PyVidCrypt:
Python Video Encryption

Group 2

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Summary:

In this project we will be taking a video feed, encrypting the feed, transmitting it across the internet using the TCP protocol, and decrypting it at the endpoint server to display for the clients that choose to watch the feed. The technologies we will be using will be Python for the video transmission, along with a chosen encryption symmetric algorithm for the video data, and Python Flask for the frontend output. For the client, we will be using one of our personal laptops to transmit the data to our server using a socks proxy. Through this project we aim to properly transmit the video data securely and efficiently.

The test we will be doing:

1) Video fidelity by testing the fps on both ends and testing the slowdown between one end to the other.
2) FPS test before encryption and after encryption.
3) Looking at the video packets before encryption.
4) Analyzing the encrypted video packets to find the difference between before and after encryption.

Objectives

- The importance of encryption and decryption.
- Ensure data privacy of a transmission over the public internet.

Deliverables

- One Client and one Server Executable package
- Source code releases which can be found on the Github
- Video demonstration of the working project
- User Documentation