

File Secure Tool

Securing your data with advanced encryption.

 by CHINNI KRISHNA





Introduction

1

AES Algorithm

Strong encryption for sensitive data.

2

User-Friendly Interface

Easy to use for everyone.

3

Notifications

Clear feedback and guidance.

4

Complete Features

Encryption, decryption, restart, and close.

Problem Statement

Data Security

Growing threats to sensitive data.

User-Friendly Solutions

Lack of easy-to-use encryption tools.

Key Management

Complex process for managing keys.



AES Algorithm Overview

Symmetric Algorithm

Same key for encryption and decryption.

NIST Approved

High security standard for sensitive data.

Block Size

128 bits for robust data processing.

Key Lengths

128, 192, and 256 bits for increased security.

Project Workflow

1

User Input

File upload and key provided.

2

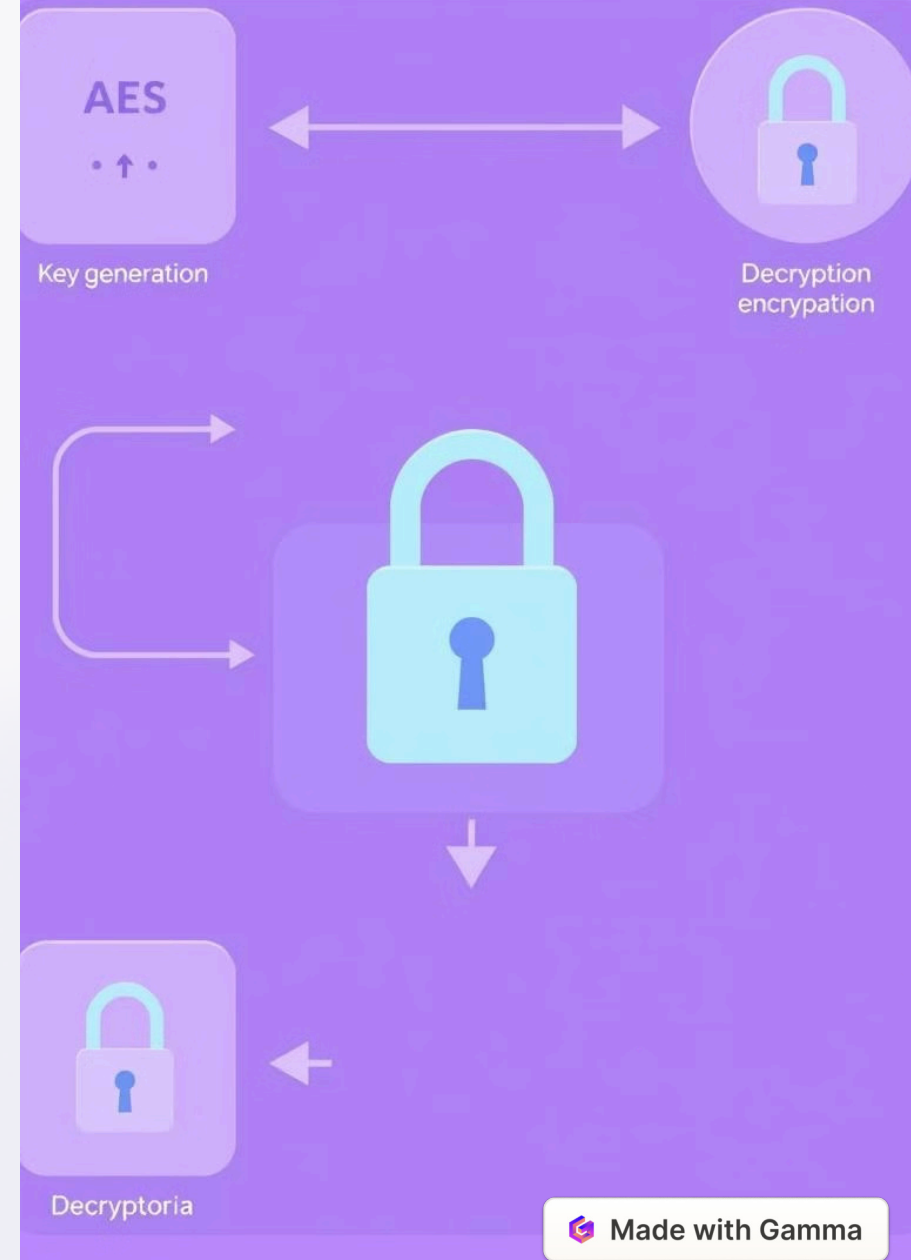
Encryption/Decryption

AES EAX mode for security and authentication.

3

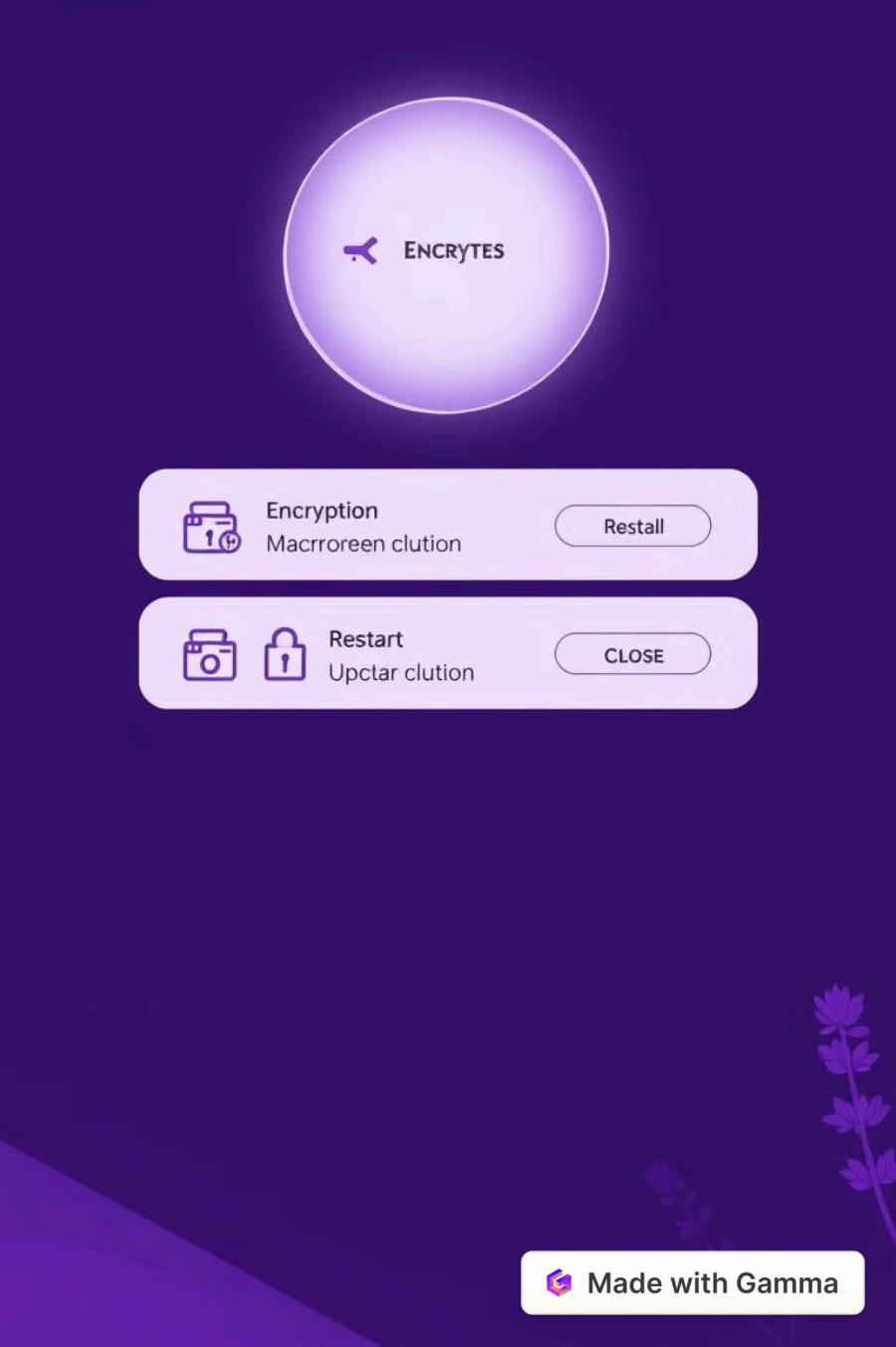
Output

Encrypted or decrypted file saved.



Key Functionalities

Encryption	Decryption	Notifications	Restart/Close
File upload and key input.	Upload encrypted file, enter key.	Success, error, and prompt messages.	Options to restart or exit the application.



```
custringall toCMAIL.com ADS Eryption }
puphous (actim:
phothis i purated-e(deodIEEDS))
decrpitenall andron-teleAGLIdterter:(fe)
    }
cratfis ancybalcoderdilsinen) <( ADL $13pe.> (Instet))
leen: <>
```

Code Highlights

1

Encryption

Utilizes AES EAX mode for secure encryption.

2

Decryption

Verifies data integrity during decryption.

3

GUI Snippet

Simple GUI implementation with tkinter.

GUI Features



File Upload

Select files for encryption or decryption.



Encryption/Decryption

Process files with the chosen key.



Key Input

Enter or generate a secure encryption key.



Notifications

Provide feedback on the process and potential errors.

File Secure Tool



File security



Sup yourre precentiat

Lhe calliyade your capx sullect sesfor for your ne to notifiedt yus a your salless.

Uney pattion.

Alsority of yoe to incone of your

Enjstrve eney:

File patch

Treruptistal:

Eill optort.



Literoyour reagemens

File partiod lsnopricing



Obyyroure ressyment



Use care yotphous skle liferunp and efirperiences



Viispual four upload/ successssful lcnrfor the celecseft.



Made with Gamma



Challenges Faced

Key Management

Handling key length and security.

1

File Validation

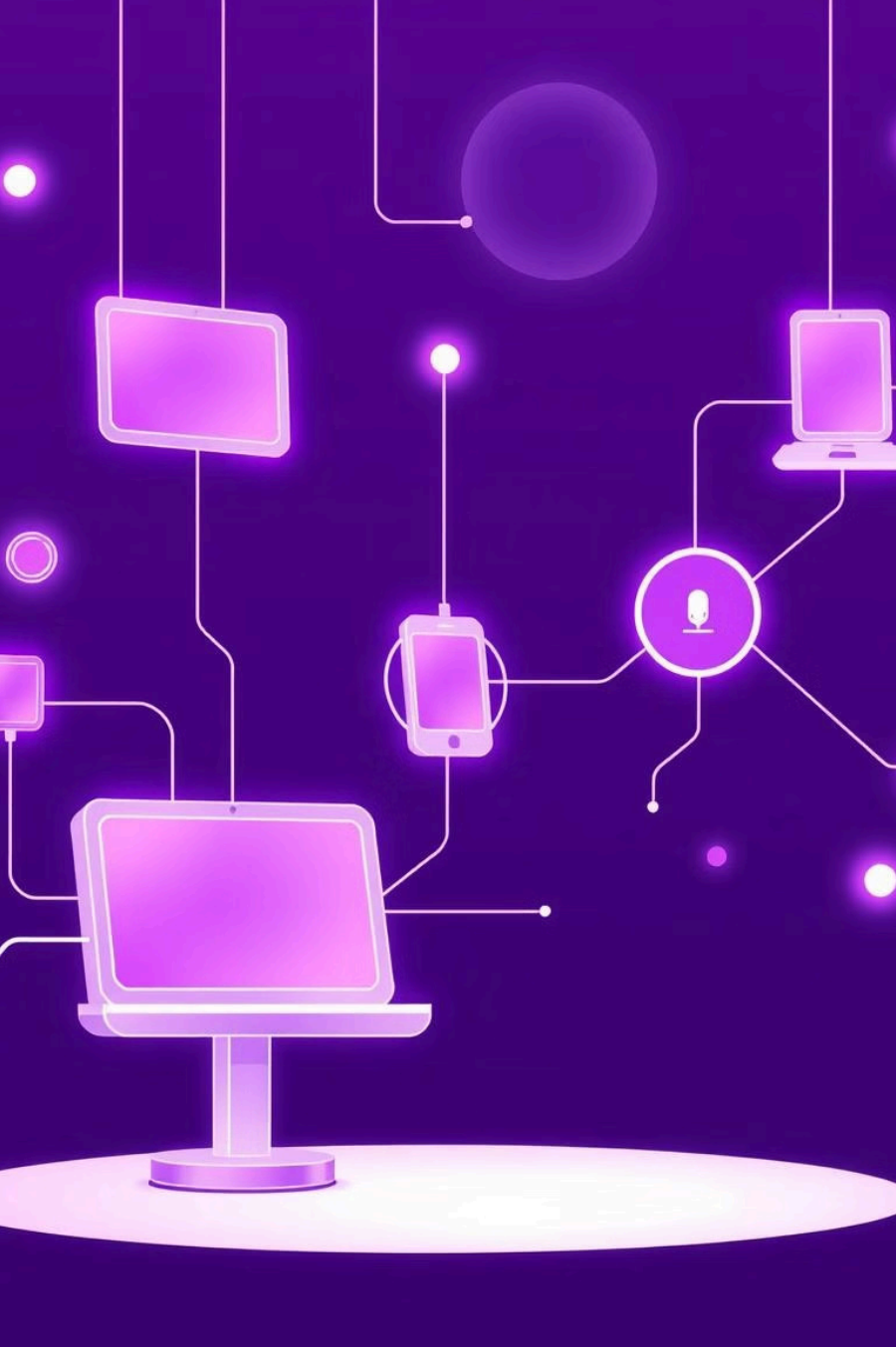
Ensuring valid file types and handling errors.

2

User Interface Design

Creating an intuitive and user-friendly GUI.

3



Future Improvements

1

Key Generation and Storage

Secure key generation and storage for users.

2

Additional Encryption Modes

Support for different encryption modes (e.g., CBC, GCM).

3

Multiple File Support

Ability to encrypt or decrypt multiple files at once.

4

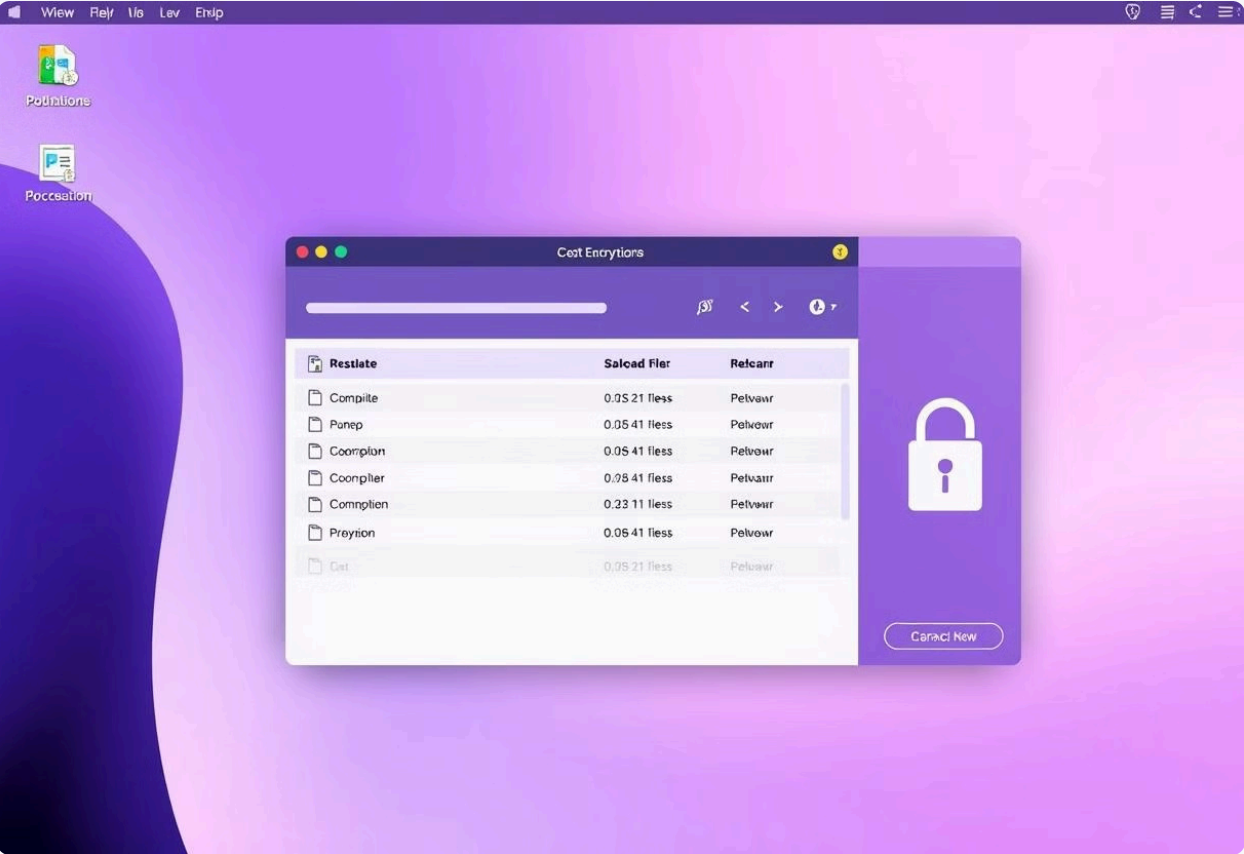
GUI Enhancements

Improved aesthetics and features for a better user experience.

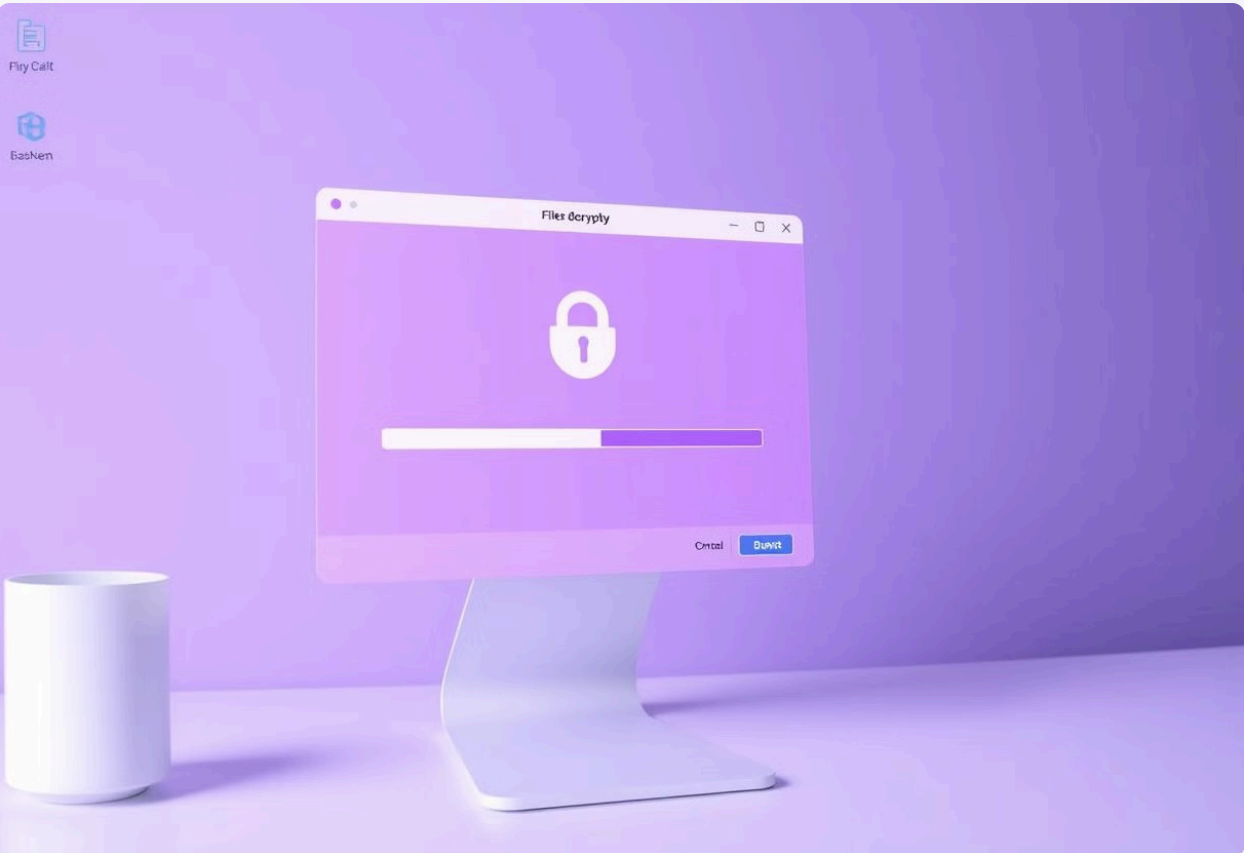
Demo

Showcase the key features of the File Secure Tool with interactive demonstrations and engaging visuals.

The main interface provides a clean and intuitive layout for users to easily navigate the encryption and decryption processes.



The file encryption window allows users to seamlessly encrypt their sensitive data with the secure AES algorithm and customizable key options.



Similarly, the file decryption window enables users to decrypt files by providing the necessary encryption key, ensuring the integrity of their data.



Conclusion: A Secure and Intuitive File Encryption Solution

The File Secure Tool offers a robust and user-friendly approach to protecting sensitive data. By leveraging the power of the AES encryption algorithm, this application ensures the confidentiality and integrity of your files, giving you peace of mind when handling critical information.

