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FINANCIAL SCOPE OF ARTIFICIAL INTELLIGENT SYSTEMS

Research article

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Abstract

In the context of the intensification of digitalization processes and the use of artificial intelligence capabilities in the modern life of service consumers and various user groups, there is an active development of digital technologies that cause possible synergetic changes in the future. Digitalization of all spheres of the modern economic system is accompanied by the active introduction of innovative developments into the business environment and the financial system. The ongoing changes affect the business models used, transforming the existing traditional economic structure. In the context of the intensification of digitalization processes and the use of artificial intelligence capabilities in the modern life of service consumers and various user groups, there is an active development of digital technologies that cause possible synergetic changes in the future. The purpose of the study is to consider the possibilities of using artificial intelligence programs in the formation and use of effective results of logistics and business interaction of business entities in the coming economic order.

Keywords: artificial intelligence, digital technologies, business, finance, digital way of life, new economy.

ФИНАНСОВАЯ СФЕРА ПРИМЕНЕНИЯ ИСКУССТВЕННЫХ ИНТЕЛЛЕКТУАЛЬНЫХ СИСТЕМ

Научная статья

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Аннотация

Цифровизация всех сфер современного экономического уклада сопровождается активным внедрением инновационных разработок в бизнес среду и финансовую систему. Происходящие изменения влияют на используемые бизнес модели, трансформирую существующий традиционный экономический уклад. В статье исследуются вопросы использования искусственного интеллекта в бизнес-финансовой среде современного экономического уклада. В условиях интенсификации процессов цифровизации и использования возможностей искусственного интеллекта в современной жизни потребителей услуг и различных групп пользователей наблюдается активное развитие цифровых технологий, обуславливающих возможные синергетические изменения в будущем. Цель исследования – рассмотрение возможностей использования программ искусственного интеллекта в деле формирования и использования эффективных результатов логистического и делового взаимодействия бизнес-субъектов в грядущем экономическом укладе.

Ключевые слова: искусственный интеллект, цифровые технологии, бизнес, финансы, цифровой уклад, новая экономика.

Introduction

Digitalization of all spheres of the modern economic system is accompanied by the active introduction of innovative developments into the business environment and the financial system. The ongoing changes affect the business models used, transforming the existing traditional economic structure. The formation of a competitive model of any national economy, as well as the organic integration of economic development models into the existing world order, is associated with the active use of computing and information and communication development opportunities. Thus, the active development of digital technologies causes possible synergetic changes in the future.

The purpose of the study is to consider the possibilities of using artificial intelligence programs in the formation and use of effective results of logistics and business interaction of business entities in the coming economic order. The realization of this goal determines the solution of the following interrelated tasks:

1) consideration of possible directions for the use of artificial intelligence in the financial and banking spheres;

2) analysis of the competitive advantages provided by the use of artificial intelligent systems in promising business areas;

3) actualization of complex options for using the capabilities of artificial intelligence in the formation of unique synergetic effects in the modern economic order.

The author's contribution to the study of the problem is to systematize the possibilities of using artificial intelligence programs in creating effective, relevant logistics and business potentials that best correspond to the digital economic structure of interaction between economic entities. The scientific novelty of the research consists in a comprehensive understanding of the opportunities provided by artificial intelligence programs to the business community for more effective development during the transformational processes of transition to a digital economic system.

Despite the fact that the emerging digital economic structure simultaneously combines several trends, and often multidirectional – this is the development of the basis of economic relations, and at the same time the widespread use of digitalization products and services, and the formation of "groundwork" in the economy of the future; there are gaps in its purposeful integrated use in the economy and social spheres. The completeness of the consideration of the competitive advantages provided by the use of appropriate "digital" software tools is precisely due to the "open" nature of these technologies, which trigger, multiplying the final result, deep synergistic processes in the existing socio-economic structure. Now great opportunities are opening up in the economy, both with reducing costs and obtaining undoubted benefits from optimizing processes already in use, providing new services and occupying, as yet, non-existent business niches. Moreover, possible development risks are also associated with these advantages, which must be calculated and levelled both by the intelligent systems already used and by the developers themselves, because this is the direct interest of the Human Creator.

The most popular areas of application of artificial intelligence software tools are currently the following: logistics of business relations; optimization of resource provision; increasing the efficiency of resource use in the field of target orientation of activity; minimizing time when getting an effect.

Financial technologies are considered today not only as a popular line of business being built using innovative technologies based on big data, machine learning, robotics, cloud technologies, etc. attributes of the information way of society's development, but also as the backbone of startup investments and the provision of appropriate services to "advanced" investors and users in decision-making. It is fintech that allows robotic consultants in developed world economies to maintain high rates of capitalization of related and other dynamically developing business sectors (banking, telecommunications, financial markets, retail, healthcare, etc.).

The methodological basis of the research is based on an integrated approach combining elements of process, structural, situational, functional approaches and the appropriate use of general and special methods of scientific cognition: dialectical logic, monographic, observation, analysis and synthesis, comparison, analogies, expert assessments.

The main results

The most common universal AI programs are the so-called chatbots – automated programs to support communications with consumers, allowing you to optimize many routine business processes. It is chatbots that often contact consumers in voice contact centers, applications, messengers. Most modern banks (for example, VTB, Tinkoff, Beac), having appropriate ecosystems, provide investment consulting services to clients, while the chosen goal (often already personalized and taking into account the explicit and implicit interests of the investor) is provided with appropriate strategies and tools, or automated intelligent solutions will be developed based on the analysis of the behavior of the client, to whom the one or the other strategy for using funds applies. Developed in the banking sector, so-called scoring (as a credit risk assessment system for potential customers based on statistical methods) is also based on AI technologies, which allows you to effectively minimize business costs and level out fraudulent actions. Efficiency is achieved, including in non-obvious and doubtful cases of evaluation. AI allows you to assess the loyalty of the borrower, the frequency of his purchases, which is a general "portrait" to which the forecast scenario is applied [1], [2], [3], [7].

AI intelligence in the banking sector accelerates the analysis processes and reduces the cost of customer service, and here one of the many routine tasks is checking transactions in accordance with the requirements, which allows you to compare existing rules with the cases encountered, and thus verify most transactions. It is the use of AI that allows for a thorough analysis that will reveal factors hidden from people. Machine data processing involves working with a large number of factors and ranking, assigning them varying degrees of importance, which allows you to identify patterns and signs of suspicious transactions, fraud. The use of AI to identify suspicious customers helps financial institutions improve their performance by reorienting their business to a paying audience.

In another case, the analysis and the corresponding forecast make it possible to respond in a timely manner to probable situations in the future, based on the identified factors, indicators, trends corresponding to a certain way of behavior, the life of a sample group, since any kind of human activity is based on certain patterns. For example, the behavior of traders is based on patterns that demonstrate their attitude to risk in the process of achieving remuneration. The trader's profile created in this way recommends the appropriate next step, strategy – to increase or decrease the bet. This behavior of the AI is based on the analysis of the trader's experience of past transactions, which allows you to predict his next step, and thereby simulate the behavior. In this sense, automated AI-based advisors can make recommendations based on processing information about the state of the market, evaluate the effectiveness of clients' portfolio investments, while such an independent analysis of investments can take an unjustifiably long time and does not guarantee the accuracy of the result and efficiency at all. Personalized recommendations made by AI look like one of the factors of high-quality individual service (intelligent systems can send out newsletters, calculate the volume of customer assets, offer behavior strategies and process user requests). The result of such work is a situation where bank customers receive good service, and credit institutions themselves receive the trust and location of the audience [4], [5], [6].

A comprehensive solution to reduce banking risks is a specialized web platform that combines all components of financial analytics – the bank uploads customer transactions to the application to detect unwanted transactions and fraud. Algorithms analyze the submitted transactions to identify anomalies and build a model for predicting customer behavior. When anomalies are detected, such a system generates a report on possible risks.

Being one of the leaders in the field of AI development, Beac actively implements robotic assistants in many business processes. If earlier decisions on granting a loan were made by employees in a few days or weeks, now it is possible in a matter of minutes. A comprehensive solution based on the financial and technological developments of the bank is the well-known business navigator from the Savings Bank, which allows a future businessman to make a decision about starting an appropriate and so to say "most successful" business in the location of interest, with appropriate financial support (including from the partner banks offered), leasing, calculated customer base, break-even point and other important markers of movement in the chosen niche. Such a turnkey solution will be accompanied by the bank throughout the entire business lifecycle [9], [10].

Conclusion

The popular areas of AI application in the business and financial environment can be determined by the following areas: optimization of business processes and communications; business forecasts and analytics; risk management and fraud detection; financial consulting and trading; personalization of services and automation of operations; control of compliance with rules. The use of artificial intelligence in the financial environment is an urgent requirement of the time, which allows companies to remain competitive, reduce costs and be "closer" to consumers, often even than their closest people.

Thus, we have considered the current directions of using the capabilities of artificial intelligent systems in the financial and banking spheres. A conscious understanding of the opportunities provided by artificial intelligence programs in the modern economy should be accompanied by an integrated approach to using the opportunities provided not only in individual business areas, but also in related sectors, which will minimize costs in the existing economic model and build optimal logistics schemes for the interaction of partners, forming unique competitive advantages in the future. The scientific and practical value of such anemphasis on considering possible directions of using artificial intelligence in the financial and banking spheres, taking into account the competitive advantages of using optimization software in promising business areas, involves complex options for using the capabilities of "digital" intelligence in the formation of unique synergetic effects in the coming economic order.

Конфликт интересов

Не указан.

Рецензия

Все статьи проходят рецензирование. Но рецензент или автор статьи предпочли не публиковать рецензию к этой статье в открытом доступе. Рецензия может быть предоставлена компетентным органам по запросу.

Conflict of Interest

None declared.

Review

All articles are peer-reviewed. But the reviewer or the author of the article chose not to publish a review of this article in the public domain. The review can be provided to the competent authorities upon request.

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