Audio Steganography: Image Embedding in Audio

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Abstract: *Steganography is an advanced technique used for secure data communication by concealing information within digital media. This research explores the process of embedding images within audio signals, analyzing the effectiveness of various encoding techniques, including Least Significant Bit (LSB) substitution, and cryptographic methods such as Advanced Encryption Standard (AES). The study evaluates imperceptibility, fidelity, payload capacity, and robustness to determine the feasibility of audio steganography for secure digital communication. Experimental results indicate that efficient encryption and compression techniques enhance the security and usability of audio steganography*

Keywords: *LSB, AES, Steganography, Cryptography, Histogram, Entropy, PSNR.*