

Зубович Анна Дмитрівна

Київський національний університет технологій та дизайну

(м. Київ)

Науковий керівник –Телев'як І.І.

THE FUTURE COMPUTED:

ARTIFICIAL INTELLIGENCE AND ITS ROLE IN SOCIETY

Artificial intelligence (AI), the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings. The term is frequently applied to the project of developing systems endowed with the intellectual processes characteristic of humans, such as the ability to reason, discover meaning, generalize, or learn from past experience. Since the development of the digital computer in the 1940s, it has been demonstrated that computers can be programmed to carry out very complex tasks – as, for example, discovering proofs for mathematical theorems or playing chess – with great proficiency. Still, despite continuing advances in computer processing speed and memory capacity, there are as yet no programs that can match human flexibility over wider domains or in tasks requiring much everyday knowledge [1]. On the other hand, some programs have attained the performance levels of human experts and professionals in performing certain specific tasks, so that artificial intelligence in this limited sense is found in applications as diverse as medical diagnosis, computer search engines, and voice or handwriting recognition.

The intellectual roots of AI, and the concept of intelligent machines, may be found in Greek mythology. Intelligent artifacts appear in literature since then, with real mechanical devices actually demonstrating behavior with some degree of intelligence. After modern computers became available following Second World War, it has become possible to create programs that perform difficult intellectual tasks. The term artificial intelligence was coined by John McCarthy, an American computer scientist, in 1956 at The Dartmouth Conference where the discipline was born, but AI has become more popular today thanks to increased data volumes,

advanced algorithms, and improvements in computing power and storage. Early AI research in the 1950s explored topics like problem solving and symbolic methods. In the 1960s, the US Department of Defense took interest in this type of work and began training computers to mimic basic human reasoning. This early work paved the way for the automation and formal reasoning that we see in computers today, including decision support systems and smart search systems that can be designed to complement and augment human abilities [1].

AI can be categorized in any number of ways, but here are two examples. The first classifies AI systems as either weak AI or strong AI. Weak AI, also known as narrow AI, is an AI system that is designed and trained for a particular task. Virtual personal assistants, such as Apple's Siri, are a form of weak AI. Strong AI, also known as artificial general intelligence, is an AI system with generalized human cognitive abilities so that when presented with an unfamiliar task, it has enough intelligence to find a solution. The Turing Test, developed by mathematician Alan Turing in 1950, is a method used to determine if a computer can actually think like a human, although the method is controversial.

The second example is from Arend Hintze, an assistant professor of integrative biology and computer science and engineering at Michigan State University [2]. He categorizes AI into four types, from the kind of AI systems that exist today to sentient systems, which do not yet exist. Here are four types of AI:

- Type 1: reactive machines
- Type 2: limited memory.
- Type 3: theory of mind.
- Type 4: self-awareness.

So, artificial intelligence helps us perform the tasks in our day-to-day life, making decisions and completing our daily chores. This makes AI a lot popular these days. Where are we using it in our daily life? They can be found everywhere in our surroundings. Have you ever played video games? Most of the people would have. In every modern video game, all the characters have artificial intelligence which allows

them to follow the main player, attack and fight automatically without human interaction. Or here is one more great example: many websites now offer customers the opportunity to chat with a customer support representative while they're browsing – but not every site actually has a live person on the other end of the line. In many cases, you're talking to a rudimentary AI. Many of these chat support bots amount to little more than automated responders, but some of them are actually able to extract knowledge from the website and present it to customers when they ask for it.

These examples tell us how important artificial intelligence has become in our modern life. But this is just a start; we are going to see a lot of great inventions using AI which will make our lives a lot easier. It is a growing number of AI applications actively improving people's lives and creating positive change in the world. There are so many AI applications in completely different fields. Here are the most common of them. The discovery process, sifting through of documents, in law is often overwhelming for humans. Automating this process is a better use of time and a more efficient process. Startups are also building question-and-answer computer assistants that can sift programmed-to answer questions by examining the taxonomy and ontology associated with a database [3].

Also, AI can automate grading, giving educators more time. AI can assess students and adapt to their needs, helping them work at their own pace. AI tutors can provide additional support to students, ensuring they stay on track. AI could change where and how students learn, perhaps even replacing some teachers.

The biggest bets are on improving patient outcomes and reducing costs. Companies are applying machine learning to make better and faster diagnoses than humans. One of the best known healthcare technologies is IBM Watson. It understands natural language and is capable of responding to questions asked of it [3].

But are there any challenges of using artificial intelligence? Artificial intelligence is going to change every industry, but we have to understand its limits. The princip limitation of AI is that it learns from the data. There is no other way in

which knowledge can be incorporated. That means any inaccuracies in the data will be reflected in the results. And any additional layers of prediction or analysis have to be added separately. Today's AI systems are trained to do a clearly defined task. The system that plays poker can't play solitaire or chess. The system that detects fraud can't drive a car or give you legal advice. In fact, an AI system that detects health care fraud can't accurately detect tax fraud or warranty claims fraud. In other words, these systems are very, very specialized. They are focused on a single task and are far from behaving like humans. Likewise, self-learning systems are not autonomous systems. The imagined AI technologies that you see in movies and TV are still science fiction. But computers that can probe complex data to learn and perfect specific tasks are becoming quite common [4].

As a conclusion, here is a fact that AI has no real definition of intelligence to offer, not even in the subhuman case. Rats are intelligent, but what exactly must an artificial intelligence achieve before researchers can claim this level of success? In the absence of a reasonably precise criterion for when an artificial system counts as intelligent, there is no objective way of telling whether an AI research program has succeeded or failed. One result of AI's failure to produce a satisfactory criterion of intelligence is that whenever researchers achieve one of AI's goals – for example, a program that can summarize newspaper articles or beat the world chess champion – critics are able to say «That's not intelligence!» Marvin Minsky's response to the problem of defining intelligence is to maintain – like Turing before him – that intelligence is simply our name for any problem-solving mental process that we do not yet understand. Minsky likens intelligence to the concept «unexplored regions of Africa»: it disappears as soon as we discover it [4].

REFERENCES

1. James Barrat, *Our Final Invention: Artificial Intelligence and the End of the Human Era*, Thomas Dunne Books, 2013.

2. Max Tegmark, Life 3.0: Being Human in the Age of Artificial Intelligence, Knopf, 2017.

3. Ray Kurzweil, The Age of Spiritual Machines: When Computers Exceed Human Intelligence, New York: Viking, 1999.

4. Richmond Thomason, editor, Philosophical Logic and Artificial Intelligence. Kluwer Academic, 1989.

Кучинська Дар`я Андріївна

Київський національний університет технологій та дизайну
(м.Київ)

Науковий керівник — Горлатова О.М.

ADAPTATION OF A SPECIALIST IN A FOREIGN-SPEAKING ENVIROMENT

Introduction. The relevance of the problem of adaptation of specialists in a foreign environment is primarily determined by the tasks of their further effective work as foreign specialists. Successful adaptation facilitates the rapid inclusion of employees in the workflow, which allows to solve the problem of maintaining the number of employees. **The purpose** of this work is to reveal the problems and their reasons for adapting employees in a foreign-language environment and proposals for their elimination. Within the framework of this goal, the following tasks can be singled out: 1) to analyze the factors that affect the effectiveness of the adaptation of employees in a foreign-speaking environment; 2) identify the main problems of adaptation; 3) the disclosure of methods that ease the adaptation process.

Basic material. During the adaptation, new employee evaluates the company (in the same way as the company evaluates the employee), and if this process is not controlled, there is a great chance that the person will give up the job or spend too much time in order to join the team.[1] A well-functioning system of adaptation