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Ethical Aspects of Artificial Intelligence in Future Society

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Abstract— *Nowadays, innovations in the field of artificial intelligence (AI) are becoming increasingly popular and involved in various areas of social life. They are used to automate tasks, improve product quality, optimize operations, and more. However, with progress in AI, new moral dilemmas and challenges arise that require careful study and discussion. One of the key issues is the impact of AI on social relations in the future. On the one hand, the use of AI can contribute to the formation of a fairer and more equal society, where everyone will have access to new opportunities and resources. On the other hand, there is a possibility of new forms of injustice, discrimination, and control over people by AI algorithms and systems.*

Keywords— *Artificial intelligence (AI); ethical aspects; future of society; automation; discrimination; inequality; data bias; data protection; transparency of decisions*.

I. Introduction

In today's reality, developments in the field of artificial intelligence (AI) are gaining increasing popularity and are being implemented in various areas of human activity. They are used for automating operations, improving the quality of goods, increasing labor productivity, and much more. However, with progress in AI, new ethical dilemmas and complexities arise that require detailed consideration and discussion. Every year, new methods and systems of artificial intelligence are created, which increasingly affect people's lives. This necessitates the creation of ethical rules and standards that will govern the use of these technologies. Artificial intelligence can lead to the emergence of new forms of inequality, discrimination, and control over people by algorithms and AI systems. Therefore, measures must be developed to help avoid these negative consequences. Currently, there is no universal international standard or code of ethics in the field of artificial intelligence. Different countries and organizations develop their own principles and guidelines, leading to confusion and misunderstanding. To create effective measures for regulating artificial intelligence, the participation of all stakeholders is necessary: scientists, engineers, politicians, business community representatives, and the public. Only in this way can a system be created that considers the interests of all participants. Thus, the theme of the ethical aspects of the application of artificial intelligence is significant and substantial for modern society.

It requires in-depth research, discussion, and the development of specific recommendations. The purpose of this research is to investigate the ethical aspects of applying artificial intelligence (AI) in the future social environment [2]. The task of this study is to explore the ethical aspects of the application of artificial intelligence in the public environment of the future. To achieve this task, it is necessary to analyze and answer a series of specific questions, namely: what are the pros and cons of using AI in different areas of social life; what guarantees exist in observing individual rights, and what prospects for the development of the ethics of AI use can be considered in the further refinement and implementation of these systems in public life. It is necessary to conduct an analysis of existing research and practical approaches in the field of AI ethics, as well as to propose new techniques and solutions. This will allow forming an ethically justified approach to the use of AI in the society of the future and will ensure its sustainable development.

II. Definition and Classification of Artificial Intelligence

(AI) Artificial Intelligence (AI) is a branch of computer science that specializes in the development of intelligent agents capable of performing tasks that require human intelligence. AI includes a multitude of technologies and methods, such as machine learning, deep learning, neural networks, natural language processing, computer vision, and others. There are several classifications of AI, which are based on different criteria [3]. One of the most well-known classifications divides artificial intelligence into three groups:

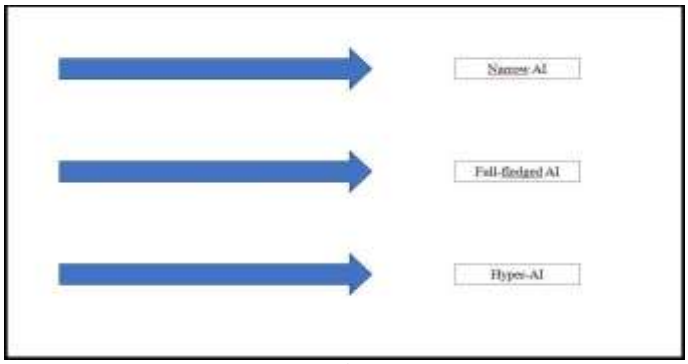

Figure 1. AI Classification by Groups

1. *Narrow AI* — This type of AI is designed to perform a specific task or function. Examples of narrow AI include speech recognition systems, computer vision systems, and recommendation systems. Narrow AI is actively used in various sectors such as medicine, finance, transportation, and others.

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2. *Full-fledged AI* — This is a theoretical AI that is capable of performing any task that a human can do. Fully developed AI does not yet exist, but its creation is the goal of many researchers and organizations.
3. *Hyper-AI* — This is an even more theoretical form of AI that surpasses human intelligence in all aspects. Superintelligent AI also does not yet exist, and its creation raises serious ethical questions and concerns.

Another classification of AI is based on the level of autonomy. It divides AI into the following categories:

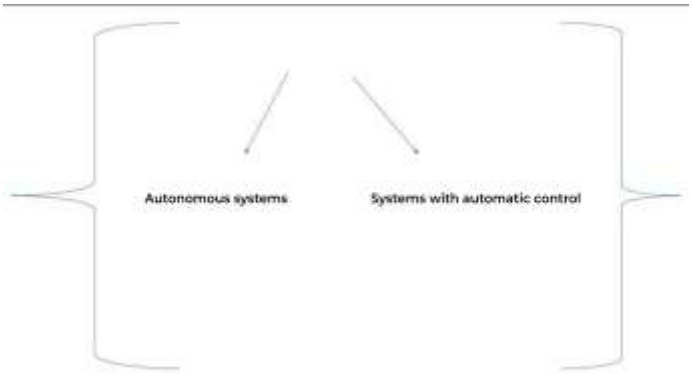

Figure 2. AI Classification by Level of Autonomy

Autonomous Systems — These are systems that can make decisions and act independently without direct human control. Examples of autonomous systems include unmanned vehicles, autonomous robots, and others. Autonomous systems are actively used in various fields, including manufacturing, logistics, medicine, and others. Systems with Automatic Control — These are systems that operate under human supervision. Examples of such systems include industrial robots, traffic management systems, and others. Automatic control systems are widely used in industry, transportation, healthcare, and other areas. Thus, artificial intelligence represents a vast and multifaceted domain, encompassing diverse technologies and approaches. Systematization of artificial intelligence helps to more deeply understand its characteristics and potential, as well as to define its ethical aspects [4].

III. Main Ethical Issues Associated with Artificial Intelligence (AI)

The development of artificial intelligence technology poses a number of ethical questions that require careful consideration and discussion. Ethical issues are among the main ones to be addressed when creating and developing artificial intelligence. To discuss the importance of ethical issues, it is necessary to determine the possible consequences (Table 1) that may arise if they are not given due attention.

These are just some of the potential ethical issues and the emergence of certain possible consequences, the resolution of which needs to be considered already at the early stages of developing artificial intelligence algorithms. During the analysis of potential ethical issues, a table with possible solutions for addressing the moral context in the use and creation of AI algorithms (Table 2) was created.

TABLE 1. Ethical Issues Associated with Artificial Intelligence

No.	Description of the Issue	Possible Consequences
1	Automation and Job Loss	Process automation and reduction of jobs, social tension, and inequality
2	Confidentiality and Data Protection	Risk of data breaches
3	Bias and Discrimination	Unfair treatment towards certain groups of people
4	Actions of Artificial Intelligence	Lack of accountability for the actions of artificial intelligence
5	Ethical Frameworks for Use	Use of AI in military purposes or for developing weapons of mass destruction
6	Impact on Society and Culture	Potential changes in behavior, values, and lifestyle of people
7	Access to Technology and Inequality	Lack of equal access to the benefits of artificial intelligence for all population strata
8	Control Over Algorithms and Data	Lack of transparency and openness in decision-making processes involving AI
9	Ethics in Training Models	Lack of regulation in the collection and processing of data for artificial intelligence

TABLE 2. Moral Aspects of Artificial Intelligence

No.	Ethical Issue	Proposed Solutions
1	Automation and Job Loss	Implement training programs for workforce re-skilling and development of new job sectors
2	Confidentiality and Data Protection	Strengthen data protection regulations and implement robust security measures
3	Bias and Discrimination	Ensure diverse data sets and regular audits of AI algorithms to reduce bias
4	Actions of Artificial Intelligence	Develop clear accountability frameworks and legal guidelines for AI actions
5	Ethical Frameworks for Use	Establish international treaties and guidelines for ethical AI usage, particularly in sensitive areas like military and surveillance
6	Impact on Society and Culture	Engage in public discourse and policy making to align AI development with societal values
7	Access to Technology and Inequality	Promote equitable access to AI technologies through policy and community outreach
8	Control Over Algorithms and Data	Enhance transparency in AI decision-making processes and provide mechanisms for public oversight
9	Ethics in Training Models	Regulate the collection and processing of data used in AI, ensuring ethical standards are met

IV. Legal Aspects of Using Artificial Intelligence

The development of artificial intelligence (AI) technologies necessitates careful consideration and discussion of legal issues related to their use. It is crucial to recognize that the legal aspect not only affects certain institutional features of managing a project but also regulates and ensures the safety of citizens. The following key legal aspects should be noted:

- Regulation of liability for the actions of artificial intelligence;
- Protection of intellectual property rights;
- Compliance with data protection legislation;
- Adherence to safety and reliability requirements;
- Ethical frameworks for use;
- Control over algorithms and data;
- Compliance with antitrust legislation;

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- Intellectual property and copyright rights;
- Privacy legislation.

For a more detailed examination of each of the aforementioned aspects, it is necessary to address a number of specific questions: Who will be held responsible in case of errors or undesirable consequences from AI actions? To address this, mechanisms of responsibility for decisions made by artificial intelligence systems must be defined. It is also worth noting that artificial intelligence (AI) algorithms are the result of the intellectual efforts of their developers. Therefore, it is important to ensure the protection of copyrights and patents on these algorithms and models. When collecting and processing large volumes of data for training AI models, strict adherence to data protection legislation is necessary. This includes developing and implementing measures to ensure data security and protect user rights. To prevent potential threats and risks, AI systems must comply with safety and reliability requirements [5].

It's also important to note that there are tasks and areas of activity where the use of artificial intelligence (AI) should be restricted or prohibited, such as in military applications or for the production of weapons of mass destruction.

One of the most critical questions is: "Who controls the development and use of AI algorithms?" Ensuring transparency and openness in the decision-making processes related to AI application is crucial. There is a need to create legislation that accommodates the evolution of technology, particularly in the field of artificial intelligence. This legislation should ensure the reliable protection of personal data when using AI.

V. International Experience in Regulating Artificial Intelligence

In recent years, artificial intelligence (AI) has been at the forefront of global public attention. With the advancement of AI technologies, important ethical, societal, and legal issues arise that need to be discussed at an international level. It is necessary to develop international standards and regulations that will govern the use of artificial intelligence. Several initiatives aimed at regulating the use of AI on an international scale have been established. One such initiative worth noting is that of the OECD (Organization for Economic Cooperation and Development).

The OECD has developed guidelines intended for governments and other stakeholders on how to ethically and responsibly use artificial intelligence. These guidelines aim to ensure that the development, deployment, and decision-making processes facilitated by AI are fair, transparent, and considerate of all stakeholders' interests. Additionally, the European Union has been actively working on AI regulation, notably through proposals such as the Digital Services Act and the Digital Markets Act, which aim to ensure the safety and reliability of digital services, including artificial intelligence. These initiatives help to shape a common understanding and framework for AI usage, which is vital for ensuring its safe and ethical application.

As AI continues to evolve, international collaboration and agreement on standards will be pivotal in managing its impacts and harnessing its potential responsibly.

The OECD has already developed a set of recommendations for the ethical use of artificial intelligence (AI), specifically:

1. Transparency and Understandability: AI systems must be transparent and understandable to users. Users should have the ability to comprehend how decisions are made using AI.

2. Fairness and Non-Discrimination: AI systems must be impartial and not allow discrimination. They should ensure equal treatment for all users.

3. Safety and Reliability: AI systems should be safe and reliable. They should not pose threats to society or the environment.

Currently, the European Union (EU) is developing legislation to regulate the use of artificial intelligence. It is already apparent that EU legislation on AI regulation includes the following provisions:

- *Human Rights Protection:* European legislation must guarantee the protection of human rights in the application of artificial intelligence.
- *Ethical Principles:* Legislation in the European Union should be based on ethical principles such as transparency, fairness, safety, and reliability.

It is also important to note that control over AI algorithms is crucial for ensuring the safety and ethical use of AI. AI algorithms can be complex and opaque, making it difficult to understand how they make decisions. This can lead to undesirable outcomes, such as discrimination, bias, or violations of human rights.

The approach to AI regulation highlights the importance of comprehensive oversight and frameworks that not only promote innovation but also safeguard fundamental ethical and societal norms. As AI technology evolves, continuous updates and international collaboration will be essential to adapt and refine these regulations, ensuring that AI benefits society as a whole without compromising ethical standards or human rights.

Given these concerns, it is essential to develop ethical principles, regulate data, and create a system of accountability that will govern the aforementioned aspects. This approach aims to address several key objectives.

VI. Discussion

Artificial Intelligence (AI) is a broad and multifaceted field that encompasses various technologies and methods. Classifying AI helps us better understand its characteristics, potential, and ethical aspects. The development of artificial intelligence technologies raises many ethical questions that require deep analysis and debate. These issues relate to automation and job loss, confidentiality and data protection, bias and discrimination, accountability for AI actions, ethical boundaries of use, societal and cultural impact, access to technology and inequality, control over algorithms and data, and ethics in training models. To address these issues, it is necessary to create international standards and principles that will regulate the use of artificial intelligence. There are already several initiatives aimed at regulating AI on a global level, including the OECD's recommendations for the ethical use of AI and EU legislation on AI regulation.

It is crucial to emphasize the importance of adhering to ethical norms when using artificial intelligence in future

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society. Ethical aspects are key to ensuring fairness, safety, and respect for human rights. Above all, adhering to ethical standards helps prevent abuses in the field of artificial intelligence, such as racism, segregation, and discrimination. This can be achieved by creating and implementing strict laws and regulatory mechanisms that govern the use of AI for unethical purposes.

Furthermore, the international community must work collaboratively to adapt these frameworks as technology evolves. This ongoing dialogue and adaptation ensure that AI development aligns with global human values and rights, accommodating diverse perspectives and preventing the consolidation of power among a few entities. Through collective efforts in policy-making, research, and public engagement, we can foster an environment where AI enhances societal well-being without compromising ethical integrity.

Firstly, ethical norms imply that artificial intelligence should be used to improve the quality of human life rather than to oppress it. This means that access to AI should be open to all, regardless of their social status, race, or gender.

Secondly, it is important to adhere to ethical norms when using artificial intelligence. This will help build trust in this technology. This is particularly relevant as AI becomes an increasingly important part of our daily lives.

VII. Conclusion

Overall, adhering to ethical norms in the use of artificial intelligence is a crucial step towards creating a fair and sustainable society in the future. This requires the participation of all stakeholders: governments, businesses, academic circles, and society as a whole. Only in this way can we ensure that artificial intelligence is used ethically and fairly, as well as for the benefit of society and humanity.

By fostering a culture of ethical AI use, we can navigate the challenges and harness the benefits of AI in a manner that aligns with our collective values and aspirations for a better world. This journey towards ethical AI necessitates not only a commitment to principles but also practical actions, including policy-making, education, and transparent governance to achieve these ideals.

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