

STEGANOGRAPHY
WITH
CUSTOM CIPHER

SUBMITTED BY

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RESEARCH AREA

This project involves the development of a website that use to conceal the information with the help of steganography along with custom cipher.

PROBLEM STATEMENT

Military and defence organizations rely on various methods to communicate covertly with each other or their operatives. However, many of these methods are vulnerable to interception, decryption, or exposure by adversaries. Therefore, there is a need for more secure and robust techniques to ensure the confidentiality and integrity of sensitive information especially while sharing the information with RAW agents or spy

EXISTING SYSTEM

In the current landscape, confidential information is often exchanged within private networks, which are presumed to be secure. However, despite these precautions, there remains a potential vulnerability. Unauthorized access, whether due to human error, system flaws, or malicious intent, can jeopardize the integrity of the entire system. If such a breach occurs, the consequences are severe: sensitive information may fall into the wrong hands, compromising not only security but also the trust of stakeholders. To mitigate this risk, it is crucial to explore advanced methods of secure communication

PROPOSED SYSTEM

In this system, custom ciphers are employed to encode or decode sensitive information. These ciphers can be tailored to meet specific security requirements, ensuring robust protection for confidential data.

Additionally, the system incorporates steganography, a technique that allows the hidden embedding of information within seemingly innocuous files, such as images.

By concealing the encoded data within an image, the system achieves a dual layer of security: the encrypted content remains confidential, while the steganographic cover ensures that the presence of hidden data is inconspicuous.

Overall, this proposed system combines cryptographic strength with covert communication, making it a powerful tool for secure information exchange and protection against unauthorized access.

OBJECTIVES

The main objective is to create a website which can perform the following features

- Steganography of data
- Custom cipher creation and usage

REQUIREMENTS

HARDWARE REQUIREMENTS:

PC or Laptop

- Processor i5 or more
- 4GB RAM

SOFTWARE REQUIREMENTS:

OS: Windows 10 or 11

IDE: VS code

Database: PostgreSQL

Framework: Django Framework

Languages:

- Python for Backend
- HTML, CSS, JS & Jinja for frontend

MODULES

ADMIN

This module encompasses the administration functions and systems within the overall system, including data handling and user management.

USER

This module encompasses user registration, login, and all other user-related activities.

STEGANOGRAPHY

This module mainly encompasses of codes and algorithms related to steganography

CUSTOM CIPHER

This module is related custom cipher made by the user, which is used to encode and decode the information before and after steganography respectively.