

# The Most Necessary Aspects of Artificial Intelligence in Different Fields

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## Abstract

Intellectual information technologies - informatics the future shiny and fast paces with developing scientific and practical field is considered It is from computers use with depends all scientific and technological directions significant level effect it shows to the society from science what pending if the same of today in itself is giving , practical important have was results , their most of them them apply possible was in the fields fundamentally changes to do able \_ In the article intellectual information of technologies scientific in the foundation the key component artificial calculation of intelligence (AI) . about the word is conducted.

**Keywords-**Electronic Count Machine, Information Search System, Knowledge Base,Intellectual System, Working Memory, Database Management System, Communication System, Artificial Intelligence, Artificial Intellect Systems, Technical Means, Natural Language, Formal System, Reverse Chain Of Thinking, Computing Machine, Expert System, New Information Technologies, Software, Database, Explainer Component, Knowledge Harvest To Do Component.

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## I. INTRODUCTION

The evolution of information technologies and systems is determined by a higher level of their intellectualization.

The goals of intelligent information technologies are, firstly, to expand the scope of problems solved with the help of computers, especially in poorly structured subject areas, and secondly, to raise the level of intellectual information support of a modern specialist.

## **II. LITERATURE REVIEW**

The idea of AI and research in this field - a scientific approach to the production of "Intellectual machines" first appeared in the scientific circle founded in 1956 on the initiative of Professor John McCarthy of Stanford University (USA).

This circle includes Marvin Minsky, professor emeritus of the department of "Electronics and Computing" of Massachusetts Institute of Technology (USA), cybernetic Allen Newell, creator of intellectual programs "General Problem Solver" and "Logic-Theorist" and famous psychologist of Carnegie-Mellen, Dorylfun (USA) Herbert Simon, prominent computer experts Arthur Samuel, Oliver Selfridge, K. Shannon and others. It was in this circle that the concept of "Artificial Intelligence" appeared.

The following scholars have considered priority directions of the development of the national innovation system in our republic in their research:

## **III. RESEARCH METHODOLOGY**

The methodological basis of the research was formed as a result of the study of theoretical and practical information, legislation and other legal documents, literary sources and publications. The research is based on the connections between theory and practice, but also made extensive use of methods such as analysis, comparison, and synthesis.

## **IV. ANALYSIS AND RESULTS**

One of the main directions of modern information technologies is the creation of intelligent systems that perform human tasks.

In the modern world, the development of a programmer in creating a program occurs only in such cases, when computers take over a part of the intellectual task. One of the methods of perfect development of this field is "Artificial Intelligence". In this case, the computer takes on not only one type, but also many repeated events and learns on its own. In addition, the creation of perfect "Artificial Intelligence" will open new directions of development for humanity.

Currently, competitive advantage is not determined by the size of the country, nor by its natural resources. Now it is decided by the level of education and the amount of knowledge accumulated by the society. In the future, only the countries that can create and acquire new knowledge compared to other countries will prosper. New information technologies play the main role in this, and SI methods and tools play in them.

An intellectual system is defined as a voluntary biological, artificial or formal system, whose nature reflects a goal-directed ability.

The latter includes communication, knowledge gathering, decision-making, learning, adaptation, and other features. Currently, there is a steady trend of intellectualization of computers and their software (SW). The main functions of future computers are aimed at solving problems of a more non-computational nature, that is, logical reasoning, BB control, intelligent interface support, and other problems. The intellectualization of computers is carried out due to the creation of special hardware (for example, neurocomputers) and SW (expert systems, BB, problem solvers, etc.),

A working definition of the concept of "intelligent system" is given in [7]. A system is considered intelligent if it fulfills three basic functions:

1. Knowledge presentation and processing function. The intellectual system (AS) should be able to collect knowledge about the surrounding environment, classify and evaluate them in terms of pragmatics and non-contradictions, determine the processes of receiving new knowledge, determine the connections between the knowledge stored in the database (MB) and new knowledge;
2. Reflection function. IT should create new knowledge with the help of a logical conclusion and demonstrate the mechanism of legitimacy in the accumulated knowledge, obtain generalized knowledge based on individual (personal) knowledge and logically plan its activities;
3. Communication function. IT can communicate with a person in a language close to him and receive information from channels analogous to a person's perception of the surrounding environment (primarily visual and audio), know how to formulate an explanation of personal activity "for himself" or at the request of a person (i.e. (answering questions such as "How did I do this?") helps a person to account for the knowledge stored in his memory and a logical means of reasoning.

What is artificial intelligence? Artificial Intelligence (AI) allows computers to learn from their experiences, adapt to given parameters, and perform tasks previously only 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 "trained" to perform certain tasks by processing large amounts of data and identifying patterns in it. 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, focused on the development of problem solving and symbolic computing systems. In the 1960s, 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 experts managed to create intelligent personal assistants in 2003, long before Siri, Alexa and Cortana appeared.

This work laid the foundations for the automation and formal logic principles used in modern computers, particularly in decision support systems and intelligent search systems designed to augment human capabilities. At the current stage of SI technology development, SIs are not that scary or smart. On the contrary, the development of artificial intelligence will bring real benefits to these technologies in all areas of the economy. Below are examples of the use of artificial intelligence technologies in healthcare, retail and other industries.

In which field is artificial intelligence most needed? Of course, in medicine.

The reason is that now you know that the "coronavirus" infection has spread all over the Earth. This virus is still spreading in our country. How many of our doctors are getting infected with this disease in order to treat our patients infected with this virus. But there is a solution. Now is the age of technology. We need to use modern technology against this virus. That is, from "Artificial Intelligence".

The idea is that in order for us to save our doctors from this stupid virus, we need to replace them with an artificial intelligence robot, one in every hospital to take care of the patients. They should quickly go to each sick person, measure his temperature, give the necessary medicines and get to the next sick person.

The main reasons for replacing doctors with robots are:

- There is no risk of virus infection (because it is a robot);
- The robot is a robot as its name suggests, 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.

What about Uzbekistan?

Recently, one of our compatriots from Guzor district of Kashkadayo region created such robots based on artificial intelligence. These robots are designed for disinfection. We would like to thank

this compatriot for providing such robots to our country. Now we are waiting for them to introduce multi-functional robots.

Currently, ETs are used in medicine - in the diagnosis of various forms of intestinal, tuberculosis and hypertensive diseases; in the military field - assisting the pilot in landing the aircraft, determining the type of radar that sent the interception signal to the analyst, carrying out cartographic work on making changes to the map, helping to process the results obtained during the reconnaissance of the command centers, management and communications of the opponents, performing the situation assessment in the field of the opponent's radio exchange intelligence increasing and helping intelligence analysts predict when and where the next armed conflict will occur; in informatics - helping specialists who develop a database (DB) and determine the conceptual scheme of the DB; in computer systems - in the design of local systems and in the management of MVS operating systems with a large discharge in a large EC; in electronics - in identifying malfunctions in the telephone network, making recommendations on its adjustment and recovery measures; in energy - in the detection and correction of malfunctions in energy systems; in geology - in finding and determining the condition of minerals; in agriculture - advising to look after orchards; in mathematics - in proving theorems and simplifying algebraic expressions; in chemistry - understanding the structures of complex organic molecules; in biology - it is widely and effectively applied in determining the structure of DNA.

AIT in agriculture in the future - protecting crops from pests, pruning trees and providing care based on selective traits; in the mining industry - working in extremely dangerous conditions for people; in production - execution of various issues of assembly and technical control; in organizations - to prepare a schedule for the team and individual employees, to provide brief information about the news; in educational institutions - to see the problems that students solve, to search for errors in them and solve them, to provide students with supertextbooks stored in the memory of computer systems; in hospitals - to diagnose patients, send them to the necessary department and give them advice and control during treatment; in housework - he should give advice on preparing food, buying products, control the condition of the house and lawns in the garden.

## **V. CONCLUSION/RECOMMENDATIONS**

In conclusion, Artificial Intelligence (AI) allows computers to learn from their experiences, adapt to given parameters, and perform tasks previously only 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 "trained" to perform certain tasks by processing large amounts of data and identifying patterns in it.

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