

## ADVANCED ENCRYPTION AND IMAGE DATA SECURITY USING CLOUD COMPUTING

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**Relevance:** Image protection is an important issue, particularly in cloud computing, since the majority of service providers don't typically have a robust security system for protecting data centers, for providing such privacy and security to users, the encryption of images Data protects from any unauthorized user access. Many fields have applications of image encryptions, such as multimedia systems, internet communication, medical imaging, and military communication. In addition, color images have been transmitted as well as stored in large amounts over wireless networks and the internet, which is benefiting from the quick developments in network and multimedia technologies.

**Goal of the work:** to design a secure image encryption model in order to obtain better data in cloud security and prevent cloud providers from reaching the original data of users directly.

**Result analysis** – Data privacy and security were vital issues restricting many cloud applications. A major concern in security and privacy results from the fact that the data might be reached via cloud operators. The presented work was focusing on such issues and suggested an intelligent image cryptography method by which the intruders or cloud service operators cannot get the data directly, however, to design a secure image encryption model in order to obtain better data in cloud security. Effective cryptography means to avoid malicious activities occurring on cloud computing, and prevent cloud providers from reaching the original data of users directly. Despite the difference in the size of the proposed images, that the Enhance proposed model by implementing the strong algorithm, takes less time compared to the original images.

**Conclusion.** The chosen solution was to implement both encryption and decryption using the required programs with the Amazon Web Services (AWS) cloud provider. Encrypted data can then safely be stored in the Cloud and decrypted on demand again it has been observed that the proposed model achieved good results in all experiments with high security and less time. The highest value of the PSNR (10.545) and the smaller value of the MSE (5734.47) indicate that the proposed model has efficient encryption strength. The comparison result sand percentage enhancement between the proposed method and the original encryption method showed that the proposed method can be used effectively and fast to provide good protection for the image.