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G. V. Abramovych
S. A. Ryndin

Implementation of artificial intelligence in human life

Vinnytsia National Technical University

Анотація: *В статті розглянуто переваги і недоліки використання штучного інтелекту у житті людини. Наводяться ризики його використання та думки відомих розробників.*
Ключові слова: штучний інтелект, промисловість, загрози, прогрес, роботи.

Abstract: *The article considers the advantages and disadvantages of using artificial intelligence in human life. The risks of its usage and thoughts of prominent developers are presented.*
Keywords: artificial intelligence, industry, threats, progress, robots.

Introduction

In today's world, smart machines are becoming increasingly widespread. They are actively used in services and production spheres, some of them can diagnose while some can maintain a dialogue with a human. However, with the development of artificial intelligence and robotics, issues of social and economic nature are arising.

In modern science, the development and research of artificial intelligence and robotics is one of the most discussed topics. There exist already many companies that work in this direction and each have taken its niche and developed one or another related direction.

Main part

Changes that contribute to the development of artificial intelligence are already affecting everyone. According to the research organization McKinsey Global Institute, fundamental changes in the labor market should be expected in the next ten years and novice technologies are supposed to save about $ 50 trillion.

Almost all routine work will be transferred to intelligent machines as they will be able to perform it faster and better. The changes will reduce hundreds of millions of work places. At the same time, not only low-qualified workers will be affected in the process of automation.

For example, the investment company Goldman Sachs fired 600 traders, leaving only two people and introducing automated software algorithms. For servicing them, a staff of 200 programmers was formed.

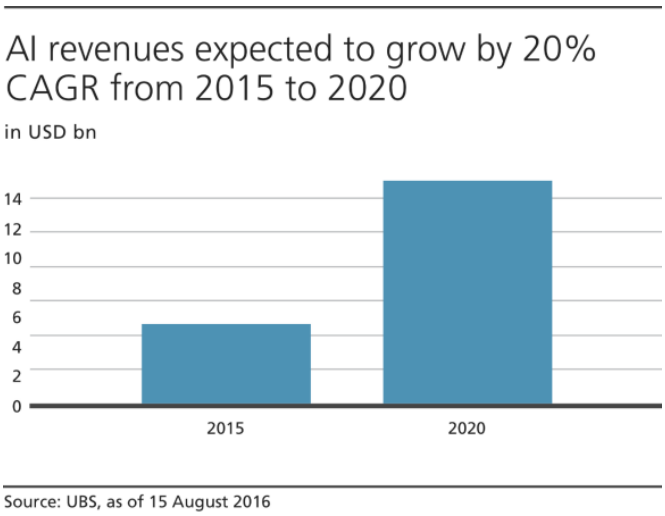
Artificial intelligence has already started to penetrate into medical offices and experts are convinced that it is only a matter of time when it will become a commonplace there. At the moment, artificial intelligence works well in diagnosing diseases: researchers at the John Redcliffe Hospital in Oxford have developed a diagnostic system that demonstrated the rate of 80% in diagnosing heart diseases if compared to doctors' diagnosing; at Harvard University, scientists have taught a "smart microscope" to see dangerous blood infections [1].

According to The Daily Mail [2], artificial intelligence has also proven its ability to determine the risk of developing such age-related diseases as cancer and heart disease.

The chairman of Orange Silicon Valley George Nayhon believes that due to the current development of artificial intelligence, human faces will be new credit cards, according to the CNBC article. "Face Recognition today completely changes the security systems by introducing biometric capabilities. Taking into consideration how technologies combine with retailers, such as Amazon and Whole Foods, a near future when people no longer have to queue at the store, is easily seen" Nayhon said [3].

In the next several years, AI's industry growth is expected to explode and the influence on all spheres will grow significantly. By the end of the decade, the beginning of true autonomy is expected. AI-powered machines and software will likely start to be free from human supervision, they will become sentient beings one day. But this will happen much later in the distant future.

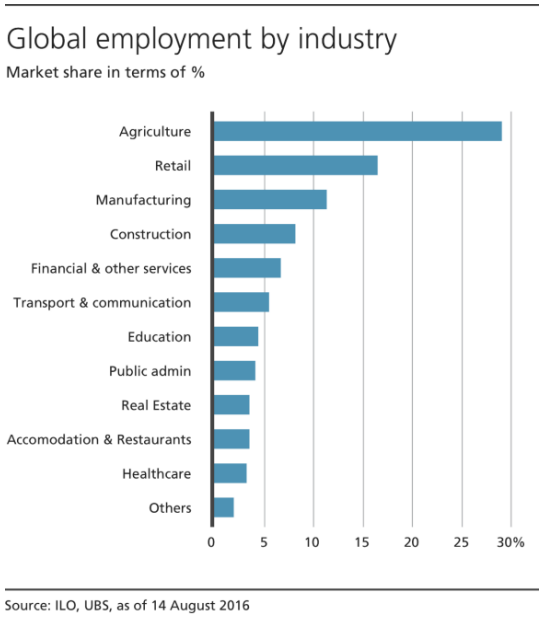
According to the estimates, the AI industry was a USD 5 billion marketplace by revenue in 2015, a respectable size for such a promising sector. By 2020, exponential improvements and broader adoption should more than double revenue to become a USD 12.5 billion industry. This represents a 20% annual growth rate [4].



Source: UBS, as of 15 August 2016

However, global employment will not be unharmed. By automating tasks that rely on analyses, subtle judgments and problem solving, AI can be a threat to low-skill, predictable and routine jobs in industries like retail and financial services and indirectly through the broader automation of the auto industry and certain other manufacturing industries. While it is difficult to predict the exact impact at this stage, assuming 5% of the jobs in these industries are routine in nature, it is expected that 50-75 million jobs globally, or 2% of the worldwide work force, will be potentially affected due to the advent of AI – a significant number, but one that isn`t that high in comparison to the opportunities AI will create.

AI's rise and ensuing surge in productivity will spur an excess of opportunities for employees to upgrade their skills and focus on creative aspects. With the emergence of other disruptive business models like apps or sharing economies highly likely in a post-AI era, there is increased scope for jobs that require a high level of personalization, creativity or craftsmanship - tasks that will still need a person. These occupations are hard to imagine at this point, hence the job-related anxiety associated with AI's widespread integration; but they will quickly increase as new specializations are needed - comparable to the post-Industrial revolution bloom of factory workers.



Source: ILO, UBS, as of 14 August 2016

Although there is another side of the coin. Well-known scholars and multi-billionaires have become opposed to innovations and argue that artificial intelligence in modern conditions presents a threat even more severe than nuclear weapons [5].

Elon Mask compared artificial intelligence to the "call of the devil," which will sooner or later succeed. In his view, artificial intelligence can give rise to the third world war, when super-intelligent machines will become able to take over the main spheres of life in the world. In addition, supercomputers can turn to an "immortal dictator."

In the documentary film by Chris Peyne "Do you trust this computer?" Mask warns about the danger that smart machines are playing an increasingly important role in our lives [6].

After all, computers accumulate more personal data, develop science and medicine, and are already on the verge of creating a new form of super intellect, almost without human interference in the process.

"We are approaching digital superintelligence that will surpass any person," explained Mask.

The founder of SpaceX believes that the lack of control on the part of state structures increases the threat of the beginning of the third world war, which could lead to the complete extinction of mankind. Mask emphasizes that the main threat is hidden in the fact that scientists are creating a technique that can study independently and improve itself without any human help. However, it is impossible to teach any machine to show emotions or to be guided by morals. Human feelings are not subject to robots and this is the problem - nobody can predict what machines will do. That is why, due to its uncontrollability, artificial intelligence can be more scary than nuclear weapons.

Mask's opinion is also shared by the legendary Microsoft founder Bill Gates, who is known for criticizing people who do not see possible problems with uncontrolled use of artificial intelligence. The billionaire argues that in the nearest time robots which are capable of performing large volumes of work will play a positive role in the development of society; however, in the long run, artificial intelligence can present a real threat.

According to the well-known physicist Stephen Hawking, artificial intelligence, robots and social structure that they generate can lead to both positive and negative consequences for humanity. Hawking does not see clear indications that the world of machines will always be kept under human control. The impossibility to predict consequences seems to be the main problem associated with the use of AI technologies.

Conclusion

Humanity should focus on solving technical, social, and economic problems that are gradually arising with the development of artificial intelligence.

However, it should be emphasized that artificial intelligence in today's conditions is a valuable helper for a man. It can diagnose cancer, detect suicidal tendencies, helps us solve domestic and global problems. Developments in this direction are potentially able to improve the quality of life of every inhabitant of the planet, therefore, the field of artificial intelligence needs to be streamlined and regulated rather than prohibited.

Eventually, it is obvious that whether artificial intelligence becomes a threat or helper, depends only on mankind.

REFERENCES

1. Examples of Artificial Intelligence You’re Using in Daily Life [Electronic resource] // Access mode: https://beebom.com/examples-of-artificial-intelligence/
2. New artificial intelligence can tell you the age of your CELLS - paving the way to personalized medical advice that could extend your lifespan [Electronic resource] // Access mode: https://www.dailymail.co.uk/health/article-5272313/New-artificial-intelligence-age-CELLS.html
3. 8 ways artificial intelligence is going to change the way you live, work and play in 2018 [Electronic resource] // Access mode: https://www.cnbc.com/2018/01/05/how-artificial-intelligence-will-affect-your-life-and-work-in-2018.html
4. The evolution of artificial intelligence [Electronic resource] // Access mode: https://www.ubs.com/microsites/artificial-intelligence/en/ai-coming-age.html
5. Possible threats of artificial intelligence [Electronic resource] // Access mode: https://pogliad.ua/ru/news/com-news/vektor-razvitiya/mozhlivi-zagrozi-shtuchnogo-intelektu-356411
6. Elon Musk on Do you trust this computer? [Electronic resource] // Access mode: https://www.youtube.com/watch?time_continue=37&v=wlCBMEZn1q8

Науковий керівник: Абрамович Галина Валеріївна – ст. викладач кафедри іноземних мов, Вінницький національний технічний університет, м. Вінниця, e-mail: gala_vinnica@yahoo.com

Риндін Сергій Анатолійович, студент групи 2Пі-18м, факультет інформаційних технологій та комп’ютерної інженерії, Вінницький національний технічний університет, Вінниця, e-mail: rindin70@gmail.com

Supervisor: Galyna Abramovych — senior teacher of the Foreign languages Chair, Vinnytsia National Technical University, Vinnytsia, email: gala_vinnica@ukr.net;

Serhii Ryndin, master student of group 2PI-18m, Department for Information Technologies and Computer Engineering, Vinnytsia National Technical University, Vinnytsia, e-mail: rindin70@gmail.com