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# Utilizing Repeated Adjacencies of Vector Quantization Indices in Image Compression

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## Abstract:

Image compression using vector quantization (VQ) results in highly correlated indices. The correlation between these indices is used to reduce the bits needed to represent them. This is done by many index compression algorithms such as the Hu and Chang, search order coding (SOC), and switching tree coding (STC). A new algorithm for VQ index compression is introduced and it utilizes the local statistics of each image and the repeating pattern of its adjacent indices. The proposed algorithm improves the index compression performance of the basic VQ, with a relatively slight increase of complexity.

## Keywords:

VQ Index Compression, Lossless Coding, Image Compression, Vector Quantization.

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