Case Study - Ethics in Computing in the age of Generative AI

Introduction

The rapid advancements in generative AI have undoubtedly transformed various aspects of our lives, with Computer Science being at the forefront of this revolution. As AI continues to evolve and integrate into our daily activities, it is crucial to establish a set of guidelines and principles to ensure its responsible development and deployment. Correa et al. (2023) highlight the challenges in reaching a global consensus on the values that should guide AI progress, given the diverse perspectives of stakeholders worldwide and the abstract nature of normative discourse.

1. Global approach to generative AI

After reviewing the article and analysing how different countries approach the generative AI revolution, it is evident that a multi-stakeholder, collaborative effort is necessary to address the legal, social, and ethical implications of AI (Floridi et al., 2018). Deckard (2023) emphasizes the importance of building a strong foundation in ethics and technology, whereas Hagendorff (2020) pointed out that staying informed about AI developments, understanding the context of AI ethics, and developing strong communication skills to become an effective AI ethicist.

One suitable course of action could be the establishment of an international AI ethics framework that sets forth a set of guiding principles for the responsible development and deployment of AI technologies Tech.co. (2023). This framework should be developed through a collaborative effort involving governments, industry leaders, academic institutions, and civil society organizations from around the world. UNESCO (2023) emphasised that the framework should address key ethical principles such as transparency, accountability, fairness, privacy, and safety, while also considering the diverse cultural, social, and economic contexts in which AI is being developed and deployed.

To ensure the effectiveness of this framework, it is crucial to engage in multi-stakeholder dialogues and collaborations. Governments should work closely with industry leaders and academic institutions to develop policies and regulations that promote the responsible development and deployment of AI technologies (Cath et al., 2017). This could include the establishment of AI ethics boards or committees that oversee the development and deployment of AI systems, as well as the creation of certification programs that ensure AI systems meet certain ethical standards (Fjeld et al., 2020).

2. Public awareness and education

There is a need for greater public awareness and education about the ethical implications of AI. As Deckard (2023) suggests, AI ethicists should develop strong communication skills to effectively convey complex ethical concepts to a range of audiences. This could involve the development of educational programs and resources that help the public understand the potential benefits and risks of AI, as well as the ethical considerations that should guide its development and deployment (Bryson and Winfield, 2017).

3. Impact on legal, social, and professional aspects

The impact of these actions would be significant from a legal, social, and professional perspective. From a legal standpoint, the establishment of an international AI ethics framework would provide a clear set of guidelines for the development and deployment of AI technologies, reducing the risk of legal disputes and ensuring compliance with relevant laws and regulations (Scherer, 2016). This could also help to promote greater harmonization of AI regulations across different jurisdictions, reducing the risk of regulatory fragmentation and promoting greater international cooperation (Cath et al., 2018).

Jobin, Ienca and Vayena (2019) highlighted that from a social perspective, the development of an AI ethics framework would help to promote greater public trust and confidence in AI technologies. This argument was further emphasised by Rahwan (2018) stating that AI systems are developed and deployed in a responsible and ethical manner, the public may be more willing to embrace these technologies and reap their potential benefits. Moreover, greater public awareness and education about AI ethics could help to promote a more informed and engaged citizenry, empowering individuals to make more informed decisions about the use of AI in their daily lives (Taddeo and Floridi, 2018).

From a professional perspective, the establishment of an AI ethics framework would provide clear guidance for computing professionals working in the field of AI (Anderson and Anderson, 2007). This could help to promote greater professional responsibility and accountability, ensuring that AI systems are developed and deployed in a manner that is consistent with ethical principles and standards (Stahl et al., 2010). Moreover, the development of strong communication skills and the ability to collaborate with diverse stakeholders would be essential for computing professionals working in the field of AI ethics (Mittelstadt, 2019).

Conclusion

The generative AI revolution presents both opportunities and challenges for society. To ensure that AI is developed and deployed in a responsible and ethical manner, it is crucial to establish a clear set of guidelines and principles that promote transparency, accountability, fairness, privacy, and safety. This will require a collaborative effort involving governments, industry leaders, academic institutions, and civil society organizations from around the world. By working together to develop an international AI ethics framework and promoting greater public awareness and education about AI ethics, we can help to ensure that the benefits of AI are realized while minimizing its potential risks and negative impacts.

References:

Anderson, M. and Susan Leigh Anderson (2019). Machine Ethics: Creating an Ethical Intelligent Agent. AI Magazine, [online] 28(4), pp.15–15. Doi: HTTPs://doi.org/10.1609/aimag.v28i4.2065

Bryson, J. and Winfield, A. (2017). Standardizing Ethical Design for Artificial Intelligence and Autonomous Systems. Computer, 50(5), pp.116–119. Doi: HTTPs://doi.org/10.1109/mc.2017.154.

Cath, C., Wachter, S., Mittelstadt, B., Taddeo, M. and Floridi, L., 2018. Artificial intelligence and the 'good society': the US, EU, and UK approach. Science and engineering ethics, 24(2), pp.505-528.

Correa, N.K., Galvão, C., Santos, J.W., Del Pino, C., Pinto, E.P., Barbosa, C., Massmann, D., Mambrini, R., Galvão, L., Terem, E. and de Oliveira, N., 2023. Worldwide AI ethics: A review of 200 guidelines and recommendations for AI governance. Patterns, 4(10), p.100857. https://doi.org/10.1016/j.patter.2023.100857

Deckard, R., 2023. What are ethics in AI? [online] Available at: [Accessed 14 May 2023].

Floridi, L., Cowls, J., Beltrametti, M. et al. AI4People—An Ethical Framework for a Good AI Society: Opportunities, Risks, Principles, and Recommendations. Minds & Machines 28, 689–707 (2018). https://doi.org/10.1007/s11023-018-9482-5

Fjeld, J., Achten, N., Hilligoss, H., Nagy, A. and Srikumar, M. (2020). Principled Artificial Intelligence: Mapping Consensus in Ethical and Rights-Based Approaches to Principles for AI. [online]

papers.ssrn.com. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3518482. [Accessed 02 April 2024].

Hagendorff, T. (2020). The Ethics of AI Ethics: An Evaluation of Guidelines. Minds and Machines, 30, 99-120. Available at: https://link.springer.com/article/10.1007/s11023-020-09517-8 [Accessed 12 May 2024].

Jobin, A., Ienca, M. & Vayena, E. The global landscape of AI ethics guidelines. Nat Mach Intell 1, 389–399 (2019). https://doi.org/10.1038/s42256-019-0088-2

Mittelstadt, B. (2019). Principles alone cannot guarantee ethical AI. Nature Machine Intelligence, [online] 1(11), pp.501–507. Doi: HTTPs://doi.org/10.1038/s42256-019-0114-4

Rahwan, I. (2018). Society-in-the-loop: programming the algorithmic social contract. Ethics and Information Technology, 20(1), pp.5–14. Doi: HTTPs://doi.org/10.1007/s10676-017-9430-8

Scherer, M.U. (2016). Regulating Artificial Intelligence Systems: Risks, Challenges, Competencies, and Strategies. Harvard Journal of Law & Technology, 29(2). Doi: HTTPs://doi.org/10.2139/ssrn.2609777

Stahl, B.C., Heersmink, R., Goujon, P., Flick, C., van den Hoven, J., Wakunuma, K., Ikonen, V. and Rader, M. (2010). Identifying the Ethics of Emerging Information and Communication Technologies. International Journal of Technoethics, 1(4), pp.20–38. Doi: HTTPs://doi.org/10.4018/jte.2010100102

Taddeo, M. and Floridi, L., 2018. How AI can be a force for good. Science, 361(6404), pp.751-752.

Tech.co. (2023). AI Ethics: Principles and Issues. Available at: https://tech.co/news/ai-ethics-principles-and-issues [Accessed 25 April 2024].

UNESCO. (2023). Recommendation on the Ethics of Artificial Intelligence. Available at: https://www.unesco.org/en/artificial-intelligence/recommendation-ethics [Accessed 25 April 2024].