

ABSTRACT

Master's dissertation: 87 p., 35 figures, 13 tables, 7 applications, 37 sources.

Topicality. Information is one of the basic needs of human life. Being a valuable national resource in our time, information can be stored, changed and rationally used in the process of meeting the information needs of mankind electronically through information systems. Yes, despite the fact that we live in the period of development of information technology, a large amount of information continues to be transmitted in the usual once (paper) form, and this, even, becomes a fashionable phenomenon, if we talk about fiction, for example.

Owners of bookshops, which are, in essence, retailers of books and other information products, are interested in obtaining maximum profits with minimal cost of resources. The automation of the work of such organizations greatly improves their activities, and, accordingly, profits. Therefore, the issue of the implementation of support work of technical and information tools has long become popular in this area of human activity, and the improvement of bookstores systems remains an urgent task of developers.

Functions of studying the user's behavior and recommendations based on the results of the most relevant user product significantly improves the work of any enterprise, therefore, regardless of the subject area, great attention in developing systems and sites selling products is now given to these functions.

Relationship of work with scientific programs, plans, themes. This work was implemented at the Department of Automated Information Processing and Control Systems of the National Technical University of Ukraine "Kyiv Polytechnic Institute Igor Sikorsky" within the framework of the theme "Methods and technologies of creation of expert-reference systems".

The purpose of the study is to increase the efficiency of the bookstore by improving the advisory function of the assortment of its user service system.

To achieve the goal, you need to accomplish the following **tasks**:

- to review the existing decisions of the task set within the framework of the work;

- compare the methods used to solve the problem of product recommendations by the system;
- develop an algorithm for the segmentation process and the creation of proposals for users of the bookstore;
- develop software implementation of the developed algorithm;
- to analyze the results obtained.

The **object** of research - the process of segmentation and the formation of proposals for users of the bookstore system.

Subject of research - TDM methods, strategies for filtering information, algorithms of advisory systems.

Scientific novelty of the obtained results. The approaches and methods of the solution of the set task are studied, and the algorithm of data clustering and filtering is offered for the possibility of performing the offer to users of the bookshop most relevant for their behavior and preferences of the product for purchase.

Publications. The materials of the work were considered at the conference "Informatics and Computing Technology-IOT-2018" [1], at the international scientific and practical conference "The Results of the Development of Scientific Thought: 2018" [2], Ivano-Frankivsk, Ukraine, December 5, 2018, and also sent to publication on International Scientific and Practical Conference "Current Issues in the Context of the Development of Modern Sciences" [3], Dresden, Germany, January 27, 2019.

RECOMMENDATION SYSTEMS, CONTENT FILTRATION, COLLABORATE
FILTRATION, CLUSTERIZATION, ASSOCIATIVE RULES