A Machine Learning Approach for Removal of JPEG Compression Artifacts: A Survey

International Journal of Computer Applications
Foundation of Computer Science (FCS), NY, USA

Volume 138

Number 2

Year of Publication: 2016

Authors:

Anagha R., Kavya B., Namratha M., Chandralekha Singasani, Hamsa J.

10.5120/ijca2016908732

Abstract

JPEG is a widely used image compression method. Though it is very efficient, it introduces certain artifacts and quantization noise. This paper is a detailed survey about various existing methods for the reduction of these artifacts. The paper explains each method and their advantages and drawbacks. Some of the methods mentioned are Weiner filtering, Image Optimization, Zero-masking, Local Edge regeneration, Multiple dictionary learning, Hybrid Filtering, Fuzzy filtering, Total Variation Regularization, Offset and Shift Technique, Post-processing et al. Also, a comparative study is made as to which method is suitable for which scenario.

References

1. S.Gayathri Tejaswini, M. Ramalakshmi, M. Santhi, H. Rahul and Hemanth Nag, “Reduction of Blocking Artifacts of DCT Compressed Image Based on Block Wiener Filtering”,

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7. Tuan Q. Pham and Lucas J. van Vliet, “Blocking artifacts removal by a hybrid filter method”.


Index Terms

Computer Science

Image Processing

Keywords

Machine Learning, Feed – Forward neural networks, Blocking artifacts, Ringing artifacts, Blurring.