

On estimation of accuracy characteristics of kNN-classifiers

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Let remotely sensed data be a sequence of feature vectors which corresponds to pixels of an digital image. The problem of recognition is equivalent to “coloring” of the image. Suppose that there is a (training) set of correctly paired feature vectors and colors. Well-known kNN-classifiers can be used in important image processing problems. We consider estimators of the numbers of non-correctly colored pixels. The initial, obtained by the cross-validation, estimators are improved by averaging with respect to sufficient statistics. The averaging is done by using appropriate Markov chains which essentially reduces computing time.