**Reflective Activity 1 – Ethics in Computing in the age of Generative Artificial Intelligent (Gen AI)**

**Introduction**

The advancement in technology aided the development of Gen AI like ChatGPT, Google’s Bard, and DALL-E among others. This Gen AI is a type of Artificial Intelligent (AI) that relies on sophisticated machine learning model to create images and audio contents, generate software codes, summarize complex data, and assist with repetitive tasks etc (Stryker & Scapiccohio, 2024).

According to McKinsey (2024), most of the industries like financial services, Healthcare and Pharmaceutical, Advertising and Marketing, Software development, and Media &Entertainment etc uses Gen AI tools on its daily operations for enhancement of operational efficiencies and productivities. The author further forecasted that the global annual economy contribution of Gen AI will be $4.4trillion in the next three years. To my understanding, this shows a great milage and the future trend of Gen AI tool utilization.

However, the rapid utilization of Gen AI tools and the associated challenges such as lack of trust & authenticity, threat to security, distribution of harmful contents, lack of transparency, among others necessitate consideration of social, legal, balancing of the competing interest of organisational productivity and ethical concerns in decision making (Deckard,2023). This is to avoid or minimize the unintended negative risks arising from the implementation of Gen AI in the society.

**Ethical Principles in Gen AI.**

Gen AI ethics refer to the frameworks guiding software developers, manufacturers and other stakeholder’s operators on the potential ethical harms that could arise from implementation of Gen AI in the society, either from poor (unethical) design, inappropriate application or misuse (Bird, et al, 2020).

The major challenge on the subject is defining the values and ideals in establishing the principles of ethics with human relationships considering the diverse cultures and believes among countries and regions around the world (Correa et al.2022). The author divided the AI ethical concerns into short-term, mid-term and long-term challenges. The short-term includes algorithmic discrimination, data privacy violation, algorithmic opacity and legal accountability while the mid-term comprises of labour displacement, environmental sustainability, existential risk and autonomous weapon etc and the long-term is the future impact of AI system in the society such as misalignment of AI and AI-related existential risk. Mittelstadt (2019) analysed the ethical concerns of AI from healthcare preceptive where the author identified that AI development lacks common aims and fiduciary duties, professional history and norms, proven methods to translate principles into practice, and robust legal and professional accountability mechanisms.

The above-mentioned authors highlighted the top ethical principles guidelines for AI designs, development, and deployment as: transparency & explainability, reliability & trustworthiness of the system, Non-discrimination & fairness, Data privacy of user, Accountability of stakeholders, Dignity/human right, and Beneficence/non-maleficence.

These AI ethics concerns, and principal applications are now the boring global topic of discussions for researchers and policy makers in order to safeguard the public interest. And there are several private and public bodies that provided guidelines to promotes AI ethical principles best practices in different sectors such frameworks include; BSC code of conduct and ethics for IT professions, Data protection Act 2018, General Data Protection Regulation (GDPR), SAP’s Guiding Principles for AI, Association for Computing Machinery (ACM) Code of Ethics & Professional conduct among others.

**Personal Learnings and Recommendations**

The field of study has improved my understanding on the benefits and challenges of Gen AI and the need for provision of AI ethical principles to protect both human and the environment. To understand the context of AI Ethics, a deeper understanding of the social, political and economic context as it relates to development and deployment of AI technology (Deckard,2023) is required. This means in creating of virtual and audio contents, or application of AI tools in any sector, I need to evaluate the impact of the AI tools on individuals, society, or the cultural difference in terms of discriminations, power and oppressions to ensure that it’s in line with some of the ethical principles mentioned in my paper. Another critical lesson for me is in the context of security threats of Gen AI technology such as the ability of the AL tools to generate phishing emails, fake identities, malicious content that can fool users, deepfakes used by cybercriminals (Chugh,2023). Nevertheless, with all these dark sides of Gen AI technology, there have been tremendously value addition of the technology in improving welfare of the individuals and operational efficiency in this modern economy and digitalized sectors like healthcare, transportations and financial services etc. (Yilmaz &Karaoglan, 2023).

The knowledge I acquired in this study will assist me in choosing my MSc project topic based numerously information and papers available on AI technology and its future trend. Also, In the event I decided to pursue a professional career as an AI ethicist, I must scale-up my knowledge on the field of study, develop a strong communication and analytical skill to convene any complex ethical principles to the required audiences.

Based on my findings, I’ll recommend that one of the ways to bridge the gaps between the guiding ethical principles and the actual implementation of the principles in practice is for the policy makers to collaborate with various disciplines such as Computer scientists, Software developers, Engineers, legal experts, social scientists etc to share knowledge needed to draw-up an effective and applicable AI ethical framework. This will assist in ensuring that ethical guidelines are integrated into design and development stage of AI technology. Also, continuous research on AI technology cybersecurity threats and measures with its related ethical principles is recommended considering the advancement of AI technology and future trend.

**Conclusion**

The risk poses by Gen AI are enhanced and more concerning than those risk associated with typical AI (Lawton,2024) and this is more reasons for Keeping abreast with current and future landscape of artificial general intelligent design, development and deployment of the technology. It is important to ensure that the ethical concerns were addressed, and all the required ethical principles were considered in order to balance the organisational interest of performance and human welfare.

**References**

* Association for Computing Machinery (2018) ACM Code of Ethics and Professional Conduct. Available from: [**https://ethics.acm.org/**](https://ethics.acm.org/) [Accessed: 28 August 2024].
* British Computer Society (BCS), 2022. *BCS Code of Conduct*. Available from: [**https://www.bcs.org/membership-and-registrations/become-a-member/bcs-code-of-conduct/**](https://www.bcs.org/membership-and-registrations/become-a-member/bcs-code-of-conduct/) [Accessed 28 August 2024].
* Bird, E. et,al. (2020). European Parliament. *The ethics of artificial intelligence: Issues and initiatives*. Available from: [https://www.europarl.europa.eu/RegData/etudes/STUD/2020/634452/EPRS\_STU(2020)634452\_EN.pdf[Accessed](https://www.europarl.europa.eu/RegData/etudes/STUD/2020/634452/EPRS_STU(2020)634452_EN.pdf%5bAccessed) [Accessed 16 October 2024].
* Corral et,al(2023).ScienceDirect. Pattern .*Worldwide AI ethics: A review of 200 guidelines and recommendations for AI governance.* Volume 4,issued 10*.* Available from: <https://www-sciencedirect-com.uniessexlib.idm.oclc.org/science/article/pii/S2666389923002416?via%3Dihub> [Accessed 2 October 2024].
* Deckard,R.(2023) The Chartered Institute For IT(BCS).*What are ethics in AI?.* Available from: <https://www.bcs.org/articles-opinion-and-research/what-are-ethics-in-ai/> [Accessed 5 August 2024].
* FP Team (2023). Fact Protocol*. Generative AI: Advantages, Disadvantages, Limitations, and Challenges.* Available from: <https://fact.technology/learn/generative-ai-advantages-limitations-and-challenges/>[Accessed 12 October 2024].
* Lawton,G.(2024).TechTarget*. Generative AI ethics: 8 biggest concerns and risks.* Available from: <https://www.techtarget.com/searchenterpriseai/tip/Generative-AI-ethics-8-biggest-concerns> [Accessed 13 October 2024]
* McKinsey &Company (2024)*.What is generative AI?.*Available from: <https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-generative-ai> [Accessed 13 October 2024].
* Mittelstadt.B (2019). Nature Masterclass.Nature Machine Intelligence; *Principles alone cannot guarantee ethical AI.* Available from: <https://www.nature.com/articles/s42256-019-0114-4> [Accessed 13 October 2024]
* Stryker,C & Scapicctio,M.(2024)IBM TechXchange Conference 2024*.What is generative AI?.* Available from: <https://www.ibm.com/topics/generative-ai>[Accessed 12 October 2024].
* Yilmaz.R & Karaoglan,F(2023*)*ScienceDirect, ELSEVIER. Computers and Education: Artificial Intelligent *.The effect of generative artificial intelligence (AI)-based tool use on students' computational thinking skills, programming self-efficacy and motivation.*Volume4(100147*)* Available from: [https://www.sciencedirect.com/science/article/pii/S2666920X23000267[accessed](https://www.sciencedirect.com/science/article/pii/S2666920X23000267%5baccessed) [Accessed 10 October 2024].