ABSTRACT

for the graduate work of Konstantin Davydenko Petrovich on the point: "Methods and algorithms for classification and prediction problems in building intelligent user interface"

The purpose of this work is devoted to analyzing the most common methods of numerical classification series and forecasting methods of time series. Marked as their main advantages and disadvantages. Implemeted classification method using kernel features – kernel discriminant analysis and lists its comparison with other methods of classification that uses kernel functions - support vector machine. As an illustration of the investigated methods, implemented in the program that uses the implemented algorithm – Kernel discriminant analysis, which can recognize handwritten letters.

This work is oriented to practical use by developers of context-dependent applications for solving problems of classification or prediction.

According to the work report was made at the conference on "System Analysis and Information Technology 2011 ".

Total volume of the work: 119 pages, main part – 101 pages, 3 tables, 29 illustrations and 1 appendix. By preparation of work the literature from 22 different sources was used.

Keywords: classification, numerical series, forecasting, time series, support vector machine, linear discriminant analysis, kernel function, the kernel, SVM, KDA, LDA, neural networks, perceptron.