ABSTRACT

Master dissertation: 94 pp., 24 fig., 12 tab., 1 app., 35 sources

The relevance. After the creation of the Internet in 1991 terabytes of new information appear in the World Wide Web every day. More than 2 billion people across the globe now have Internet access. Given these facts, one can imagine how increased difficulty finding relevant information online. Internet user receives huge number of results per search query, thats why he needs help in sifting and sorting of search results. When a user enters certain keywords in search engine, search engine provides a list of Web pages that contain the most relevant information. Each item of the list consists of a header of a web page and a short description of it or a piece of text, which includes the query keywords. The problem is that search engines provide a long list of web pages, where you can find information in any way related to the keywords in a search query. Also, users can not always pick the keywords to create "correct" requests that meet their needs. For example, a user wants to watch a movie, but does not know how to choose keywords. Need a system that will help users find, choose products, services or information in the case when there are a lot of options or the user does not have enough knowledge on the subject in the subject area. This system is called recommender system (RS), it uses the information of the user and the product, in order to provide the user with the most relevant searches.

Relationship of academic programs, themes. Master's thesis executed according to plan department managed process optimization Institute of Cybernetics of VM Glushkov NAS of Ukraine within the research theme "Development of mathematical tools focused on the development of intelligent information technologies for solving problems of combinatorial optimization and information security" (state registration 0117U000323).

Purpose of the study. The goal is to create recommender system for system sales coupons for medical services.

To achieve the goal must perform the following **tasks**:

- perform a review of known models of RS;
- perform a comparative analysis of models of RS;
- perform the task of creating the formalization of recommendations;
- develop a model of RS;
- develop a software implementation of RS that can be used in determining the optimal set of services for specific customers;
- perform an analysis of the results.

Object of study - improve the relevance of online recommendations.

Subject of research - the creation of the RS for system sales coupons for discounts on medical services.

Methods of research - theoretical, empirical, mathematical processing methods of the study.

The scientific novelty of the results is the development and use of new algorithm of creation of recommendations in the RS.

Publications. Materials published in the V International scientific conference "Actual problems of modern science" [34] International Conference "Recent research in the modern world" [35].

RECOMMENDATIONS RECOMMENDATION MODEL, RECOMMENDER SYSTEM, COLLABORATIVE FILTERING