

ABSTRACT

Thesis performed at 66 pages, it includes 3 applications and a list of references to sources used 16 names. The paper provides 22 figures and 3 tables.

The goal of this thesis is to create mathematical and software systems for the analysis of financial expenditures user.

In this paper, an analysis of existing solutions specified tasks - fuzzy inference algorithms based on knowledge and algorithms for finding the optimal path. Done comparing them with regard to software implementation and their effectiveness. To solve the problem in the algorithm selected fuzzy inference Mamdani and branch and bound method for finding the optimal path

For each of the types of costs were generated fuzzy predicate rules. Developed an automated system that centrally stores data about the costs of different users and implement selected methods for analyzing costs and build an optimal way.

Keywords: analysis, finance, fuzzy predicate rules Mamdani algorithm, branch and bound algorithm.