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Examined is the software that implements a nonparametric algorithm for automatic classification of big statistical data. The class is characterized by a unimodal fragment of probability density. The proposed algorithm of automatic classification is based on the decomposition of the initial data. The results of the decomposition form a set of multidimensional intervals centers and corresponding incidences of random variables values. Classes are discovered on the basis of the received information. The obtained nonparametric algorithms are important in the processing of remote sensing data.

**Keywords:** software, automatic classification, multidimensional histogram, pattern recognition, large-volume sampling, discretization of multidimensional random variables value area, remote sensing data.

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