

Subject:

“The recommendation algorithm based on recommendation sessions working based on user behaviour and object attributes in an e-Commerce system”.

Abstract:

The subject of this paper is a recommendation algorithm based on recommendation sessions. The paper proposes a hybrid recommendation approach based on user sessions, in which specific behaviours are extracted, and on the attributes of objects (products, services) contained in the database of the e-Commerce system. An important assumption of the analysed problem studied is fact that there is no identification of the user to describe him in the form of demographic data or historical preferences.

Within the scope of the study, a mathematical model of G recommendation session graph data and a session model were developed, on which the author's recommendation algorithm is based. In addition, its implementation was presented in the operational online e-Commerce system.

Furthermore, in order to compare the original ARS algorithm, a competitive algorithm using user behaviour based on association rules has been described and implemented.

As part of the research, experiments were conducted to verify the suitability of the implemented algorithms for e-Commerce purposes in the area of recommendations and to compare them with each other.

The experiments were conducted in a fully functioning online e-Commerce environment. The research used observation of the recommendation system and analysis of real data. Analysis and comparison were then carried out on the basis of the collected data. The results confirmed the usability of the proprietary algorithm for e-Commerce solutions and its superiority over competitive solutions.

Author: Michał Malinowski

