Abstract

Image compression techniques are the most apprehensive topics in today’s high-tech environment. Singular Value Decomposition (SVD) is one of the image compression technique. SVD is an attractive algebraic transform for digital image processing applications. The SVD method can transform matrix A into product, which allows us to refactor a digital image in three orthogonal matrices. The using of singular values of such factoring allows us to represent the image with a reduced set of values, which can store the useful features of the given original image, also use less storage space of the memory, and achieve the image compression process. In this paper, discuss how SVD is applied to images, the technique of image compression and maintain the quality of the image using SVD and also the algorithm to compress an image using MATLAB.

References

1. T. Ozcelik, J. Brailean, and A. Katsaggelos, Image and video compression algorithms


Index Terms

Computer Science

Algorithms

Keywords

Image processing Singular Value Decomposition (SVD); Image compression; MATLAB;