

The role of artificial intelligence in synergetic analysis for predicting the global evolution of the universe

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Abstract

As a result of the rapid changes taking place in today's globalized world, new problems are emerging in all fields of science. The most important result of biological evolution is the emergence of thinking. The significance of this process lies not only in the emergence of new adaptive abilities in living organisms. Thanks to the passive natural anti-entropic processes, i.e. the processes of natural creation of self-organization, the anti-entropic models of artificial creation of organized objects and systems were added. Science, technology and social organizations underlie this development of civilization. Computer science and various information and communication technologies are also evolving rapidly. Many researchers argue that the evolution of life will end and be replaced by technological evolution. The emergence of artificial intelligence is already an undeniable fact, the presence of technical evolution in real life can be seen at every step. Informatics is generally considered a purely technical science; it evolved with the advent of computers in the middle of the last century. Ironically, many researchers, including quantum physics researchers, believe that computer science created people, not people created computer science. No evolutionary theory can explain the magnificent CAD Project that created the perfect human-like self-replicating computing device.

Key Words: Global Evolution, Universe, Artificial Intelligence

As a result of rapid changes occurring in the modern globalized world, new problems appear in all fields of science. The most important result of biological evolution is the emergence of thinking. The importance of this result lies not only in the emergence of new adaptive abilities in living organisms. Thanks to passive natural anti-entropic processes, i.e., the processes of natural creation of self-organization, anti-entropic models of artificial creation of organized objects and systems were also added. The basis of this development of civilization is governed by science, technology and social organizations. Computing technology, various information and communication technologies are also developing rapidly. Many researchers argue that the evolution of life will end and be replaced by technological evolution. The emergence of artificial intelligence is already an undeniable fact, the presence of technical evolution in real life is visible at every step [1].

Computer science is generally considered to be a purely technical science, it developed with the emergence of computers in the middle of the last century. Ironically, many researchers, including quantum physics researchers, believe that computer science created people, not that people created computer science. No evolutionary theory can explain a magnificent cad project that resulted in the creation of a perfect, self-replicating computing device like man. It is clear that the principles of this development are still completely incomprehensible to us or very confusedly understood. But it cannot be denied that these studies were conducted.

Many processes occurring in nature can be considered informative. these are, for example, developmental processes, biological transport, processes in unicellular organisms. scientists explain the universal principles of information processing in nature, which they observed while studying these processes, from the point of view of natural-scientific context (physiology, genetics, quantum physics). austrian-american biologist ludwig von bertalanffy proposed general systems theory in the 1930s. Its main idea is to recognize the isomorphism of the laws governing the operation of system objects. Many concepts of this theory are related to modern computer science. These are represented by, for example, objects (object-oriented programming) and relationships (relational databases), system and environment (client-server-architecture) schema. However, bertalanfi's theory also examines the dynamics of systems - homeostasis, evolution, adaptation, transient processes. If we consider, for example, the software development process, we will see

the importance of conducting these programs by computer science. This is another concept of the system indicated by programs of complexity, entropy, and destruction processes. If fixing a bug in the code leads to n new bugs on average when $n > 1$, the development process is different. There is no possibility that nature does not encounter such problems, these problems exist everywhere, but it is not known how nature solves these problems [2].

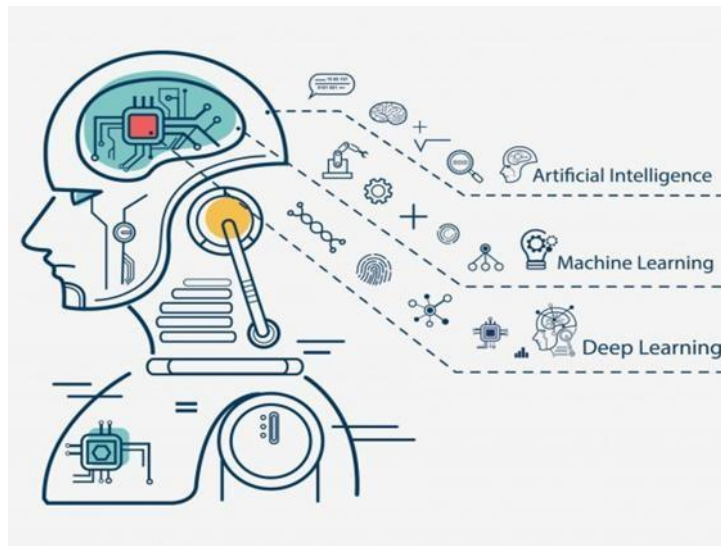


Figure 1. Directions for the integration of artificial intelligence into human activity

Devices developed by modern companies are controlled by artificial intelligence based on fuzzy logic. The inclusion of fuzzy set theory and the concept of fuzzy measure in science enabled a more adequate approach to the explanation of the events happening in our world. Philosophical-methodological-scientific contradictions have naturally turned into linguistic and terminological contradictions in the information abundance of the modern era. In the hypothesis put forward by the English mathematician Roger Penrose, the human consciousness has a quantum nature, and an attempt has been made to compare the processes of spirit, thought, consciousness, and understanding with physical processes.

At the same time, there is a problem that is actively discussed in the popular publications about the "global risk of creating artificial intelligence". To assess this problem, we need to answer a number of questions; what is thinking, is it possible to think artificially? How far has man progressed in creating artificial intelligence? Is it possible to create an autonomous active artificial intelligence? Answering these questions and challenges requires analyzing the results and perspectives of algorithmic artificial intelligence, as well as research on related fields such as pattern recognition and formal neural networks. These problems are investigated from the point of view of synergetics, which is considered adequate to the problem of modeling thinking. Considering artificial intelligence as a special branch of computer science "dealing with the automation of intelligent behavior", it can be considered as a direction to develop the best possible agent software. Currently, artificial limited intelligence is an analogue of human thinking type, able to analyze, compare, learn and interact with other technologies [3].

Artificial intelligence, along with well-known promising machine learning techniques in computer science, is widely influencing many aspects of various fields, including science and technology, industry, and even our daily lives. Because techniques have been developed to analyze high-throughput data to derive useful insights, categorize, predict, and make evidence-based decisions in new ways, which will encourage the growth of new applications and drive the continued development of AI. This article is based on

comprehensive research on the development and application of ai in various aspects of basic sciences, including information sciences, mathematics, medical sciences, materials science, geosciences, humanities, physics, and chemistry. The challenges faced by each field of science and the potential of ai techniques to overcome these challenges are discussed in detail. In addition, we also analyze directions for new research trends involving the integration of artificial intelligence into each scientific discipline (figure 1).

On the one hand, it is difficult to assess the essence of such changes. Against the background of announcements about dangers and risks unexpected at first glance, there are also attractive prospects (expansion of human cognitive abilities, freedom from monotonous work, improvement of quality of life and service, etc.). Since its inception, artificial intelligence has been developing as a field that is not equal to, but significantly surpasses, human intelligence.

Conclusion

In any case, ai technologies, which have gained certainty as a phenomenon, can be studied in the context of how modern people see their interactions with them. The noticeable role of the young generation, which has mastered social subjectivity, manifests itself in the creation of new social structures and projects. Thus, looking at how young people perceive interaction with artificial intelligence, reflect the vector of mastering the technologies of the future in their thoughts, interest in applying scientific discoveries in real life is increasing.

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