

occupy a leading position in China's economy, can help the country to realize all these tasks.

REFERENCES

1. The improvement of the innovation organization of enterprise operational business processes using various forms of financing, [Electronic resource]. – Access mode: https://www.research-gate.net/publication/3303-84821_2014_Nechaev_Andreeva_The_improvement_of_the_organization_of_innovation_enterprise/link/5c3d9ec9458515a4c726e215/download/. – Access date: 02.04.2023.
2. On the current features of small and medium-sized entrepreneurship in China [Electronic resource]. – Access mode: <https://cyberleninka.ru/article/n/o-sovremennyh-osobennostyah-malogo-i-srednego-predprinimatelstva-v-kitae/>. – Access date: 02.04.2023.

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THE POSSIBILITIES OF USING NEURAL NETWORKS IN THE ECONOMY

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Резюме – основная цель этой работы – выявить способы использования нейронных сетей в экономике, обозначить основные способы машинного обучения.

Resume – the main purpose of this work is to identify ways of using neural networks in the economy, to identify the main ways of machine learning.

Introduction. Looking through the news on various websites, social network groups and on YouTube, we constantly come across entries about neural networks. The topic of neural networks is undoubtedly a trend now. I wondered: have all these distributed neural networks played any role in the economy at the moment, or how can they be used for decision-making?

The main part. The fundamental advantage of neural networks is that they can be self-learning. This means that they do not need to be programmed using the traditional method, but at the same time they will learn from past experience and make fewer and fewer mistakes in the future.

How can we use neural networks in the economy?

Firstly, neural networks are excellent forecasters. They easily find dependencies, so they easily cope with such tasks. For example, they can predict the volume of demand for a product, predict sales, customer behavior, can tell us whether the company is reliable, or how soon it will go bankrupt, can predict changes in the stock price, and also determine whether the customer is sufficiently solvent to apply for a loan.

Secondly, neural networks are suitable for solving problems of economic analysis. For example, they can be used to quickly classify customers into risk groups for providing them with services, issuing a loan.

There are two ways to train a neural network: "learning with a teacher" is a controlled method, and "learning without a teacher" is an unmanaged method. Two types of algorithms are selected for network training: managing, "training with masters", and unmanaged, respectively, "Training without masters". Training data is taken from all existing sources. Most often, it is training with a master that is used.

Next, I would like to provide information about large companies that use the advantages of neural networks in their activities:

Amazon and Alibaba use neural networks to classify customer preferences so that the recommendations section works much better than ever. They also created a virtual assistant for Alex. The network of offline stores has made a lot of noise completely without any cash registers: regular ones with a cashier and self-service. Purchases in such stores are automatically tracked and paid directly from the card linked to the account.

Apple uses neural networks in its voice assistant Siri, as well as the Face ID facial recognition system.

It is important to mention that YouTube's profit, like Amazon's, has grown after the introduction of a new recommendation selection system. Bank clerks of JPMorgan Chase&Co. we used neural networks in our activities – now the AI processes applications in a couple of seconds.

In the CIS, Alice's voice assistant immediately comes to mind. She is able to build a meaningful dialogue, perform a voice search, plot a route, turn on music, call a taxi, order food. But Yandex's functionality is not limited to this: for example, it can translate videos from any language into Russian in real time, while the translated subtitles will be read out by a virtual announcer.

Conclusion. To summarize, I want to say that the study of neurotechnologies is really an urgent topic today. Humanity is obliged to move in this direction, we need to develop them and learn how to use them correctly. Fortunately, neural networks cannot completely replace a person who solves various problems much more correctly.

REFERENCES

1. Саймон О. Хейкин Нейронные сети и обучающие машины [Электронный ресурс] – Режим доступа: https://www.goodreads.com/book/show/589000.Neural_Networks_and_Learning_Machines. – Дата доступа: 24.03.2022.
2. Баканов, М. И. Теория экономического анализа / М. И. Баканов, А. Д. Шеремет. – М. : Финансы и статистика, 1997.
3. Галушкин, А. И. Нейрокомпьютеры. Учебное пособие по информационным технологиям / А. И. Галушкин. – М. : Альянс, 2014.
4. Латыпова, Р. Нейронные сети / Р. Латыпова. – М. : LAP Lambert Academic Publishing, 2012.