Ethics in Computing in the age of Generative AI: Towards a Unified Ethical and Regulatory Framework

Introduction

Since late 2022, the rise of generative artificial intelligence has had a major impact on technology worldwide, reaching fields like education, healthcare, software and discussions in the public sphere. As more organisations use AI, there is a quick need to establish boundaries and standards for it. Although AI research dates back several years, Correa et al. (2023) point out that the current wave of advancements is happening much faster, is more accessible and involves a bigger community, so new methods of regulation and monitoring must be considered.

The Challenge of Fragmented Global Governance

A significant issue in AI governance now is that there is no common set of principles guiding how artificial intelligence is created and used internationally. According to Correa et al. (2023), different countries apply different methods to govern AI, influenced by their unique traditions, politics and economy. Therefore, making universal standards is very difficult for policymakers and researchers because they cannot compare the governance practises of different nations effectively.

The differences in rules are becoming more obvious as countries adopt various approaches. The EU's Artificial Intelligence Act shows that it follows a rights-based approach by setting strict guidelines for human oversight and detailed ways to classify risks (Al-kfairy et al., 2024; BCS, 2023). By contrast, the United States has chosen a mainly sectoral, innovation-based approach, depending on guidelines like the NIST AI Risk Management Framework to oversee development and emphasise innovations (NIST, 2024). China's system of government uses state controls to keep society stable

and ensure the country's key interests. Deckard (2023) discusses the differences in worldviews that cause disagreement over how AI should be governed. The different approaches result in major differences in how AI is developed and put into use, as some regions emphasise technology but others choose to prioritise rights, sustainability or culture.

Towards a Federated Governance Framework

Instead of using a single global rule that might overlook national and cultural values, I support a system similar to the Paris Climate Accord. The method would set up important ethical and technical principles and allow for flexible ways of using them in different areas and situations. Therefore, the framework would address key issues like ensuring AI is fair, open and protected, with well-defined rules for accountability.

Correa et al. (2023) believe that developing an international AI Governance Index would help the federated approach succeed. Unlike the OECD's AI Policy Observatory, the index would provide a framework to compare the AI policies of various countries, focusing on ethics, technology and society. Because of this, researchers, policymakers and civil society organisations could highlight successes, explain where the regulations need improvement and encourage open communication among interested parties.

Legal and Regulatory Implications

Establishing a common international framework for governance would provide significant legal and regulatory improvements and solve the issues of having many different regulations. Aligning important rules such as data protection and algorithm

accountability could greatly cut costs for big multinational tech firms and improve user protection across countries (Desai & Riedl, 2024). If large language model companies, for instance ChatGPT, Stable Diffusion or Gemini, had to remain transparent in every place they operate, it would decrease the possibilities for companies to move to less regulated locations to avoid oversight (Schlagwein & Willcocks, 2023). Even so, it is vital to consider that international standards should work together with national laws, mainly when AI systems might worsen existing inequality or threaten the rights of marginalised groups. Because of the flexible nature of the federated model, countries can have higher standards when necessary and still ensure basic protections are present everywhere.

Societal and Professional Responsibilities

Socially speaking, unified rules would tackle important problems such as spreading false news, overstepping in surveillance and making algorithms biassed. According to Deckard (2023), AI systems that generate content are sure to spread biases that exist in their training data which may maintain stereotypes, create more divisions among users and weaken public trust. Well-designed audits and consulting stakeholders often ensure that these risks are dealt with properly.

To address these issues, the field of computing needs to change its practises and guidelines. Current directives such as the ACM Code of Ethics, must now cover important topics like where data comes from, how machine learning models work and ways to avoid abuse (ACM,2018). Experienced computing professionals should be able

to foresee possible harm, involve several communities in their work and communicate both what the system can do and what it cannot do openly.

Consequently, new areas of specialisation are required, much like what cybersecurity has seen. AI auditors, model risk managers and bias mitigation specialists may play a bigger role in the future. AI ethics and governance should be included in the main computer science programmes in schools, so students become aware of the social and ethical concerns of developing AI (Kirova et al., 2023).

The Path Forward

Generative AI needs to be governed by teams made up of experts from many different fields. The job of good regulation should involve ethicists, legal scholars, sociologists and those affected, as well as engineers and policymakers. This is in agreement with Correa et al. (2023) who call for more participation and updated tools that support meetings between stakeholders. For example, creating detailed AI impact assessments calls for cooperation between developers and people trained in law, ethics and human rights.

Conclusion

Generative AI offers society many opportunities as well as serious challenges. Even though countries use various strategies, it is becoming clear that worldwide ethical and regulatory rules are needed. Moving towards a governance model that follows transparency, fairness and rights protections addresses risks, supports more progress and earns the trust of the public in AI. Being successful means having open and

inclusive conversations, raising ethical standards and collaborating internationally for a long time. In addition to technical tasks, we must make certain the AI-driven world is fair, just and puts people first. Decisions about AI governance today will have lasting consequences for the next many years, calling for quick and responsible decisions.

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