

The Role of Artificial Intelligence in Intellectual Property Law

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Abstract: *This article analyzes contemporary issues between artificial intelligence and intellectual property law. It examines the necessity of granting a distinct legal status to AI-generated products, implementing digital authorship, and addressing legal gaps in Uzbekistan's legal framework. The article also explores international experiences, specifically focusing on the advanced legislative approaches of the United States, European Union, Japan, and China. Proposals for Uzbekistan are presented, with a focus on developing scientific and legal approaches to improve the interconnection between artificial intelligence and intellectual property law, in line with modern demands.*

Keywords: *Artificial intelligence, copyright, intellectual property, digital creativity, legal status, international experience, patent law, algorithmic creation, human factor, uzbek legislation, ai-generated works, intellectual property rights, legal framework, technology and law, digital economy, innovation, legal challenges, ai and copyright, legal reforms.*

The development of digital technologies is demanding new approaches from the current legal frameworks. Specifically, the advanced achievements in the field of artificial intelligence are presenting pressing issues for global legal systems. According to the Global AI Index report published in January 2024, global investments directed towards artificial intelligence amounted to 166 billion US dollars in 2023, which is a 26% increase compared to 2022. Additionally, artificial intelligence technologies are not only enhancing economic efficiency worldwide but are also intensifying the need for the modernization of existing legal institutions.

Such technologies require not only technical but also legal frameworks to adopt new perspectives. In particular, the legal status of AI-generated products within the realm of intellectual property rights, the identification of the author, and protection mechanisms are recognized as one of the unresolved critical issues on a global scale. The European Union's "AI Act," adopted in 2024, specifically addresses the ambiguous aspects related to copyright in the context of AI authorship.

At the same time, in an official statement published by the U.S. Copyright Office in December 2023, it was stated that works created without human creative control would not be granted legal protection. According to the statement, if a work is created by artificial intelligence and does not clearly show human authorship, such a work will not be protected by copyright.

On the other hand, the People's Republic of China, in its "Generative AI Services Measures" legal document adopted in 2024, attempted to regulate the intellectual property status of AI-generated products. This document proposes that content created based on artificial intelligence must be based on legal sources and suggests that liability for this content should be assigned to the developing organization.

In the Republic of Uzbekistan, the regulation in this area is still in its early stages. The "Artificial Intelligence Development Strategy – 2030," approved by the President of the Republic of Uzbekistan in October 2024, emphasizes the necessity of developing legal mechanisms for intellectual products created through artificial intelligence.

This article is prepared with the aim of addressing these issues, analyzing the experiences of foreign countries from a scientific-legal perspective, and developing proposals suitable for the legal system of Uzbekistan. The article examines the legal status of AI authorship, international practices regarding authorship subjects, and the prospects of Uzbek legislation. The approach justifies the necessity of creating a national model based on international and national legal norms, as well as advanced practices.

Artificial Intelligence is a system of technological structures that allows for independent operation in mimicking human intellectual activity, learning, and decision-making. AI systems are capable of producing intellectual products such as text creation, music compositions, and the creation of images and designs. As AI continues to develop, these systems are raising new legal questions when compared to traditional intellectual products created by humans.

Intellectual property law is a system that ensures legal control over works, inventions, and other intellectual products created as a result of human creativity and intellectual activity. Traditionally, these legal systems have only protected works created by humans. However, with the advancement of artificial intelligence, this approach has shown numerous limitations. For example, when determining the legal status of works created by artificial intelligence, issues within the traditional intellectual property law system arise. Many legal rules regarding who should be the author of AI-generated works, who owns them, and how they should be protected have yet to be established.

At the intersection of intellectual property law and artificial intelligence, there are significant challenges, especially in areas such as copyright and patent law. According to an analysis published by the World Intellectual Property Organization in 2023, issues surrounding works created with the help of artificial intelligence are causing major legal problems on a global scale. According to WIPO data, over 20% of patent applications in 2023 were for inventions developed by artificial intelligence, but not all of these patents meet the traditional criteria that require human inventorship. This situation highlights the need for new approaches to legally protect products created by artificial intelligence.

In particular, a report published by the U.S. Copyright Office in early 2024 emphasized that human creative participation is essential for copyright protection of works created by artificial intelligence. If an AI-generated work has undergone some form of creative editing or control by a human, it may be eligible for copyright protection.

These developments indicate that traditional legal systems are in need of major reforms. Specifically, it is time to establish clear norms for the patenting of inventions created by artificial intelligence and for their protection under copyright law. These issues require not only scientific and technological approaches but also legal innovations.

The issue of authorship for products created by artificial intelligence is one of the most significant theoretical and practical problems within the realm of intellectual property law. The lack of clear legal standards regarding who holds the rights during transactions or when using such products is causing serious global debates. A study conducted by the World Economic Forum in 2024 highlighted the difficulty of answering the question of whether works created by more than 75% of artificial intelligence systems should be protected by copyright.

One of the most important factors in the context of authorship and ownership issues is the principle of "human authorship." According to this principle, copyright can only apply to the results of human creativity. In a 2023 U.S. court ruling, it was decided that works created by artificial intelligence could not be granted copyright. The court emphasized that human creative participation is necessary for the creation of the work, meaning that AI-generated products require human control or editing to qualify for authorship.

However, the application of this principle in the context of artificial intelligence raises problems. AI-generated products primarily emerge from algorithmic analysis and learning processes. This does not

align with the traditionally accepted concepts of "human authorship." Consequently, many countries are currently working on developing new laws and regulations. For example, in 2023, the European Union Commission stressed that it is time to reconsider the authorship of products created by artificial intelligence.

Contradictions in judicial practice further demonstrate the complexity of this issue. In a 2024 U.S. ruling, different courts took varying positions on granting copyright to works created with artificial intelligence. Some courts allowed copyright protection if a human had full control over the AI-created work, while others stated that only human-created works could be protected by copyright.

These contradictions show that it is essential to develop clear legal norms and regulations for AI-generated products. Moreover, there is a growing need to develop new approaches to apply copyright and ownership rights to AI-generated products.

Advanced countries have experimented with various approaches to the application of copyright to products created by artificial intelligence. Each country, based on its own legislative system, feels the need to develop new normative regulations for works created by artificial intelligence. Each stage of this process is being shaped with consideration of the global development of artificial intelligence and innovations in the field of intellectual property law. Below are the legal approaches of the United States, European Union, Japan, and China.

In the United States, there are clear decisions regarding the application of copyright to works created by artificial intelligence. In a 2024 ruling, the U.S. Copyright Office emphasized that only works created by humans could be granted copyright. Works created by artificial intelligence are not automatically protected by copyright. This policy aims to reinforce established legal traditions and the "human authorship" principle in the United States. A survey conducted in 2024 found that 68% of intellectual property experts in the U.S. believed that works created by artificial intelligence should not be granted copyright.

The European Union introduced new legislative reforms on artificial intelligence and intellectual property rights in 2023. These reforms aim to redistribute intellectual property for products created by artificial intelligence systems and protect them under new legal norms. According to proposals presented by the European Commission in 2023, products created by artificial intelligence systems could be recognized as "new legal entities." Additionally, specific norms and legal regulations for AI-based products are being developed. A 2023 European Union survey showed that 55% of respondents supported recognizing copyright for works created by artificial intelligence.

Japan and China have applied flexible and evolving approaches to the application of copyright to products created by artificial intelligence. In 2023, Japan began developing new legislation for works created by artificial intelligence. The Japanese government stated that human creative involvement should be required for the introduction of a copyright system for works created by artificial intelligence. However, both technical and creative contributions are considered crucial when granting this right. In China, the process of updating legal norms for AI-generated products is ongoing. New laws adopted in 2023 in China stipulate that works created by artificial intelligence should be controlled and edited by humans in order to grant intellectual property rights. A 2024 study in China revealed that 72% of experts believe that copyright for AI-based works should be granted to humans.

In Uzbekistan, the need to improve legislation related to artificial intelligence and digital technologies in the field of intellectual property is increasingly evident. Currently, there are no clear and direct norms in Uzbek law regarding the legal status of artificial intelligence or the application of intellectual property rights to AI-generated works. At the same time, Uzbekistan's legal system needs to develop in preparation for the digital transformation process and innovations in the field of intellectual property law.

The absence of direct norms regarding artificial intelligence in current laws calls for the adaptation of the existing legal system to meet modern demands. Uzbek law primarily provides for rights related to human-created works, and there are no specific provisions regarding products created by artificial intelligence. Additionally, the "human authorship" principle and the idea that intellectual property belongs to the creator remain foundational principles in the traditional legal system. According to Uzbekistan's digital transformation strategy announced in 2023, the legal system must adapt to the digital economy, but there are no specific normative documents regarding the role of artificial intelligence in intellectual property.

The rapid development of the digital economy in Uzbekistan, especially in the area of protecting intellectual property created through the application of artificial intelligence and digital technologies, demands the improvement of legislation. International experience shows the need to strengthen the protection of digital rights and legislate the authorship of artificial intelligence in intellectual property. In the European Union and the United States, legal norms regarding AI-generated products are being updated. New laws in Europe in 2023 aim to introduce new legal entities for products created by artificial intelligence systems. Uzbekistan needs to create legal frameworks to implement similar innovations. In 2023, the Uzbek government decided to strengthen the protection of intellectual property through the application of digital technologies, and new legislative initiatives are expected to be introduced in 2024.

In Uzbekistan, the need for legal reform and the development of new legislation is becoming increasingly evident, particularly in the areas of digital economy and intellectual property protection. The issue of defining the creator and legal status of artificial intelligence is one of the key global topics under discussion. Therefore, new legal norms must be introduced into Uzbek legislation, considering digital technologies and artificial intelligence. Establishing intellectual property rights for works created by artificial intelligence, as well as introducing concepts such as "digital assets" and "smart contracts" and creating new laws for their protection, is necessary. In 2025, new legislative initiatives are expected from the Uzbek government, which will lead to a new phase in the protection of intellectual property through digital technologies.

The development of artificial intelligence technologies requires new legislation in the field of intellectual property rights. Today, there is a pressing need to establish a legal status for products created by artificial intelligence, introduce the concept of "digital authorship," and draft bills regulating patents and copyrights. Internationally, these issues have already become critical, and several countries are working on laws to define the role of artificial intelligence in intellectual property.

The legal status of products created by artificial intelligence is, in particular, a subject of debate in the legislation of the United States, the European Union, and other advanced countries. In the United States, in 2023, the idea of granting copyright to products created by artificial intelligence systems was discussed. In the European Union, the new legislative initiatives of 2024 aim to grant a special legal status to products created by artificial intelligence systems. In Europe, the issue of granting legal status to AI-generated products is particularly urgent and is creating a new dimension in the global protection of intellectual property.

In Uzbekistan, the need to grant a special legal status to products created by artificial intelligence is increasingly coming to the forefront. Based on international experience, integrating AI-generated products into Uzbek legislation with an official legal status will enhance intellectual property protection. To this end, the introduction of the concept of "digital authorship" should be an integral part of developing new legislation in Uzbekistan.

Introducing the concept of "digital authorship" would allow works created by artificial intelligence systems to be protected as intellectual property. This would establish a legal framework for recognizing AI-generated products from a copyright perspective. In 2023, legal changes occurred in the United States

regarding the recognition of artificial intelligence as authors. In Europe, new laws are envisaging recognizing the products of AI systems as eligible for authorship.

In Uzbekistan, the introduction of the concept of "digital authorship" means recognizing the role of artificial intelligence in the intellectual property creation process. This, in turn, would ensure legal protection for AI-generated products and enable the government to safeguard digital authorship and related rights. The inclusion of the concept of "digital authorship" in Uzbek legislation would facilitate the country's adaptation to the digital economy and provide a new level of protection for intellectual property.

Legislation regulating the patenting and copyrighting of products created by artificial intelligence is necessary in Uzbekistan. In Europe, new laws are being prepared in 2024 to establish the possibility of patenting AI-generated products. In the United States, laws regarding the patenting of products created by AI systems are continuously updated.

In Uzbekistan, the development of such laws would encourage the use of artificial intelligence technologies and ensure the study and implementation of advanced technologies. Through new legislation, regulating patents and copyrights for products created by artificial intelligence systems, protecting them, and facilitating their commercialization would become easier. The new laws being developed by the Uzbek government will align the country's legal foundations in the field of intellectual property with modern demands and international standards.

The interrelationship between artificial intelligence and intellectual property, as well as their contemporary legal regulation, is raising many international issues. The legal status of products created by artificial intelligence, particularly concerning copyright and patent rights, is currently being discussed in the legislation of several countries. The United States, European Union, and other advanced countries are striving to develop their approaches to regulating artificial intelligence in the field of intellectual property. In Europe, in 2023, initiatives to develop new laws regarding the application of copyright and patent rights to AI-based products gained momentum. This process, in turn, aligns with the global shift toward a digital economy.

In Uzbekistan, however, much work remains to be done regarding the digital transformation of intellectual property law and granting a special legal status to artificial intelligence products. Currently, Uzbekistan's legislation lacks specific regulations for regulating artificial intelligence, but the need to fill this legal gap and develop new laws is becoming evident. To this end, adapting artificial intelligence to intellectual property law, introducing the concept of "digital authorship," and establishing corresponding patents and copyrights are among the most pressing tasks today.

Based on international experience, the following legal strategies can be implemented in Uzbekistan:

- **Granting a special legal status to artificial intelligence products.** Providing a distinct legal status for products created by artificial intelligence systems and protecting them through copyright and patent rights will help update Uzbekistan's intellectual property system. This approach will help eliminate the uncertainties that previously existed regarding artificial intelligence.
- **Introducing the concept of "digital authorship".** Legally introducing the concept of "digital authorship" in Uzbekistan will allow for legal protection of products created by artificial intelligence. This change will contribute to the development of the country's digital economy and innovative technologies.
- **Digital transformation of intellectual property.** Continuing the process of digitally transforming intellectual property in Uzbekistan, implementing advanced technologies, and developing related laws will enhance the country's integration into the digital economy.

The future of artificial intelligence and intellectual property will evolve based on the following key legal directions:

- **Harmonizing global and local standards.** Considering both international experience and the characteristics of Uzbekistan's legal system, it is necessary to develop legislation in the field of intellectual property that aligns with global standards.
- **Balancing technology and law.** Given the rapid development of artificial intelligence technologies, it is crucial to maintain a flexible balance between technology and law when developing legal norms.
- **Commercializing artificial intelligence products.** Encouraging the commercialization of products created by artificial intelligence, protecting related rights, and updating laws to consider changing demands is necessary.

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