The Benefits and Risks of Artificial Intelligence

Introduction

In the quest for sophistication, the human race has incessantly improved and developed technologies to ease life. The development of computers is so far one of the most groundbreaking innovations and its improvement over the years has changed the capability of different technologies in different fields. One of the most life-changing developments in computer technology has been Artificial Intelligence (AI). AI technology has enabled the simulation of human intelligence in machines programmed to mimic actions and act like human beings. Additionally, AI machines exhibit traits concomitant with a human mind, such as problem-solving and learning. Artificial intelligence (AI) is a phenomenon that is easy to describe but quite difficult to define. According to Copeland (para. 1 - 3), it is the development of systems that possess the intellectual capacity and perform processes typically considered human. AI is the power technology that makes devices 'think' and 'behave' human. This includes the ability to utilize a body of data and scenarios to make reasoned judgments and take actions. Consequently, the discussion about AI derives a basis from human ability and how machines measure up. AI continues to positively impact society in healthcare, banking, manufacturing, warfare, criminal justice, sales and marketing sectors. As the discussion will show, there are also a number of serious concerns about the technology. Key among these concerns is ethical violation such as compromising data security. Another important concern is the risk AI poses to human existence.

Benefits of AI

There are many benefits that accrue out of embracing artificial intelligence. Even the most ardent opposers of the technology do acknowledge the immense potential it has to improve human life. Some of the key benefits are discussed below.

Multitasking

AI facilitates seamless multitasking. Multitasking is an admirable attribute of human beings, with individuals who excel in it getting trusted with crucial responsibilities and promotions at work. Even so, those individuals are human beings, too, and are susceptible to the weaknesses of ordinary humanity. They would wear out, require periodic energy replenishment, and are affected by mood swings. Machines are versatile and perform any number of iterative tasks provided they are properly configured. Unlike human beings that need work shifts to remain productive, AI objects can work 24 hours of every day if need be (Marr, para. 3 - 6). Safe for technical hitches and external interference, machines guarantee the same level of productivity over time. AI has no downtime.

Aiding Healthcare Services

AI has had an incredibly positive impact on essential human services such as healthcare. For instance, lives continue to be saved through timely and accurate clinical interventions. According to Makridakis (pp. 46-60), diagnostic processes are now more accessible, highly accurate, and fast. Besides, with AI, personalized care can be provided to patients in healthcare facilities or homecare plans. Additionally, experts in the field predict AI's immense potential to transform healthcare further. This potential is demonstrated by the power of efficiency accomplished if multiple elements of medical care are merged and coordinated to the benefit of a given patient. AI affords "the ability to bring all of the medical knowledge available on a disease

to any treatment decision" (Pazzanese, para. 2 - 11). With MRI and other technological breakthroughs already proving successful, things can only get better with AI.

Improved Workplace Safety

Another beneficial component of AI is workplace safety. In manufacturing, for instance, certain processes have proven repetitive, boring, and dangerous. In such circumstances, AI can be deployed. Not only is it cost-effective in the long term, AI in manufacturing and other industrial sectors guarantees efficiency and consistency. Where large machinery is turning, safety concerns can be minimized by utilizing the technology. The same goes for sections where heat is emitted in degrees too high for the human being (Katz, pp. 4 - 7). In addition, the use of AI frees up time to perform tasks better suited for human beings, such as those requiring creativity and empathy. As Marr (para. 3 - 6) notes, allowing people to perform tasks they enjoy doing, increases productivity and boosts job retention.

Efficiency in Criminal Justice Systems

In criminal justice systems, AI has also provided much-needed support. Unlike before, when victims and witnesses were required to scan long parades of suspects to identify criminals, biometric identification is now possible through AI. With fingerprint, face recognition, geolocation, and other modern software, more offenders are brought to justice. Other than eliminating lapses, such as failure to identify due to swift attacks, appearance manipulation or victim trauma, justice can now be dispensed faster (Marr, para. 3 - 5; Pazzanese, para. 3). Besides, the system can be semi or completely autonomous, reducing the need for human and other resources.

Job Creation

AI has also helped with job creation. According to a UK survey on its human resource, intelligent machines will replace at least 7 million jobs currently performed by humans over a 20-year period between 2017 and 2037. During this period, more than 7.2 million more jobs will be created by this technology (Marr, para. 5 - 12). While a moral debate persists regarding the livelihoods of those to be replaced, the scales till in favor of the technology since it replaces potentially harmful and even dangerous jobs, increases efficiency, and creates more jobs (Marr, para. 5 - 12). Besides, people are increasingly adapting to a world where efficiency and production groundbreaking achieved through complementarity between human resources and machines.

Greater Independence for Differently Abled Individuals

AI has also provided a reprieve for people living with a disability. With breakthroughs in the development of high-tech sensors, AI can augment the experiences of differently abled individuals. In this way, the individuals are offered more options that helps reduce their socioeconomic exclusion. Besides, they utilize appropriate internet of things (IoT) devices to better interact with the environment. Consequently, such individuals gain the much-desired independence and a better quality of life.

Greater speed and Improved Quality of Decisions

The speed of decision-making and quality of the decisions made are also increased. Traditionally, top executives had to sit through meetings with stakeholders and study volumes of reports before making certain decisions. Ultimately, much time was wasted, and even then, the certainty of the decisions' effectiveness remained unresolved. With AI, the process is made way faster and smarter. All that is needed is accurate books of original entry which can also be

automated. AI technology utilizes various data sources in the organization, analyzes them, and supplies the best solution from a set of considered alternatives. This is possible through the integration of advanced decision support systems (DSS) and executive support systems (ESS) into AI (Harleenk, p. 1). Additionally, the technology is scalable and can be deployed across industries. With AI, the future of any organization can be predicted with a considerable accuracy.

Reduction in Human Error and Substitution of Risk

Reducing human error and substituting risk is another major advantage of AI. Humans are bound to make errors, and the same errors can be multiplied at any decision point. AI minimizes this possibility, provided mistakes are avoided in the primary data, which forms the database from which the technology derives its decisions. Besides, human risk has been significantly reduced. Where humans used to undertake risky endeavors, machines are now deployed instead. For instance, robots can now be used to detonate explosives with humans a safe distance away, unlike in the past when personnel used various techniques to detect, locate, and detonate them. Besides, unmanned aerial vehicles (drones) are used by militaries to perform surveillance and attacks over enemy territory. In the same way, AI is used in defense and counter-defense operations. Lately, even unmanned civilian vehicles have used AI technology to navigate traffic routes along with manned vehicles. Even modern global challenges such as weather forecasts and climate change can be tackled using AI technology (Marr, para. 5 - 12). For example, drones were used to deliver foodstuff and medical supplies during the coronavirus pandemic. Many lives were saved by this supply mode when restriction of movement or total lockdown was implemented across the world.

Growth of Economic Sectors and Inventions

The growth of important sectors of society also benefits from AI. With the aid of data science, lending institutions have a ready information base and the tools to make instant decisions regarding potential borrowers. In addition, business sales and marketing departments utilize the technology to segment and target potential clients. This is in addition to the growth of related inventions and technologies (Peeters, pp.217 - 238). With the great potential inherent in AI, software developers and inventors are kept busy producing supportive tools while retaining gainful employment. For this reason, many countries in the world are now tweaking their strategic plans to align their economies with this technological reality (Furman & Seamans, pp. 161 - 191). The so-called Asian Tigers, such as China and Japan, have prospered by focusing on a technology-based economy. Many countries will copy them either for similar prosperity ambitions or for national interests such as cyber security.

Risks of AI

However, artificial intelligence is not good news for everyone. With the great benefits AI has offered, there are serious concerns on several fronts. Given that technology has impacted virtually every aspect of society, concerns are inevitably raised from multiple quarters. People have begun to question AI, especially the impact it has on an individual's daily functioning. Doubtless, data privacy, the role of human judgment and objectivity in decision-making are the most urgent concerns.

Ethical Violations

AI remains a serious ethical issue. The fear of data misuse is a genuine one. At its most excellent and effective, the technology needs to have collected every minute detail about individuals. This is because AI relies on enormous pools of data collected over time and uses a

set of algorithms to manipulate them to generate useful information. In some quarters, the inevitable compromise of personal privacy is viewed as a form of social oppression (Marr, pp. 3 - 6). Others consider it a form of surveillance of an individual's affairs (Pazzanese, 12 - 17). Based on such concerns, AI continues to face resistance in China, where the state incorporated it into its social credit system. The risk is amplified by the conduct of individual firms handling such data. While the expectation is that firms would do self-regulation, Facebook Inc. and the disgraced Cambridge Analytica have proven fears that self-regulation is easier said than done. The two firms were indicted and found guilty in some cases, for allowing databases of private data under their care to be used in influencing elections and referenda across the world. The most notable ones are Brexit and the 2016 US presidential elections (Pazzanese, 12 - 17). There is no sufficient self-regulation.

Transfer and Legitimization of Human Biases

Other than the ethical and legal issues emerging out of the misuse, there is a risk of "transferring and legitimizing human biases" (Pazzanese, para. 12 - 19). The data collected ultimately comes from human beings who inherently possess biases. Since the system lacks evaluative thinking, such biases will be transferred legitimizing them in the process. This defeats objectivity which is a crucial component of decision-making. AI uses information collected in the past and, therefore, does not reflect recent changes on an individual's behavior. This is especially so for socially unequal societies like the US. For example, the technology could legitimize long-held views that black Americans are inferior and less civilized (Pazzanese, para. 11 - 25). Such biases can also influence a minority's chances of securing parole where the decision is automated through AI.

Loss of Human Touch

The human touch is lost at the workplace where AI is deployed. While concerns about job losses due to AI have been countered by the figures of jobs the technology has created, compassion, empathy, and creativity, among other human attributes, are now missing in the work environment. Unfortunately, this loss is also present in social circles. While robots dominate certain jobs in manufacturing, chatbots and other AI-enabled devices are used in place of human interactions. The result is an emotionless and meaningless conversation. The absence of human touch is also felt on the road, where self-driven cars share the space with traditional vehicles (Peeters, pp. 217 – 238). The risk of road accidents is heightened because traffic is a dynamic process. AI relies on a preinstalled version of reality on the road, which is inappropriate since constant change is inevitable even on a fairly good day. No wonder there have been reports of unexplained stalling and over-cautiousness. The potential explanation for such "behavior" is the confusion a tool that lacks creativity and innovation may experience. In these circumstances, the default action is to break and eventually stop.

Robots Replacing Human Beings on the Planet

Danger to humanity is an imminent possibility. Already, there is a growing concern about the prospect of robots eventually wiping out humans from the earth. These fears are credible for, at its excellence, the technology needs to interact with the environment the same way humans do. With the development of data science and machine learning, the threat of AI on humanity is not that remote. For instance, the technology can get to a point where it can defend itself against humans or, worse, challenge humanity for the right to utilize certain resources (Peeters, pp. 217 –

238). Can robots, indeed, go rogue? What will be the role of spam ware in such an eventuality? As remote as it may sound, AI threatens humanity as it is known today.

Conclusion

The controversy surrounding artificial intelligence is unlikely to be resolved anytime soon. This is because, for every reservation expressed concerning it, there is a stronger case for it. Besides, the world is already mired in it, and it might be too late to do anything about it. Both sides of the debate present legitimate arguments. Those supporting it cite the groundbreaking interventions that have been successfully performed with the help of the technology. In healthcare, for instance, lives continue to be saved through the accuracy and precision AI lends to medical diagnosis and surgical procedures. In manufacturing and warfare, risky and repetitive operations are safely performed by robots. There are also countless instances where technology has excelled in almost every sector, including banking, criminal justice, sales, and marketing. Those opposing it equally have strong arguments. Data privacy leads the charge for ethical violations. Millions of individual data are collected by firms continuously with the ever-present possibility of misuse. Further, the technology uses information from the past, which makes it unreliable in a dynamically changing environment that is the real world. There are also complaints about job losses after AI-enabled devices replaced humans. However, the real worry about replacement is the risk of the actual substitution of humans on the planet by robots. Experts agree that it is impossible to revert to a pre-AI world. This means any solution to the controversy has got to consider the urgency and legitimacy of each argument, and only then can a workable balance be established.

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