

ABSTRACT

Master's thesis: 80 pages, 13 figures, 26 tables, 11 sources.

Actuality. Nowadays, a large number of people are in search of housing. The housing should be not too expensive, conveniently located in a neighborhood with a well-developed infrastructure and convenient transportation. For someone other, housing should be outside the city and near the forest, etc. Everyone is looking for housing according to his or her own criteria.

Typically, rental properties use sites with offer filters that make it much easier to find the best solution. However, such filters must be sophisticated in order to satisfy all user desires. Moreover, it is difficult for the user to assess whether the cost of housing is in line with the standard or overpriced.

Choosing a home takes a lot of time and effort, though much of this process can be automated. The system should provide a selection of the proposals most suited to the client's wishes.

The problem is the inaccuracy and non-flexibility of housing search algorithms; time spent by the user to evaluate all the solutions and compare them to the user's expectations.

Relationship with scientific programs, plans, topics. The work was performed at the department of automated information processing and management systems of the national technical university of Ukraine «Igor Sikorsky Kyiv Polytechnic Institute» within the topic “Intelligent Support System for Buyers and Tenants Making Housing Choices” (№ ДП 0117U000925).

The purpose of the study is to optimize the process of finding the best deal on a large amount of data by using intelligent algorithms on the one hand and simplifying the process of renting housing through a user-friendly interface on the other.

To achieve this goal, you must complete the following **tasks**:

- optimization of housing selection for rent;
- optimization of the formation of a rental offer;
- simplifying the lease process;
- simplifying the lease payment process.

Object of study - the process of finding housing for rent.

The subject of the study is clustering methods and mining data using regression models as estimation functions for clustering.

Scientific novelty of the obtained results. Approaches and methods of solution of the given problem with use of clustering methods and classification are

developed. Using created regression models can significantly improve the quality of relative estimation of homogeneous data.

Publications. The materials of the work are published in the collection of articles of a IV international scientific-practical conference "Topical issues of the development of modern science" and in the theses of the III all-Ukrainian scientific-practical conference of young scientists and students "Information systems and management technologies".

CLASSIFICATION, CLUSTERING, REGRESSION ANALYSIS, C-MEDIUM, K-MEDIUM, REGRESSION MODEL