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Ethical and Moral Perspectives of Artificial Intelligence - A Critical Analysis of Global Reflections

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Abstract

Advances in information technology have seen the development of new software, hardware, and emerging technologies, such as Artificial Intelligence, an area in computer sciences that has seen the creation of intelligent machines that work, think and react like humans. Nonetheless, the subject of artificial intelligence has attracted much criticism and raised ethical concerns as it continues to cause unemployment and, threatens human autonomy, agency, and capabilities. The unemployment extends to justice administration where AI guarantees a fair trial, faster decision making unlike conventional approaches takes months. In this study, the benefits and scope of artificial intelligence are discussed as well as its risks to human lives and governance processes elaborated thus raising an ethical dilemma in the efficacy and general use of artificially intelligent systems.

Key Words: Ethics, morals, artificial intelligence

Introduction

The 21st century has seen continuous innovations in the field of Information and Communication Technology (ICT), leading to the development of new software, hardware, and emerging technologies, that have been most beneficial. Key among these developments includes the development of Artificial Intelligence, Cloud Computing, Blockchain technology, Internet of Things, Computer Aided Designs (CAD) and Ubiquitous computing. Nonetheless, the focus of this study is on Artificial Intelligence, an area in computer sciences that has seen the creation of intelligent machines that work, think and react like humans. The process of developing artificial intelligence has been advancing, and its epitome was the first female robot named Sophia, an intelligent being that used speech recognition, facial recognition and data processing. Sophia is one example of the application of artificial intelligence a concept which allows the machine to correctly interpret, learn and use data to achieve specific objectives. Artificial intelligence embeds software applications, actuators, sensors and internet connection which facilitate connectivity and the exchange of data.

Nonetheless, the subject of artificial intelligence has attracted much criticism and raised ethical concerns. For instance, in military applications, the use of artificially intelligent crewless aerial vehicles raises concerns on whether the robots can abide by the conventions of war to prevent harm to non-combatants. Besides that, the widespread use of artificial intelligence is marred by uncertainties and unintended

consequences which are often dangerous and undesirable. Moreover, the use of artificially intelligent robots causes unemployment and continues to threaten human autonomy, agency, and capabilities. The unemployment extends to justice administrators as AI systems are used for arbitration. However, systems do not provide the flexibility and trust that a justice administrator does and this threatens a fair trial process.

Consequently, the focus of this study is to ascertain that, while the use of AI has several advantages, it has its down sides which raise ethical dilemmas.

Research Questions

There are several research questions and subsequent objectives in this study, these include:

1. To investigate the uses of Artificial Intelligence
2. To identify what are the benefits of the Artificial Intelligence
3. To establish ethical concerns in Artificial Intelligence

Scope and Importance of Artificial Intelligence

Transportation

Automotive industry leaders such as Mercedes Benz have adopted artificial intelligence through the Internet of Things applications to enhance the driving experience. The Mercedes Benz Car-to-X communication utilizes intelligent mobility with the emphasis on safety, comfort, and efficiency (Mercedes Benz, 2013).The system allows vehicles to communicate with each other facilitating a new form of information exchange that provides early warning of hazards such as severe weather and accidents.

Consequently, the driver can prepare for the situation by adjusting their driving behavior (Mercedes Benz, 2013). Also, the internet of things extends across all aspects of the transport system allowing for smart traffic control and parking, eases in logistics and fleet management as well as road assistance. Moreover, the use of artificial intelligence had facilitated advances in automated and connected driving something that had caused fewer accidents compared to when drivers were assisted. For instance, a 45-year old man who was sleeping behind the wheel survived a possible accident which would easily have been fatal after his the Tesla he was driving with the autopilot on continued to follow was following the freeway lanes – rather than the veering and swerving until the cops managed to slow him down.

Medical Applications

Artificially intelligent crawling robots have also seen applications in neurosciences where researchers try to elaborate on psychomotor activities and locomotion control in animals. Ijspeert (2008) revealed that central pattern generators (neural circuits that when activated produce motor patterns such as crawling and walking in the absence of sensory feedback) have been used to control different robots and enhanced the understanding of locomotion. Besides, those artificially intelligent robots have found usefulness in surgical operations; in fact, according to Rosen, (2011) cardio

surgeons have seen the potential of robots in the delivery of intrapericardial treatments such as myocardial injections. Such robots have onboard electromagnetic tracking sensor that facilitates the location of the robot inside the heart. On that score, robots play a crucial role in dealing with heart failure from myocardial infection is which oxygen deprival causes the death of heart muscles.

Operations in Dangerous Environments

Artificial intelligence has played an essential role in bio-inspired engineering, for instance, computer algorithms can monitor the movements of animals such as worms and replicate similar effects in crawling robots. Larvae move primarily through the omega-shaped motion predominant in inchworms or the peristalsis kind of movement which incorporates circumferential and longitudinal muscle contractions and relaxations to facilitate subsequent activation movements (Custodio, 2008). Such crawl robots have several applications and as is the case with other machines can operate in situations that are deemed difficult for individual operations. Robotic capabilities have far surpassed human capabilities and are thus used in the circumstances beyond human endurance.

According to Custodio (2008), crawl robots can climb walls which would require human beings a special equipment to do so. Moreover, robots can counter natural phenomena such as gravity; crawl robots can easily move upside down, and this is important in doing activities such as the inspection of underground pipes which cannot be easily accessed by human beings. Moreover, such tubes are sometimes small in sizes, and a human being can not only move in the pipe but also cannot adequately inspect. Critical infrastructural systems need inspection for repairs and maintenance. Furthermore, examination helps prevent accidents; for instance, a leak within a high-pressure gas pipe can be a cause for concern. Moreover, inspection helps in the identification of recording of hazards to take effective preventive actions.

Ethical Dilemmas of Artificial Intelligence:

Interferences in governance processes

According to West (2018), advances in AI applications raises ethical concerns through fears of bias, a lack of transparency and ease in manipulation. Moreover, with growing numbers of cybercrime highlights the need for AI regulation to deter the dangerous development in global advancements of technology. Artificial intelligence has been a tool for illegal internet-related activities that take place in universal electronic networks. Cases such as Cambridge Analytica and Facebook which influenced Britain's exit from the European Union, the winning of Donald Trump in 2016, and the meddling of the 2017 Kenyan election highlight the need for effective laws and the dangers of artificial intelligence is that of. Besides that, in the alleged interference of the 2016 U.S. general election, hackers used Ai in favor of by the Republican candidate and now president, his Excellency Donald Trump. In Brexit, the internet was used in mass data-harvesting to wage psychological

warfare on the voters using military strategies on a civilian populace.

Global internet companies such as Facebook can carry quantitative psychological and social experiments on millions of people without their knowledge or intent to reveal the results of these studies. Consequently, politicians now rely on clandestine operators who use data mining techniques to analyze reactions of electorates to a particular message. In fact, according to Davies (2017), advancements in data mining techniques has led a paradigm shift from conventional analysis and political advisers (economists and pollsters) to data experts involved in psychological welfare to influence the electorate. Advanced data analytics used by consultancy firms such as the controversial Cambridge Analytica utilize data analytics techniques to target and refine psychological insights from millions of internet users. Consequently, leaders can enjoy emotional allure as their choice of words can resonate with their targeted electorates even if it entails demeaning opponents in defamatory terms and the use of racial slurs.

The danger of psychological profiling and the uses of negative messages through the Internet lie in the loss of lives from cognitive dissonance as well as foreign interferences in elections. The 2017 Kenyan election is a perfect example of how foreign interference and data mining techniques can alter the will of the people in such a fragile democracy, worse off in a country with a history of politically incited violence. By default, the Brits through the firm Cambridge Analytica in a way influenced the loss of lives in the controversial election that was even annulled by the country's supreme courts amid racial tension between supporters of the incumbent and his primary opponent (Madowo, 2018).

Through access to thousands of Facebook profiles, Cambridge Analytica(hired by the incumbent President Uhuru Kenyatta) was used in a smear campaign against the main opponent; Rt. Honorable Raila Odinga, a former prime minister and veteran opposition leader (Madowo, 2018). The attacks entailed apocalyptic style ads aired on various forms of media vindicating the opposition leader as power hungry, corrupt and evil old man out to destroy the country. The use of artificial intelligence showed a dramatic shift from the usual tweets and noticed to more deceptive generative adversarial networks. For instance, the apocalyptic style images and videos against the opposition chief looked, sounded, and felt exactly like the real thing. In such a case, the computer algorithm creates a realistic image of something while another algorithm tries to decide whether that image is real or fake to create fake photos and videos. On that score, such interferences by foreign powers using artificial intelligence undermine the fundamentals of democracy as well as highlight the need for International Laws that can restrict internet-based firms from different elections and regulation of artificial intelligence.

State surveillance

Advances in information technology have led to the emergence of artificial intelligence systems which have been subjects of

controversy especially with regards to ethics. AI systems are available in mobile devices, and it is what makes phones smart enabling them to learn from users and improve human-machine interactions. What is even more worrying is that Mobile devices have become a close companion and with many people owning smart phones, in fact, according to Tamara, (2016), 56% of Americans have smart devices that allow them to check mail, play games and access social media.

Mobile phones have become part of our daily lives; they are capable of accessing confidential information such as family details, friends contact and browser history. Therefore, they are often targets for cybercriminals who use malware and spyware to obtain such information raising concerns for privacy and security breach. The access to information also attracts the attention of governments keen to ensure totalitarian control. Worse off, the ever-advancing artificial systems have made it difficult for cyber laws to cope up with. Consequently, as revealed by Anderson, Rainie, & Luchsinger (2018), such systems are not easy to regulate and this alongside the lack of incorporation of values and ethics increase vulnerability to government control through state surveillance. Moreover, artificial intelligence can easily be used by rogue agents and foreign intelligence officers for political gains, for instance, according to Blinderman, & Din(2017) two FSB officers Igor Sushchin and Dmitry Dokuchaev were accused of stealing data of millions of social media users through Storm, an artificial intelligence application that can also intercept email and telephone communications.

Autonomy of AI systems:

Volkswagen diesel scandal

While artificial intelligence has numerous benefits, ethical concerns arise in trading off the goods and bad of such systems. Independence of such systems attracts ethical concerns especially as human beings continue to keep upgrading AI and allocating them autonomous duties which according to Delcker (2018) increase vulnerability to a situation when machines take over, and this might have dire consequences. Moreover, the autonomy provided by intelligent mechanisms can be misused further raising ethical concerns. The Volkswagen diesel scandal typifies such a situation, in fact in investigating the VW fraud case, Deborah, Johnson, and Verdicchio (2018) revealed the vulnerability of technological artifacts in the international agency of human beings.

To its business, conquer the American markets, and bypass environmental emission tests engineers at Volkswagen developed cheat devices and software. The systems only activated emission controls during emission testing. Therefore, the vehicles could not meet emission regulation standards in real-world driving. In so doing consumers and other road users were subjected to harmful emissions which also contribute to environmental concerns. From a practical ethicist perspective, doing of doing things makes life better; nonetheless, the use of AI to beat emissions was actions that impede doing well. Moreover,

according to the moral act, the engineers and top-level involvements in the scandal is a ramification of neglect of duty.

Deaths from autopilot systems

The use of Artificial Intelligence systems has made transport safer; AI systems are used in aircraft and have helped reduce human error. Moreover, in cars, such systems enhance driver capabilities and relieve the stress especially on long journeys. Autopilot systems can steer, accelerate and decelerate, self-park and even maintain safe car distance. However, it is illegal to drive with hands of the wheel as these are only supplemental capabilities thus drivers have to remain alert. Moreover, there is the need for precise regulation and clarity on the responsibility of the driving task; human or computer("BMVI - Ethics Commission On Automated Driving Presents Report"). Many are the incidents, some who would have easily been fatal and others are where autopilot to ending lives which they seek to protect. The death of a software engineer raises ethical concerns as the *Tesla Model S* he was driving failed to auto brake and instead accelerated killing the 38-year old (Levin, 2018).

Unemployment

While machines can perform repetitive tasks efficiently, operate under challenging environments and are not affected by cognitive deficiencies that humans suffer from, their increasing use in the workplace jeopardizes the future of human labor. The need to save cost and efficiencies raises ethical concerns in the workplace as automation is increasing unemployment. In fact, according to Lufkin, (2017), AI systems are increasingly complex and are going to replace human labor; in fact, formerly industrial cities are now deserted as robots continue to take thousands of jobs. From an Aristotelian ethical perspective, moral obligations are derived from what is desirable to be achieved in the end; the good is a universal will that all things aim for. Nonetheless, the replacement of human labor is unethical as it does not promote the well-being of others.

Justice Education

Besides the automotive industry that has seen great reliance on machines, Artificial Intelligence is going to take even more jobs as it is bound to interrupt the global arbitration sector. While AI guarantees a fair trial, faster decision making; conventional approaches take months and even years to arrive at a solution, the job losses raise an ethical quagmire. Also, AI systems take time to develop and upgrade their capabilities, and there is an inherent danger of failing to cope up with the complexity of laws. For instance, according to Sim, (2018), it took a computer scientist two and a half years to automate the review of legal contracts despite having promised to take six months. Moreover, AI systems do not provide the flexibility and trust that a justice administrator does and this threatens a fair trial process; legal decisions call for clarity in the process by which AI decisions are arrived at, however, there is ambiguity and the secrecy of algorithms of AI systems. Furthermore, as the output of computers is only as good as the input, the development of a spectacular international arbitration AI

calls for the best legal minds. Nonetheless, the process is costly and time consuming and thus it seems nearly impossible.

Conclusion

It is clear that the use of Artificial intelligence raises ethical dilemmas. Artificial intelligence has played an essential role in bio-inspired engineering, applications in neurosciences, life-saving autonomous driving and home automation systems. Nonetheless, advances in AI applications raises ethical concerns through fears of bias, lack of transparency and ease in manipulation. Moreover, with growing numbers of cases amounting to cybercrime highlights the need for AI regulation as a means of deterrence in what is seen as a dangerous development in global advancements of technology. Incidents such as the Volkswagen diesel scandal typifies situations where AI has been misused negating the importance of such systems. Furthermore, in justice education, legal decisions call for clarity in the process by which decisions are arrived at, however, the secrecy of algorithms of AI systems makes it difficult to do so.

Moreover, while machines can perform repetitive tasks efficiently, operate under challenging environments and are not affected by deficiencies that humans suffer from, their increasing use in the workplace jeopardizes the future of human labor. Also, the ease in access to information provided by AI also attracts the attention of companies and governments keen to ensure totalitarian control. Worse off, the ever-advancing artificial systems have made it difficult for cyber laws to cope up with, therefore, such systems are not natural to regulate and this alongside the lack of incorporation of values and ethics increase vulnerability to government control through state surveillance.

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