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Image quality metric based on mutual information of image features MOHAMMAD HAGHIGHAT, Univ of Miami, MASOUD AMIRKABIRI RAZIAN, Univ of Tabriz — Objective image quality assessment has always been a challenging issue among image processing scientists. Here, a novel image quality metric based on mutual information of image features is presented. The proposed metric calculates the amount of information that one image contains about the other. Normalized feature vectors extracted from the test and reference images represent the considered information as the marginal probability distributions. In order to use the mutual information we need not only the marginal probability distributions but also the joint distribution between two images. In this work, Nelsen's method is employed to estimate the joint probability distribution from marginal distributions using the correlation between two feature vectors. Experimental results and comparisons with other well-known full-reference metrics like SSIM, MSSIM, FSIM and SFF certify the soundness of our proposed metric.

- Prefer Oral Session
 Prefer Poster Session

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