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PERFORMANCE ANALYSIS OF DISCRETIZATION TECHNIQUES OF TWO-DIMENSIONAL FIELD OF VALUES OF A RANDOM VARIABLE IN THE SYNTHESIS OF A NONPARAMETRIC ESTIMATE OF PROBABILITY DENSITY

The paper gives wide coverage to comparison of optimal and heuristic discretization techniques of two-dimensional field of values of a random variable. It defines the terms of their competency under restoration of normal law of distribution of two independent random variables. The efficiency of the method is confirmed by the results of computational experiments.

Keywords: probability density, histogram, regression estimate of the probability density, two-dimensional random variable, discretization techniques, Pearson criterion, Sturges rule, Heinhold – Gaede rule.

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