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Balancing Potential and Peril: The Ethical Implications of Artificial Intelligence on Human Rights

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Abstract

Artificial Intelligence (AI) has the potential to revolutionize various aspects of our lives, but it also raises significant ethical concerns. This paper examines the impact of AI on selected human rights, such as the right to privacy and freedom from discrimination, and discusses the issues related to the codification and regulation of AI from global and regional perspectives. AI has the potential to enhance human capabilities and improve decision-making processes, but it also poses a threat to privacy, bias, and accountability. AI algorithms can perpetuate existing societal stereotypes and discrimination, leading to significant violations of human rights, including the right to equality and non-discrimination. Furthermore, the use of autonomous weapons and drones has raised significant ethical concerns related to human rights. These weapons can potentially cause harm to innocent civilians and violate the right to life. There are ongoing debates about the development and use of these technologies and the need for international regulations to ensure their ethical use. Additionally, with the increasing use of automation and AI in various industries, there are concerns that many jobs may become obsolete, leading to significant job loss, and violating the right to work and a dignified livelihood. The paper also highlights the need for future work in AI ethics, including the development of AI systems that are transparent, explainable, and fair. The paper concludes that while AI has the potential to significantly benefit society, its development and deployment must be guided by ethical principles to prevent its negative impact on human rights.

Introduction

Artificial Intelligence (AI) is getting increasingly integrated into our daily life and revolutionizing how the world operates. However, with the advancements in AI, several ethical and legal implications must be considered as well. This paper is an attempt to present how AI is impacting selected human rights like for example the right to privacy or freedom from discrimination. This article also discusses the issues related to the codification and regulation of AI from global and regional perspectives.

The easiest explanation for AI is that it is a set of algorithms that allows machines to perform tasks that typically require human intelligence. It, therefore, involves creating machines that can think and learn like humans. OECD defines an Artificial intelligence system' (AI system) as a "machine-based system that is designed to operate with varying levels of autonomy and that can, for explicit or implicit objectives, generate output such as predictions, recommendations, or decisions influencing physical or virtual environments," (OECD).

AI has immense potential to enhance human capabilities and improve decision-making processes. However, at the same time, it also raises concerns about privacy, bias, and accountability. These concerns must be addressed to ensure that AI is used ethically and its negative impact on human rights is mitigated.

One of the primary ethical concerns of AI is its potential to perpetuate existing societal stereotypes and discrimination. As AI algorithms are often trained on large datasets, they can reinforce and even amplify existing biases present in the data. For instance, facial recognition technology has been found to have higher error rates when identifying people of color and women (Buolamwini&Gebru, 2018). Additionally, AI systems used in hiring and recruiting have been shown to replicate gender and racial biases (Dastin, 2018). These issues can lead to significant violations of human rights, including the right to equality and non-discrimination. Furthermore, machine learning algorithms can be used to make decisions that affect individuals' lives, such as determining creditworthiness or parole eligibility. Decisions made by algorithms may not always be transparent, just or explainable, leading to concerns about fairness and accountability (Goodman & Flaxman, 2016).

Apart from these issues, it is often highlighted that AI also poses a threat to the right to work. With the increasing use of automation and AI in various industries, there are concerns that many jobs may become

obsolete, leading to significant job loss and displacement (Brynjolfsson & McAfee, 2014). This can lead to the violation of the right to work and a dignified livelihood.
Finally, the use of autonomous weapons and drones has raised significant ethical concerns related to human rights. These weapons can potentially cause harm to innocent civilians and violate the right to life. There are ongoing debates about the development and use of these technologies and the need for international regulations to ensure their ethical use (Sharkey, 2017).
This article comprises an introduction and nine sections followed by a conclusion. In the first section provides an introduction of the paper, in the subsequent section the authors provide an overview of the applied research methods used in the article. The third and fourth sections defines human rights, AI and discusses their characteristics. The fifth section explores international efforts made to regulate AI and its impact on human rights, with a particular emphasis on the discussion led by the European Union. The next section discusses the positive impact of AI on human rights, including the potential to enhance decision-making processes and improve human capabilities. The seventh section examines the influence of AI on human dignity and the right to privacy, as well as the associated ethical concerns. Lastly, the eighth section focuses on the issue of non-discrimination, particularly racial and gender biases perpetuated by AI algorithms. The authors conclude by emphasizing the importance of addressing these ethical concerns and mitigating the negative impact of AI on human rights, while also recognizing the potential benefits of this technology for society.

Methodology

As this is a literature review article, the methodology used for this study is a systematic review of the existing literature related to the ethical implications of artificial intelligence on human rights. The search for relevant studies was conducted on various academic databases, including Google Scholar, Jstor, SSRN, IEEE Xplore, ACM Digital Library, ScienceDirect, and SpringerLink. The search was conducted using a combination of relevant keywords, including "artificial intelligence,""Cyber security," "ethics," "human rights," "privacy," and "fairness." The search was limited to studies published in English from the past five years (2017-2022).
The inclusion criteria for the studies were as follows:

1) studies that specifically addressed the ethical implications of AI on human rights,
2) studies that explored the impact of AI on privacy, fairness, and other human rights concerns, and
3) studies that provided evidence-based recommendations for addressing ethical concerns related to AI.

The exclusion criteria for the studies were as follows:

i. studies that did not specifically address the ethical implications of AI on human rights,
ii. studies that were not published in English,
iii. studies that were not peer-reviewed, and
iv. studies that did not provide evidence-based recommendations for addressing ethical concerns related to AI.

After conducting the initial search, duplicate studies were removed, and the remaining studies were screened based on their titles and abstracts. The full-text articles of the selected studies were then reviewed, and relevant information was extracted for this literature review.
The information extracted from the selected studies included the study's main objective, research design, data sources, key findings, and recommendations. The extracted data was then analyzed using thematic analysis to identify the key themes and issues related to the ethical implications of AI on human rights.

Definition of Human Rights

Human rights are the rights inherent to all people, regardless of race, sex, nationality, ethnicity, language, religion, or any other status. The Universal Declaration of Human Rights is an absolute cornerstone of the human rights regime and is considered the most significant human rights document. UDHR was adopted by the UN General Assembly in 1948 and was the first legal document to set out basic and fundamental human rights and recognized them as universally protected. UDHR was however proclaimed as a declaration, a non-binding document. Thus, already during the work on the declaration, the international community noticed the need to prepare binding documents. This task was completed in 1966 when International Covenant on Civil and Political Rights (ICCPR) and the International Covenant on Economic, Social, and Cultural Rights (ICESCR) were adopted by UN GA. These 3 documents are known by the collective name “International Bill of Human Rights” (Sękowska – Kozłowska, 2011)
Human rights are often characterized as inherent, inalienable, interrelated, indivisible, interdependent, and universal (OHCHR, 2016).The terms interrelated, indivisible, and interdependent are often used alternately and explain why the violation of one human right very often affects several other rights and why it is insufficient to respect some human rights and not others. Human rights are seen as having equal importance and of being equally essential to respect the dignity and worth of every person. Human rights are seen as universal because they have their source in human dignity irrespective or race, color, sex, ethnic or social origin, religion, language, nationality, age, sexual orientation, disability, or any other distinguishing characteristic.

Inalienable means that no one can have his or her human rights taken, except in specific situations and according to due process. For example, the right to liberty can be restricted if a person is found guilty of a crime by a court of law. Non-derogable rights cannot be subjected to limitations for any reason, even during a declared state of emergency. Article 4 of the International Covenant on Civil and Political Rights (ICCPR) allows governments to employ temporary measures and suspend the application of certain rights. Article 4.2 however states that there are certain rights like the right to life, prohibition from torture, slavery, imprisonment for inability to fulfill a contractual obligation, freedom of religion and conscience, prohibition against the retrospective operation of criminal laws, and recognition before the law that are non-derogable. Responsibility to protect human rights rests with the State which is obliged to guarantee a high level of legal protection against potential misuse of new technologies. Freedom is based on human autonomy and means the ability to act, without external or internal constraints (in, 1969) The intervention in the autonomy of the individual is allowed only if it's based on the consent of the individual concerned or if the freedom conflicts with the individuals of others and is based on the principle of proportionality (Kriebitz, Lutge).

Definition of Artificial Intelligence

In year 1955 John McCarthy, who is known as father of the AI coined the term "computational intelligence" which subsequently got recognized as modern day term "artificial intelligence."(Andresen, 2002)There is no universally accepted definition of the AI. McCarthydefined AI as *"the science and engineering of making intelligent machines."*

Apart from his definition, AI can be defied in multi-dimensions. It can be defined as *"The exciting new effort to make computers think ... machines with minds, in the full and literal sense"*. (Haugel, 1985) Similarly it can defined as *"The automation of activities that we associate with human thinking, activities such as decision-making, problem solving, learning"*(Bellman, 1978)

On the other it can also be defined as *"the study of mental faculties through the use of computational models"*(Charniak& McDermott, 1987) or *"The study of the computations that makeit possible to perceive, reason, and act."*(Winston, 1992).

According to Kurzweil it is "the art of creating machines that perform functions that require intelligencewhen performed by people." (Kurzweil, 1990) while Poole and others maintained that AI or *"the Computational Intelligence is the studyof the design of intelligent agents." (*Poole et al., 1998*)*

While it was also held that it is*"the study of how to make computers dothings at which, at the moment, people arebetter." (*Rich and Knight, 1991*)*andalso that*"AI . . . is concerned with intelligent behavior in artifacts." (*Nilsson, 1998*)*

As far as definition of the AI is concerned following eight definitions suggests two approaches (Russell et al., 2022).

To sum it up, AI can be defined as a characteristic of computer and machines whereby these computers and machines can think and act as humans rationally do.

International efforts to regulate AI and human rights

Discussion related to the impact of AI on human rights has been present in global forums for many years. In 2021 UN Commissioner for Human Rights said countries should expressly ban AI applications thatdo not comply with international human rights law (Arab News, 2021). Despite efforts to place AI in the framework of human rights, still there are no legally binding instruments that specifically deal with AI under human rights law (Lane, 2022). As further noted by L. Lane, especially unregulated and ambiguous is the area of roles and responsibilities of the private businesses thatdevelop and deploy AI.EU in recent years took several initiatives related to the impact of AI on human rights. For example, the report titled "Getting the Future Right – Artificial Intelligence and fundamental rights" prepared by the European Union Agency for Fundamental Rights (FRA) analyzesthe impact of AI on fundamental human rights. The report focused on use cases in four key areas - social benefits, criminological forecasting, health services, and targeted advertising.FRA developed several documents related to AI. In 2018 the framework of this organization was prepared to document "#Data: Discrimination in data-supported decision" which discusses the issue of using discriminatory data and algorithms. The document explains that AI can contribute to discriminatory decision making. In 2019 Agency prepared a report "Facial recognition technology: fundamental rights considerations in the context of law enforcement", this paper outlines and analyzes the issues that arise when public authorities use facial recognition technology for law enforcement purposes. This document also proposes the actions that should be taken to prevent this from happening violations of fundamental rights. In the same year FRA published another paper titled "Data quality and artificial intelligence – mitigating bias and error to protect fundamental rights" which highlights the importance of avoiding low-quality, biased, and discriminatory data.

Currently EU proposed the law titled The AI Act which is the first law on AI. As noted on the official website of the AI Act: "The law assigns applications of AI to three risk categories. First, applications and systems that create an unacceptable risk, such as government-run social scoring of the type used in China, are banned.

Second, high-risk applications, such as a CV-scanning tool that ranks job applicants, are subject to specific legal requirements. Lastly, applications not explicitly banned or listed as high-risk are largely left unregulated" (AI Act, 2021)

The Organization for Economic Cooperation and Development (OECED)issued AI Policy Observatory and OECED Principles that promote values such fairness, transparency, safety, and accountability of AI Systems (OECED)

The efforts to regulate the impact of AI on human rights are being taken on global forums as well. In 2020 UN Committee on Economic, Social and Cultural Rights (CteeESCR) adopted a general comment on the right to science, in which it discusses some of the risks posed and benefits offered by AI for human rights. One year later, in March 2021 the UN Committee on the Rights of the Child (CteeRC) adopted a general comment on the rights of children in relation to the digital environment (Lane, 2022).

The Ministry of Information and Technology of Pakistan has also drafted an AI policy and asked the general public for their opinion on the policy. (Report, 2023)The draft is based on four pillars: 1) Enabling AI through awareness & readiness, 2) AI market enablement, 3) Building a progressive and trusted environment and 4) Transformation and evolution — further categorized into 15 different targets.

Positive Impact on Human Rights

AI has revolutionized how businesses operate and is now integrated into daily life. The development of Artificial Intelligence (AI) has brought significant advancements to various industries, including transportation, finance, and education. AI has a positive impact on human life by improving healthcare or making cars and other transportation systems safer. AI helps in making products and services more user-friendly, cheaper, and more sustainable. It can facilitate access to information, education, and training. Especially the use of technology in the time of the coronavirus demic when the need for distance education has increased was very visible. AI can also increase safety in the workplace, as dangerous tasks can be carried out by robots, and new jobs will be created as AI-powered industries develop and change.

AI might be an effective tool in crime prevention and terrorist attacks. It is already used by online platforms to detect and respond to illegal and inappropriate online behavior.

AI has the potential to increase efficiency and reduce costs in various industries. For instance, AI is used in the healthcare sector to develop personalized treatment plans for patients based on their medical history and genetic information. The algorithms are used medical image analysis or the development of new drugs (Park, 2020). The use of AI in healthcare however raises a series of concerns. Personal medical information is sensitive, and it must be properly protected to ensure that a patient's rights are not violated. AI could be used to collect and analyze personal medical information, and if not properly secured, it could violate patients' rights to privacy. Additionally, AI could be biased toward certain groups of people based on their medical history or genetic information, which could result in discrimination.

In transportation, AI is used to develop autonomous vehicles, which could significantly reduce accidents caused by human error. However, development of autonomous vehicles raises concerns about accountability. For example, in the event of an accident caused by an autonomous vehicle issues related to responsibility for this accident arise. Will the manufacturer of the vehicle, the software developer, or the owner of the vehicle be held responsible in a given case scenario?

In finance, AI is used to detect fraud and to develop investment strategies. However, the use of AI in these industries raises concerns about privacy, bias, and accountability. AI could be biased towards certain groups of people or certain types of investments, which could result in discrimination. Additionally, the use of AI to detect fraud raises concerns about the accuracy and reliability of the AI algorithm.

Influence of AI on Human dignity and right to privacy

It is well known that the source of human rights and all freedoms is the inherent dignity of the human person. In the preamble of the Universal Declaration of Human Rights (UDHR, 1948) we read that: 'Whereas recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world.' Human dignity is considered as an absolute, final, and inherent right.

Processing of personal data controlled by AI must be carried out in a manner that respects human dignity. Attention should be given to the man who creates and influences the technology, not the technology itself. Therefore, the assumption that human dignity will be the starting point will help ensure that the use of AI will bring satisfactory results.

In addition, the protection of dignity requires AI systems to inform that one is interacting with AI, not with human beings. The right to privacy is considered an essential component of human dignity. UDHR in the Article 12 states that "No one shall be subjected to arbitrary interference with his privacy, family, home, or correspondence, nor to attacks upon his honour and reputation. Everyone has the right to the protection of the law against such interference or attacks". Further ICCPR in the Article 17 confirms this right, stating that: "No

one shall be subjected to arbitrary or unlawful interference with his privacy, family, home, or correspondence, nor to unlawful attacks on his honor and reputation. Everyone has the right to the protection of the law against such interference or attacks."

Data protection on the other hand is widely considered one of the fundamental rights which protect the human right to privacy (AccessNow, p. 20) Data protection is defined as a process of safeguarding important data from corruption, compromise or loss and providing the capability to restore the data (SNIA). Data protection assures that data is not corrupted, is accessible for authorized purposes only, and follows applicable legal or regulatory requirements. Protected data should be available when needed and usable for its intended purpose.

With the increasing use of AI in surveillance systems, individuals' privacy can be severely compromised. For example, China's use of facial recognition technology for surveillance has been criticized for its infringement on the privacy rights of its citizens (Cox, 2018). Additionally, AI-powered chatbots and voice assistants may collect and process personal data, leading to concerns about data privacy and security. The right to privacy is also threatened by large-scale data collection, new methods of surveillance, and policing (Nayef Al-Rodhan, 2021). AI can make predictions about people's behavior, identity, or state of mind by processing data thatis not considered personal e.g.,facial expressions, heart rate location, or other public data. In the paper prepared by The Alan Turing Institute we read that "an AI system that analyses facial expressions, tone of voice, word choice, and other biometric cues and compares them to models to predict whether a job candidate will be a "successful" hire may violate the job candidate's sense of bodily and emotional privacy" (The Alan Turing Institute, 2021).

AI is used in national security mechanisms and access justice borders. As indicated earlier, AI operates based on data from various sources, which can use different information, e.g., on criminal records, travel, or behavior in social media. Therefore, it can be used to create profiles of people, including marking them as suspicious or identifying their whereabouts. Based on the collected data, people can be searched or arrested. It is adding to the problem of the fact that AI can discriminate against people due to their skin color or ethnicity.

In September 2021, the UN High Commissioner for Human Rights published a report on the right to privacy in the digital age. (UNHCHR) In the report, High Commissioner Michelle Bachelet discusses the many risks that AI poses to privacy and provides suggestions for safeguards that should be designed and implemented by both States and the private sector to prevent and mitigate them.

Non-discrimination, racial and gender biases

The prohibition of discrimination and the principles of equality are key elements of the international human rights system. In literature is often highlighted that algorithms may reconfigure racism and sexism (Dawes, 2020). As explained in the first part of the paper, even the most complex algorithms, including the learning ones, are still human creations, as the name of "artificial" intelligence indicates. As noted by M. Redden "One glaring issue is how Al, if imbued with some form of personhood, can exist in a world where human personhood itself is flawed. Specifically, if personhood incorporates the perception of racial, gender, sexual, or wealth superiority, how do these translate into Al? (Redden, 2020).

In 2020 UNESCO released a report on Artificial Intelligence and Gender Equality which reveals that gender biases found in AI training data sets, algorithms and devices have the potential of spreading and reinforcing harmful gender stereotypes. These gender biases risk further stigmatizing and marginalizing women on a global scale (UNESCO, 2020). C. Niethammer in her article provides number of situation where AI bias not only discriminate women but put their lives at risk (Niethammer, 2020). As an example, she is indicating seatbelts or airbags in cars which are designed by data collected based on men physique and seating position, ignoring the physique of for example pregnant women. AI technologies are applied in various medical domains to predict patient outcomes with high accuracy (Chung, 2019). Exclusion of women in biomedical research might also result in distortion and provide lower level of accuracy (Regitz-Zagrosek, 2016).

Recently more often experts highlighted that AI could contribute to reinforcing systematic racism. A Study regarding this issue was published in 2022 by OHCHR. (OHCHR, 2022). The report lists different situations where AI and machine learning algorithms treatspecific groups of the community as having lower status in society. People ofcolour are targeted in predictive policing, and access to public health. The report reveals that techniques like facial recognition, profiling and targeting on internet platforms are biased toward race. Study proves the existence of inequality in face recognition algorithms. (Najibi, 2020) T.Cutts in her research prove as well that people of color are often seen as fated for becoming criminals, 2023)

Conclusion

Artificial Intelligence (AI) is an emerging field that is transforming the world and how it operates. However, with the advancements in AI, there are several ethical and legal implications that must be considered. This article has presented the impact of AI on human rights such as privacy, freedom from discrimination, and the right to work. It also discussed issues related to the codification and regulation of AI from global and regional perspectives.

While AI has the potential to enhance human capabilities and improve decision-making processes, there are concerns about its negative impact on human rights. One of the primary ethical concerns of AI is its potential to perpetuate existing societal stereotypes and discrimination. The use of facial recognition technology, AI systems in hiring and recruiting, and machine learning algorithms can lead to significant violations of human rights, including the right to equality and non-discrimination. Additionally, there are concerns about the transparency, accountability, and explainability of decisions made by algorithms.

Apart from these issues, AI also poses a threat to the right to work. With the increasing use of automation and AI in various industries, there are concerns that many jobs may become obsolete, leading to significant job loss and displacement. This can lead to the violation of the right to work and a dignified livelihood.

Furthermore, the use of autonomous weapons and drones has raised significant ethical concerns related to human rights. These weapons can potentially cause harm to innocent civilians and violate the right to life. It is necessary to have international regulations to ensure their ethical use.

In addition to addressing these current concerns, it is crucial to look towards the future and consider potential ethical and legal implications of AI. As AI continues to advance, it is essential to ensure that its development and implementation align with human rights principles. Future work should focus on developing ethical AI systems that prioritize transparency, fairness, and accountability while minimizing potential negative impacts on human rights.

In conclusion, AI can bring significant positive changes to society but also poses ethical and legal concerns that need to be addressed. It is essential to ensure that the development, implementation,and regulation of AI align with human rights principles to prevent potential negative impacts on society. As AI evolves, it is necessary to stay vigilant and work towards developing ethical and responsible AI systems.

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