

1	2	3	4	5	6
2020	4,0	3,95	0,05	4,0	0
2021	3,9	3,76	0,14	3,9	0
2022	3,6	3,68	-0,08	3,6	0
2023	3,5	3,46	0,04	3,5	0
2024	–	2,28	–	3,9	–
2025	–	2,30	–	3,1	–

According to the data in the table, the unemployment forecast without taking into account the automation coefficient implies a more optimistic scenario. However, the forecast taking into account the impact of AI is more accurate, as it has less deviation from the actual data. Considering current trends, several scenarios of the labor market situation in the Republic of Belarus under the influence of AI implementation in enterprises can be identified:

1. *Optimistic Scenario*. The active growth of economic sectors and the adaptation of the workforce to new requirements will lead to the creation of new jobs and a reduction in unemployment levels.

2. *Pessimistic Scenario*. If the pace of automation exceeds the labor market's ability to adapt, it could lead to an increase in unemployment, especially among low-skilled workers.

3. *Balanced Development Scenario*. The implementation of retraining programs and support for workers, including at the state level, will help mitigate the negative impact of automation on the unemployment rate.

M. Kolesinskiy

М.В. Колесинский

АУППРБ (Минск)

Научный руководитель В.В. Rogov

DLP SYSTEMS: PROTECTING CONFIDENTIAL INFORMATION IN THE DIGITAL AGE

DLP-системы: защита конфиденциальной информации в цифровую эпоху

Data breaches represent one of the main threats in the modern IT world. Personal data, confidential information, trade secrets, and even more classified information periodically appear on the Darknet and other dubious resources.

However, DLP systems have existed for several decades. DLP stands for Data Leak Prevention, and sometimes it is deciphered as Data Loss Prevention. However, data loss

and data leakage are different concepts. When data is lost, it does not necessarily become accessible to outsiders, whereas data leakage implies that outsiders have gained access to it.

The purpose of this study is to analyze modern methods and technologies of DLP systems for protecting confidential information in the digital age, as well as to assess their effectiveness in preventing data leaks and ensuring information security for organizations.

Data Leak Prevention (DLP) systems are designed to protect confidential information from unauthorized access, transmission, or use. They help organizations control and protect data located in both local systems and cloud storage and on endpoint devices. DLP systems use technologies such as artificial intelligence and machine learning to detect and prevent data leaks.

The implementation of DLP systems is necessary for various types of organizations, whether they are commercial companies, government institutions, or medical organizations. This not only protects confidential information but also ensures compliance with regulatory requirements. For effective implementation of a DLP system, there are several key actions, such as data prioritization, classification, tracking each data movement, and continuous monitoring.

The first step before implementing DLP is to determine which data would cause the most significant problem if stolen. Regardless of the organization's activity, priority may be given to intellectual property, such as design documentation, drawings, etc. Although this may seem obvious, data loss prevention should start with the most valuable or confidential data that is most likely to be targeted by attackers.

Data classification is often considered one of the most challenging tasks when implementing DLP systems. However, in practice, the context present in certain types of confidential documents can be used. For example, documents containing trade secrets should have appropriate identifiers.

Applying permanent classification tags to data allows organizations to track their usage. Regular expressions can be used to identify credit card numbers or keywords such as «confidential». File formats, application protocols, and other characteristics that can identify data for control using DLP systems are also important. However, problems may arise if the data is exported to PDF or graphic formats, which allows bypassing the DLP system.

Another key stage in the implementation of a DLP system is tracking all data movements within the organization. At this stage, the system monitors and analyzes all data transmission channels, including email, messengers, cloud storage, and other communication means. This allows for the detection of suspicious activities and the prevention of potential confidential information leaks.

Finally, the research has shown that data leak prevention (DLP) systems are designed to protect confidential information from unauthorized access, transfer, or use. Modern DLP systems utilize artificial intelligence and machine learning technologies to effectively detect and prevent data leaks. These systems enable organizations to monitor and control

data within local systems, cloud storage, and endpoint devices, ensuring compliance with regulatory requirements. The study also revealed that the key stages of implementing DLP systems include data prioritization, classification, and constant monitoring and control.

N. Kolesnichenko
Н.О. Колесниченко
БНТУ (Минск)

Научный руководитель Г.В. Прибыльская

AUTOMATED INFORMATION SYSTEM «DAILY CALORIE CALCULATION OF THE HUMAN DIET»

Автоматизированная информационная система «Ежедневный расчет калорийности питания человека»

In today's society, achieving and maintaining a healthy body weight is a common goal for many individuals. Issues related to unhealthy eating habits, lack of awareness about proper nutrition, and challenges in estimating daily calorie needs are prevalent. The aim of this work is to address these problems by providing a user-friendly application that calculates daily calorie intake based on a completed user profile. The software offers personalized dietary recommendations, assisting users in achieving their weight goals effectively and supporting a healthier lifestyle.

Program Description

The 'calories+' software is an easy-to-use application designed to help users track their daily diet and calculate the necessary caloric intake. It features a comprehensive database of common food and dishes, with options for users to add custom entries. The program calculates not only the total calorie content but also the nutritional breakdown (proteins, fats, carbohydrates) for each meal. Additionally, it offers dietary tips and suggestions to support users in making healthier food choices. The software is designed to be accessible to a broad audience, including those without specialized dietary knowledge.

Relevance and Objective

The development of this program is particularly relevant given the widespread prevalence of conditions such as obesity and anorexia, as well as the growing interest in fitness and weight management among athletes. The 'calories+' program helps users quickly assess the nutritional content of their meals, providing valuable information that can be used to adjust their diet for optimal health and fitness.

Goal and Tasks

The main goal of the project is to create an automated information system that simplifies the process of diet control and calorie calculation. The key tasks for achieving this goal include: