

# Steganography

- *Hiding Data Within Data* -

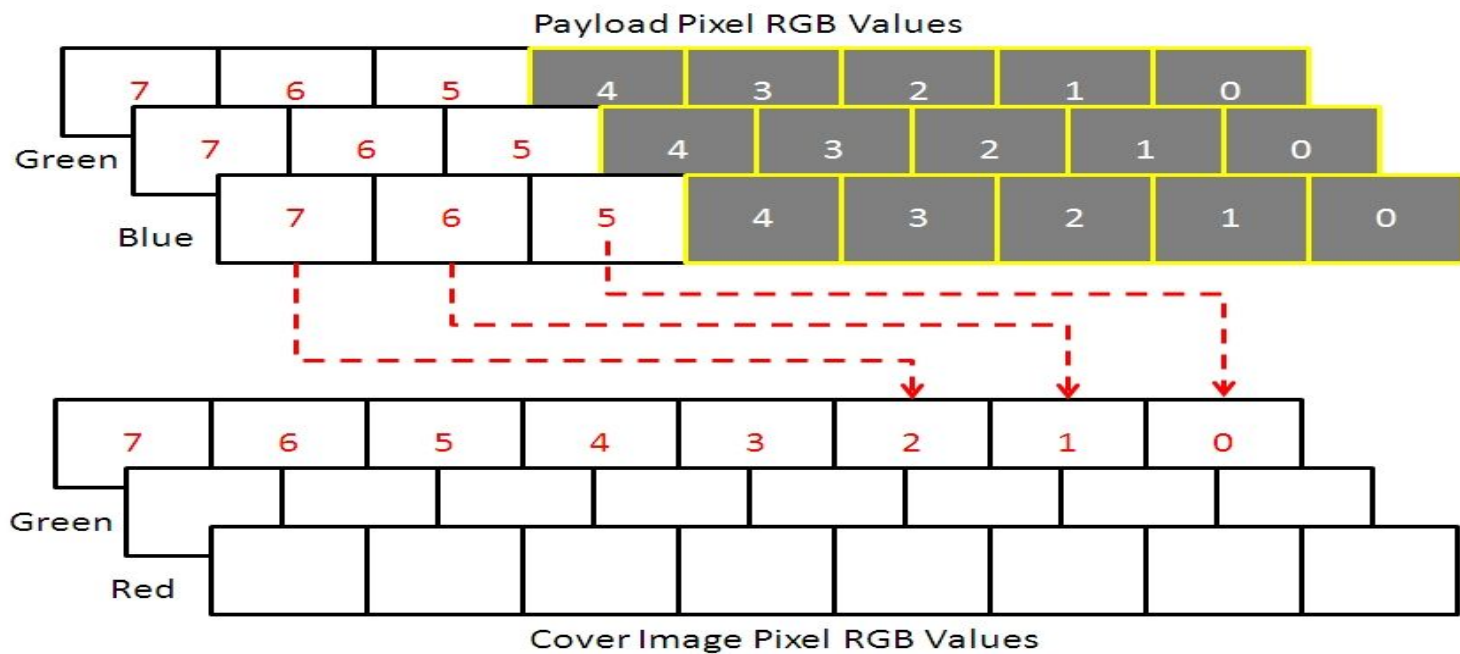


*The word  
steganography is derived from the Greek words  
“stegos” meaning “cover” and “grafia” meaning  
“writing”*

*defining it as “covered writing”. In image  
steganography the information is hidden  
exclusively in images.*



## Least Significant bit replacement



4

## Cover image



Before hiding an image inside



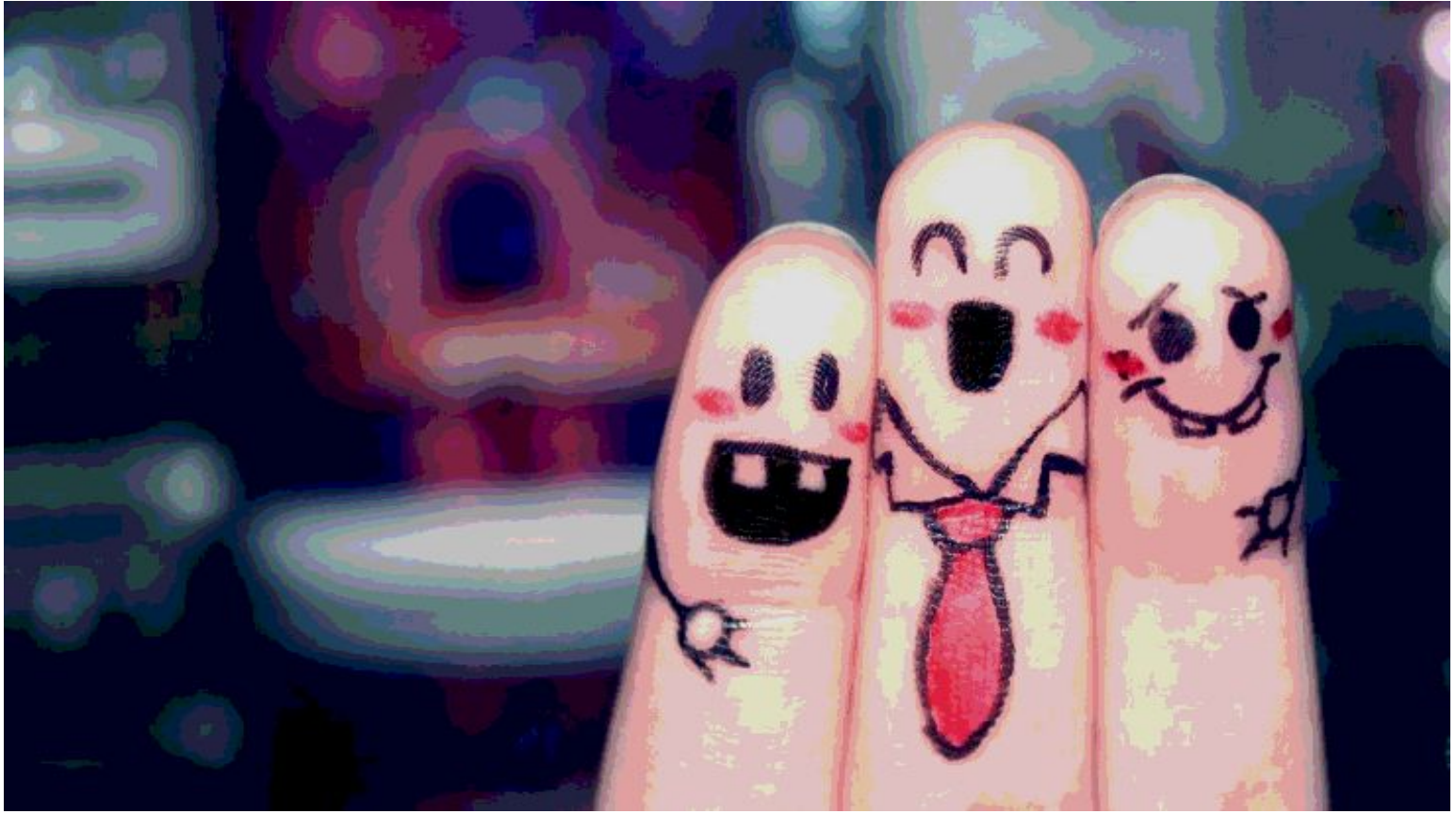
After hiding an image inside

## Stegno image



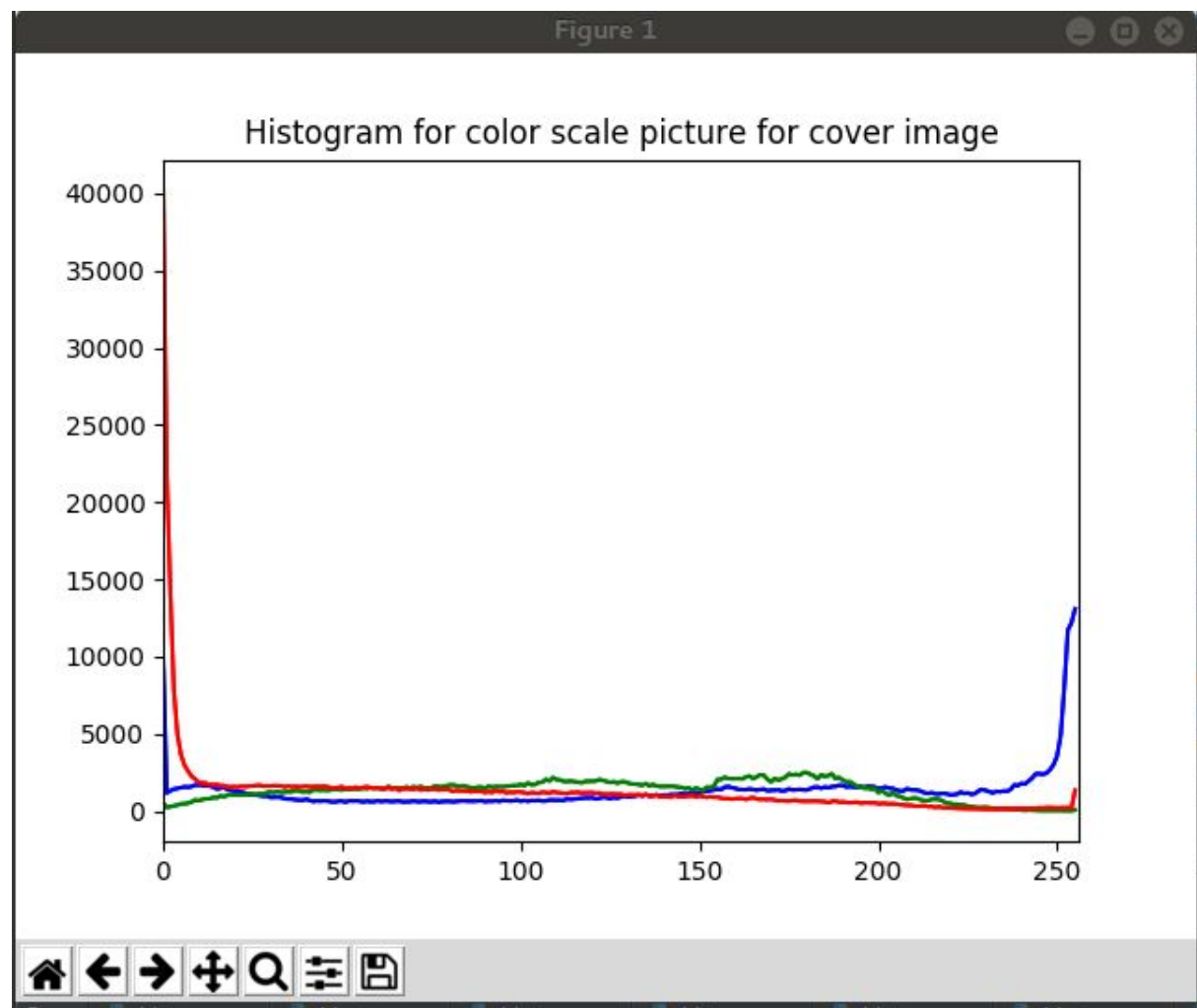


## Recovered image - 3 bits



## Recovered image - 2 bits







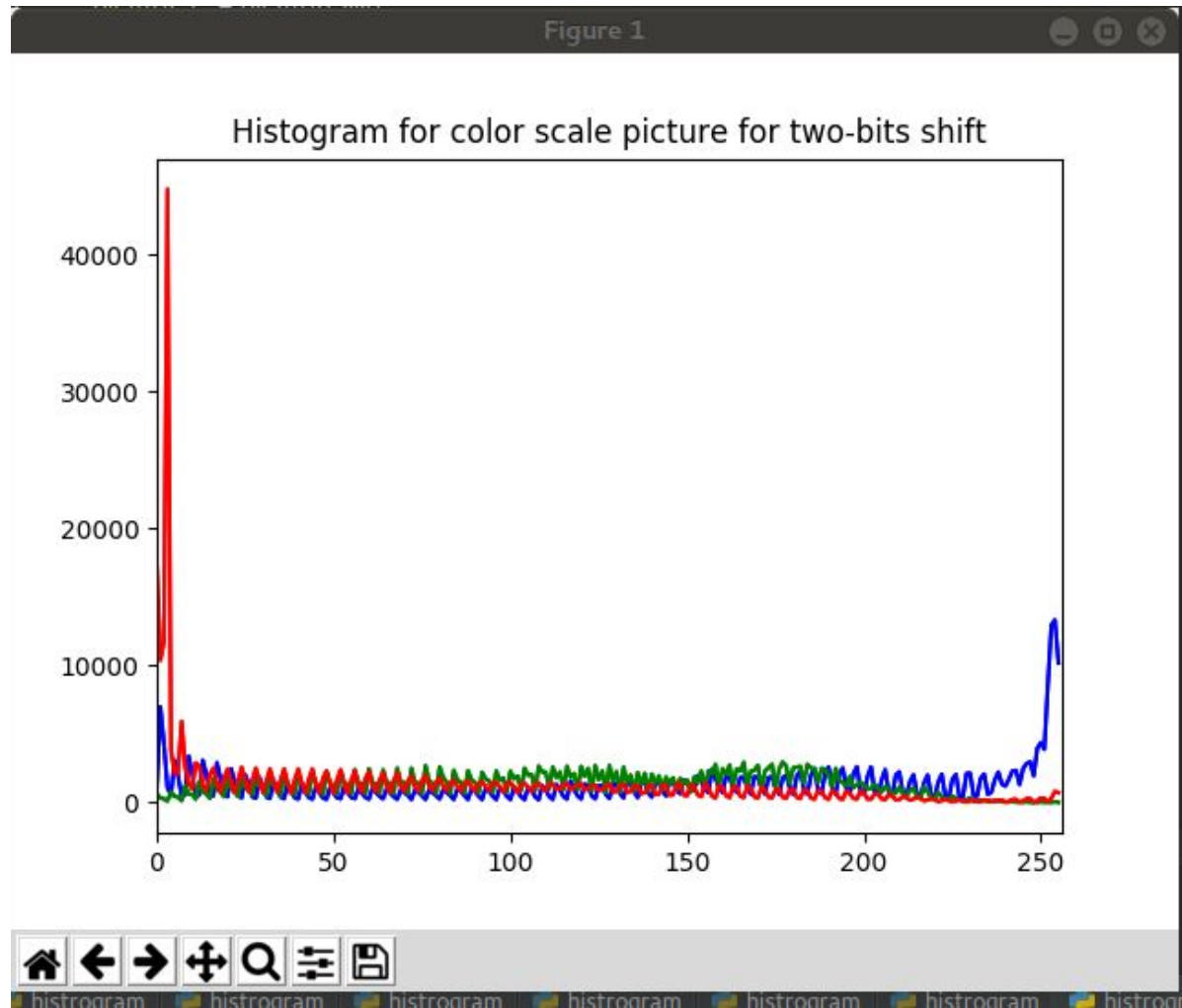


Figure 1

Histogram for color scale picture for cover image

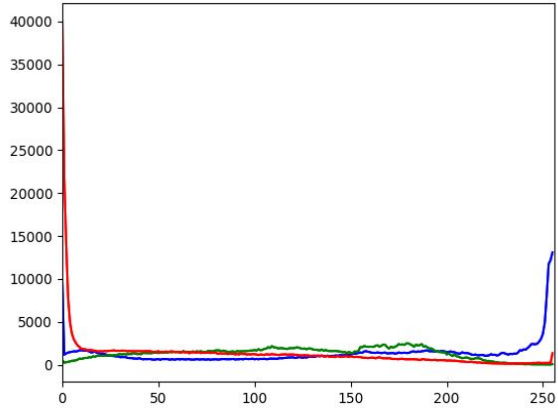
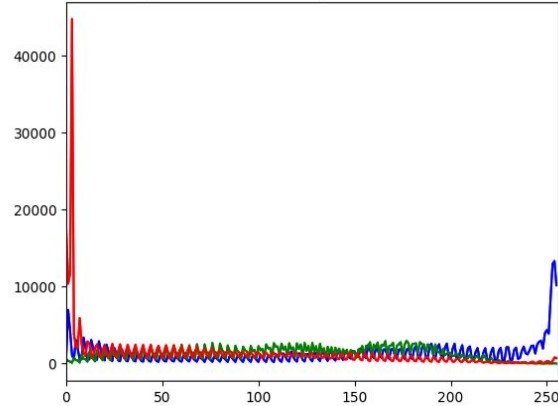


Figure 1

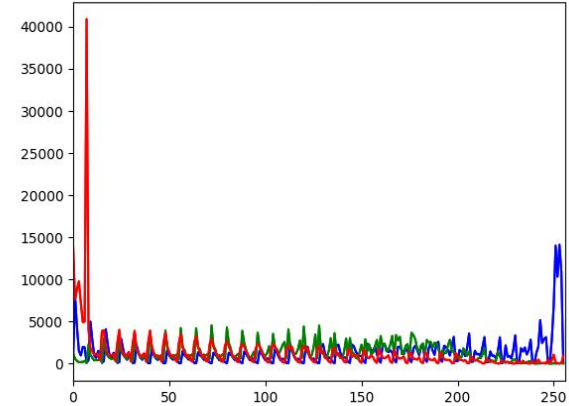
Histogram for color scale picture for two-bits shift



x=148.129 y=44540.9

Figure 1

Histogram for color scale picture for three-bits shift

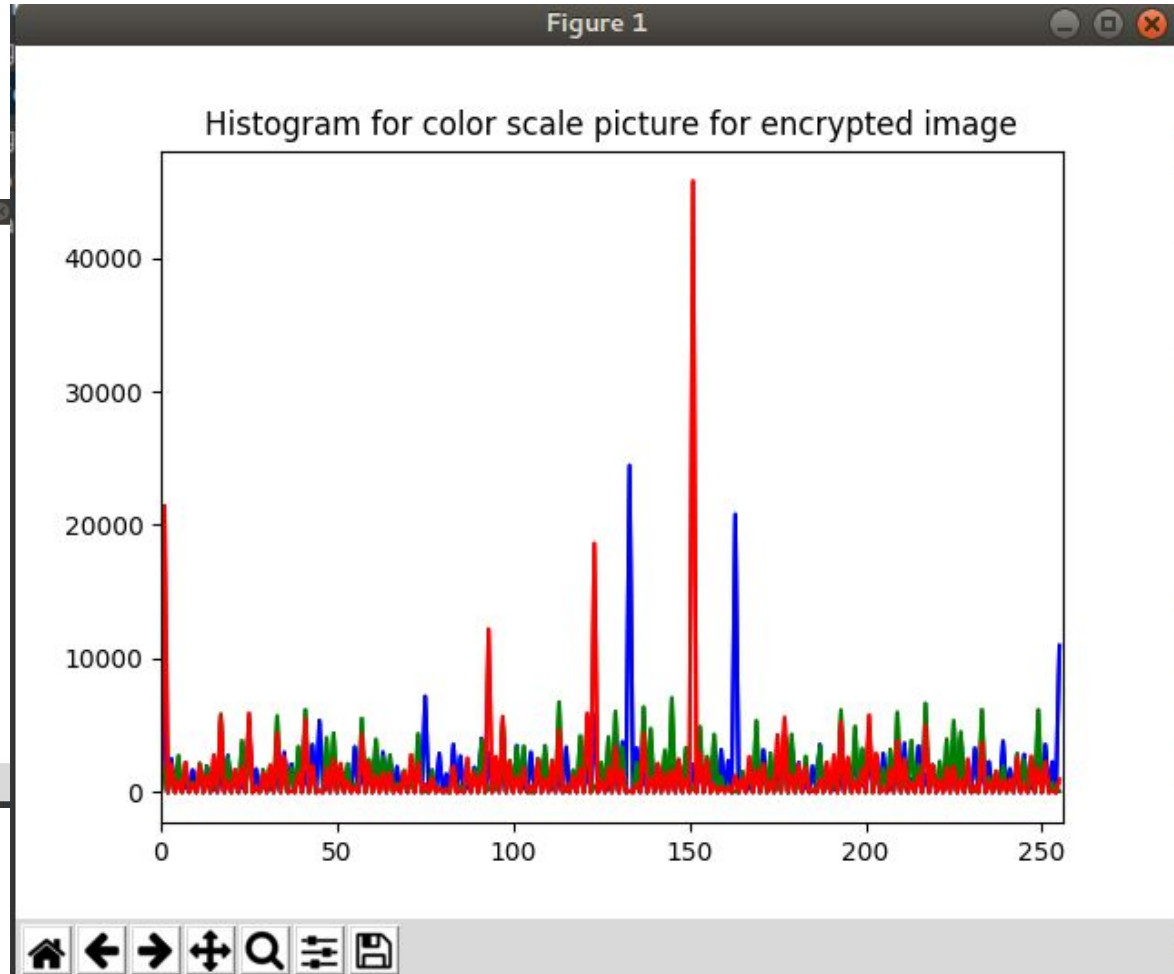
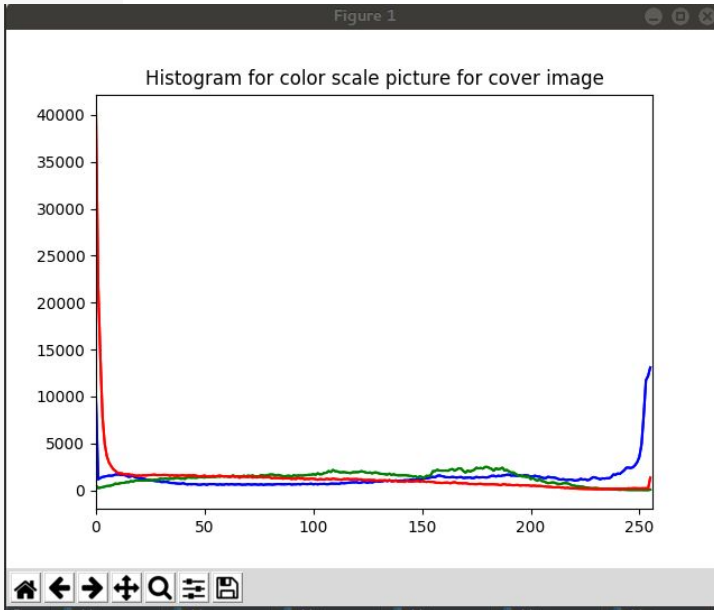


$$(\textit{pixel} ^ 43) \% 256 = \textit{value}$$

$$(\textit{Value} ^ 3) \% 256 = \textit{pixel}$$









original image



retrieved image - 3 bits



original image



retrieved image - 3 bits