ABSTRACT

Master dissertation: 107 pp., 38 fig., 32 tables, 1 app., 32 sources.

Actuality. Today's global car market is one of the most important components of the world's economy, one of the most competitive markets. Car sales directly affect economic growth and the crisis of the global economy [1].

The world car market in September this year increased by 0.5% to 7647,000 cars. The largest number of cars for the reporting period was sold in China with a figure of 2.487 million units, which is 9.3% higher than last year's result. American motorists bought 1.337 million cars, which is 4.4% more than in 2019. Western European car markets showed a result of 1.367 million cars (+ 1.3%). Sales of cars in Eastern Europe increased by 19.7% to 393.3 thousand units [2].

Due to the high demand for this product in car dealerships, car sales companies receive a large number of requests from customers to buy cars. Accordingly, sales staff receive and analyze the wishes of each customer and, usually, personally select the best options for customers. However, this selection process is quite time consuming and depends on the qualifications of the worker who finds the recommendations, i.e. the recommendations found depend on the human factor and may not always be correct. Therefore, the chosen direction of research and creation of recommendation system is relevant.

Relationship of work with academic programs, plans, themes. The work was performed at the Department of Automated Information Processing and Control Systems of the National Technical University of Ukraine "Kyiv Polytechnic Institute. Igor Sikorsky "in the framework of the theme "Methods and technologies of high-performance computing and processing of ultra-large data sets"(No. GR 0117U000924).

The purpose of the study – increase the efficiency of managers, which in general will increase the company's profits by increasing the total number of processed applications and sales.

To achieve this goal, the following **tasks** were set:

– analyze existing methods and tools and identify problems in making recommendations;
– create and investigate an algorithm for creating recommendations;
– develop the architecture of the recommendation system on the Dynamics 365 platform;
– implement a recommendation system on the Dynamics 365 platform.

The object of the research – the process of finding a list of recommended cars without taking into account the previous history of the client.

The subject of the research – methods and algorithms for finding recommendations.

The scientific novelty of the obtained results is to find recommendations based on the wishes of the client without a pre-existing history for a particular client.

Publications. Materials were published in the IX International Scientific and Practical Conference "PERSPECTIVES OF WORLD SCIENCE AND EDUCATION" [3] and the V All-Ukrainian Scientific and Practical Conference of Young Scientists and Students "Information Systems and Management Technologies" (ISTU-2020) [4].

RECOMMENDATION SYSTEM, LEXICOGRAPHIC MATCH, EUCLIDEAN DISTANCE, CAR, CRM SYSTEM, INTEGRATION