

ABSTRACT

Master's dissertation: 101 p., 22 pictures., 44 tables., 1 appendix, 36 sources.

Topicality. In the process of his activity, a person often receives, searches and analyzes certain information. That is why it develops certain habits, and gives preference to one or another accessible segments of information (books, politics, etc.). As a result, a situation arises that with an increase in the amount of information and simplification of the possibility of obtaining it, it becomes difficult for a person to choose what he would like to know, to review, etc. And also, each person wants to receive only the information that will benefit her and which will be relevant for her, in order not to use her time to analyze the "extra" information.

And in order to obtain the "necessary" information, reference systems are very often used. However, quite often, the information we receive in these advisory systems is not valid or relevant to us.

Therefore, it is necessary to develop an information technology that will enable the user to recommend the information that will be needed to him, based on his preferences, behavioral model. Using the classification algorithm, the system can find users with similar interests and, based on this, provide the current user with recommendations in various segments of information, that is, the system provides the user with recommendations not only in the direction of "films", but may also provide recommendations in other areas. such as "books", "music", etc. Also, this system can provide the user with a recommendation in the direction of the interest, for example, if a person is interested in books and music, give it recommendations "films".

Relationship of work with scientific programs, plans, themes. Work performed at the Department of ASOIU at the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute" within the topic “Methods and technologies of high performance computing and performing of big data”. Governments register number 0117U000924.

The purpose of research is to find a way to improve the existing process of recommending information to the user in various directions (films, books, etc.) by creating and integrating the information technology of user classification according to his behavioral model.

To achieve the goal it is needed to resolve the following tasks:

- to formulate and analyze methods and algorithms which allow to classify a user based on his behavioral model;
- to select and implement a proper method of user classification;
- to conduct an experimental study of this method, analysis of the results obtained;
- to choose an algorithm to provide guidance on "new" user interests;
- to conduct an experimental study of this algorithm; to perform the analysis of the obtained results;
- to develop software.

The object of research - is the process of user classification based on behavioral model, and as a result of providing information to users on the basis of its class.

Subject of research - methods of user classification based on behavioral model, as well as methods for making recommendations.

Scientific novelty of the obtained results

Improvement of the user classification algorithm by using the hybrid classification method, using the built-in text classifier that analyzes its posts. It also takes into account the behavior of the user, which varies over time, by maintaining a class of user every day. As a result, this approach allows you to analyze the dynamics of changes in user interests over time, which in the end gives him the opportunity to provide him with relevant recommendations that will be most appropriate for him.

Adaptation of the algorithm for determination of associative rules for the possibility of providing recommendations based on associative rules that are constructed using the Apriori algorithm.

Publications

Horobiuk V. P. Using the Apriori algorithm to create associative rules for giving recommendations to the user regarding teaching materials / Horobiuk. // MODS. – 2018. – pp. 158–161.

Horobiuk V. P. Information Technology for Behavior-based User Classification / Horobiuk. // ISMT. – 2018. – pp. 12–16.

CLASSIFICATION, BEHAVIOR MODEL, ASSOCIATIVE RULES, GIVING PROPOSALS, APPLICATION PROGRAMMING INTERFACE