Title Page

Title: Layered Securation

Name: Praful Raju Awasarmol

University: Mulund College of Commerce(Autonomous)

Course: Cyber security

Date: May 2025

Abstract

In recent years, cybercrimes have reached a peak due to rapid advancements in the field of computer systems. Hackers have become smarter and use social engineering techniques to trick individuals into sharing confidential information. This research aims to secure systems from every possible perspective, focusing on the needs of end users. A uniquely next-generation method is used, involving deep thinking, observation of user interactions with attackers, and identification of vulnerabilities in systems. The findings highlight the importance of awareness against manipulative tricks. The approach works on the concept of layered security, implemented through algorithmic mechanisms.

Problem Statement

In todays Worlds technological Advancement at rapid improvement stages. According to security Field attackers building different kinds of strategy for manipulating, getting into the systems and tricking the People for their own benefit. Its problem so vast that many peoples have lost money, privacy and disrupt and also social is get disturb.

Objective

This Research main objective is to protect the Whole system from n number of hackers by providing valuable Services to secure in every possible way. Not only from getting secure but it will also make ensure and Alert About the attack.

Literature review

According to the Security Solutions are also rapidly given by the experts and providing the more Secure features to be more systematically be organised. It's a term of layering of any Systems software, Tools, accounts, or other. Layered Securation consists of Layered Security algorithms and script to Secure the system. The Algorithm will have as combination of many other known algorithm in cryptography and Network Security and also newly created algorithm in present time. It will Integrate all known algorithm use in cryptography, quantum computing and Security related field. It combining all newly algorithms with early designed algorithms and the cycle will go on.

Layered Securation is a security providing method in a organized manner with systematic integrating multiple algorithms at once. It's a providing a shield to the system just as ozone layer is protecting from ultraviolet rays of sun.

Its very much reliable and useful method as its uses multiple algorithms, self-algorithms with high performance. The base of the attacker mind-set can be decode by the software itself.

Research Methodology

In this research mixed-methods approach combining qualitative & quantitative research method is being used.

As this purpose of research methodology of where its an understanding of many other known security providing algorithms. As the its also have types of Layered Securation with all its at special level.

Types of Layered Securation

- **Repetitive Layered-Securation**: In this type of Layered Securation one algorithm is use multiple times or n times encryption and same for decrypting n times.
- **Double Repetitive Layered-Securation:** Its use two algorithms simultaneously n+1 times for 1st algorithm and n+1 for 2nd algorithm. As per decrypting Layered Securation for both is n-1 times.
- **Poly-Repetitive Layered-Securation:** Its uses multiple algorithms or more than 2 algorithms simultaneously. Its uses n + N as for encrypting and for decrypting n – N is used where N > 2.
- **Mathematical Layered securation:** This is a special type of securation provides wide range of concepts its main concept is encryption and its reverse concept will be as decryption for securing.

- **Science Layered securation:** This is another special securation as science will be as for encryption and reverse science for decryption.

As above are all 5 types of Layered securation by which we can have its sub Layered securation as well. It will provide high security as per complexity of each.

Tool Implementation (with no tool)

The algorithm is the main thing in this research by which we can secure the system itself till its all applications externally installed. Below is the algorithm use as master algorithm.

The Algorithm for Working of other algorithms

ALL-AlGO Algorithm

Steps

1) Take the input as cipher text, Account Profile, password.
2) Layer1 Security Algorithm
   a. Files Stores where all algorithms are Stored in code format.
   b. Random Numbers & Alpha keys to provide more security and also automatically gives info about what other values are being used.
   c. Implement it.
3) Layering steps [Layered n+1] to Layered [n] (checking or additional Layered Securation or Choice based) .
4) Repeat step 2 and step 3 according to system memory size.
5) Stop the Execution until fully secured the system.

 Below is the example for the above algorithm
Ex:- Securation of Account Profile
1) Input: Account Profile
   i. Meta data
   ii. Password
   iii. Username & Name
   iv. Link
   v. Data: Post as an example
   vi. Phone number
   vii. Email Id
   viii. Others
2) Layered1 Securation Algorithm getting in use

      i. It will see check the folder and open All files (choose as number of algorithms as needed. For example supposes around 5 securing codes are available then choose all as per need.

    ii. The system itself will give immediate Response to the user.

   iii. Implement it.

3) If not chosen all files at first, we can navigate to next group of files and Select all.

4) Repeat step 2:-> As its consists of steps to Integrate previous with new algorithm. Repeat step 3:-> As it move to next file for the other codes.

5) Stop the execution until fully secured the system.

Therefore we can see how this algorithm works on account Profile perspective that how its check for all Securation of the account Profile.

Result & Observation

As the results of this research is the main motive is to give an extra coverage of securation and have a shield as the system itself will protect itself from the attackers.

Due to the Observation its Understandable that we can have Advanced Securation software as preinstalled so that it will have less interaction with attackers at first stage.

Ethical Impact & Market relevance

Its an ethically build Securation system which can have capabilities to protect data, secure it through the algorithm with transparency, trust from each other. Integrity is reached highest peak make the system unbeatable and unbreakable system.

Its market relevance will have an Upper hand as it can be used with Low cost as per end user need and it can be also depending upon beginner level

companies is Low cost or free also for 1 year free trial, Intermediate as will have little High cost or budget friendly, and Large or Big giants can have high cost as ranging from 10 Thousand to 20 Thousand. As its so much benefit without premium it will provide Securation 70 to 80 percent with one feature that it will have contacts with nearby cyber crime agency, it can have practical use as it can be use by a nontechnical person.

It will have self-innovatory system by which we doesn't need to update as its self update itself which can be helpful Without premium need. As the Demand for Security today is needed as many scams are happen like bank fraud, profile steak ,privacy sensitive and more. It can be more in provide wide range of securation of all whole system.

Future Scope

It's a Securation process where it not only will get self-innovatory but self working too in the Future with feature to detect vulnerabilities, to manipulate attackers system and give report to the directly to the cyber crime cell.

In Future it will have Scope at what it can understand the process consciousness of Human brain and also unlock the new advancement Ideas itself without external and can be useful too have high risk taker software.

References

https://www.cloudflare.com/en-gb/learning/security/glossary/what-is-defense-in-depth/

https://www.ericom.com/glossary/what-is-layered-security/

https://www.geeksforgeeks.org/7-layers-of-it-security/

https://jetpack.com/blog/layered-security

https://informatics.nic.in/uploads/pdfs/
dd647eae_25_27_inf_cybsec_did_compressed.pdf

https://gomindsight.com/insights/blog/what-are-the-7-layers-of-security

https://blog.totalprosource.com/traditional-security-vs-layered-security-
identifying-the-differences

https://cmitsolutions.com/richardson-tx-1049/blog/what-are-the-three-main-
elements-of-layered-security

https://www.redqor.com/layered-security

https://en.wikipedia.org/wiki/Defense_in_depth_