NON−PARAMETRIC INFORMATION GEOMETRY AND MULTI−SCALE MODELS OF TEXTURE (WedAmOR11)

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Abstract :

We develop a novel algorithmic representation of textures using the statistics of multiple spectral components of images. Histograms of filter responses are viewed as elements of a non−parametric statistical manifold, and dissimilarities of local texture patterns are quantified using a metric derived from information geometry. This representation of textures is applied to the development of a spectral cartoon mode of images, and several image segmentation experiments are discussed.

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