

Visual Cryptography on Securing Image Data Using Machine Learning

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Abstract: *With the rapid growth of the internet and the transmission channels, it has become easier for attackers to gain unauthorized access to visual information. Privacy considerations even affect academics collecting image collections for surveillance purposes. However, existing methods still risk being attacked. A system that takes information or images as an input, initial processing, and machine learning to give classification output has been designed to reduce this risk. An appropriate encryption procedure, like secret share creation or using different chaotic maps, is derived from this output, and used to secure the data. The decryption process is based on the encryption technique used, which helps to reconstruct the original data and allows for an evaluation of the accuracy and security level of the system. The goal of this technology is to increase the security of essential visual information by making the encrypted images harder for the attackers to decrypt. In the proposed work, various models are proposed and implemented. The result obtained is analyzed using PSNR and entropy.*

Keywords: Visual Cryptography, Encryption, Cryptography algorithms, Information hiding, Shamir's scheme, Visual secret sharing, Machine Learning

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