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Regulation of artificial intelligence in Ukraine in the framework of harmonisation of legislation with EU legal norms

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Abstract. Due to the rapid development of artificial intelligence (AI) technologies, the massive spread of generative models such as ChatGPT, and the growing risks of their use, the issue of legislative regulation in this area has become relevant. The adoption of the Artificial Intelligence Act by the European Parliament in March 2024 marked the emergence of the world's first specialised law on the development and use of AI technologies. The purpose of the current study was to analyse the legal regulation of this field in Ukraine and the prospects for its harmonisation with European Union (EU) legislation in the framework of integration into the EU. During the study, the author used logical, comparative legal, systemic, and formal legal methods of scientific knowledge. The current state and prerequisites for legislative regulation of artificial intelligence in Ukraine and the EU were investigated. The author analyses the relationship between ethics, policy, and law in the field of AI at the national and international levels. It was found that Ukraine does not have specialised legislation on AI, however an approach is being taken to gradually implement EU regulation in this area. The article analyses the current legislation on AI regulation in Ukraine. It analyses the potential legal consequences of granting legal personality to AI, liability for its actions taken with AI, protection of data created and processed by AI, considering the General Data Protection Regulation and the possibilities of their adaptation. It also discusses aspects of extending copyright to objects created by AI, with recommendations for their legal regulation. The author summarises the key provisions of the EU Artificial Intelligence Act and assesses its potential impact on the legal framework of Ukraine. The results of this study can be used to further improve Ukraine's legislative framework in the field of AI regulation to harmonise with the approaches of the EU. It can also be used as a basis for scientific developments and practical recommendations for the settlement of legal issues related to the development and use of artificial intelligence technologies

Keywords: public policy; legal regulation; European integration; European Union law; Artificial Intelligence Act

Introduction

The legal regulation of artificial intelligence (AI) is facing challenges due to the rapid development of AI technologies and their impact on society. Ukraine needs a comprehensive and effective state policy in the field of AI, and legal regulation is one of the key elements of its implementation. It should be in line with the approaches of the European Union (EU) and at the same time stimulate the development of innovations in all spheres of life, including public ones. This is especially important in the context of martial law and post-war reconstruction. The development of an effective regulatory mechanism will help ensure the safe introduction and use of AI in Ukraine, stimulating technological development and innovation. This issue has been the subject of research by many scholars.

Considering general issues of legal relations in the field of AI, O. Paramonova & I. Varava (2023) emphasise the absence of a single concept of legal regulation and the need for an interdisciplinary approach involving lawyers,

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engineers, futurists, and philosophers. The authors consider various models of legal personality for AI, including as an autonomous agent. O.V. Kuzmenko *et al.* (2024) analyse the legal regulation of the introduction and use of AI, proposing the adaptation of existing civil liability mechanisms and the development of new approaches that take into account the unique features of AI technologies. Several scholars analyse certain legal phenomena related to AI. In particular, N. Stefanyshyn & T. Skhab-Buchynska (2023) consider AI as an object of civil legal relations, emphasising that Ukrainian society is not ready to accept AI as a subject of legal relations, and emphasise the need to impose liability for damage caused by AI on the owner. O. Doroshenko & L. Tarasenko (2023) focus on the legal status of non-original objects generated by a computer program, defining the subjects of property rights and the scope of such rights. The authors propose to improve the legal regulation, in particular, with regard to the ownership of property rights to a non-original object and the extension of the *sui generis* legal regime to photographs. However, they do not analyse how these issues relate to the EU experience in the context of harmonisation of Ukrainian legislation with the European one.

A substantial part of the research concerns the problem of AI regulation in specific areas of life. A. Klochko *et al.* (2023) study the introduction of AI in the banking sector of Ukraine, emphasising the strategic role of these technologies in the recovery of the banking system after the war and the need to adapt biometric identification technologies to the provisions of the EU AI law. O.O. Khorvatova (2023) studies the impact of AI on insurance, emphasising that the introduction of AI will change most aspects of insurance, including the calculation of the cost of an insurance policy and the transition to a continuous insurance cycle. It also emphasises the role of insurance brokers and the need to adapt their activities to new technological conditions, but does not focus on harmonisation with European legislation.

The studies conducted before 2022 provide an important basis for understanding the evolution of approaches to regulating AI, and focus mainly on the problems of granting it legal personality. M. Stefanchuk *et al.* (2021) emphasise the dynamism and innovative approaches to understanding legal personality through the development of robotics. They underscore the necessity of granting AI the status of a civil law subject and ensuring timely legal regulation. O. Radutnyi (2018) proposes to recognise AI as an "electronic person" in criminal law and to provide for a relevant section in the Criminal Code of Ukraine, considering the possibility of creating AI that exceeds human intelligence. K. Tokarieva & N. Savliiva (2021) examine the legal regulation of AI in Ukraine, emphasising the need to improve data protection legislation and grant AI the status of a legal entity with legal liability. The authors also analyse the experience of EU countries in implementing a legal framework for AI regulation.

The analysis of sources has revealed that the issue of harmonisation of Ukrainian legislation with EU law in the field of AI remains insufficiently covered. The purpose of the article is to study the current aspects of AI regulation, as well as to analyse the public regulation strategy and determine the framework for future legal regulation of the AI sphere with a view to harmonising Ukrainian legislation with EU law.

Materials and Methods

The following methods of scientific cognition were used during the study: logical, comparative legal, systemic and formal legal. In particular, the logical method made it possible to analyse the content of AI-related concepts and categories, to identify their correlations and interrelations. The comparative legal method was used to study and compare approaches to AI regulation in different jurisdictions, including Ukraine, the EU, and other countries. The systemic method made it possible to consider AI as a complex phenomenon in its interconnection with ethical, political and legal aspects. The formal legal method was used to analyse current Ukrainian legislation and draft EU regulations in the field of AI regulation. The choice of methods was determined by the purpose and objectives of the study, as well as the specifics of the subject – AI as a complex interdisciplinary phenomenon.

The factual material of the study consisted of:

1. Policy documents of international organisations:
   - Draft text of the Recommendation on the Ethics of Artificial Intelligence (2021);
   - Recommendation of the Council on Artificial Intelligence (2024).
2. EU policy documents:
   - Coordinated Plan on Artificial Intelligence 2021 Review (European Commission, 2021a);
   - Artificial Intelligence for Europe (European Commission, 2018);
   - Fostering a European Approach to Artificial Intelligence (European Commission, 2021b);
   - Ethics Guidelines for Trustworthy AI (2019);
   - White Paper on Artificial Intelligence: A European Approach to Excellence and Trust (European Commission, 2020b);
   - Report on the Safety and Liability Implications of AI, the Internet of Things and Robotics (European Commission, 2020a).
3. Draft EU regulations:
   - Artificial Intelligence Act (European Parliament and Council, 2024);
   - AI Liability Directive (European Parliament and Council, 2022).
4. Applicable EU regulations:
   - General Data Protection Regulation (European Parliament and Council, 2016).
5. The current legislation of Ukraine:
   - Law of Ukraine No. 2974-IX (2020);
   - Concept for the Development of Artificial Intelligence in Ukraine (Order of the Cabinet…, 2020).
6. Political documents of Ukraine:
   - Roadmap for the Regulation of Artificial Intelligence in Ukraine (Ministry of Digital Transformation of Ukraine, 2023).

The study identified the main concepts and categories related to AI, its classification and current state of development. The study analysed the correlation between ethics, policy, and regulation of artificial intelligence, and considered relevant initiatives at the international, regional and national levels. Finally, the article analyses the adopted regulatory documents governing the development and use of artificial intelligence in Ukraine and the EU.

Results and Discussion

The concept of artificial intelligence. The concept of artificial intelligence encompasses a wide range of different technologies and approaches, and it is such a dynamic field that its technologies, approaches, and boundaries are constantly changing and evolving. Approaches that were previously considered part of AI, such as expert systems or rule-based programming, have been pitted against more modern machine learning and deep learning techniques. So, the term "artificial intelligence" is more of an umbrella concept that encompasses different technologies and approaches, and its definition may depend on the specific context or application. This is because AI has emerged as a field of knowledge based on various disciplines and combines the achievements and methods of philosophy, mathematics, economics,neuroscience,psychology,computerengineering,management theory, and linguistics (Russell & Norvig, 2021).

The most comprehensive English-language encyclopaedia, Encyclopædia Britannica, defines AI as the ability of a digital computer or computer-controlled robot to perform tasks normally associated with intelligent beings (Copeland, 2024). Instead, the Artificial Intelligence Act, adopted by the European Parliament in March 2024, introduces the term "AI system" and defines it as a machine system that is designed to operate with varying levels of autonomy and that can, for explicit or implicit purposes, generate outputs such as predictions, recommendations, or decisions that affect physical or virtual environments. Both the encyclopaedic and legislative definitions do not refer to specific AI technologies and offer a technology-neutral approach. In the Artificial Intelligence Act, the European legislator justifies this by ensuring legal certainty, stability, international harmonisation of legal norms, flexibility, and adaptability of legislation to new technological advances (European Parliament and Council, 2024). An analysis of various sources shows that these are manifestations of a global trend toward broad definitions of AI systems based on certain characteristics of the systems to be regulated. As opposed to narrow definitions that consider only systems developed by methods and techniques included in certain closed lists as AI (Castán, 2024).

When considering the category of AI, it is also important to provide a traditional classification that distinguishes three types of AI: weak AI, strong AI, and artificial superintelligence. Weak AI ("Narrow AI") is a system focused on solving one or more specific tasks usually performed by humans. This includes most modern applications such as recommendation systems, voice recognition, machine translation, etc. Strong AI ("Artificial General Intelligence", AGI) is a hypothetical system capable of solving any intellectual task at or above the level of a human. AGI would have to demonstrate human-like intelligence and self-awareness, not limited to narrow areas of application. The creation of AGI remains a theoretical goal. Artificial Superintelligence (ASI) is also a hypothetical form of AI that would significantly surpass human intellectual capabilities in all areas. ASI implies the presence of consciousness, subjective experience, and abilities beyond the reach of the biological human mind. This category of AI is the subject of science fiction and philosophical reflections (Stefanchuk *et al.*, 2021).

The state of the art and generative AI. The early 2020s saw a major leap in the development of generative AI systems. Computer programs have emerged that can generate text, images, audio, program code, or other data using generative models, mostly in response to user prompts or requests (prompts). Generative AI models learn the patterns and structure of the input training data and then generate new data with similar characteristics (Kalota, 2024). Generative AI includes large language models for chatbots, for example: ChatGPT, Claude, Perplexity, Gemini, Copilot, systems for generating images from text descriptions, such as DALL-E (integrated with ChatGPT 4.0), Stable Diffusion, Midjourney, Leonardo, as well as video content generators from text queries (Sora).

Correlation of AI ethics, policy, and regulation. According to the International Association of Privacy Professionals, as of the beginning of 2024, most countries in the world have no legal regulation of AI (Global AI law…, 2024). Therefore, an understanding of AI ethics and AI policy allows to correctly interpret existing regulation or proposals for it, predict possible regulatory changes, and consider ethical, political, and legal trends when developing or using AI technologies. The interconnection of ethics, policy, and regulation is illustrated in Figure 1.

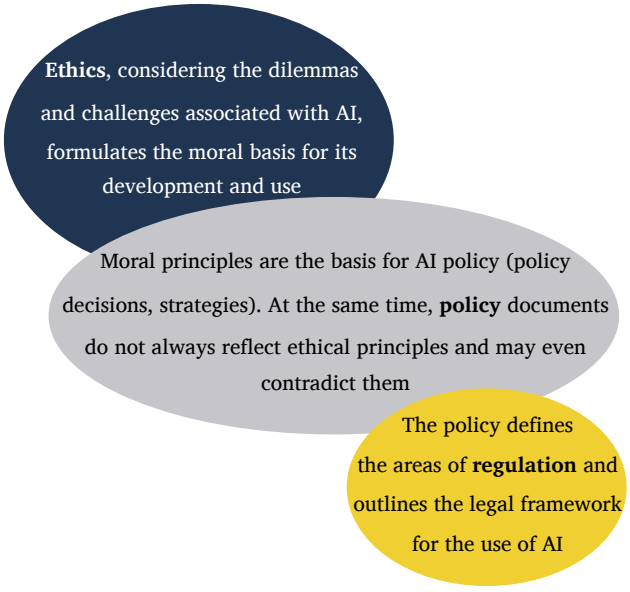

Figure 1. *The relationship between ethics of AI policy and regulation*
Source: *author's development*

Ethics of AI. Ethics is a set of moral principles that help humans distinguish between right and wrong. Accordingly, AI ethics is an interdisciplinary field that examines how to optimise the beneficial impact of AI while mitigating risks and adverse outcomes. AI ethics encompasses a series of moral dilemmas, challenges, and recommendations aimed at ensuring that the development and application of AI is done responsibly and for the benefit of society. One of the first to start a discussion on AI ethics was the American science fiction writer I. Asimov, who formulated the "Three Laws of Robotics" in his short story collection I, Robot:

"1. A robot cannot harm a person or, through its inaction, allow a person to be harmed.

2. A robot must obey human orders, provided that these orders do not contradict the First Law.

3. A robot must take care of its own safety as long as it does not contradict the First and Second Laws" (Asimov, 1987).

The current scientific discourse on the ethical issues of AI identifies several problems that are relevant now and will arise in the future. First and foremost, it is about privacy protection, which concerns the control over personal data and the right to secrecy. Another important aspect is the potential for behavioural manipulation, which includes the use of algorithms to influence people's choices and decisions, undermining the autonomy and rationality of personal choice. Ethical issues are also raised by the opacity of AI actions, which arises from the inability to understand how the system came to a certain result. AI bias arises from the use of data that may contain systematic errors. The direct interaction between humans and AI also has an ethical dimension, especially when dealing with robotics, when the deceptive appearance or behaviour of robots can lead to unjustified trust. A separate issue is the operation of autonomous systems, which raise questions of responsibility and control by humans. In addition, the use of AI will have a significant impact on employment through the automation of processes in both manufacturing and intellectual spheres, reducing the number of jobs in some sectors and creating new opportunities in others (Müller, 2020).

Policy on the use of artificial intelligence. In contrast to ethical guidelines and codes, policies are more binding and strategic in nature (though not normative). They often contain specific objectives, goals, and initiatives for governments, industry, and other stakeholders, and are aimed at building a favourable regulatory environment, stimulating research and innovation, attracting investment, and developing human capital. Thus, policy documents are tools for strategic planning and coordination of AI development efforts. For example, national AI strategies have been developed in the United States of America (USA), Canada, China, India, Japan, and other countries (Global AI law…, 2024). The main goals of national AI policies around the world are to create an AI market, counteract monopolies, engage in strategic cooperation for research and development, create ethical and reliable AI, educate AI specialists, and expand the use of AI in practice (Kalota, 2024).

AI policy is also being actively developed at the international level. In particular, policy documents have been developed by such international organisations as UNESCO (2021), which emphasises the importance of human rights protection, transparency, and inclusiveness throughout the AI lifecycle, and OECD (2019), which defines five main principles: promoting inclusive growth, respect for laws and human rights, transparency, safety, and responsibility. Both documents emphasise the need to comply with ethical norms and laws, but UNESCO focuses more on the protection of human rights and diversity, while the OECD emphasises the principles ensuring the reliability and responsible use of AI technologies. EU policy documents deserve special attention. In particular, the Coordinated Plan on Artificial Intelligence (European Commission, 2021a) proposes joint actions to achieve the EU's global leadership in the field of trustworthy AI. Its key elements: legality, ethics, and reliability – are defined by the Ethics Guidelines for Trustworthy AI (2019). Artificial Intelligence for Europe (European Commission, 2018) emphasises the importance of AI as a strategic technology and calls for coordination of plans of EU member states, attraction of investments, and support of research in this area. The European approach to the further development of AI is declared in two documents (European Commission, 2020b; 2021), the first of which focuses on promoting "excellence and trust" in technology and creating a regulatory framework for building a "trust ecosystem" in the field of AI. The second focuses on ensuring competitiveness and responsibility for the use of these technologies. In 2020, the European Commission published a report on the impact of AI, the Internet of Things and robotics on product safety and liability (European Commission, 2020a), which analyses the current legal framework and emphasises the need to ensure that consumers of technological innovations are protected on an equal footing with consumers of traditional products, which will help to increase confidence in new digital technologies and investment stability. These policy documents declare the EU's strategic approach to the development and application of AI for the coming decades, which is primarily human-centric and focuses on investment, innovation, education, and universal access to the latest technologies. They define the main principles of AI reliability and security requirements for its further development and implementation. They also emphasise the need to intensify efforts in the field of investment and to constantly update and improve the legislative framework governing activities in the digital sector (Yanyshivskyi & Yanyshivskyi, 2023).

AI policy in Ukraine. Ukraine is actively integrating into international efforts to develop AI policy. It is a member of the Council of Europe's AI Committee and participates in the OECD's AI Governance Working Group. In November 2023, during the AI Security Summit in the UK, Ukraine signed The Bletchley Declaration (2023), joining international cooperation in AI security research, according to which participating states should work

together to overcome AI risks and promote its safe design, development, and use in both the public and private sectors (Shadska, 2024).

Ukraine also has its own national AI strategy: in 2020, the Cabinet of Ministers of Ukraine approved the Concept for the Development of Artificial Intelligence in Ukraine (Order of the Cabinet..., 2020). Its implementation is envisaged for the period until 2030. The document defines the following priority areas: strengthening Ukraine's position in the global AI market and in international rankings (AI Readiness Index, AI Index, etc.); active participation in the activities of international organisations to develop strategies, regulate and standardise AI; widespread implementation of AI technologies in education, economy, public administration, cybersecurity, defence and other areas to ensure Ukraine's competitiveness; ensuring access to data and its use to develop AI-based solutions in the production of goods and services; promoting research in the field of AI and improving its quality; training qualified personnel in the field of AI technologies; protecting the information space and ensuring cybersecurity of AI systems; using AI to improve the security of society, in particular in the resocialisation of convicts; harmonising AI legislation with international standards.

Legal regulation of AI in the world. Different countries are actively working on the development of approaches to AI regulation, however, as of early 2024, there is not a single country that has adopted a specialised law. At the same time, some jurisdictions are already working on a specialised AI law. A common first step towards regulation in many jurisdictions is to launch a national ethics strategy or policy, rather than introduce legislation outright. This method emphasises a cautious approach to maintain a balance between innovation and regulation of potential risks (Global AI law…, 2024).

Often states also resort to targeted regulation of specific cases of AI use. For example, in China, a law on AI generative services came into force in September 2023, according to which all providers offering text, image, audio, and video generation services must undergo a security assessment and obtain administrative permits. They are obliged to ensure the protection of users' rights, prevent dependence on AI, and avoid potential abuse by unscrupulous individuals (Smirnov, 2023).

Legal regulation of AI in the European Union (EU). In March 2024 the European Parliament adopted the official text, and in May 2024, the EU Council unanimously approved the Artificial Intelligence Act (European Parliament and Council, 2024), which brought the world's first specialised AI law closer to entering into force after the official publication of the text of the regulation in the Official Journal of the European Union. This document establishes the rules for the functioning of the EU internal market, considering all aspects of the use of AI systems. It divides AI systems into four risk groups depending on the level of potential threats to users and society, namely: unacceptable risk, high risk, limited risk, and minimal risk.

The unacceptable risk group includes systems that pose a direct threat to security, life and human rights. They should be banned. These include: social assessment systems and remote biometric identification systems that operate in real time for law enforcement purposes and are used for monitoring in public places. Exceptions to the lawful use of such systems are cases related to terrorist threats, child abduction, and the search for persons sentenced to more than 3 years in prison.

High-risk AI systems are those used in critical infrastructure, education, employment, key public and private services, law enforcement and judicial authorities, and migration services. Therefore, they are subject to increased security requirements for their use. In particular, such systems must be risk-assessed and have ways to mitigate them, have high data quality and transparency, and be subject to human control.

Limited and minimal risk AI systems only need to meet the requirement of transparency: users must understand that they are interacting with an intelligent machine, not a human. Most of these systems, as well as those without risk, have no legal restrictions on their use.

In order to implement the decisions made, according to the said AI Act, a special EU Council on AI should be established, consisting of representatives of all member states. The Council will be responsible for market regulation and imposing fines for violations of the requirements.

The European Commission has also drafted the AI Liability Directive (European Parliament and Council, 2022), which proposes to introduce the principle of strict liability for operators of high-risk AI systems. It means that they will be liable for any damage caused by their AI systems, regardless of fault. Instead, for systems with limited or low risk, the traditional fault-based liability regime will apply.

The EU aims to become a global leader in the field of AI regulation, so the AI Act has an impact not only on countries that aspire to join the EU, but also on the whole world, similar to the impact of the General Data Protection Regulation (GDPR) on privacy regulation (European Parliament and Council, 2016). At the same time, EU law is not comprehensive, and this should be taken into account when implementing it into Ukrainian law. In particular, the principle of subsidiarity, according to Article 5 of the Treaty on European Union, puts national interests and competences first (Consolidated version..., 2012). In addition, there are significant restrictions on EU law in areas such as criminal law, national security, public order and law enforcement (Pagallo, 2024).

AI regulation in Ukraine. As of the beginning of 2024, Ukraine had no law regulating AI issues and no initiatives to develop such a law, due to the focus on the entry into force of the Artificial Intelligence Act in the EU, the provisions of which will be implemented in Ukrainian legislation. In October 2023 the Ministry of Digital Transformation presented the Roadmap for the Regulation of Artificial Intelligence in Ukraine (Ministry of Digital Transformation of Ukraine, 2023). This document provides for a

comprehensive approach to supporting the development of the digital economy and protecting the rights of citizens. It aims, among other things, to increase the competitiveness of Ukrainian business internationally; build Ukraine's brand as an advanced digital nation; protect human rights in the face of AI-related challenges; create an effective mechanism for co-regulation and self-regulation in the field of AI; and ensure Ukraine's integration into the European market through the implementation of EU standards.

The Roadmap envisages the use of the so-called "bottom-up approach", which means the gradual introduction of regulatory mechanisms, from the development of extra-legislative initiatives to the drafting of relevant legislation, when the industry is ready for such changes and the existing mechanisms for protecting the rights and freedoms of citizens are insufficient. The purpose of this approach is to find a balance between supporting innovation and AI development, on the one hand, and ensuring an adequate level of protection of human rights and the interests of society, on the other. In addition, the implementation of this approach will help Ukraine prepare for the future implementation of the EU AI Act, which is one of the key conditions for European integration in the digital sphere (Ministry of Digital Transformation of Ukraine, 2023). As part of the implementation of the Roadmap for the Regulation of Artificial Intelligence in Ukraine, the launch of a regulatory sandbox for AI development companies was announced. This is a controlled environment where companies can develop their products from the initial stage, taking into account the requirements of the Artificial Intelligence Act. Here, they can receive expert advice at all stages of their product development, which will allow them to prepare for entering the EU markets. Participation in this sandbox is voluntary and companies can join it at their own discretion (Centre for Democracy and Rule of Law, 2023).

Although there is no specialised regulation of AI in Ukraine, it is important to analyse how the existing legislation addresses the main issues of development and use of AI technologies. These key aspects include: legal personality of AI systems, liability for their actions and decisions, copyright for works created with the help of AI, and protection of personal data used for training and operation of AI models.

AI personhood. Analysis of the current legislation shows that AI is considered exclusively as an object of civil legal relations, not as a subject. It can be an entity, a subject of property rights that can be sold, purchased, donated, or otherwise alienated. Alternatively, AI can be considered an object of intellectual property rights, created as a result of human creative endeavour. As noted by O. Paramonova & I. Varava (2023), accepting AI as a subject of legal relations would contradict the fundamental principles of civil law and the concept of law in general, as such an idea calls into question the uniqueness of human mental abilities and their exclusive right to self-determination.

However, according to O. Radutnyi (2018), AI should be granted legal personality by analogy with the way a legal entity acquired legal personality. Interesting in this context is the European Parliament resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL) (Civil Law Rules on Robotics, 2018), which, among other things, called on the European Commission to consider the creation of a special legal status for robots in the long term. The resolution proposes that at least the most advanced autonomous robots could be recognised as electronic persons liable for compensation for damage, as well as in cases where such robots make independent decisions or otherwise interact independently with third parties.

AI liability. Related to AI personhood is the problem of legal liability of AI, as it gives rise to various risks that do not depend on the scope of application. In particular, N. Shyshka (2023) identifies: **security risks** (including physical security of people and material assets, in particular as a result of failures, accidents, or misuse of technology), **risks to fundamental rights (**privacy violations, discrimination, and inequality that may arise from biased algorithms, misuse of data or interference with freedom of expression) and **general challenges (**opacity, complexity, partially autonomous and unpredictable behaviour of AI systems).

According to N. Stefanyshyn & T. Skhab-Buchynska (2023), under current legislation, the owner of an AI system is liable for the damage caused by it on the same grounds as for activities related to a source of increased danger. In other words, the owner or developer of an AI system is equated to the owner of a source of increased danger and must be held liable for any damage caused, regardless of fault. Also, to the interaction with AI, K. Tokarieva & N. Savliiva (2021) propose to apply consumer protection legislation to interaction with AI. That is, the manufacturer will be liable for any malfunctions, and the user of the product will be liable for the behaviour that caused the damage. And the concept of updating the Civil Code of Ukraine envisages supplementing Chapter 82 on special torts with provisions on compensation for damage caused by software, robotics and AI (Shyshka, 2023). On the other hand, O. Radutnyi (2018) proposes to supplement the Criminal Code of Ukraine with a section on "Measures of a criminal law nature in relation to electronic persons (personalities)".

Copyright and AI. The emergence and active use of generative AI systems has raised many questions in the field of copyright application. In particular, there were numerous lawsuits filed by representatives of the film industry and literature against OpenAI, who accused it of using works to train the ChatGPT model. In February 2024, a US court partially dismissed a lawsuit against OpenAI filed by authors who claimed that ChatGPT illegally used their works for training purposes. The court ruled that the authors failed to prove economic damage and did not provide specific examples of ChatGPT source code that resembled their works. At the same time, unfair competition claims related to obtaining permission to use copyrighted works for commercial purposes remain under consideration by the court (Pequeño, 2024).

The question of copyright ownership of "works" generated by users using AI is also important. In this case, the original creative contribution is recognised for the human user, not the AI model itself, which is used as a tool. But in such cases, it is also worth referring to the user agreements with such services. According to the Europe Terms of Use (2024), the developer of the ChatGPT system, OpenAI, has no copyright claims to the content generated by users using the model. That is, all content created by users belongs to them as their copyright.

There is no specialised regulation in the EU on copyright protection for AI-generated works. However, the general approach is based on the fact that copyright applies exclusively to original works created by a human being, not a machine or algorithm. According to the decision of the Court of Justice of the European Union in the case C-5/08 Infopaq International A/S v. Danske Dagbaldes Forening, copyright protects only works that are "the author's own intellectual contribution" (Court of Justice of the European Union, 2009). Therefore, objects created with the help of AI can be subject to copyright protection only if there is a significant creative participation of a person in their creation (Barbashyn, 2023).

In Ukraine, at the end of 2022, the Law of Ukraine No. 2974-IX "On Copyright and Related Rights" (2020) was amended and introduced such a category as a **non-original object generated by a computer program**. This is an object that differs in novelty (not originality, as this is inherent in objects created by humans) from existing similar objects (including copyright objects) and was created without the direct participation of an individual. In other words, objects created by individuals using computer technology are not considered non-original objects generated by a computer program, as concluded by O. Doroshenko & L. Tarasenko (2023). The subjects of property right to such a non-original object are the owners of computer programs, legitimate users of the computer program (under a licence agreement), or the issue of rights is established by agreement. The scope of property rights to such an object is equivalent to the author's property rights, while no personal non-property rights arise. The rights arise as a result of the fact of generating this object and begin to operate from the moment of its generation. The term of the rights is 25 years.

The law also emphasises the observance of property rights of third parties. This includes both other non-original objects generated by a computer program and copyrighted works. There is no law enforcement practice, but it should be assumed that any legal disputes that arise will require proper evidence, and some circumstances will have to be proved in court by providing a forensic expert opinion on intellectual property or computer-technical issues (Doroshenko & Tarasenko, 2023).

Personal data protection. Due to data security concerns, many large corporations have banned employees from using generative AI such as ChatGPT (Mok, 2023), which is a clear indication of the risks of protecting sensitive data in AI systems in general. In the EU, this issue is regulated by the provisions of the General Data Protection Regulation (GDPR) (Regulation (EU)..., 2016). And due to their extraterritorial effect and Ukraine's obligations under the Association Agreement with the EU, Ukraine must also ensure the protection of personal data in accordance with these European standards, as AI systems often process personal data themselves (Shadska, 2024). The GDPR establishes rules for the lawful, fair and transparent use of data, requires data accuracy, limits storage periods, and ensures data protection. The *GDPR* also regulates automated decision-making and profiling, providing rights to human intervention and appeal against decisions based on automated processing, which often relates to AI systems (Yanyshivskyi & Yanyshivskyi, 2023).

There have been several high-profile cases in the EU where AI system operators have been prosecuted for violating the GDPR. In particular, Clearview AI, a facial recognition software company, was fined in 5 EU countries for the illegal use of personal information without the lawful consent of users and a legitimate interest for such collection, which is a serious violation of the GDPR (Barbashyn, 2023). Another well-known precedent is the suspension of ChatGPT in Italy in March 2023, although a month later, after the company took measures to increase the visibility of its privacy policy and user opt-out form, the service resumed its work. And in January 2024, the Italian regulator again ruled that ChatGPT violated the GDPR and massively collected personal data of users to train the model (Walker, 2023).

In view of the above, the issue of legal regulation of the development and use of AI systems is not fully resolved in Europe and Ukraine in particular. The analysis of regulatory documents and facts from judicial practice shows that there is an urgent need to create a specialised legal framework for the AI sector. This conclusion is confirmed by the research of Ukrainian scholars O. Paramonova & I. Varava (2023), who focus on determining the possible legal status of AI, but consider political rather than legal documents, such as the Recommendation of the Council on Artificial Intelligence (2019) and the European Parliament resolution of 16 February 2017 (Civil Law Rules on Robotics, 2018). They ignore the EU legal framework, which Ukraine should be guided by, which differs from the approach of the author of this article, which provides for harmonisation with European legislation. At the same time, these scholars emphasise the importance of an interdisciplinary approach, involving lawyers, engineers, futurists and philosophers, which is consistent with the current conclusion that this area is difficult to regulate. The study by V. Teremetskyi (2024) is the most consistent with the conclusions drawn in this article regarding the EU regulatory orientation, emphasising the need to build mechanisms for the implementation and adaptation of Ukrainian legislation. However, in contrast to the current analysis, the author uses the outdated text of the Artificial Intelligence Act of 2021, which does not consider the latest amendments adopted by the European Parliament.

This article only briefly analyses the current legal regulation of the issues of personality, liability, copyright, and data protection. Some Ukrainian researchers consider these aspects in detail. In particular, N. Shyshka (2023) focuses on the development of regulations and the adaptation of old ones, without considering EU law as the main reference point for Ukraine. The author proposes to define clear principles of liability and compensation, engage experts to assess risks, implement educational programmes to train AI specialists, and intensify international cooperation and ongoing dialogue between all stakeholders. The difference between the results of this study and the current one is the emphasis on a wide range of measures aimed at preventing risks and ensuring law and order in the context of AI use, without considering the need for harmonisation with European legislation.

V. Saman *et al.* (2024) analyse the regulation of AI in labour relations, comparing approaches to AI regulation in countries such as Germany, Finland, and Poland. They emphasise the involvement of labour councils in the process of AI implementation and stress the need to legislate labour rights of employees and adapt legislation to the challenges of AI. The paper also highlights Ukraine's obligations to the EU and the need to implement the provisions of European regulations into national legislation, which coincides with the approach outlined in the current study and confirms the importance of regulating specific aspects of AI.

The analysis of the results of research in the field of AI regulation after 2022 shows that only a few researchers are trying to find out the general trends and guidelines for legal regulation in the field of AI in Ukraine, while others are actively studying various aspects of AI legal regulation, including subjectivity, liability, copyright and data protection, as well as the use of AI in specific areas such as banking, labour relations and insurance. However, the main problem and, at the same time, the difference from the current study is that only a few authors sufficiently emphasise the need to harmonise national legislation with EU legal regulations and official Ukrainian policy, which is key to ensuring the effective and safe implementation of AI technologies in Ukraine.

Thus, the issue of AI regulation is of considerable interest to scholars, who, on the one hand, are trying to investigate how new legal relations related to the development and use of AI should be regulated by the current legislation. The analysis of the legal framework shows that Ukraine, like most countries in the world, does not yet have specialised AI legislation, but there are trends towards the development of such regulations. Given the rapid development of AI technologies, ensuring legal certainty and adaptability of legislation is critical for the implementation of a comprehensive public policy in the field of AI, including the creation of favourable conditions for innovation and protection of citizens' rights. For Ukraine, it is especially important to focus on the Artificial Intelligence Act and its implementation practices in the EU as a factor in Ukraine's successful accession to the EU.

Conclusions

As of the beginning of 2024 Ukraine has no systematic legal framework for AI, except for certain aspects related to copyright, including the introduction of such a category as "non-original object generated by a computer program".

The official strategy of the Ukrainian state for AI regulation, as reflected in the Roadmap for the Regulation of Artificial Intelligence in Ukraine approved by the Ministry of Digital Transformation of Ukraine, is to focus on the specifics of EU regulation, in particular the Artificial Intelligence Act and the AI Liability Directive, and gradually implement it. Such a strategy is fully justified given Ukraine's aspirations to join the EU and its commitment to implement EU legislation, and it is also designed to provide the necessary conditions for Ukrainian businesses to be competitive in the European market.

The current state of legal regulation of AI in Ukraine reflects the global trend towards the development and implementation of new legislative initiatives that consider the rapid development of technology. The main aspects that require attention are the issues of legal personality of AI, liability for actions and decisions of AI systems, copyright for works created with the help of AI, and personal data protection. An important step in this direction is the adoption of national strategies and policies based on international experience and best practices.

Ethical and policy issues related to AI also play a significant role in shaping the information legal framework. The relationship between ethical principles, policy decisions, and legal norms is key to understanding and implementing AI regulation. Ethical principles form the basis for policy, which in turn determines the direction of legal regulation. Thus, ethical, political, and legal aspects should be integrated into a single strategy for AI development in Ukraine. These approaches will ensure an adequate level of human rights protection, promote innovation and AI development, and ensure legal certainty and adaptability of legislation to new technological developments.

In further research, it is essential to analyse the content and potential implications of the Artificial Intelligence Act, in particular, how it will be interpreted by regulators and courts in the event of its rapid entry into force. Understanding the reaction of European regulators and judicial practice is important to assess the impact of this document on the legal system and AI practices in Ukraine as a future EU member.

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Conflict of Interest

None.

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Регулювання штучного інтелекту в Україні в рамках гармонізації законодавства з правовими нормами ЄС

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Анотація. У зв'язку з бурхливим розвитком технологій штучного інтелекту, масовим поширенням генеративних моделей, таких як ChatGPT, і зростанням ризиків їх використання актуальним стало питання законодавчого регулювання в цій сфері. Прийняття Європейським парламентом у березні 2024 року Акта про штучний інтелект ознаменувало появу першого у світі спеціалізованого закону щодо розробки та використання технологій штучного інтелекту. Метою поточного дослідження був аналіз правового регулювання цієї галузі в Україні та перспектив його гармонізації з європейським законодавством у рамках інтеграції до Європейського Союзу. Під час роботи були використані логічний, порівняльно-правовий, системний та формально-юридичний методи наукового пізнання. Було досліджено сучасний стан і передумови законодавчого регулювання штучного інтелекту в Україні та Європейському Союзі. Було проаналізовано співвідношення етики, політики та права у сфері штучного інтелекту на національному та міжнародному рівнях. Було встановлено, що в Україні відсутнє спеціалізоване законодавство щодо штучного інтелекту, проте запроваджується підхід до поступової імплементації регулювання Європейського Союзу в цій сфері. Було проаналізовано чинне законодавство на предмет регулювання ШІ в Україні, а також потенційні правові наслідки надання правосуб'єктності штучному інтелекту та відповідальність за його дії, захист даних, створених та оброблених ШІ, з урахуванням норм Загального регламенту захисту даних (GDPR) та можливостей їх адаптації, а також аспекти поширення авторського права на об'єкти, створені ШІ, із запропонованими рекомендаціями щодо їх правового регулювання. Було узагальнено ключові положення Акта про штучний інтелект ЄС та оцінено його потенційний вплив на правове поле України. Результати цього дослідження можуть бути використані для подальшого вдосконалення законодавчої бази України у сфері регулювання штучного інтелекту з метою гармонізації з підходами Європейського Союзу, а також як основа для наукових розробок і практичних рекомендацій щодо врегулювання правових питань, пов'язаних із розвитком та використанням технологій штучного інтелекту

Ключові слова: державна політика; правове регулювання; європейська інтеграція; право Європейського Союзу; Акт про штучний інтелект