Artificial Intelligence: The Impact on Employment and The Workforce

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What is Artificial Intelligence?

Artificial Intelligence (AI) is intelligence demonstrated by machines, unlike the natural intelligence displayed by humans and animals, which involves consciousness and emotionality (Wikipedia, n.d.). It is constantly utilized by people across the globe, for instance navigation applications and smart devices. Although Artificial Intelligence makes a considerable contribution to the enhancement of the world, there is a noticeable preoccupation on the subject of its adverse impact on employment and the workforce.

These concerns have emerged for good reason. No doubt, thanks to such modern technologies new in-demand occupations have appeared that barely existed 10 years ago. For example, the most recent jobs are Cloud Specialist, Robotics and Computer Vision Engineers, Data Scientists, Business Intelligence and Software Developers. On the other hand, according to Oxford University researchers, 47% of jobs will disappear in the next 25 years. Moreover, according to McKinsey Global Institute, between 400 and 800 million people will have to find new jobs by 2030.

To my mind, it is substantial to explore this topic. A big number of young people are thinking who they want to be in the long run. It is essential to realize to what extent Artificial Intelligence influences our career choices for the immediate future. Teenagers should evaluate what tasks and components their further occupation consists of and will it be at stake. Perhaps, there are still some subjects taught at the universities, which in several years will simply vanish.

It is vital to investigate some samples of Artificial Intelligence and its application in order to gain a better understanding of this modern technology and its influence on employment and the workforce.

Machine Learning

Machine learning is a unit of artificial intelligence, which gives numerous systems the opportunity to automatically learn and progressively develop from their experience without any human intervention. It concentrates on the improvement of computer programs, which are able to access proper data, analyze great amounts of information and take action by identifying templates and making better predictions. Such a principle traces in many work industries. Usually, certain jobs get under influence of Artificial Intelligence. The majority of these occupations could be distinguished by tedious, monotonous and repetitive tasks.

Robotic Process Automation (RPA)

Robotic Process Automation (RPA) is another technology based on AI and ML, which is responsible for tasks' automation. PRA uses software to automate human activities and, therefore, it enhances employee productivity, accuracy and engagement by removing primitive and repetitive objectives. RPA robots simplify workflows by replicating human actions and cooperating with applications to fulfill labour-intensive tasks, for instance replying to customer questions, entering information, implementing transactions. RPA is gaining more and more popularity, which makes organizations more profitable and flexible.

AI in Transportation Sector

Transportation is the industry, which tackles the movement of either merchandises or passengers from one destination to another one, has evolved and enhanced by conducting numerous researches and tests. For instance, it is already strongly impacted by Artificial Intelligence. The people, whose job consists of driving taxis, buses or trucks, are likely to lose their occupations in the foreseeable future. These means of transport are on the verge of complete automation. Machines, possessing Artificial Intelligence capabilities, are able to emulate humans and, therefore, conduct different operations by making their own decisions without any assistance. On the one hand, such innovations are beneficial, as there is no need for a self-driving truck to waste time by taking a break. Instead, it will focus exclusively on the road all the time. Furthermore, if AI helps analyze and collect the data, traffic congestion or flight delays could be avoided. Moreover, the next generation of Tesla cars is planned to be only autonomous. In accordance with studies the global market for AI in transportation is likely to reach 3.5 billion dollars by 2023. On the other hand, former drivers will need to search for another job options. Nowadays, more and more car manufacturers tend towards electric and self-driving vehicles.

AI in Financial Industry

Secondly, the finance sector has considered itself as an early supporter of AI if it is compared with other industries. Hence, Artificial Intelligence and Financial industry suit each other perfectly. The examples of AI and machine learning implementation in finance are an enormous amount. Statistics, calculations and analysis may be implemented in a more efficient way thanks to this modern technology. The financial sector is based on accuracy and the treatment of a

large number of quantitative data. As Artificial Intelligence learns from the previous experience and follow the tendencies, its contribution could be valuable and efficient regarding financial planning, budgeting, trading, sorting and organizing information. In addition, Artificial Intelligence is able to identify any risks in the financial statements far more rapidly. However, one of the difficulties large banks and insurance firms are most likely encounter while they are trying to apply AI is that considerable amount of their historical data are kept in paper documents rather than digital ones**.** Hence, before hiring data scientists to adopt AI software insurance and banks enterprises have to digitize all the information they are storing, since machine learning models are exclusively trained on digital data. Traders, bankers and insurers are well aware of this situation and are at risk of losing their job. Furthermore, such jobs as tax preparers, bookkeepers and accountants will be replaced by Automated Virtual Financial assistants and planners, whose responsibilities will include monitoring stock, prices and numerous events.

Last but not least, Artificial Intelligence impacts the assistance of banking industry. There are particular applications on the phones, which provide people with the ability to make payments, receive money, check the balance, credit history and conduct many other operations. It is not required to go directly to the bank anymore. Besides, bank accounts are opened online through AI applications either. Overall, the work of bank tellers tends to be not as essential and helpful as it used to be.

AI in Tourism

What is more, Artificial Intelligence is closely correlating with tourism. It makes our life much easier, as it could be applicable for arranging the journey or suggesting the most reasonable way to the mall. Despite the fact that less than 10 years ago the job of travel agents was highly appreciated, today these occupations are out of date. Nowadays, people are more inclined to plan trips by themselves online. Specific applications, produced by Artificial Intelligence on the basis of data analysis, are recommended to potential travelers. Thereby, customers could gain information and notifications on some exclusive journey offers, sales, best prices, upcoming trips, flight details and many others. In addition, for hotels and other businesses in the tourism industry in case people still want to use any travel agency for trip planning, one of the most exciting advantages of artificial intelligence is the opportunity of providing assistance to customers online. Specifically, numerous powering chatbots on social media and some instant messages apps were widely distributed and applied for such purposes. Accordingly, AI

is able to respond to any questions or requests and provide customers with valuable data, especially it is convenient when a customer service rep is not accessible at this very moment. As customers are waiting for rabid replies on online platforms, only Artificial Intelligence allows businesses to achieve prompt delivery and satisfy all customers' needs. Meanwhile, for humans it is impossible to achieve such efficiency.

Additionally, thanks to Google Maps and ride-hailing applications it is possible to reach any chosen destination by an effectively selected root. The major advantage of AI in this certain area is its capacity to explore enormous amounts of data in a fast and precise way, whereas human work would take significantly more effort and may contain shortcomings or mistakes. Moreover, there are many digital travel guides that help foreigners get acquainted with the city instead of tour conductors.

AI in Manufacturing Sector

Nowadays, AI robots are able to tackle problems and execute different tasks like humans, even though they do not have natural intelligence. There are numerous examples of industries, where Artificial Intelligence is used in the field of robotics.

Artificial Intelligence is actively implemented in the manufacturing sector. From one point of view, companies have an opportunity to reach a higher level of effective work. Undoubtedly, robotics is an auspicious factor for the enhancement of productivity, production line and the decrease of production cost. With the application of AI technologies there is a possibility to achieve expected results much sooner. However, for a long time multiple humans used to work hard in communities to produce goods. A lot of these workers are going to be substituted by robots and machinery in a few years.

Nowadays, most of the AI in manufacturing deals with tools used for measurement, nondestructive testing (NDT), and other processes. Despite the fact that AI is facilitating the design of products, production is still in the early stages of AI adoption. A considerable amount of the world's factories and plants continue to utilize older equipment, frequently with only a mechanical or limited digital interface.

AI in Construction Industry

Furthermore, Artificial Intelligence captures the construction industry. Additionally, the jobs in this field are quite dangerous and risky, for the reason that people may easily be injured. However, technology is getting more affordable and efficient. If developing countries want to expand their wealth by building new structures and factories, it is unnecessary to hire more workers. Today developers need more machines instead of specialized workforce. While the world is progressing, greater amounts of technologies are emerging. The process of constructing buildings starts to take less time in order to fulfill the project. Unfortunately, construction workers will follow the same path, as those who work in the manufacturing industry, for instance crane operators or bulldozer drivers.

AI in Farming

Moreover, farmers are likely to lose their occupations in the nearest future. The farming sector used to be a popular field of workforce, but during recent years it has changed significantly. All over the world crop systems have been thrived and became automated. Companies like Blue River Technology are helping farmers refine their planting and herbicide usage thanks to computer vision. Trace Genomics, the farming community, enables farmers to identify early signs of disease in crops. Only a few qualified individuals will be involved in the process of farming. Such people are monitoring and operating heavy equipment from their offices due to specific wireless connections. This machinery harvests the product and feeds animals. For instance, automatic milking systems have been generated to feed cows. Overall, planting can be done at a faster pace because of specialized hardware and self-driving trucks.

AI in Tertiary Sector

Waiters and waitresses have also started vanishing. This situation relates to cashiers and store sales workers as well. Self-checkouts have appeared and disseminated globally. The work of such equipment relies on algorithms and repetitions. Today conveyor belts start to be actively utilized in some places as well. People serve themselves by ordering food on their own, especially in regard of fast food restaurants.

One more sample of Artificial Intelligence is a chatbot that could be affect tertiary sector. It is a computer program, whose task is to conduct a conversation using a natural language or a text interface and make the impression of being intelligent. This procedure is aimed at making the interlocutor believe that he is talking to a real person. Chatbots are often used on websites as

interactive, virtual characters, replacing live assistants, answering questions about the service and activities of a given company.

AI in other occupations

Last but not least, other occupations will be affected by Artificial Intelligence such as couriers, dispatchers, publishers, telemarketers, security guards, receptionists and other types of customer consultation. It is inevitable, as the world is evolving every day. Regarding delivery industries, Amazon has invested a huge amount of money in expanding drones with the purpose of delivering packages. In respect of different types of assistance, recruitment process is a tedious activity for any large company. Searching for the right candidate for the certain workplace is a complicated task. Currently, some innovative AI companies are trying to apply Artificial Intelligence to make the recruitment process autonomous.

Unaffected Jobs

Nevertheless, there are a lot of jobs that will even flourish in the future thanks to Artificial Intelligence or hardly be affected. Occupations, which are not vulnerable, contain unpredictable tasks. Anything that is unforeseeable requires certain skills such as creative thinking, imagination, negotiating and interpersonal skills. There are a lot of job options that have such requirements, for instance writers, lawyers, products marketing managers and many others. Among occupations, which will thrive, it is possible to mention psychologists, virtual world designer, entertainment labor, real-estate developers etc.

Conclusion

In conclusion, I would like to say that Artificial Intelligence has both positive and negative impacts on employment and the workforce. Some jobs are appearing, whereas others are disappearing. However, in order to make the right decision on your carrier choice, it is important to determine whether the majority of the tasks that comprise your future job are likely to be vulnerable to new technologies.

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