

ARTIFICIAL INTELLIGENCE IN MEDICINE

Every generation and every person on this planet would like to be healthy and has always sought to prevent diseases, the number of which is growing every day. Today, with the rapid development of technology, those diseases that previously seemed impossible to cure, due to which entire populations died, are now cured, and rather quickly. However, at the same time there are many diseases that a person is not ready to cope with at that moment. Fortunately, science does not stand still, and with the development of artificial intelligence, people use it not only in the areas of robotics, automation, but also in medicine.

Artificial intelligence began to develop not so long ago in 1956, so it is a rather young area of research [1]. Artificial intelligence provides the opportunity for machines to learn, think, perform various actions and help people, expanding our possibilities. Scientists and experts who work in the field of developing artificial intelligence believe that it has great potential and in the near future it will be ready to change our lives radically in all its spheres.

Today, artificial intelligence allows researchers and doctors, who deal with problems related to cancer to determine which additional tests should be done to the patient or which treatment would be better to prescribe. This application was developed by IBM and is a self-learning decision support system. This system includes data on all the latest clinical trials in the fight against malignant tumors, recently discovered symptoms of cancer and the results of tests of each participant in clinical trials. The program contains 600 0000 medical reports, including data on molecular and genetic research in the field of oncology. Now the doctor can examine in detail all the information that the program provides him and make further decisions on that basis.

Artificial intelligence could not only provide assistance to doctors whose work is related to oncology problems but also began to be used for diseases associated with heart attacks.

The proofs are two companies IBM and Astrazenek, which, in March 2019, are presented a neural network that will be able to predict the presence of the heart attack. Many studies have been conducted, which resulted in many data on age, sex, bad habits, as well as laboratory results, information on treatment and almost 40 other indicators among 26 986 adults hospitalized from 38 urban and rural hospitals in China.

All the data obtained were loaded into the neural network, the task of which was to find out whether the patient had any heart disease or not, and whether the patient received drugs that reduce the appearance of coronary insufficiency and prevent myocardial infarction and stroke. After that, scientists began to carry out clustering, in order to distribute patients into seven groups based on data obtained by the neural network. Patients who are prone to frequent cardiovascular diseases such as heart attack or stroke but have a low incidence of coronary heart disease were assigned to the first

cluster, and patients with severe cardiovascular disease, but without a previous heart attack, was attributed to another cluster.

Based on the research it turned out that for those patients who attributed to the first cluster the main predictor of the next heart attack was the presence of diabetes mellitus, while for patients referred to the second cluster, the main predictors were elderly age and increased systolic blood pressure.

Nevertheless, scientists working on this neural network argue that although clustering plays a role in the prognosis of the disease, it is still not entirely clear whether this data can be effectively used in clinical practice.

However, their work demonstrates that cluster analysis based on artificial intelligence is a promising approach for classifying patients with myocardial infarction, and perhaps in the future, scientists will be able to achieve great success using the capabilities of artificial intelligence. [3, 4]

However, despite the fact that artificial intelligence began to be used rapidly in medicine, there are also concerns about the loss of human participation in such an important and people-oriented profession.

Soon artificial intelligence will be able to replace 60% of professions according to forecasts of researchers at Oxford University. Whole communities of scientists, researchers and futurologists have already formed in the world, who are convinced that the emergence of artificial intelligence will lead to irreparable consequences - the domination of the machine over man in the near future.

Many technology innovators, such as theoretical physicist Stephen Hawking, Microsoft's founder Bill Gates, and Tesla's founder Ilon Musk, have some fear that people might lose control of super intelligent machines, and artificial intelligence will do more harm than good. Therefore, we need to feel the facet and not to overstep it. [5]

Now I believe that it is impossible to evaluate artificial intelligence as something good or bad. Artificial intelligence is positive if it is about replacing the routine work, improving and preventing doctors' mistakes that are related to the human factor. On the other hand, if people strive for something more and want to make artificial intelligence similar to us, then I think it can lead to the negative consequences.

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