Student Details

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Internship start and end date : 3/june/24 to 12/july/24

Project title:
Hiding a text In a image using steganography

Problem statement:

* A client required to send a secret message to a business man suchthat other can't read that message. He requires a new technique because the old ones are getting easy to decode and read that message .

AGENDA

* The main agenda of the project is to tell about steganography, method of steganography(image steganography), working of steganography. Thus the project involves encrypting a text and decrypting a text by the authorized users only.

PROJECT OVERVIEW

The project involves :

- Cover image
- secret message
- Stegano image(encrypted image)
- Encryption and decryption algorithms

The project on image steganography is the practice of hiding a text or content in a digital image in such a way that is undetectable to human eye. The specific users or the authorized persons can decode that image and can read the secret message.

Aim and uses of the project :

1. The main aim of this project is to send a secret message and this will increase the use of image steganography for communication in such a way only authorized users can read the data .
2. This eventually decrease the loss age of data . Nowadays hackers are increased, everyone is curious to know about other . Image steganography helps us to avoid these things

WHO ARE THE END USERS of this project?

The project is helpful to everyone .so, there are so many end-users for this project. Some of them are:

1. Business people
2. students
3. IT employees
4. Security staff(army,police, navy,etc)

- Every business has a secret and key points, if the business person has to share this with new business partner then this will help them to share the information secretly
- The students would like to communicate in new and secret methods
- The IT (software developers,company officials,etc) has the need of the secret communication
- The security staff are the major users of this project because they have to communicate with each other without alerting the enemies

Not only these people . The people who want to communicate secretly with each other ,will be the users of this project .

YOUR SOLUTION AND ITS VALUE PROPOSITION

Description :

The proposed solution is an advanced image steganography system designed to send a message (secret content) in a simple and secure manner. The algorithms used in this project helps us to send the secret message with micro changes in the image .

Features of steganography:

1. **Invisibility :** The image steganography hides the secret text In a image
2. **Security :** It has more security when compared to the old methods
3. **simplicity :** It is easy to execute and as well as to understand
4. **Resilience :** The hidden information should withstand attempts to detect or remove it
5. **capacity :** It has the ability to hide a significant amount of data with in the cover image

How did you customize the project and make it your own

- I have customized the project by the use of steganography techniques, user interface, error detection and correction of errors.
- Coming to steganography techniques these will help the the users to send secret message in a new way.
- By detection and correction of the errors, the user can work on the steganography in a quick manner and also it will generates the output quickly because of less errors
- In this way I customized my project and make it as my own

MODELLING

- Image steganography involves hiding secret message within digital image In a way that conceals the presence of message . It involves developing mathematical and frameworks to design
- This includes ensuring the data is secure and extracting it reliably

Steps in modeling :

1. Understanding the basics of steganography
2. Embedding the payload
3. Generating stegano image
4. Extracting payload
5. Evaluating the method
6. Implementing
7. Testing and validation

Results

This project results to generates a same image before and after encryption . This results, to increase the security level and as well as to send the secret message with high security. By advancing these steganography techniques and sharing knowledge with the academic and professional communities. The project has made significant contribution to the field of data security and as well as sending secret messages.

Before encryption :

After encryption :

links :

https://github.com/Eswar-14/steganography-final-project