OPTIMIZING STEGANOGRAPHY SECURITY THROUGH ARTIFICIAL INTELLIGENCE AND GANS

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In an era of escalating digital threats and advanced detection methods, the need for fortified data security has become paramount.Steganography security optimization through the integration of Artificial Intelligence (AI) and Generative Adversarial Networks (GANs), coupled with Convolutional Neu- ral Networks (CNNs) and the acclaimed AlexNet architecture. Leveraging the power of deep learning, the study investigates advanced techniques to enhance the concealment and robustness of hidden information within digital content. The utilization of GANs introduces complexity and unpredictability, while the integration of CNNs, particularly with the AlexNet architec- ture, ensures the extraction of intricate features, fortifying the steganography method against sophisticated detection techniques. The proposed approach offers a promising avenue for advancing steganographic security, bridging the gap between traditional methods and cutting-edge technologies to address the evolving challenges in information concealment and cybersecurity.

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