

## ABSTRACT

The thesis is presented in 49 pages. It contains 2 appendixes and bibliography of 14 references. Eighteen figures are given in the thesis.

The goal of the thesis is to improve the planning process of software development through the creation of mathematical models and software for the automated forecasting system for estimating the employees load in the IT field for a given period of time.

In the thesis, existing solutions are analyzed, such as regression analysis, expert evaluation, and artificial neural networks. They are compared in terms of the accuracy of obtained results, algorithm efficiency. In the thesis, artificial neural network approach is used to solve the task.

A neural net was created for estimating the employee load. The automated system implementing the chosen method was developed. The developed system was experimentally .

Keywords: load, information technologies, artificial neural network, error backpropagation, estimation.