

ARTIFICIAL INTELLIGENCE AND SOFTWARE BASED ARTIFICIAL INTELLIGENCE

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ABSTRACT

Nowadays we live in a time when information communication technologies are developing on a global scale. In this article, there are given main information about artificial intelligence and software based on and software based on artificial intelligence.

Keywords: *ICT, AI, Technology, software, artificial intelligence systems, telecommunications.*

АННОТАЦИЯ

В настоящее время мы живем во время, когда информационно-коммуникационные технологии развиваются в глобальном масштабе. В этой статье приведены основные сведения об искусственном интеллекте и программном обеспечении на его основе, а также о программном обеспечении на основе искусственного интеллекта.

Ключевые слова: *ИКТ, ИИ, технологии, программное обеспечение, системы искусственного интеллекта, телекоммуникации.*

INTRODUCTION

Information and communication technologies are the main source of development of the state's economic system: telecommunications create new jobs in areas such as software production, and new information and communication services such as education and training. In particular, as a result of the rapid development of information communication technologies, the development of artificial intelligence systems and its role in human life is developing day by day. It is no coincidence that in many developed and developing countries, special emphasis is placed on the development of this sector. The reason is that in the current process of globalization, all documents are transferred electronically. It can be said that this will be a solution to some of the problems of humanity. We have a lot of information, but the human mind is unable to perceive it, so we are turning to artificial intelligence.

What is artificial intelligence? Artificial intelligence (AI) allows computers to learn from their experiences, adapt to given parameters, and perform tasks previously possible for humans. In many AI implementations—from computer chess players to

unmanned vehicles—deep learning and natural language processing capabilities are critical. Thanks to these technologies, computers can be "taught" to perform certain tasks by processing large amounts of data and identifying patterns in them. The history of the development of artificial intelligence". The term "artificial intelligence" appeared in 1956, but today AI technology has gained real popularity against the background of increasing the volume of data, improving algorithms, optimizing computing power and data storage facilities. The first research in the field of AI, which began in the 1950s, was aimed at solving problems and developing symbolic computing systems. In the 60s, the US Department of Defense became interested in this field: the US military began training computers to simulate human mental activity. For example, the Defense Advanced Research Projects Agency (DARPA) completed a series of virtual street map projects in the 1970s. And DARPA specialists managed to create intelligent personal assistants in 2003, long before Siri, Alexa and Cortana appeared. 'used automation and became the basis for formal logic principles. Although AI's are often depicted in science fiction films and novels as scientifically powerful robots, in the current stage of the development of AI technology, which has taken hold on a global scale, AI's are not very are not scary and smart.

DISCUSSION AND RESULTS

On the contrary, the development of artificial intelligence will bring real benefits to these technologies in all sectors of the economy. Below are examples of the use of artificial intelligence technologies in healthcare, retail and other industries.

As you know, the "coronavirus" infection has spread all over the Earth. This virus has spread in our country. How many of our doctors got infected with this disease in order to treat our patients infected with this virus. But there was a solution. Now is the age of technology. We had to use modern technology against this virus. That is, from "Artificial Intelligence". The idea is that in order to save our doctors from this stupid virus, we need to replace them with artificial intelligence robots, one in each hospital to look after patients. They should quickly go to each sick person, measure his temperature, give the necessary medicines and reach the other sick person. The main reasons for replacing doctors with robots: There is no danger of getting a virus (because it is a robot) The robot is a robot by its name, it moves quickly from one patient to another He does not receive a salary But we cannot say that there are no such robots anywhere. The reason is that in many developed

countries robots based on this artificial intelligence are taking care of patients in hospitals.

Artificial intelligence, which was used to detect cancer, is now being used to detect the COVID-19 coronavirus. The software was used in 34 hospitals in China and more than 32,000 cases were examined with its help, Neowin reports. Recently, a compatriot from Guzgor district of Kashkadayo region created robots based on artificial intelligence. These robots are designed for disinfection. We would like to thank our compatriot for providing such robots to our country. Now we are waiting for them to present multifunctional robots.

In addition to the above, the fact that the majority of consumers do not trust robots is one of the obstacles to the popularization of AI. It will take some time for people to accept self-driving cars or airplanes, of course. However, the opposite is true of the young generation growing up surrounded by modern technologies, and this process does not worry them so much. Despite all the objections and criticisms, AI continues to develop and help people. Its importance is increasing, especially in medicine. Now robots are able to perform relatively complex surgical procedures. The unique cooperation of robot-doctors with medical personnel has greatly increased efficiency. Medtronis, in cooperation with IBM, is developing a special program for patients with diabetes. This software will be able to detect an emergency drop in blood sugar 3 hours before. For this, medical data of 600 anonymous patients with this disease were studied. This means that now people will have the opportunity to regularly monitor their health through special programs on mobile devices. As you can see, AI's role in our lives is getting deeper day by day. Debates on the question of whether they are a victory or a defeat for humanity will continue for a long time. Most importantly, in the words of the fantastic writer Ishaq Azimov, the motto of creating robots should be to avoid harming people.

Artificial intelligence based software or Software is a tool designed to perform a specific type of task on a computer. this is understood as a set of software and documentation tools for creating and using data processing isystems with computer tools. It was this software that coined the term "dry iron". Software is a collection of all programs used by a computer. In English, this term means software, i.e. "soft" - soft, "ware" - "product". Software development Software development is a field that brings together professionals who develop computer programs. Some develop applications that manage tasks on a computer or computer-controlled device, while others develop core system software that manages networks or broader applications. They may be involved in developing software for computer games, business

applications, or medical devices. Those in this career path are adept at working with systems theory and understanding the technical limitations of the hardware they are developing software to control. Teams of experts work together on larger efforts, and software developers usually work closely with computer programmers. In some cases, developers write the code themselves instead of giving instructions to programmers. What makes it unique? This is an ever-changing field as computer applications and systems become involved in more and more products and services. This requires more software development to improve product features, system applications, and customer satisfaction.

Artificial intelligence has completely changed the way we live with innovative technologies. Artificial intelligence has entered human life like a storm and has made incredible changes, affecting every area of society. The term artificial intelligence was first introduced at a conference in 1956. Conference discussion led to interdisciplinary information technology natural language generation. The advent of the Internet has helped the rapid development of technology. Artificial intelligence technology has been an independent technology for three decades, but now the applications of this technology have become widespread in all areas of life. Artificial intelligence is known by the abbreviation AI and is the process of recreating the human mind in machines.

According to a Gartner information, the adoption of artificial intelligence grew from 4 percent to 15 percent in 2018-2019. Many new and emerging technologies are incorporated into artificial intelligence. Startups of giant organizations are participating in a major race to introduce artificial intelligence to improve productivity and intelligently analyze data.

Let's discuss the nine latest AI technologies in this article.

The latest artificial intelligence technologies

Natural language generation occupies the first position in the list of technologies of artificial intelligence that are considered relevant in 2022:

Natural language generation

Machines process and communicate differently than human brains. Natural language generation is a modern technology that converts structured data into native language. Machines are programmed with algorithms to convert data into the format required by the user. Natural language is a subset of artificial intelligence that helps content developers automate and deliver content in the desired format. Content developers can use automated content to advertise on various social media platforms

and other media platforms to reach their target audience. Human intervention is greatly reduced as data is converted into desired formats. data charts,

In second place is speech recognition technology:

Speech recognition: Speech recognition is another important piece of artificial intelligence that converts human speech into a format that is useful and understandable by computers. Speech recognition is the bridge between human and computer interaction. The technology recognizes and converts human speech in several languages. iPhone Siri is a classic example of speech recognition.

And the third place belonged to the currently important Virtual Agent technology:

Virtual agent: Virtual agents have become valuable tools for instructional designers. A virtual agent is a computer application that interacts with humans. Web apps and mobile apps provide chatbots as service agents to interact with customers and answer their questions. For example, Google Assistant helps organize meetings, and Amazon's Alexia makes shopping easier. The virtual assistant also works like a language assistant that chooses the tips according to your choice and preference. IBM Watson understands typical customer service requests that are asked in several ways. Virtual agents also serve as software.

At the same time, Decision Management technology, which is currently needed especially in large enterprises and organizations, is in fourth place on the list:

Decision management

Modern organizations are implementing decision management systems to transform and interpret data into predictive models. Enterprise-level applications implement decision management systems to obtain up-to-date information while analyzing business data to aid in organizational decision-making. Decision management helps to make quick decisions, avoid risks and automate the process. Decision management system is widely used in financial sector, healthcare sector, trade, insurance sector, e-commerce, etc.

The fifth place in the list is occupied by Deep Learning technology:

Deep learning; Another branch of artificial intelligence based on artificial neural networks is Deep Learning. This technique teaches computers and machines to learn like humans. The term "deep" was coined because neural networks have hidden layers. Typically, a neural network has 2-3 hidden layers and can have a maximum of 150 hidden layers. Deep learning is efficient in big data to train model and graph processing unit. Algorithms work in a hierarchy of predictive analytics automation. Deep learning is being used successfully in many industries such as aerospace and

military to detect objects from satellites, help improve worker safety by detecting dangerous events when approaching a working machine,

Another important technology of the year is Machine Learning, which took the sixth place on the list.

Machine learning is a branch of artificial intelligence that allows a machine to extract meaning from a set of data without being programmed. Machine learning techniques help businesses make informed decisions with data analysis powered by algorithms and statistical models. Enterprises are investing heavily in machine learning to take advantage of its applications in various industries. The healthcare and medical profession needs machine learning techniques to analyze patient data for disease prediction and effective treatment. The banking and finance sector needs machine learning to analyze customer data to identify and recommend investment opportunities to customers and prevent risk and fraud.

Another type of artificial intelligence technologies, such as automating processes through robotics, is ranked seventh:

Automation of processes through robotization

Process automation through robotics is an artificial intelligence application that configures a robot (software application) to interpret, communicate, and analyze data. This discipline of artificial intelligence helps to automate repetitive and rule-based operations that are partially or fully manual.

Eighth place on our list is occupied by Peer-to-peer network.

A peer-to-peer network helps to connect different systems and computers to share data without passing it through a server. Peer-to-peer network has the ability to solve the most complex problems. This technology is used in cryptocurrencies. The use of this technology provides savings, because separate computers are connected, and servers are not required.

And finally, at the bottom of our list is hardware optimized for Artificial Intelligence.

Hardware optimized for artificial intelligence

Artificial intelligence software is in high demand in the business world. With the increased focus on software comes the need for hardware to support the software. Traditional chip does not support artificial intelligence models. Next-generation artificial intelligence chips are being developed for neural networks, deep learning, and computer vision. AI hardware includes CPUs to handle scalable workloads, special-purpose embedded silicon for neural networks, neuromorphic chips, and more. Major organizations such as Nvidia, Qualcomm and AMD are creating chips that can

perform complex artificial intelligence calculations. Healthcare and automotive are likely to be areas that benefit from these chips.

CONCLUSION

Artificial intelligence and software based on and based on artificial intelligence are linked and completed with each other. They are very vital for human's life in current moment. Intelligence can be defined as structures, models, and operational functions that can be programmed to solve problems, make inferences, process language, and so on. The benefits of using artificial intelligence are already being reaped in many industries. Organizations using artificial intelligence should conduct testing before release to eliminate bugs and errors. Design, models should be solid. After deploying artificial systems, enterprises must continuously monitor in various scenarios. Organizations need to create and maintain standards and hire experts from different disciplines to make better decisions.

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