

ABSTRACT

Master's dissertation: 94 pages., 19 Fig., 37 tabl., 1 addition, 36 sources.

Topicality. Today, one of the most valuable resources of mankind is information. It occupies one of the central roles in the process of formation of modern society. With the advent of the Internet - the main storage of information has become the World Wide Web. But over time, its volumes began to grow much faster than computing capabilities for data processing. The amount of information on the Internet is so great that a person simply can not find what she really needs.

In this regard, the development of a special system is urgent, which will recommend to user some elements that she deems advisable. Such a system will formulate its recommendations based on the behavior of users in the past and their preferences. This will allow users to save a large amount of time to find the content they need.

Relationship of work with scientific programs, plans, themes. The work was carried out at the Department of Automated Systems for Information Processing and Management of the National Technical University of Ukraine "Kyiv Polytechnic Institute. Igor Sikorsky" within the theme «Effective methods of collaborative filtering based on the analysis of user behavior, reflected in "big data"»

Purpose of the study is to improve the effectiveness of the recommendation system.

To achieve the **purpose**, we need to accomplish following tasks:

- review the existing methods and algorithms of the recommendation systems;
- carry out a comparative analysis of various methods and algorithms of the recommendation systems;
- formalize the problem of forming recommendations based on the hybrid approach;

- develop an effective model for recommendation computing based on a hybrid approach;

- develop a prototype of the books recommendation system by using the aforementioned approaches;

- perform the analysis of the results.

The object of the research - the process of creating personal recommendations based on the preferences of users.

Subject of research - methods and models for the formation of personal recommendations.

The research methods used in this paper are based on the methods of information retrieval.

The scientific novelty of the results is applying a hybrid approach to data filtering for the formation of personal recommendations. An approach is developed that combines data filtering based on content with collaborative and demographic filtering.

Publications: the materials of the work are published in the theses of the international scientific and practical conference " Mathematical and imitation systems modelling MISM 2018" as well as within the framework of the All-Ukrainian Scientific and Practical Conference of Young Scientists and Students "The actual problems of informatization of management decisions" (APIMD 2018).

RECOMMENDATIONS, COLLABORATIVE FILTERING, CONTENT-BASED FILTERING, RELEVANTITY, CLASSIFICATION, OPPORTUNITY, SEARCH, RATING