

## **A Hybrid Image Compression Technique Using DFT and DCT**

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The main aim of image compression is to decrease the size of the data required to represent an image. Thus, reducing the required space to store the image and reducing the time required to transfer the image throughout computer networks. The art of designing and developing an image compression system is a compromise between image quality and compression ratio. This research proposes a new hybrid image technique to achieve high compression ratio and at the same time saving the quality of the compressed image. The proposed technique combines the benefits of two transformations; the Discrete Fourier Transform (DFT) and the Discrete Cosine Transform (DCT). The experimental results show that the suggested approach preserves the quality of the reconstructed image and achieved higher compression ratio compared to individual standalone of the aforementioned transformations. The results of the proposed hybrid technique show that the average value of PSNR over all test images is 29.89 compared to those of DFT and DCT which are 33.07 and 32.13, respectively. The results also show that the hybrid technique achieved 23.81 average compression ratio over all test images compared to 19.93 and 21.75 for DFT and DCT, respectively. It is clear that the proposed technique outperforms both standalone DFT and DCT in terms of compression ratio and at the same time preserves the quality of the compressed image.

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