

# Cyber Security

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**Abstract**-The main objective of cyber security is to protect the system, data or information from any kind of attack or threat. Today, the security is the main concern because our data is stored in system now we can say that we are totally depend on computer system. We stored the personal information, credit card information, financial information. So in these type of cases there is more chances to lost the data.

So, there is a need of security analyst to handle the data.

**Keywords**— Cyber security, Security areas of cyber security, types of cyber attacks, Cyber security challenges

## I. INTRODUCTION

It is mainly the protection of internet connected system including hardware, software and program or data from data attack. It is mainly made up of two words one is cyber and other is security. Cyber is mainly related to the technology which contains systems, network or program. Whereas security related to the protection which includes system security, network security and application and information security. It is used to protect information from attack. It is the security of your system from any type of attack. Now, at the time of technology from is very important to protect the information from the threat, being stolen. Security is important in the emergence of technology we all access the internet but we don't know within a minutes our data or information can be hacked or stolen. All sorts of data it is government, corporate or personal need high security, if the data is belong to

Bank, development organization and research etc. are highly confidential and the negotiation of small amount of data may cause damage to whole nation. As we live in digital era our private

information is more important than before. As we live in modern era our all information are stored in computer system like personal information, accounts information, financial data for which unauthorized access can be negative effect.

## II. Types of cyber attacks

A cyber attack is an profiteering of computer system and networks. It uses the malicious code to modify the computer code, data lead to cyber crimes, such as information and identity theft. In the digital era most of the people use computer and internet. Because of the dependency on digital things, the illegal activity is increasing and changing like any type of crime.

There are mainly two types of attacks are given below:

### 1. Web based attacks

These are the attacks which is mainly occur on a website or web based application. Some of the important web based attacks are:

1. It is the attack in which some data are put into the web applications to change the application and retrieve the needed information.

Example-sql injection, code injection etc.

### 2. Brute force

It is a type of which mainly uses a trial and error method. It generates large no. of Guesses and validate to acquired actual data like user password and personal

identification no. It is mainly used by criminals to crack encrypted data.

#### System based attack

##### 1. Bots

Bots or robot is an automated process which is automatically run in the system, while the other bots are executed accepting the input based on the command.

##### 2. Backdoors

It is a method that bypasses through the authentication process. Developer can create Backdoor so that an application can be accessed.

#### Cyber security challenges

Today cyber security is the main concern about the national security and economic security. To watch out the security of the system organization is hiring the analyst to make sure that their data is secured.

The cyber security challenges are:

##### 1. AI Expansion

It is an area of computer science which is mainly the creation of intelligence machines that work and react like humans. Some activities of artificial intelligence are speech recognition, problem solving. The main role of cyber security in the artificial intelligence has to protect the data when the attacks begin.

##### 2. Iot threats

It is a devices which can be accessible through the use of internet. When iot

were designed it was not in mind about the use of cyber security for the purposes. So every organization working with the cyber security professionals to sure the security of password policies, user verification and security protocols to manage the risk..

##### 3. Blockchain revolution

It is the most important invention in computing era. It is a technology that permit cryptocurrencies like bit coin. It is Difficult to anticipate what block chain systems will present in concern to cybersecurity. The professionals are making only some guess concerning block chain.

III. There are various security areas which are used in cyber security are:

##### 1. Information security

Information security is mainly defined that whatever the information we have it must be safe or protected in any way. Information may be about related to business, personal information or may be another information. But the information may be disclosed to the authorized parties not in between the unknown person. It is necessary that when you send the data make sure it must be accessed by the authorized user when requested (available).

##### 2. Wireless security

Today, the wireless network are not secured as compare to the wired one. It is the prevention of unauthorized access or damage of data using wireless networks. The most common types of wireless security are Wired equivalent privacy (WEP) and Wi-fi protected access (Wpa). In the wireless network hacker easily find the network to break into and use wireless technology hack it into wired network. There are policies which are

used in wireless are Wireless intrusion prevention system or Wireless intrusion detection system.

### 3. Mobile device security

Mobile device security is also necessary to protect your personal information or business information. You must need to know how much your connection is secure and your network connection must be secure so nobody can access your connection easily. If you are sending the data it must be secure nobody can try to hack the data or information easily. Restrict access to data use Security password, pin code, Pattern screen lock.

### 4. Web security

Web security are mainly the security of web application, websites, web services etc. Web security actually protect your website or web application being hacked by unauthorized person. Web security just less the chances of being hacked or damage your website. The divination of your information is crucial to protect websites, applications, and services.

### 5. Email security

Email security is a priority for all businesses, with growing threat of hackers, viruses as well as to secure information. It is the security of your email. Email security application block incoming attacks and it control out messages to avoid the loss of data.

## iv. Conclusion

In the digital era cyber security is needed for everyone in every field. Cyber security mainly focuses on the security of data, and information from any kind of threat, vulnerability and hacked. Cyber security tell us how you can secure your data confidentially and how to avoid your data with the unauthorized access. It mainly secure the company information and personal information and always protect your password. It is the basic need of today's generation to secure their data. It allows that whatever the data you have it must be well secured.

Always get up to date try to update your system time to time and also your other devices get updated timely.

## v. References

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