Image Quality Assessment Using Multi Method Fusion by Adaboost Classifier

sedighe ghorbani*,azam sadat noorbakhsh,

Abstract Interest in image quality assessments has increased over the past decade and highly regarded. Nowadays, the image quality assessment and diagnosis of the loss of image quality is one of the key points and widely used in image processing. The aim of the quality assessments is design algorithms that can automatically assess image quality with a consistent behavior. In this research, a full reference image quality assessment method, that uses a fusion of six widely index (SSIM, VIF, FSIM, MAD, IFC and MSSIM) is provided which shows good performance for quality detection. The Quality assessment ,using fusion method of combining the positive attributes of each of the six indexes, has been achieved by Adaboost classifier. The result of this combination, is creating an equation that evaluates the image quality. by examining the root mean square error of the indexes output and fusion method output by experts opinion(MOS), it is shown that the equation improves the accuracy of evaluation. Fusion method Output to the experts opinion is 0.9517. Its means that, the opinion of fusion method than individual indices is closer to the experts opinion. Keywords: image quality assessment, image processing, fusion method, quality indices, Adaboost classifier.

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