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THE DEVELOPMENT PROSPECTS OF ARTIFICIAL INTELLIGENCE

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Before we talk about the study of the object, no matter what it represents, it is necessary to give definitions of the object and related parts that will unambiguously designate them and will be sufficient for accurate description of the topic in hand.

The idea of artificial intelligence is not that old and there are many ways to interpret the concept. What does it mean, to have intelligence? It means to have the ability to think, reason rationally, draw conclusions, learn, create something completely new and even make art. But it is inseparable from feeling and receiving information by intuition, empathizing and even dreaming. When a machine becomes "thinking"?

The machine can be made competent in one area, even more competent than a person, for example, in a game of chess or Go, but other fields human mind still rules over.

There are also philosophical questions which doubt the rationality of a person as it is, since, not all of a human's decisions are taken with the accordance to logic – some of them are prone to emotional impulses, others are imposed from outside, others are the result of naive assumptions. Even if a person acts in a way that he or she does not fully recognize, he or she still remains a rational human-being, while the machine is in any case to be considered as the one with the lack of reason.

In this regard, there are different points of view concerning the definition of artificial intelligence and approaches to the development of artificial intelligence and intelligent systems.

In the framework of the current level of the development of AI, the existing division of approaches into the top-down and the bottom-up ways is justified.

The top down approach to the development of AI consists of a plenty of methods aiming at both the achievement of automated intelligence and understanding the biological aspects of the human brain. If we understand the operation of this internal structure, we will be able to create a system that works in a similar way and obtains the similar results. A great role in this approach is played by neural networks and neurocomputers.

The bottom up approach is quite different in a certain respect with the consumption that the human brain looks like a "black box" which inner construction is obscure. But we do have input and output data so we can say what the result will be and, therefore, model a workable system [1].

Such systems are based on the principles of symbolic, logical, agent-based, hybrid approach and others. By creating expert systems in this way, humanity has achieved the certain results.

The creation of AI and IS, like any designing, has generated a number of associated "side effects", what were not always expected, but now their influence cannot be underestimated.

Bias. The recent research of the work of AI has shown the bias of its decisions. Intellectual systems based on human speech in order to understand and produce it use historical and cultural associations, some of which can be objectionable. But IS bias today create problems, for example, regarding the interrogation of racial and gender differences of

people with résumé screening and in the future they will only increase and block the introduction of IS into processes for which they were created [2].

Neuroevolution, has led to networks that can drive a car or even compose music. They work by simplifying the original problem, splitting it into easily solvable, by solving which we get the result, without performing lots of computation in one step. The algorithm uses “gradient descent”, improves the solution and reducing the number of errors and discarding options that lead to unwanted consequences, and giving preference to the most beneficial. The advantage of the method is that we consider many options, which turns out to be more efficient, and train the neural network while decision making, forcing the system to evolve [3].

AI is used for researching of psycho-emotional processes by simulation of chemical reactions and important role of neurotransmitters that affect emotions, mood and decision-making process, which make machine more like human in case of mental diseases [4].

As for emotional intelligence, humanity is not on the first place. Often people are not able to control their emotions and feelings, starting pointless fights for example. Emotions and feelings are organic algorithms that can be programmed and used against humanity. What is difficult to control by a person can easily be programmed and used against him. By programming such processes, we are approaching the possibility of programming a person, turning him into an organic robot [5].

To sum it up, we can say that the technology of artificial intelligence is the future. It has advantages and disadvantages, it should be treated carefully and used for the prosperity of humanity.

References

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