



THE EMERGING ROLE OF ARTIFICIAL INTELLIGENCE IN MODERN SOCIETY

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Abstract

The role of artificial intelligence has created a massive impact on all sectors of the world. Shortly, it will be more rapidly expanding to mark its significance for shaping the world. The present study cites some of the scientific studies highlighting the different roles of artificial intelligence to advance the applicative properties in the current world. The present report envisions the importance and needs of artificial intelligence in the modern world and society, shaping the future world.

Keywords: Artificial intelligence, Modern society, Future impact, Digital world

Introduction

Artificial Intelligence or AI, as it is popularly known as, was founded in 1955. Since then, it has undergone several waves of changes (Huang and Smith, 2006). In the modern world, AI has experienced a revival since advancements in large amounts of data, enhanced computer technologies, and theoretical understanding (Russell and Norvig, 2003). Artificial intelligence has become an integral part of various industries like information technology, marketing, healthcare, cybersecurity, art, military, etc. AI uses algorithms to execute a problem or situation. The algorithm is a set of explicit instructions that a computer can run. A sophisticated algorithm is built on other simpler algorithms (Jaladin, 2004). Intelligence, simply put, is what a person uses to analyze a situation based on his experience in a similar situation. Artificial intelligence algorithms are capable of learning from data. They can evolve by learning new strategies that have worked well in the past or can write new algorithms all by themselves (Katsikeas et al. 2016). There are many ways AI or artificial intelligence, along with that of machine learning, has been used indirectly, impacting the lives of people in modern society. Artificial Intelligence or AI has assisted in many areas of life, be it trying to read multiple emails, getting directions while driving along with music or movie recommendations (Lomas, 2016). AI is making it a lot easier for people to communicate with and locate business associates and friends by improving the social media world. In the area of Twitter, there are customized tweet recommendations that are available along with content that helps to fight racist or inappropriate content. There is also AI for enhancing users' experiences as Twitter has been supported by this so that they can improve their content (Theodotou and Stassopoulou, 2015). They are the ones who are processing a lot of data through neural networks, which are deep to be learning what users prefer online. Facebook deep learning has helped the platform draw its value from that of a large portion of unstructured datasets that have been created by about two billion people who have updated their statuses as much as 293,000 times within a minute. Most of the technology of deep learning has been built on Torch's framework, which is focused on techniques of deep learning and that of neural networks (Bahrampour et al., 2016). The social media platform has also

started using AI and big data to target advertisements and fight cyber crimes by deleting offensive comments. There is an exponential growth of content using the platform, and AI is deemed critical to show the users of various social media content they would like to see, fight spam and thus enhance the experience of the user (Markic et al., 2015; Forrest and Hoanca, 2015).

Chatbots are employed to recognize phrases and words so that they can hopefully deliver content that is most helpful to the consumers having common questions. At times, chatbots are accurate, and it can seem that one is talking to a live person online. As an example, it can be stated that chatbots can schedule appointments to a hairdresser for a client by the use of AI (Hill et al., 2015).

Digital assistants help in making life more comfortable as well as that of Google Now, Apple's Siri, Microsoft's Cortana and Amazon's Alexa that can help a user perform multifarious tasks like checking their schedule, web searches are made to be customized along with the sending of commands to a different application. AI is essential in the working and performance of the apps since they can learn from a single user and their interaction (Köhl, K.I., & Gremmels, 2015).

Self-parking along with self-driving cars can be using deep learning, which is one of the subsets of AI to be able to detect how much space is there around that of a vehicle. Nvidia, a technology company, has been using AI to give cars the ability to learn, think, and see along with navigating the possibly infinite ranges of scenarios of driving. Companies have AI-powered technologies that are already being used inside cars manufactured by Tesla, Volvo, Audi, Mercedes-Benz, Toyota, etc. making sure to revolutionize how people enable and drive their vehicles for themselves (Li et al., 2015).

Gmail users have the facility to use **smart replies** to respond to their emails much quicker and with the help of simple phrases. These are being tailored to suit whatever is the content of the email (Kannan et al., 2016). The users simply have to reply by typing out a response manually, or they may instead choose to respond with a single-click smart reply. As an example, if someone is sending an email to somebody about a forthcoming game, they will reply to let someone know that the user is interested in going to a particular game, and Gmail will be offering options of smart reply (Raminhos et al., 2016). Google has been using filters to be ensuring that almost all the emails reaching one's inbox is not spam or is authentic. The **email filters** have sorted the emails into categories like Primary, Social, Promotions, Updates, Forums, and Spam. This kind of program can help the emails be organized so that the user can find their way to the communications that are more important quickly. As explained earlier, Gmail will be sorting the emails, placing them under four categories that are tabbed along with the sending of spam mails to a folder which is separate (Kaur and Gurm, 2016). AI has made sure that it does its best to be helping people search quicker on Google for a long time. When someone begins to type a term that is to be explored on Google, it makes appropriate recommendations for someone to be choosing from, which is a massive example of artificial intelligence in action (Clayton, 2016).

A **predictive search** based on the data that Google has collected from a user, such as their age, location, and other personal details. By using AI, the search engines will attempt to be guessing what they may be looking for (Serrano, 2016). The search engines of Google have evolved by studying linguistics used in searches. The AI learns along with the finding of results and adapts the same over time to be better meeting the user's needs. For example, searching for anything shows Google's best answers that will be highlighted right at the top and will be followed by the array of sources that may answer the questions. The purpose of having an algorithm for Google is to deliver results, which are best possible for that of the searcher.

For the sake of doing this, Google has been using AI to determine the content quality, which has to match the query of the user. Online retailers like Amazon are using AI to gather information about the buying habits and preferences of people (Khanna, P., & Sampat, 2015). The websites further personalize the shopping experience by making suggestions in new products that are curated to the user's habits. AI-powered recommendations help quicken the process for Amazon. The services of music use AI to be able to track the patterns of one's listening. Thus, they can use that information to be suggesting other songs that one may want to be hearing. For example, the application Spotify offers suggestive lists of songs for newer discoveries, newer releases, and old favorites based on listening habits. Google Play makes personalized offers of recommendations for music. The AI-fuelled suggestions have taken into account such factors as the time of the day and weather to be offering music playlists, which can be setting the mood for these activities. One might have been provided a playlist for dance music on that night on Friday or soft and acoustic music when it is raining.

There are also applications like that of Google Maps that can calculate construction under effect and traffic so that they can find a quick way to their destinations, which results from AI being at work. The maps offered by *Google have provided directions* that are based on that of the route that is fastest from Potsdam to Berlin as per traffic that is the usual (Chu and Huang, 2015). The sections which are indicated in orange indicate routes where the traffic is slow or highways are congested. One might be surprised to be discovering that there is tiny flying done by a pilot within the cockpit of an aircraft. In a survey of 2015, in regards to the airline of Boeing 777, the pilots have reported that they spent as little as 7 minutes manually flying the aircraft during the typical flight with most of the work being performed by the technology of AI. As per a report from the Wired Magazine, Boeing has worked towards the building of jetliners that will be piloted entirely by that of artificial intelligence that has no human pilots working at the very helm. How AI will be balancing out is for anyone to guess, has been debated for the longest time, and is there for people, futurists, and writers to contemplate. One can be an optimist in faith and believe in the changes will turn out to be mostly good; however, they can be challenging.

AI is causing the workforce to be evolving; however, there are alarmist headlines that emphasize that there are *job losses for machines*; yet, the actual challenge for that of the human race is to be discovering their passion along with newer responsibilities which require unique social abilities (Watte, 2016). However, it has also come to light that 7.2 million jobs may also be created. This kind of uncertainty, along with the changes in how some people can continue making a living, is indeed challenging. The impact may be transformative in some cases on that of human society. They may also have far-reaching regulatory, political, legal, and economic implications that one needs to discuss and prepare for. Determining whose fault it is if an autonomous vehicle ends up hurting a pedestrian or the ways of managing that of a global arms race that is autonomous is one of the examples of challenges that one might come across to be facing. There is a prediction about humans losing the battle to super-intelligent AI. There is always ongoing debate around how things will pan out if AI does threaten humans into beating them at the intelligence, and there are unforeseen circumstances as newer technology is being introduced. The unintended outcomes due to AI is likely to challenge the human race (BBC NEWS, 2016). There has been a higher consumption as per the rates of EEE, shorter life-cycles along with lesser options for repair even if the technologies are AI-assisted resulting in levels of e-waste that are almost behemoth.

The increase of landing of wastes in the wastage bins of the EU is almost 82.6 percent of the e-waste that is undocumented, traded, and dumped in a manner that is not environmentally sound. The 98 Mt in equivalents of Carbon-dioxide has been released in the atmosphere endangering the health of workers who are exposed. There are other issues. However, that is to make sure that AI is not as proficient in doing its job by crossing over boundaries, which are legal, environmental, and ethical. The original intention, along with the goal of AI, is the benefit of humanity; however, it may also spin out of control and achieve the desired goals in an efficient but destructive way, thus negatively impacting the society (Campanella, 2016). That of data is powering the algorithms of AI. While more information is being

collected by the minute of a person's day, their privacy is being primarily compromised. If governments and businesses have decided that they will make decisions based on intelligence they have gathered about people like how China has created its social system of credit, it can be devolving into that of social oppression.

There are many positive impacts, as well. AI will dramatically improve the efficiency of the workplace and maybe augment the work done by humans. As AI is taking over dangerous and repetitive tasks, it frees up the manual labor involved so that people can apply the same rigor in other jobs that are better for them, such as tasks involving empathy and creativity. People should work in more engaging posts, which will increase job satisfaction and happiness. With the evolution of better diagnostics capabilities and monitoring AI may have its effect on healthcare quite dramatically (Albu and Stanciu, 2015). With the *improvement of healthcare facilities and its operations* with the evolution of medical organizations, artificial intelligence can be reducing the costs of services to save a lot of money. An estimate from McKinsey has predicted that big data can be keeping medicines and pharma as much as 100 billion dollars per annum. The more significant impact can be in the case of the facility of patient care. The vast potential for personalized treatment and its plans, along with the handling of drug protocols such as giving providers better access to that of information across facilities that are medical to improve patient care, can be life-changing. The society will be on its way to gaining numerous productive hours with the introduction in autonomous transportation and using AI to look into other issues of traffic congestion with multiple forms of improving on-the-job productivity.

The society can also be free from commutes which are a hassle and people will be finally spending some quality time in other ways they like. The means of unearthing criminal activities, along with *solving crimes*, may be enhanced with AI. The technology for facial recognition is more common than fingerprints as of now (Ran, 2009). Using AI in the judiciary system has presented numerous opportunities to find ways to effectively use the same without crossing into boundaries of an individual's privacy. Unless one is living remotely, planning never to be interacting with that of today's world, their lives will be very much impacted by that of artificial intelligence. There are yet many experiences of learning and challenges that must be faced with technology rolling out novel applications. There will be expectations regarding artificial intelligence being more positive than harmful or detrimental to society. A decade ago, if somebody mentioned the phrase artificial intelligence within a boardroom, there was a fat chance that they would have been laughed at. Mostly for people, it brings to mind sentiments and sci-fi machines like Hal of 2001: A Space Odyssey or Star Trek's Data.

As of today, AI is a word that is highly relevant socially as in industries and businesses. The technology of AI is a crucial lynchpin with regards to *digitization or digital transformation* taking over things today. Some companies position themselves in such a way that they can capitalize on the ever-increasing data amounts being collected and generated (Azad et al., 2016). The change that is seen to be taking place is part of the revolution due to that of big data. Data gluttons have led up to the intensification of research into how it may be acted upon, analyzed, and processed. There is machinery that is more suitable than humans for this type of work, and the focus will be on the training machines so that they can get things done in the smartest way possible. An increase in the interest for research within the field in industry, academia, open-source communities sitting amidst all of it, etc., will lead to better advances and breakthroughs that show high potential for generating tremendous change. Development and research of AI are divided into two branches that are applied to AI and Generalised AI.

Applied AI is something that uses principles of technology for stimulation of human thought processes in regards to carrying through of specific tasks. *Generalized AI* has sought to develop machine intelligence systems that can help or be used in any responsibility very much like that of a real person. Any research into the region of specialized or applied AI has already provoked breakthroughs in study fields from that of quantum physics that of medicine itself (Millerand Brown, 2018). In quantum physics, it has been used to predict and model the behavioral patterns of systems consisting of a billion subatomic particles. In medicine, AI is utilized for patient diagnosis based on that of genomic data. In

industries, it has been employed in the world of finance for the uses ranging from that of improvement of customer services by predicting what they need to detect potential frauds. In manufacturing, it has been used to manage production processes and workforces for predicting faults before one event occurs, thereby enabling maintenance that is predictive. In the world of the consumer, more technologies being adopted into everyday living is being powered by AI.

Conclusion

It has been recognized that AI or Artificial Intelligence had made people's lives increasingly more productive day after day by powering multiple services and programs, which will be helping people to do daily things like establishing a connection with friends, using applications of an email or that of services for ride-sharing. For someone who has a reservation about the use of AI, they will be comforted to come to know that society has been taking advantage of the same for years. The effects of the same are both negative and positive, as most of the changes in life. AI has, however, undoubtedly transformed the lives of people in society. The algorithms of AI have to be built to be aligning the overall goals of that of humanity.

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