ARTIFICIAL INTELLIGENCE AND HUMAN BEINGS

Solomevich E. Y.

Belarusian State University of Informatics and Radioelectronics, Minsk, Republic of Belarus

Kaspiarovich N. G. – Senior Lecturer

Annotation. The abstract is devoted to artificial intelligence, also known as the industrial revolution 4.0. The impact of artificial intelligence on the ways we do things and relate to one another is described. New principles of artificial intelligence bioethics must be considered and developed to provide guidelines for the artificial intelligence technology to observe so that the world will be benefited by the progress of this new intelligence. The role of artificial intelligence in industrial, social, and economic changes of humankind in the 21st century is discussed.

Keywords. Artificial intelligence, flexible adaptation, image recognition, machine learning, natural language processing, human error, digital Associate.

Artificial intelligence (AI) has many various definitions. Some see it as a created technology that allows computers and machines to function intelligently. Some regard it as a machine that replaces human labour to work for men achieving a more effective and speedier result. Others consider it as 'a system' with the ability to interpret external data correctly, to learn from such data, and to use that knowledge to reach specific goals and perform various tasks through flexible adaptation.

Along with the rapid development of cybernetic technology in recent years, AI has been seen almost in all our life circles, and some of that may no longer be regarded as AI because it is so common in daily life that we are much used to it such as optical character recognition, or the Siri, or Google Associate of information searching engine.

The question we should inquire whether AI is really needed in human society. To state the answer, we should admit that it depends. If humans opt for a faster and effective way to complete their work and to work continuously without taking breaks, yes, it is. However, if humankind is satisfied with a natural way of living without excessive desires to conquer the order of nature, it is not. History tells us that humans are always looking for something faster, easier, more effective, and convenient to finish the task they work on; therefore, the pressure for further development motivates humankind to seek a new and better way of doing things. Above all, we see the high-profile examples of AI including autonomous vehicles (such as drones and self-driving cars), medical diagnosis, art creation, playing games (such as Chess), search engines (such as Google search), online Associates (such as Siri), image recognition in photographs, spam filtering, flight delay prediction, etc. All these have made human life much easier and convenient that we are so used to them and take them for granted. AI has become indispensable, although it is not absolutely needed, without it our world will be in chaos in many ways today.

Let us consider the negative impact AI will have on human society. A huge social change that disrupts the way we live in the human community will occur. Humankind has to be industrious to make their living, but with the service of AI, we can just program the machine to do a thing for us without even lifting a tool. Human closeness will be gradually diminishing as AI will replace the need for people to meet face to face for idea exchange. AI will stand in between people as the personal gathering will no longer be needed for communication.

Unemployment is the next because many works will be replaced by machinery. Today, many automobile assembly lines have been filled with machinery and robots, forcing traditional workers to lose their jobs. Even in supermarkets, the store clerks will not be needed anymore as the digital device can take over human labor.

Wealth inequality will be created as the investors of AI will take up the major share of the earnings. The gap between the rich and the poor will be widened. The so-called 'M' shape wealth distribution will be more obvious.

New issues surface not only in a social sense but also in AI itself as the AI being trained and learned how to operate the given task can eventually take off to the stage that human has no control, thus creating unanticipated problems and consequences. It refers to AI's capacity after being loaded with all needed algorithms may automatically function on its own ignoring the commands given by the human controller.

The human masters who create AI may invent something that is racially biased or egocentrically oriented to harm certain people or things. For instance, the United Nations has voted to limit the spread of nuclear power in fear of its indiscriminative use to destroying humankind or targeting certain races or regions to achieve the goal of domination. AI in its turn has an actual possibility to target a certain race or some programmed objects to accomplish the command of destruction by the programmers, thus creating a world disaster.

The advantages of AI applications are enormous and can revolutionise any professional sector. First, it can lead to the reduction of human errors. The phrase 'human error' was born because humans make mistakes from time to time. Computers, however, do not make these mistakes if they are programmed properly. With AI, the decisions are taken from the previously gathered information applying a certain set of algorithms. So, errors are reduced and the chance of reaching accuracy with a greater degree of precision is a possibility.

Second, AI devices can take risks instead of humans. This is one of the biggest advantages of AI. We can overcome many risky limitations of humans by developing an AI Robot which in turn can do dangerous things for us. Let it be going to Mars, defuse a bomb, explore the deepest parts of the oceans, mining for coal and oil, it can be used effectively in any kind of natural or man-made disaster.

Third, it is availability. An average human will work for 4-6 hours a day excluding the breaks. Humans are built in such a way that they cannot work all the time, after long and monotonous years of working as a rule come bouts of depression and they burn out. However, using AI we can make machines working without any breaks and they do not even get bored, unlike humans.

Fourth, AI is indispensable in helping with repetitive jobs. In our day-to-day work, we will be performing many repetitive tasks like sending thanking emails, verifying certain documents for errors, and many more things. Using AI, we can productively automate these mundane tasks and can even remove 'boring' activities for humans and free them up to be increasingly creative.

Fifth, some of the highly advanced organizations use digital Associates to interact with users which saves the need for human resources. Digital Associates are also used on many websites to provide things that users want. We can chat with them about what we are looking for. Some chatbots are designed in such a way that it has become hard to determine that we are chatting with a chatbot or a human being.

Using AI alongside with other technologies we can make machines take decisions faster than a human and carry out actions quicker. While taking a decision human will analyse many factors both emotionally and practically but AI-powered machine works on what it is programmed and delivers the results in a quicker way. Daily applications such as Apple's Siri, Window's Cortana, Google's OK Google are frequently used in our daily routine whether it is for searching a location, making a phone call, replying to a

mail, and many more. AI is powering many inventions in almost every domain which will help humans solve the majority of complex problems.

AI has the potential to advance the healthcare field, but perhaps the most beneficial advancement using AI is the ability to better diagnose diseases. Through deep learning, artificial intelligence can potentially reduce cost and improve the accuracy of diagnosing critical diseases on radiographic imaging. This benefit is especially pronounced for cancer patients when early detection of the disease can be the difference between life and death. Recently there have been studies that showed AI was able to pick up on subtle changes that could diagnose certain cancers sooner than a typical radiologist. AI systems have proven more effective than humans at detecting lung cancer, and a new AI deep learning program uses breast cancer screening methods that appear to be more accurate at detection than digital mammography.

Every child learns in their way at their own pace, and teachers aren't always able to meet every student's needs in the way that's best for them. That is where AI comes in. AI can teach efficiently 24 hours per day, and it has the potential to provide one-on-one tutoring to all students. This can provide every learner with the opportunity to get constant, personalized tutoring based on their needs. While this is still an emerging application of AI, there's the potential to create highly-personalized lesson plans for students and reduce the time teachers spend focusing on administrative tasks. Not only can AI improve the learning experience, but it can also ensure that children in all situations and areas of the world have access to education. AI has the potential to democratize education by providing world-class education regardless of where students reside.

To summarise, AI is going to change not only the way we do things, how we relate to others, but also what we know about ourselves. We have listed some advantages and disadvantages of AI. Every new invention or breakthrough will have both, but we, as humans, need to take care of that and use the positive sides of any invention to create a better world. AI has massive potential advantages. The key for humans will ensure the 'rise of robots' does not get out of hand. Some people also say that AI can destroy human civilization if it goes into the wrong hands. But still, none of the AI applications is made at that scale that can destroy or enslave humanity.

References:
1. Nils, J. N. A New Synthesis / J. N. Nils, 2009. – 513 p.
2. Nilsson, J. N. Principles of artificial intelligence / J. N. Nilsson. – Palo California, 1980. – 42 p.
3. Jacob, R. Thinking machines: The search for artificial intelligence / R. Jacob, 2016.
4. Russell, S. J. Artificial Intelligence: A Modern Approach / S. J. Russell, P. Norvig, 2009. – 946 p.
5. Bostrom, N. Superintelligence: paths, dangers, strategies / N. Bostrom, 2014. – 352 p.