

# Universal Steganography Tool

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## Description

This project is about hiding secret text messages inside images so that no one can notice them.

The project will allow users to hide a message inside an image and later extract the hidden message.

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## Features

### • Hide Secret Message

The user can enter a text message, and the tool will hide it inside a selected image without changing image looks.

### • Extract Hidden Message

The tool can read the modified image and extract the secret message that was hidden inside.

### • Simple User Interface

A very simple and easy-to-use. where the user selects an image, types a message, and gets the encoded image.

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## Technology Stack

- **Python**
  - Pillow library for image processing
  - LSB technique for hiding data
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## Brief Implementation Details

The tool will work in two main phases:

### 1. Encoding (Hiding Message)

- Load the original image.

- Convert the secret message into binary form.
- Modify the LBS of image pixels to store the message bits.
- Save the new image containing the hidden message.

## 2. Decoding (Extracting Message)

- Read the modified image.
  - Extract the LSB bits from the pixels.
  - Rebuild the original message from these bits.
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## Week Wise Timeline

### Week 1

- Understand basic steganography concepts.
- Learn how images work in Python using PIL.
- Write a small script to read and write image pixels.

### Week 2

- Implement the encode function to hide a message inside an image.
- Test the encoding on small images.

### Week 3

- Implement the decode function to extract hidden messages.
- Combine encode + decode and test full workflow.

### Week 4

- Create a simple UI or clean command-line interface.
  - Final testing, debugging, and documentation.
  - Prepare final presentation.
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## About Me

- **Personal Details:**  
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- **Why should I be selected for this project?**

I am excited about learning infosec concepts and want to build real working tools. This project will help me improve both my coding skills and understanding of digital security.
- **Any other commitments?**

I can devote around 3-4 hours daily. I can balance my study schedule and contribute regularly to the project.