



# AI for Social Good and Global Impact

Concepts and Technologies of Artificial Intelligence 5CS037

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## Abstract

Artificial intelligence (AI) is having a growing impact on how societies deal with difficult global issues like poverty alleviation, public health, education, and climate change. AI raises significant ethical questions about social inequity, environmental damage, accountability, and governance even while it provides creative and effective answers. The application of AI for societal good while upholding ethical standards is examined in this report. It illustrates how poorly managed systems may exacerbate already-existing disparities and addresses the main ethical concerns connected to the widespread use of AI. The report examines international efforts for ethical AI and suggests a workable ethical framework to direct responsible development, drawing on recent scholarly research. Overall, the study highlights that attaining inclusive, sustainable, and socially good results requires integrating ethical concepts throughout the AI lifecycle.

**Key Words:** Ethical AI, Social Good, Global Impact, Responsible Innovation, Sustainability



# Introduction

Artificial Intelligence has quickly become one of the most powerful technologies of the modern world. AI systems are currently extensively utilized in healthcare, education, governance, environmental surveillance and economic planning. These technologies have the prospect to make the decision-making process faster, more efficient, and analyze vast amounts of information. Along with these benefits, there are also critical ethical, social, and moral issues associated with the increasing impact of AI that also require attention.

The effect of AI on fairness and equality is one of the biggest ethical concerns that it brings. AI systems are usually based on big data which mirrors prevailing social biases. In case these biases are not detected and resolved, AI can be more discriminatory than less. Moreover, several AI models lack transparency, which is why it is hard to comprehend how decisions are reached and how they influence the life of individuals. The privacy, data abuse, environmental sustainability, and accountability issues are additional reasons why ethics should be at the forefront of developing AI.

In order to overcome these issues, different ethical standards and regulations frameworks have been offered on both the national and international level. These frameworks are usually based on fairness, transparency, accountability, human control, and sustainability. Ethical AI system may be defined as the one that does not violate human rights, causes minimal harm, functions openly and can be meaningfully controlled by humans. As a reality, to advance towards ethical AI, there must be responsible data governance, inclusive system design, continuous evaluation, and high institutional responsibility.

The current report is dedicated to the idea of AI in projecting the social good and impact on the world. It looks at the benefits that AI could bring in solving the global challenges as well as examining the risks that it has on its ethical side. Through this, the report has indicated the balance between technological innovation and ethical integrity.



# Thematic Review: AI for Social Good and Global Impact

## 2.1 Environmental and Sustainability Issues.

AI has also shown a great potential to resolve the environmental challenges like climate change, resource management and disaster prediction. Climate analysis, energy efficiency optimization, and renewable energy system creation are the areas where machine learning techniques are also broadly applied. These applications demonstrate that AI can be used directly in helping to achieve global sustainability objectives. Nonetheless, AI itself is a matter of a severe ethical problem in terms of its environmental impact. The large AI models demand large computational resources to train and deploy, using large quantities of energy and providing throughout contribution to carbon emissions. This poses an ethical dilemma of marketing AI as a solution to environmental issues and at the same time, contributing to environmental degradation. Ethically, there is a need to make AI systems less ecologically damaging in regard to developers and organizations. Model optimization, the use of hardware that is energy-efficient, and where renewable energy sources are used are some of the approaches that can be applied to align AI development with the objectives of sustainability.

## 2.2 International Practices and code of conduct.

The working of AI technologies is not confined within the borders of a single country, so it is very difficult to regulate the situation globally. The countries vary greatly in terms of law system, cultural beliefs, and technological potential. Consequently, it is challenging to produce international ethical standards of AI. Whereas in some countries, stringent regulatory measures have been enacted, in some cases, countries are not in a position to implement ethical practices due to lack of resources and infrastructure to do so. International projects have tried to solve these problems by ensuring common ethical guidelines in creating AIs. Such initiatives focus on respect to human rights, transparency, accountability and inclusiveness. Nevertheless, the ethical principles can not be relied on by themselves. Governance effectively involves governments, researchers, privates, and civil society to transform ethical principles into policies and practice to be implemented in reality.



## 2.3 AI and Social Inequalities

The existing social inequalities may also decrease or increase with the help of AI. On the positive side, with the help of AI, educational access can expand due to digital learning systems, health care delivery in underserved locations, and data-driven policy creation by alleviating poverty. The applications demonstrate the way AI can be a useful social good. At the same time, it is also possible to boost inequality with the help of AI systems, yet they should be designed with the help of prejudiced or incomplete information. The statistics has a tendency to give limited consideration to the marginalized groups, which is unjust or unreal. The discriminative AI-based systems are used as an example; it may be credit rating, hiring, or government services and may disqualify vulnerable groups. In order to apply AI ethically, then it is necessary to ensure that the data practices are inclusive, the stakeholders are engaged and monitored actively to instill fairness and equity.

## 2.4 International Problem Management.

The AI is increasingly being used to solve some of the most significant problems that plague the world such as the crisis of public health and climate change, and the access to education. AI systems have been useful in terms of predicting the disease, resource distribution, and medical research in case of health emergencies. Education through artificial intelligence can give learners opportunities of having personalized learning even in remote or disadvantaged places. Irrespective of these benefits, the dangers in the field of ethics are also significant. The overuse of AI systems may result in the reduction of evidence and responsible behavior of humans, and lack of control or bias in AI predictions may cause irreparable harm. Proper transparency, transparent accountability framework and efficient human supervision should therefore be included in global issues on ethical AI. AI cannot need to replace human decisions but should become an assistant to them.

## 2.5 Domestic and International Projects

. To create responsible and ethical AI, there are several national and international projects to do it. These initiatives encourage the use of ethical principles, impact analysis and open systems of governance. Though such moves are a good move in the correct direction, the global implementation is not an easy task since the political priorities and the development of technology are not the same.



## 2.6 A High level Ethical AI Framework of Social Good.

To develop responsible AI implementation to the advantage of society, a generic ethical framework can be applied to areas: Equity: AI systems should be biased to a minimal degree and encompassing of the outcomes.

Uncertainty: The process of AI decision-making should be understandable and explainable. Human Oversight: AI systems are not supposed to see human beings lose much control over it, especially where the impact of such technology is high. Sustainability: AI systems must be engineered and utilized in a way that does not do too much damage to the environment, but also contribute to the social good. Accountability: The accountability of AI decisions and accountability of AI consequences should be apparent.

## Discussion and Individual Reflection

Ethical AI is crucial as it has a direct impact on the way technology will impact the society and lives of people. This study helped me to understand that AI is not necessarily good or bad, but its implementation and application have been influenced by the values and priorities that are built within the design and application. Although AI has great potential in solving global issues, there exist ethical risks of inequality, environmental destruction, and accountability, which can destroy the advantages when unchecked. Among the lessons learned during this study is the fact that ethics cannot be an afterthought during AI development. Rather, ethical concerns should be considered at the first level of system development to the stage of deployment and assessment. Ethical AIs can be used to create trust with a vast number of communities and make certain that technological advancements serve many more. Through moral standards like fairness, transparency and human supervision, AI can help in a safer, more inclusive development. Ethical AI can eventually lead to the sustainable development and social equity in the long run, and the unethical implementation may result in further social segregation. This reflection points on the necessity of having a balance between innovation and ethical integrity to make AI useful to humanity in a responsible, meaningful manner.



## References

Floridi, L. et al. (2018). AI4People—An Ethical Framework for a Good AI Society. Mind & Machine.

Jobin, A., Ienca, M., & Vayena, E. (2019). The global landscape of AI ethics guidelines. Nature Machine Intelligence.

Rolnick, D. et al. (2020). Tackling Climate Change with Machine Learning. Nature Communications.

Vinuesa, R. et al. (2020). The role of artificial intelligence in achieving the Sustainable Development Goals. Nature Communications.

Whittlestone, J. et al. (2019). The role and limits of principles in AI ethics. Proceedings of the AAAI Conference on Artificial Intelligence.

UNESCO. (2021). Recommendation on the Ethics of Artificial Intelligence.