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Abstract
With the rapid growth of computer science, information technology brings us much convenience. However, following the convenience, it also introduces the issue of information security. The vast literature devoted to the related field. Data-hiding techniques is one of the most significant studies of the subject.
The aim of data-hiding is to embed the secret into a cover-image with exposing nothing about the secret. The traditional method of data-hiding can not provide the integrity of cover-image while extracting the secret from the stego-image. Such results might be critical if the cover-image is an important archive and has to be recovered losslessly. Recently, several articles have investigated the topic on reversible data-hiding, which can restore the stego-image to the cover-image without any loss. Since the need on the network, data-compression is usually adopted to improve transmission performance. Therefore, the issue of combining two techniques of data-hiding and data-compression is worthy to notice and becomes increasingly a focus of investigation. Data-compression is usually based on redundancy-reducing. Only characteristic values in original data would be reserved during data-compressing. So, under the condition of requiring high quality, it is a challenge how to embed the secret into a compressed-image.
The present article raises five data-hiding techniques based on data-compression, in clouding the methods with high quality and high capacity. From the comparisons between the current literatures and ours, our proposed methods show good features in various aspects.
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