Reflective Piece: Legal, Social, Ethical and Professional Implications of Generative AI – A Global Perspective

The impact that generative AI tools such as ChatGPT, image generators, and video synthesis platforms have had on industries like healthcare, education, and creative media is nothing short of revolutionary. They are transforming industries all around the world and for computing professionals, the implications of tool adoption run deep. As Correa et al. (2023) points out, this modern AI boom does not only stimulate our technical skills, it puts to test the collective ability to enforce our values, profoundly challenging global sociotechnical systems.

Governance is arguably the most urgent issue. The generative side of AI technologies has developed much faster than regulations can keep up with. As pointed out by Correa et al. (2023), there are attempts to create some AI governance frameworks by international bodies, some national governments, and even private corporations; however, there is no agreement on fundamental ethics such as transparency, fairness, privacy, and accountability. What comes forth is an ecosystem where the parts are disjointed. There are overlapping, and at times contradictory, rules. For example, the EU's AI Act focuses on regulation through risk-based approaches while the US prefers self-regulation within specific sectors. China's focus is centered on sovereignty and censorship while other countries advocate for innovation with minimal restrictions. This mixture of regulations demonstrates cultural values, legal traditions, and political approaches (Floridi, 2019).

Deckard (2023) brings to our attention that this divergence has serious implications for computing professionals. In the event that generative AI inflicts damage, who takes the blame? Is it the developers, the deployers, the users, or the regulators? What is the appropriate ethical framework for an AI system that ingests global datasets, but is trained and deployed in culturally distinct settings? How does a professional balance the need to innovate against the obligation of safety in practice with the "do no harm" principle? In the absence of clarity, there is plausible ethical ambiguity, regulatory arbitrage, or in the words of Boddington (2017), a race to achieve the lowest standards in safety and fairness.

As much as global unanimity is unlikely, I would argue that a mix of international and regional laws, industry standards, and organizational policies forms a tiered system that could be a workable solution. This method balances innovation and responsibility and adapts to local contexts without compromising on fundamental rights. Achieving this requires the construction of interoperable regulatory architectures, akin to what is done in global finance or environmental treaties. Forums such as UNESCO, the OECD, or The Global Partnership on AI facilitate governance alignment across jurisdictions (UNESCO, 2021).

To put into action such a framework, my proposal contains three points:

1. **Creation of an AI Governance Atlas:** There is a gap between researchers and policymakers regarding governance frameworks. As mentioned by Correa et al. (2023), they need a way to analyse governance frameworks. An accessible digital atlas that centralizes AI policies, ethical norms, and regulatory texts would foster dialogue, mitigate duplication of efforts, and streamline identification of successful strategies. It is essential that this resource be maintained as open access with ongoing revisions, ideally by a scholarly or intergovernmental institution.
2. **Integrating Ethical Impact Assessments within the Software Lifecycle:** Et 4. Software engineering practices incorporate security and usability aspects, similarly ethics

deserves a formal attention as a design constraint. ACM and IEEE are example of professional bodies that have a formal conduct which needs to change to include requirements on ethical AI development aligned to an ISO standard. Organizations could conduct algorithmic impact assessments (AIA), akin to privacy impact assessments, during critical developmental milestones (Cath, 2018).

3. **Educating the Public and Professionals:** Media either sensationalizes or instills fear about the generative AI tools which skews public perception. Unlike the public, professionals may lack education in ethics, law, or cross cultural governance. Industry and research universities need to include AI ethics in their syllabi and teach it through case studies and interdisciplinary lenses. In fields like generative AI, algorithmic bias, and explainability, fast-paced advancements necessitate implementing ongoing professional development (CPD).

Legal and Professional Impact

The implementation of almost any framework would have numerous legal and professional ramifications. This would trigger changes in the existing laws on data protection, intellectual property, and even liability frameworks. For instance, generative models which can replicate specific styles or voices may contravene certain IP provisions or raise deepfake issues. There are also instances where developers will need to justify that their training datasets were ethically collected and appropriately licensed. From a legal perspective, professionals will be subjected to enhanced documentation scrutiny, transparency requirements, and justification standards due to the professionalism tied to the field. Due diligence is a legal term that refers to evidence that is substantial enough to justify all pre-emptive steps one took to ensure that a reasonable risk does not exist. In that regard, practitioners will be required to defend their models against ethical and legal compliance, particularly when used in sensitive contexts (Mittelstadt, 2019).

Another matter of concern is professional responsibility. In the case that an AI recommendation system inflicts harm onto a patient or contributes to a biased hiring decision, how will the individuals seek to redress the harm inflicted? Many current frameworks lack enforcement mechanisms or ways to provide redress. There needs to be defined domains within computer science that clearly delineate professional responsibility and are scaffolded to medicine or law. These could be frameworks that have to do with professional licensure or certification in domains regarded as safety critical such as healthcare or autonomous vehicles.

Social and Ethical Considerations

As pointed out, the social aspects of generative AI technology can be both beneficial and harmful. On one hand, these tools have the potential to streamline access to creativity and knowledge, but on the other, they can cause damage by reinforcing bias, misinformation, and eroding institutional trust. As Deckard (2023) points out, marginalized groups are often targeted and disproportionately harmed by decision-making when it comes to AI. For this reason alone, any governance structure must be intersectional alongside having inclusivity and consideration for power dynamics aligned with the governance (Eubanks, 2018).

From an ethical standpoint, the rigid structure that underpins generative models casts great challenges on fundamental aspects like accountability and explainability. If a model's deployer

lacks complete understanding of the decision behind a model's action, can that deployer be held accountable? There exists also, normative relations between values like privacy and usefulness, fairness and accuracy, and lastly secrecy and openness. These balances require debate alongside ethicists, legal scholars, and civil society, not just technologists.

Conclusion

All in all, the generative AI revolution has sought to broaden the scope with emphasis on the existing ideologies in relation to AI ethics and governance. As such, the realm of computer science has entered a new phase, fostering creativity through an inclusion because it calls for collaboration rather than deep-rooted engineering approaches. The need is imminent for a flexible but coordinated governance structure firmly built on shared ideals yet considerate to varied local contexts, as this is paramount.

Like the rest of the computing professionals, I also acknowledge the ethical responsibility that comes with innovating and advancing technology. We should strive to create AI systems that reflect the collective interests of humanity – not just commercial, political, or other unrelated priorities – by promoting clear policy frameworks, engaging the public, integrating ethics at design stages, and ensuring public involvement. Both Correa et al. (2023) and Deckard (2023) underscore the fact that the AI issue is not solely technical in nature; it is fundamentally an issue that concerns people's lives.

References:

Boddington, P. (2017) *Towards a Code of Ethics for Artificial Intelligence*. Cham: Springer. https://doi.org/10.1007/978-3-319-60648-4

Cath, C. (2018) 'Governing artificial intelligence: Ethical, legal and technical opportunities and challenges', *Philosophical Transactions of the Royal Society A*, 376(2133), pp. 1–15. https://doi.org/10.1098/rsta.2018.0080

Correa, J.R., Cowls, J., Tsamados, A., Taddeo, M. and Floridi, L. (2023) 'Global AI Governance: A Framework for Comparing International AI Policies', *AI and Ethics*, 3, pp. 155–172. https://doi.org/10.1007/s43681-023-00236-1

Deckard, M. (2023) 'Ethics in the Age of Generative AI: Balancing Innovation and Responsibility', *Communications of the ACM*, 66(5), pp. 24–27. https://doi.org/10.1145/3585000

Eubanks, V. (2018) *Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor*. New York: St. Martin's Press.

Floridi, L. (2019) 'Establishing the rules for building trustworthy AI', *Nature Machine Intelligence*, 1(6), pp. 261–262. https://doi.org/10.1038/s42256-019-0055-y

Mittelstadt, B.D. (2019) 'Principles alone cannot guarantee ethical AI', *Nature Machine Intelligence*, 1(11), pp. 501–507. https://doi.org/10.1038/s42256-019-0114-4

UNESCO (2021) *Recommendation on the Ethics of Artificial Intelligence*. Available at: https://unesdoc.unesco.org/ark:/48223/pf0000381137