# PERFORMANCE ANALYSIS OF DCT AND DWT FOR IMAGE COMPRESSION

A Project report submitted in partial fulfilment of the requirements for the award of degree of

## BACHELOR OF TECHNOLOGY

IN

## ELECTRONICS AND COMMUNICATION ENGINEERING

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## CERTIFICATE

This is to certify that the project entitled "PERFORMANCE ANALYSIS OF DCT AND DWT FOR IMAGE COMPRESSION" in partial fulfilment for the of degree of Bachelor of Technology in ELECTRONICS AND COMMUNICATION ENGINEERING, at AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY, MAKAVARAPALEM, VISAKHAPATNAM is an bonafied work carried out by J.SANTHOSHKUMAR(15815A0410),B.BALAJI(15815A0403),P.SIVARAMAKRISHNA( 15815A0421), U.HARISH (14811A0471) under the guidance and supervision during 2017-2018.

**PROJECT GUIDE**

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# ABSTRACT

It is used specially for the compression of images where tolerable degradation is required. With the wide use of computers and consequently need for large scale storage and transmission of data, efficient ways of storing of data have become necessary. With the growth of technology and entrance into the Digital Age , the world has found itself amid a vast amount of information. Dealing with such enormous information can often present difficulties. Image compression is minimizing the size in bytes of a graphics file without degrading the quality of the image to an unacceptable level. The reduction in file size allows more images to be stored in a given amount of disk or memory space. It also reduces the time required for images to be sent over the Internet or downloaded from Web pages.JPEG and JPEG 2000 are two important techniques used for image compression. JPEG image compression standard use DCT (Discrete Cosine Transform). The discrete cosine transform is a fast transform. It is a widely used and robust method for image compression. It has excellent compaction for highly correlated data.DCT has fixed basis images DCT gives good compromise between information packing ability and computational complexity. JPEG 2000 image compression standard makes use of DWT (Discrete Wavelet Transform). DWT can be used to reduce the image size without losing much of the resolutions computed and values less than a pre-specified threshold are discarded. Thus it reduces the amount of memory required to represent given image.