QUEEN'S UNIVERSITY BELFAST

ARTIFICIAL INTELLIGENCE ASSIGNMENT II

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COURSE- M.Sc. Business Analytics

Word Count- 4055

TOPICS:

BLOG 1- Does Privacy Really Matter With AI?

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Does Privacy Really Matter With AI?

Intelligence (AI) is "the study and design of intelligent agents where an intelligent agent is a system that perceives its environment and takes actions which maximize its chances of success"(*Artificial Intelligence*, n.d.) Artificial intelligence (AI) and the potential benefits it offers are becoming more and more familiar to enterprises. Some people might say that our world is already driven by artificial intelligence. Businesses frequently employ it for a range of activities, including as classifying huge, very complicated amounts of data, forecasting customer behaviour, imitating human decision-making, and data analysis. The ease of owning smart gadgets to automate daily tasks and aid in information search comes at a cost to individuals in terms of privacy. The number of consumers who own smart gadgets increased by 128% between January 2017 and January 2018(Pelton et al., n.d.). Although AI has the potential to be a valuable tool, as it develops, it also poses a risk to data security and privacy as well as regulatory concerns(Artificial Intelligence (AI) And Data Privacy For Companies, 2022.). The purpose of this blog to see the impact of AI with the matter of privacy. The questions to be answered: What are the impacts on consumers? How can businesses utilize AI to boost productivity while putting users' confidentiality and data protection first?

Artificial intelligence integration into AI - powered virtual products has given users the privilege of voice-activated home control. The problem with this digital aid is that the device's microphone must constantly be on and ready to respond to a command, like Hey Siri, Alexa, or Okay Google. Consumers don't understand about what information is being captured or where it's going when they use products.

Google released the Google Home Mini, an AI-powered gadget, in October 2017. The device's deployment has a serious privacy problem. Thousands of times every day, the Google Home Mini would randomly come on, capture audio, and transmit all the information to Google (Russakovskii, A. 2017a). Even without human input, the gadget may operate other linked gadgets like smart speakers and TVs. A software update was promptly released by Google to address the problem with the gadget automatically activating and transmitting audio to Google. It wasn't artificial intelligence taking control of the Google Home Mini that was the problem. However, it is a privacy infringement when a gadget records audio at random and then sends the data to Google without the user's consent (Russakovskii, A. 2017b).

To launch an attack in October 2016, hackers captured millions of unprotected internet of things (IoT) devices, including cameras, DVRs, appliances with Internet access, and smart TVs. A domain name system (DNS) provider named Dyn was the target of the attack, which was a distributed denial of service (DDoS) attack. This attack created a record-breaking 1.2 terabytes of traffic per second, which impacted access to numerous major companies' services, including Facebook, Twitter, Amazon, Netflix, and many more (Greenstein, 2019). This breach revealed the public to the vulnerability of IoT devices, making them a prime target for hackers to snoop on unsuspecting users and steal their personal information.

AI is currently being developed with the goals of being adaptable, intuitive, and self-learning. Businesses may anticipate significant development if artificial intelligence can meet all three requirements while being effective. Artificial intelligence has already been used by several businesses into their products,

including Google, Facebook, Netflix and Youtube. Google launched its tensorflow and deep learning technology open source in 2015. An artificial intelligence system that sorted different variations of cucumbers based on 7000 images was created by a cucumber farmer using the software itself (Sugiarto & Pasila, 2018).

Too-rapid adoption of artificial intelligence has risks that have had negative effects on enterprises. Due to YouTube's dependence on AI to advertise content, over six million people watched a dead body on their site (Brubaker & Capstone, 2018). Since this event, YouTube has announced that it would add 10,000 personnel in 2018 to regulate content, and one of such hiring will apparently be used for the most recent high - quality video programme (Brubaker & Capstone, 2018).

Other technological capabilities provided by AI now have the ability to improve ethics. The International Risk Governance Center mentions AI's analytical strength, or its ability to analyse quantities and sources of data that people are unable to grasp (2018). AI can integrate data, spot trends, and provide outcomes across fields of study and geographic boundaries. Artificial intelligence (AI), which may be more tenacious than humans and quickly adapt to new information, can release people from monotonous or repetitive tasks. These are all examples of technical breakthroughs that may easily be perceived as enhancing health and welfare since they allow us to comprehend a range of phenomena more thoroughly. For instance, lowering commute times and improving junk mail filters are two examples of how AI may improve daily life (Faggella D (2020). Furthermore, both in terms of specificity and frequency of occurrence, the ethical dilemmas are quite different. Issues with data protection or data accuracy are some that will undoubtedly arise (Stahl, 2021).

Conclusion

A sign of hope for future human-centered perspectives of IT research and applications is growing research interest in societal issues such as work and organizational cultures, innovation and creativity, participation and collaboration, and culture and connectivity among AI and information technology communities. However, we must always be on the lookout for the limiting culture of short-termism and the alluring tendency of technological answers to human issues (Dodig-Crnkovic et al., 2006). It is necessary to develop AI standards that are compatible with public acceptability. To make sure AI is not evolving outside of its intended use, these rules and guidelines should also be routinely evaluated utilised in the key social institutions in our society. Hospitals and courthouses already use autonomous systems. However, there are no established techniques for evaluating the long-term impacts of such implementations on human populations (Crawford et al., n.d.).

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Is AI In Medical Sector Worth It?

The field of (AI) technology is developing quickly to make a substantial contribution to patient tracking and control in the healthcare industry. The health sector is using advanced technology for several functions, including data management, illness prediction, and patient health assessment. The use of artificial intelligence (AI) techniques can have an impact on people's health situations in industrialized nations, helping the community by identifying potential diseases and preventing drug shortages. As a result, it becomes necessary to examine some of the elements thought to be important and successful in carrying out these initiatives. The aim is to identify the crucial success elements for deploying artificial intelligence (AI) initiatives in the healthcare industry (Fathema et al., 2015).

(Ziuziański et al., n.d.) asserts that the introduction of (AI) initiatives in the healthcare industry enhances the industry. Particularly, artificial intelligence (AI) has demonstrated importance in a variety of healthcare disciplines, including neural networks, deep learning, data mining, and machine learning. Medical professionals are guided by predictive medical advice derived from historical patient outcome data and treatment performance data provided by electronic health records that are decentralized via blockchain and improved with machine learning technologies. Particularly in the field of mental health, AI-based new technologies are producing outstanding results in the monitoring of patients who are emotionally and psychologically vulnerable (Meghdari et al., 2018).

In terms of end users, the hospitals and suppliers' sector are anticipated to have the greatest share of the AI in healthcare market. A range of applications of AI technologies across supplier settings, the capacity of AI systems to enhance patient experience while lowering costs, and the increasing uptake of electronic health records by medical institutions are just a few of the key factors contributing to the high share of hospitals and providers in the market. Additionally, AI-based products like medical decision support systems and speech recognition software assist hospitals automate workflow procedures at a reduced cost while improving care delivery and patient experience. Utilizing big data's predictive capabilities has maintained the sector's performance and efficiency. Moreover, drug research and worldwide health monitoring are aided by big data insights. (Puaschunder et al., 2019).

Future Potential of AI

In the future, self-led surveillance, and distant diagnosis, supported by machine learning extraction of data block and computational decision-making, are continually supposed to provide access to high-quality, reasonably priced healthcare worldwide. As 5G technologies emerge and predictive capabilities increase, medical decision support systems are anticipated to develop soon. To provide specialised patient assistance that is available around-the-clock and at the highest degree of efficiency, virtual health assistants are expected to become more prevalent. Future 3D printing innovations may make it feasible to replace healthcare delivery closer to the customer, where the production process is streamlined by the replication of models. It benefits traditional human health workers and healthcare professionals to outsource supervision to patients and automated recording equipment as well as to access the wealth of

specialist knowledge produced by big data, which frees up these individuals' capacities for innovative decision-making and expert advice-giving (Alhashmi et al., 2020) .

The most promising AI developments are anticipated in fields like surgery, radiography, and cancer detection that would improve patient care and healthcare delivery. Cutting-edge advancements in the long term of self-determined prediction driven by algorithmic big-data generated insights include the creation of smart cells that eradicate illnesses spontaneously and internally (Laszlo & Biava, 2019).

The ability to simultaneously diagnose and anticipate future outcomes is an advantage of big data-enhanced and computer-guided capabilities in radiology and imaging. Robotics are being used in the medical industry as aided surgical tools, assisted body parts, patient care aids, automated nurseries, and stabilisers for mental health (Beerbaum et al., 2019).

AI in COVID 19

The ongoing COVID-19 situation has drawn further global awareness to the possibility of artificial intelligence (AI) in medical care as a tool of pandemic prevention. The internet healthcare technology world was unleashed by COVID-19. Data transmission skyrocketed on a flat planet a flexible digitization strategy and a multitasking online workforce outreach that reduces red tape. Health apps aim to monitor human interaction and stop COVID. Medical device Bluetooth tracking reduces fraud and bottlenecks while maintaining privacy. Remote diagnosis and treatment for COVID-19 are made possible through telemedicine (Naudé, 2020).

The anticipated post-COVID period will probably have enhanced medical technology. Future advances in digital healthcare globally are more likely to originate from nations that are leading the way in AI innovation without corruption and tend to have superior basic medical attention. Growing competitive advantages include internet access and AI-human affinity via tech aptitude and electromagnetic affinity. It is suggested that nations with a high potential for AI growth, clean institutional backing, and strong general healthcare systems will be better positioned to lead the globe in pandemic surveillance and crisis management (Hussain et al., n.d.).

Conclusion

The application of AI in public health is growing, and it will significantly affect all parts of primary care. With the use of AI-enabled computer programmes, primary care professionals will be better able to identify patients who require extra attention and administer personalized regimens for each individual. Primary care physicians may utilise AI to take notes, analyse patient interactions, and transfer necessary information into EHR systems. These tools will compile and analyse patient information and provide primary care physicians with details about the patients' medical need. (Malik et al., n.d.).

In conclusion, it is critical that primary care physicians learn about impending advancements in AI and the novel, unexplored territory the medical sector is going toward. The goal should be to strike a delicate, win-win balance between the human capacities and judgement of primary care physicians and the effective application of AI and automation. This is crucial as the possibility of AI totally replacing people in the medical industry raises concerns that may otherwise limit its potential advantages (Malik et al., n.d.).

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Do We Need To Preserve Robot Rights In The Near Future?

Robots are rapidly becoming a part of human social interactions, which poses some important considerations regarding how we should deal with them, how we should treat them, if we owe them anything, and whether they should have rights (Rev. & 2015, n.d.).Schröder stated that "controversies about the moral and legal status of robots and of humanoid robots in particular are among the top debates in recent practical philosophy and legal theory"(Schröder, 2021).One of the main issues explored in the ethics of AI technology is the question of whether or not robots should have rights. This topic is strongly connected to the debate over whether robots should be granted moral status. (Floridi et al., 2018). This blog is focused on the limits of robot protection by responding to the question- Can a robot be given rights? The answer is Yes.

Legislation is a social technology (Fairfield, 2021). The law is a versatile instrument that may be applied for various goals depending on the situation. For instance, Gellers pointed out that historically, ships had formal legal standing because there was a need for them. Therefore, there is no conceptual barrier to giving robots rights (Gellers, 2020). We may anticipate that human relationships with robots would be influenced by their moral position if robots were accepted into the moral community. Some academics flatly argue that robots should have moral standing (Birhane et al., 2020).

Robots "with the capability for human-level awareness, consciousness, and intellect," according to Miller, should be regarded as creatures deserving of the same rights as biological people (Review & 2015, 2015). According to Tavani, a robot must possess sentience, personality, personhood, intentionality, and consciousness in order to be granted rights. Surprisingly, a lot of these characteristics are necessary for moral personality (Information & 2018, 2018). According to Quarterly, as robots become more autonomous, intelligent, observant, and empathic, we begin to see them as more than just tools. These are some of the primary justifications for giving robots rights (Quarterly & 2020, 2020).

Legal professionals, philosophers, and decision-makers now dominate the conversation on robot rights. The reason dimensions are made up of affect-related compassion reasons (such as emotions, moral principles, grief, and sentiments) on the one hand and cognition-related reasons (such as moving around, speaking, paying attention, and learning) on the other hand, with only two others at first glance unrelated items (i.e., convenience and a human-like look). Accordingly, and in keeping with the findings of our cluster and regression analyses, it would seem that people's perceptions of robot affect and cognition are significant in the context of providing robots rights (Graaf et al., 2021).

The freedom to vote, copy, cross borders, make one's own decisions, and be treated fairly are the key components of the sociopolitical rights dimension, which is the first type of right (examples: possess property, be entitled to vote, and receive fair pay). Robot rights, a clearly distinct second dimension, primarily comprises of things related to a robot's technical demands for proper operation (updates, drive, personal growth, and data processing), as well as the item's right not to be exploited. The last item's association with this dimension may be due to the perception that abusing one's rights would harm other people's property. These two rights dimensions show that people often distinguish between rights related

to a robot's functional autonomy and those linked with more broad sociopolitical rights (M. M. A. de Graaf et al., 2022).

In order to argue for giving robots moral value and so protecting our own humanity, proponents of this argument compare robots to animals. One supporter of this strategy is Kate Darling, who created the comparison between robots and animals. 'Darling' stated that we should take into account how humans have historically dealt with problems in our connections with animals in order to be ready for our existence alongside robots (Darling, 2021). 'Smith', also made a suggestion, which promotes treating robots as moral patients in order to prevent their exploitation and to uphold human dignity (Smith, 2021).

As AI develops, robots will likely perform a larger variety of tasks in society in the future. Police robots with biometrics and sensors might identify people at a distance and find guns and narcotics. Attack choices might be made by military robots independently. Many of our home work demands might be met by a general-purpose robot (Lin et al., n.d.).

Through the concept of ethical behaviorism, which holds that if robots are roughly performatively analogous to other beings who have major moral status, they can have considerable moral status as well, Danaher offered an intriguing solution to the epistemological conundrum (Danaher, 2020). Robots should be seen as morally significant creatures if they pass the performative requirement. Ethical behaviorism has drawn criticism from certain academics. However, if we think that qualities matter, ethical behaviorism is the most realistic solution to our ignorance about the characteristics of the entities with whom we are engaging (Compass & 2018, 2018).

Conclusion

In order to experimentally evaluate the public's perception of robot rights, this blog offers a survey design. Regarding the interactive potential of robots, there seems to be general agreement. We discovered that fundamental robot rights, like access to energy and the ability to upgrade, are more commonly accepted by the public than sociopolitical rights, such the ability to vote and the right to own property. The readiness to provide rights to robots did not appear to be strongly correlated with demographic parameters like age, other factors like experience with robots, or geographic area. However, we discovered that this readiness is influenced by perceptions of the (future) capabilities of robots (M. M. A. de Graaf et al., 2022b). It turns out that in the near future, having an understanding of how artificial intelligence works will be crucial. Nearly nobody who uses its apps will be able to live without it. An increasing number of human activities are being replaced by artificial intelligence. Future technological advancements will be greatly aided by the fact that, for the time being, all artificial intelligence and deep learning technology development is still in the hands of humans and may, ideally, be used to their benefit (Communications & 2022, n.d.).

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