provide lessons learned from past events.It is noted that cyber attacks have played a significant role in the last few years. To damage the client, they use different types of attack.In 2018 almost 69% Indian industries face. The embrace of cloud computing is a part of the business transition that is the migration from a traditional cloud computing IT environment.

On the other hand, one of the major objectives is an enterprise solution that provides the end-customers with a critical business service .In recent years, many applications supporting the internet are developed like on-line shopping, internet banking and electronic bill payment etc.

Fig(i):Thread making in Textile industry.

## II. LITERATURE REVIEW:

The main purpose of this study, which is to solve the industrial problem, has left us with the problem faced by China in their industries. China's textile industry faces challenges. Next, emerging countries with ample labor force and trade preferences are becoming foreign buyers ' favorites. Second, labor costs are rising and the price of raw materials in China is fluctuating.The Indian Textile has reported 90% of loss in the Month of April. The lockdown affected the Indian economy.

Research reports and papers on the study of the status and developments of the textile industry are available. Cyber crime is on the rise every day. Data morphing is also being used for days to damage the rival team or industry.

The ratio of these crimes is increasing day by day to solve these issues. We will use data security and cyber security. The terms cyber security and data security are the same and they both are used to protect the data but the difference between both the terms are data security it's all about securing the data from malicious users and threats whereas cyber security deals with danger against cyberspace.

My main objective in this paper will be to highlight the crimes that are happening due to Cyber Security. Based on the literature, most researchers agreed that analysis of features is an important and most difficult component in the field of image processing[2]. The corresponding algorithm and technique currently available for feature analysis is still limited. So much work is still needed.

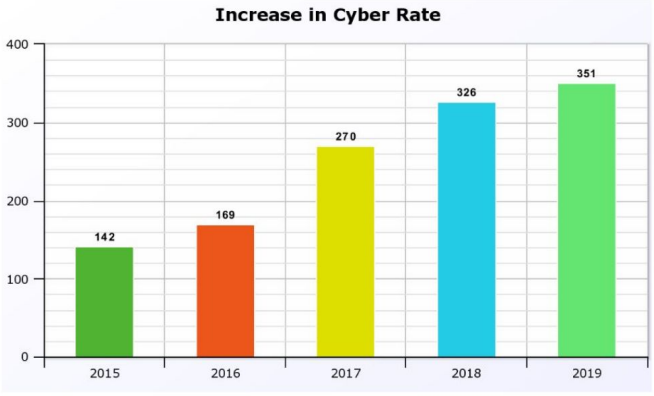


Fig.(ii)Graph to tell the increase in cyber crimes happened over years.

## III. RELATED WORK:

The textile industry is the backbone of the Indian economy. Cyber security was not an issue 20 years ago. But now it's an issue of concern. Automation has become a part of Industry 4.0 .Global corporations are influenced to include new technology like artificial Intelligence, autonomy robotics and system irrigation. The complexity of cyber security is being overlooked by several industries. The following reports in the textile industry on cyber security aims to provide the analysis in cyber security in the manufacturing environment. It addresses the presence of the threats and malware that can affect the security of the data. Main focus of the research is cyber threats that are in action and to try the ways that can be used to solve these threats . Industrial Controlled systems are the most common "Cyber-physical systems" it is the combination of software and the hardware .Any technology can be used to attack Industrial Controlled Systems with malicious and non- malicious activities. Always be prepared to identify the areas of vulnerability prior to getting internal and external risk.

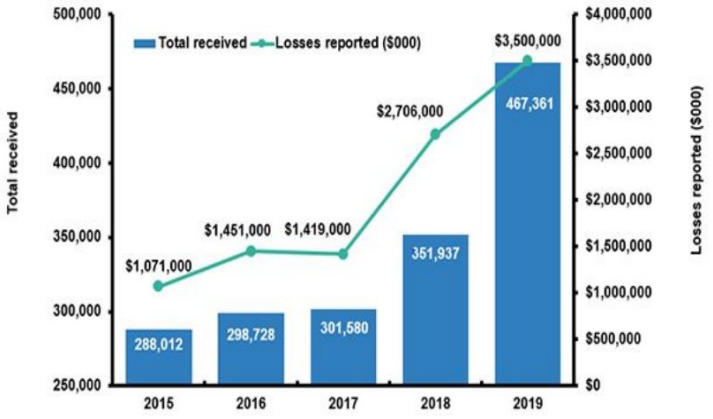

Fig.(iii) Graph of the cybercrimes happened over years.

## IV. DATASET:

Every search needs a data set to operate properly In this research paper we have search for the data set from. The different sites and different newspapers, magazines to analyze the Cybercrime that are happening all over India. The traditional sectors are paying more attention to cyber threats. The major attack to the manufacturing industry is borne at their home. Cyber security has become critical to the manufacturers. They are dealing with the highest number of the ransomware attacks.

## V. METHODOLOGY:

Now we will study about the cryptography that is used to reduce the problem of cybercrime by encrypting the users data. So, that no one in between can change the data. The cryptography works on two basic mechanisms that are Encryption and Decryption. The user will send the plain text to another side the hacker that is sitting in between will try to make the change the data in encryption. We will change the plain text to cipher text. Cipher text is the result of the encryption algorithm performed. When the data will be received by the user it will again change to plain text this mechanism is known as Decryption. It is the science that uses mathematics to encrypt and decrypt the data.

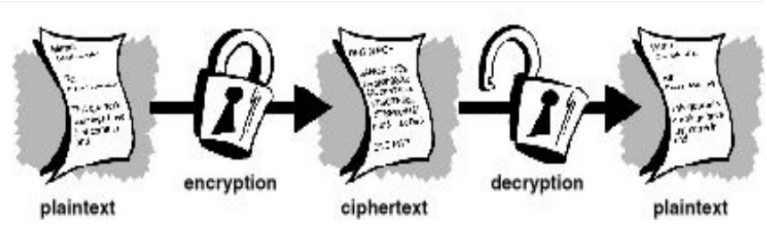


Fig.(iv) Shows encryptions and decryption of the text.

## VI. COVID-19 IMPACT:

Now we will study about the impact of covid-19 to increase the cyber-attacks and data threatening. In this Pandemic Social distancing is important. These people are communicating online and that's what increases the cyber threat. The cyber-attacks increase. It forced the organisations to follow the new practise like remote working. The companies are hiring the new staff remotely. There is a spike in Ransomware, Phishing and Malspams attracts. The people that are downloading the covid instructions ransom ware are automatically downloading in their system.

## VII.WORKING:

Cryptography works on different algorithms. It is a combination of a key, a word, a number or a phase .The keys that are used to encrypt the plain text and to decrypt that text are different. The strength of algorithms and the secrecy of the keys define the strength of the cryptography.The values that work with the cryptography to encrypt the data are known as keys. The bigger the key, the more secure the cipher text. If you want to encrypt the file for a long period of time then the large key will be a better choice. The keys are stored in two files in our hard disk one for private keys and one for public keys. Open PGP performs this work to save the keys. The file is named as" key rings". Private key and public key both will be saved in different files, private keys will be saved in a private file while public keys will be in a public key ring file. If the private key is lost the data can't be decrypted again.

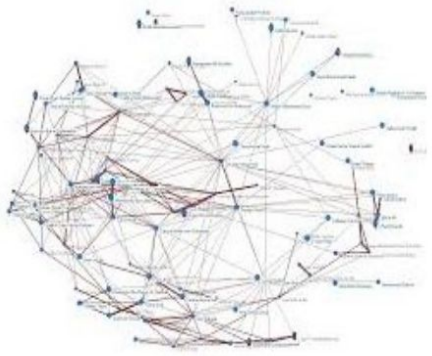

Fig.(iv) shows the l relation between the Graph theory and cryptography

The major issues of the concern for the modern cryptography are:

I. Restriction: The data will be kept confidential. To protect from unauthorised readers.
II. Probity: No, one can access the file except the sender and the user.
III. Authentication: The sender and receiver should check the identity of each other.

If the sender and the receiver both will share the same key it is known as symmetric cryptography. They must have a shared key with them. If two different keys are shared then this is known as asymmetric cryptography.
For encrypting a large amount of the data it is preferable to use the symmetric encryption method. On the other hand asymmetric is slow and it can only encrypt the piece of data that are smaller than the key size
There are multiple end points and various backend servers are available in the software system that can increase the risks of the malware attacks. The networks that the client and server do communication can't be trusted

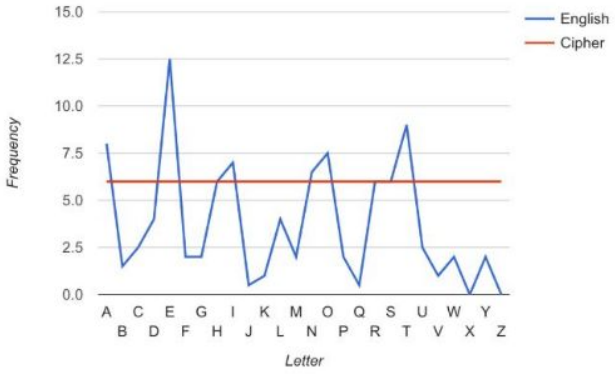


Fig.(v) Polyalphabetic Ciphers

The letters are selected randomly so there is no pattern or system that shows us how the letters are selected. The red line in the graph indicates the perfect cipher as every alphabet has appeared equally likely in the encryption method.

**VIII. EVALUATION METRIC:**

I. Encryption Time: The time that is taken to convert plain text to cipher text is known as encryption time. Block size of the plain and cipher text is the main factor on which it depends.

II. Decryption Time: The reversing back of cipher text into plain text is known as decryption and time taken is known as Decryption time. It is desired to take less time.

III. Memory Requirement: It varies from the algorithms that are used .It depends on the operations done by the algorithms.To manage the cost it is desirable that the memory requirement should be small.

**IX. RESULT:**

The cryptography is based on sending and receiving encrypted and decrypted data. In research we will pass the String and we will read the content of the string then that will be encrypted the text entered will be changed by other alphabets. In the coding part we will use the for loop that will the n numbers of times entered by the user and we will use switch case to change the Alphabets.

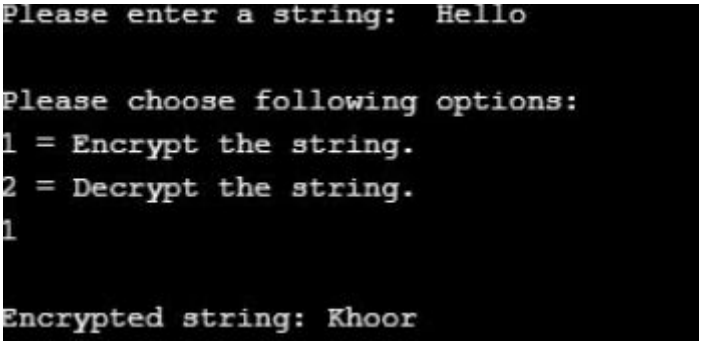


Fig.(vi) This shows the encryption part of the string. Where It will replace the Plaintext to ciphertext.

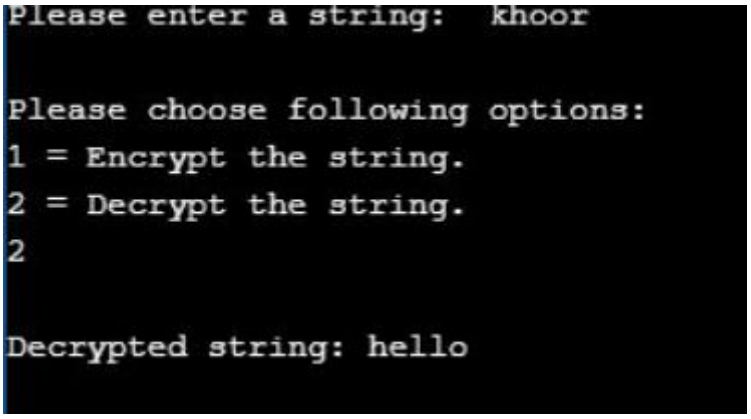


Fig.(vii) This shows the decryption part of the string. Where It will replace the ciphertext to Plaintext..

**X. CONCLUSION:**

It's in our hands how to keep our machines safe. Cryptography plays an important role in providing safety against these types of cybercrimes. The proposed system is a good and efficient way to provide the security to the firewall and to protect our data from the hackers. It provides us with a safe communication platform. The END to END is successfully completing the tasks they are performing. Cryptography might fail to perform the task that is required

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