

Research article

UDC 34:004:340.1:004.8:808.1:347.779

EDN: https://elibrary.ru/burdtt

DOI: https://doi.org/10.21202/jdtl.2025.27

Ethical Implications of Using Artificial Intelligence in Intellectual Property Creation: Authorship, Ownership and Responsibility Issues

Kolawole Afuwape

O. P. Jindal Global University, Sonipat, India

Keywords

algorithmic bias, artificial intelligence, copyright, copyright, digital technology, ethics, generative artificial intelligence, intellectual property, law, patent law

Abstract

Objective: to critically assess the ethical issues related to the use of artificial intelligence in the development of intellectual property objects, with an emphasis on the problems of authorship, ownership, originality and responsibility.

Methods: the research uses a comprehensive analysis of the existing regulatory framework and case law in the field of intellectual property and artificial intelligence. A systematic review of the scientific literature includes publications in peer-reviewed scientific journals and analytical reports on the ethical aspects of the use of artificial intelligence, legislation in the field of intellectual property and the transformation of the digital landscape. The author provides a critical synthesis of scientific arguments and theoretical discussions regarding the ethical status of artificial intelligence as an author and co-author of creative works. The study assesses artificial intelligence systems through the prism of fairness, accountability and transparency concepts.

Results: the lack of legal recognition of artificial intelligence as an author or inventor was revealed in most legal systems worldwide; the intellectual property paradigm is still based on human-centered ideas about creativity and invention, which creates a regulatory gap. The study established significant ambiguity in the fields of ownership and accountability, since artificial intelligence, without legal personality, creates an ethical problem: should the intellectual property created by an autonomous system belong to the developer, user, data provider or remain in the public domain. The author identified the risks of bias and

© Afuwape K., 2025

This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence (CC BY 4.0) (https://creativecommons.org/licenses/by/4.0), which permits unrestricted re-use, distribution and reproduction, provided the original article is properly cited.

exploitation in creative industries where artificial intelligence is trained using copyrighted materials without permission or compensation to their creators. There has been a shift towards double ethical standards due to jurisdictional and sector differences in relation to works created using artificial intelligence. This promotes unfair global differences in the protection of intellectual property rights.

Scientific novelty: the author presented a multifaceted interdisciplinary analysis that integrates the legal, ethical and technological fields of research on intellectual property created using artificial intelligence. The developed conceptual framework may help to comprehensively solve the ethical and regulatory issues arising in connection with works created with the participation of artificial intelligence, including the justification of the need for legal reform, taking into account the ethical imperatives of modern technological development.

Practical significance: The study contains ethically grounded recommendations for legislators, legal practitioners, and technology developers to amend intellectual property legislation to effectively address issues of authorship, ownership, and accountability in relation to works created using artificial intelligence. The recommendations may ensure a balance between stimulating innovations and protecting the rights of a human author.

For citation

Afuwape, K. (2025). Ethical Implications of Using Artificial Intelligence in Intellectual Property Creation: Authorship, Ownership and Responsibility Issue. *Journal of Digital Technologies and Law,* 3(4), 677–704. https://doi.org/10.21202/jdtl.2025.27

Contents

Introduction

- 1. Who owns Al-generated intellectual property?
- 2. How does AI challenge existing copyright and patent laws?
- 3. What are the ethical concerns surrounding plagiarism, bias, and accountability in Al-created works?
- 4. Recommendations for addressing Ethical Concerns
- 5. Al and the Challenge of Authorship and Ownership
 - 5.1. Traditional IP frameworks and the requirement of human authorship
 - 5.2. Ownership by the Al System
 - 5.3. Ownership by the AI Developer
 - 5.4. Ownership by the User
 - 5.5. Joint Ownership
 - 5.6. No Ownership

- 6. Al-generated work and the legal vacuum
- 7. Impact on human creators
- 8. Fair Use, and Bias in Al-Generated IP
 - 8.1. Fair use dilemmas
 - 8.2. Bias in Al-generated creations
- 9. Mitigating the Risk of Generative AI IP Problem
 - 9.1. Considering Potential Downstream Impacts
 - 9.2. The dawn of IP Law and Artificial Intelligence
- 10. Policy and Legal Recommendations

Conclusion

References

Introduction

In the last few years, great strides in AI systems and technologies have turned AI into a key pillar of business planning (Aldoseri et al., 2024). Businesses of all industries are embracing AI at a more enthusiastic rate than ever before, all in search of a greater degree of operational efficiency and more informed decision making (Ali et al., 2024). Application, services, and infrastructure spending in the world as it relates to AI is at an all-time high with IDC estimating that the number will rise to USD 632 billion by 2028, which is a compound annual growth rate of 6 percent from 2023 to 2028¹ (Hosting Journalist).

Further development in AI capabilities is creating monumental questions for the applicability of the intellectual property laws on AI and the work it produces (Salle & Rini, 2025). The accelerating evolution of AI is pushing enterprises to create internal architectures that put emphasis on ethical decision making (Olaniyi, 2024). IP is one of the critical and most disruptive subjects in AI governance (Schmit et al., 2023). Under wide recognition, AI has been seen as a very helpful commodity; people look at its challenges and innovative prospects, especially in the case of intellectual property (Ooi et al., 2025).

There is a high rate of adoption of AI, and it seems likely to lead to an even greater scale in commercial use of AI across a wide range of sectors by 2025 (Md et al., 2025). Given IP issues arise with AI, actors applying such technologies must plan proactively to manage the IP ecosystem (Lalanda & Roig, 2025). As AI law is being authored, businesses must strive to remain compliant with copyright standards whilst at the same

Global AI Infrastructure Spending to Double by 2028, Reaching \$632B. Hosting Journalist. https://clck.ru/3Qd7xh

reinforcing their own proprietary asset protection (Gaffar & Albarashdi, 2025). To become shapers of successful strategies in an Al economy, companies must understand how current laws impact ai development and stay current with the continuing legal landscape (Shalaby, 2024).

Technology is a key and imperative variable that shapes the present state of innovation (Vărzaru & Bocean, 2024). The role played by modern technology in terms of development is as critical as can be, but it has brought down the need for human intervention almost completely – or in some cases, altogether, in some cases. This creates a distinctive challenge: comparing works created by software and algorithms with those produced indicative of human effort only. In today's commercial world where IP rights ownership becomes a determining factor of the prospects of company expansion, this problem is quite a significant challenge (Mary & Enoch, 2024). The argument over whether entities from the non-human world such as software and algorithms deserve rights is an issue on the lips of discussion around intellectual property (Tunç, 2025).

1. Who owns AI-generated intellectual property?

The conflict between technology and copyright has gone through the initial creation of the printing press as well as the advancements towards creation of digital media and the internet (Iguh & Anyanor, 2023). With each innovation in technology, there has been a need to change copyright regulations (Kumar, 2024). Berne convention according to Article 2 only allows human creation to enjoy copyright (Al Da'jeh & Alzubi, 2024). If an Al creates content, whose rights should be claimed – of the Al developer or of the user who launched the process? Policy makers must revise the law to address these challenges. Though there is common understanding that human's creativity is needed for copyright, the development of Al-generated works has complicated this practice (Hutson, 2024).

As recognized by notable experts on copyright, a key international agreement, the Berne Convention lays particular emphasis on focusing on human creativity in the world of copyrights (Geiger, 2024). Article 2 of the Berne Convention says that between its nations the word "author" would mean those who physically produce the works, which effectively does away with need to have an explicit definition of authorship (Olwan& Al-Balushi, 2023). Although the Convention permits a "maker" to protect copyright in cinematographic works, it is underscoring a growing number of Al-created works test copyright systems' inequities towards the rights of human authors (Singh, 2024).

A lot of discussion is stirred up around the possibility of copyrighting AI generated work and the necessity for legal amenities to acknowledge the influence of AI in the creation process. The regulatory climate describes the controversy around GenAI's training data

being in violation of copyright protections, as well as specifies who is held responsible for doing so – the service provider or the user (de la Durantaye, 2025). In such conversations, the disparity between the forward momentum technology and desire to maintain copyright norms becomes apparent. Some areas such as the EU and the US allow more freedom to innovate, except in the cases of text and data mining exemptions, and fair use doctrine but with extra thorns and obstacles to overcome (Margoni & Kretschmer, 2022). Adjustment of IP protection requirements should be considered under different international regions as AI technologies are already largely applied globally (Marchenko et al., 2024). There are government practices such as the DMCA and others that provide protection and exceptions, but the complex use of GenAI makes the old ways of achieving protection complex (Chesterman, 2025).

The perspective of inventing has changed with the increasing speed of AI development and increased ability of data processing, pattern recognition, and predictive functions to innovation-oriented areas (Chen et al., 2024). The results provided by contemporary AI systems require a minimum or non-existence of human input. Patent for these creations can be issued, if the creator is a human. Patents conventionally require a human inventor at their heart (Ajani, 2020). The basis of patent law is to encourage the inventors by rewarding them for their revolutionary contributions. Copyright safeguards legally speak to intelligent original inventions, not simply new results or simple upgrades of pre-existing concepts (Tan, 2024). The concept of 'invention' as an idea includes the 'unique intellectual thought uniquely originated by the inventor, as the fundamental mental labour in inventive creation (Knutson, 2020).

The previous consensus is that AI systems are without legal capacity or personality and therefore cannot be baked with IP rights (Aveni & Faria, 2024). There is a wide difference of ideas regarding who the IP right owner is and if there must be an appointed rights owner (Contreras, 2022). The owner of an AI system may also potentially have an ownership interest in an AI generated invention or work (Lopez & Gonzalez, 2024). Ownership could be vested in the author of the code for the AI system; the next one to control the system (Padmanabhan & Wadsworth, 2024). The end user or steward of AI (Kelly et al., 2023); or a collective of these participants. Ownership of IP may also be assigned, through contract language (Srivastava, 2024).

2. How does AI challenge existing copyright and patent laws?

Through IP laws, the owners of intellectual property can secure themselves by prohibiting other people from taking unconventional advantage of their work (Castaldi et al., 2024). It is for patent owners to deny others the use of inventions without proof of authorization

while copyright owners can prevent people from reproducing their creative works without approval² (The World Trade Organization). With such protection in place, IP owners can instead gain recognition as well as financial reward for their creations, now underpinning their efforts to put more resources and attention into their artistic work.

Undoubtedly, the logic behind this is the key driver of the establishment and the performance of the IP legislation. Contrary to such, AI systems are not interested in such incentives because they do not derive their functions from external motivators (Ai et al., 2022). Therefore, it would not be unreasonable to ask: are AI systems under the same IP laws as human creations were? The present analysis will, for the most part, focus on how AI challenges the effective functioning of patent and copyright legislation.

3. What are the ethical concerns surrounding plagiarism, bias, and accountability in Al-created works?

Al content generators generated concerns on matters like bias, plagiarism, copyright violators, misuse, production of misinformation, fake news and deceptive information (Ghiurău & Popescu, 2024). These risks can lead to tarnished reputation; widespread proliferation of deceiving content; and increased threat of provoking violence. The increased risk of biased answers is one of the most burning ethical problems connected with the use of Al in text generation, especially with platforms such as ChatGPT (Kim, 2024). Because content generators' large language models are also trained on vast amounts of information, images, and web data, their biases are likely to crop up in the generated text (Tyagi, 2024). By extension, such biased responses might erode outputs and fairness' accuracy and promote discriminatory inclinations such as those based on race or even gender (Varona & Suárez., 2022).

The prejudice contained in contents produced by AI is not a characteristic of technology but a process of development and training (Ferrara, 2023). By taking LLMs through biased information and data, consciously or subconsciously, the output which the model produces will also reflect that bias (Tiwari, 2025). To prevent the occurrence of biased end results, delivery of fairness is also necessary and therefore it becomes very important to use an unbiased, diverse, and representative dataset to obtain fairness. Despite its promises and far-reaching reputation, as well as being much advertised, Generative Artificial Intelligence is not free from its flaws (Haase & Hanel, 2023). ChatGPT and other chatbots have been seen to be unreliable, sometimes misinformed, and unsound in answers, forcing some users to question its accuracy (Xiong, 2024). In addition, developers and users, and regulators

The World Trade Organization, Part II – Standards concerning the availability, scope and use of Intellectual Property Rights. https://clck.ru/3Qd8Aa

need immediate attention to the ethical issues posed by AI generators of content such as issues regarding authenticity, bias, and exploitation (Uddagiri & Isunuri, 2024). Otherwise, we may face unaccounted for and harmful consequences to society, to businesses, and to the economy.

One of the major ethical concerns is the danger that AI content generators can be used to malicious ends. ChatGPT and other text-generators pose threats because they also can be abused to create content that can be used for harmful purposes, including the spreading of propaganda or hate speech or spreading false or misleading reports.

Such tools, such as ChatGPT, increase the rate of plagiarism by authors and students, and it is hard to discover the instances (Khalaf, 2025). To deal with plagiarism involving AI tools, new approaches, such as ChatZero and AI Text Classifier, which can distinguish AI and human writings, have been proposed (Elkhatat et al., 2023).

There is a threat that hackers will hack AI-generated content tools to write personalized deceiving spam emails and stealthy graphic messages (Arif et al., 2024). Consequently, cyber threats could be brought in large numbers of people, possibly injuring many users (Afaq et al., 2023). Chatbot platforms obtained private personal data from users meaning that third parties may contaminate, retain or judge the data (Giordani, 2024).

Development of AI capabilities brings heavy weight upon the manufactures of AI and regulators because of uncertainty regarding who owns the copyright when the content is generated by AI (Peukert & Windisch, 2024). GenAI models are incredibly dependent on a tremendous volume of unpaid and uncompacted data uploaded by humans that is often accompanied by an abhorrence of pertinent regulations (Huang et al, 2024). The application of such techniques usually involves argumentation over ethics and law, as, as a rule, such material is taken without authorization and then incorporated into the training data (Gorwa et al., 2020). The rapid rollout and global proliferation of Gen AI technologies such as ChatGPT have discomfited established legal and ethical ground rules across the globe and caused disruption within the information supply chain and proliferation of Deepfakes. Governments need to pass regulations to enhance GenAI development by supporting the current industry and promoting its growth.

4. Recommendations for addressing Ethical Concerns

Content platforms require distinct rules and controls to represent AI use in a sensible manner (Marsoof et al., 2022). The frameworks developed respond to privacy and bias issues while allowing a code of ethics to govern the conduct of content creators using AI. Collaborative legal agencies and preeminent organizations enforce the boundaries of ethicality for AI-content creators (Pokrovskaya, 2025).

Users need to identify the weaknesses inherent in providing personal/ confidential information to artificial intelligence platforms (Zhang et al., 2022). People participating

in AI platforms should be aware of both the limitations of such tools and the role of the content creators themselves in forming them (Prakash & Sabharwal, 2024). And it is also important for the users to examine the prompts and ensure the source of the data provided is verifiable but also edit the content where necessary before furthering (Wang et al., 2024). Users should first review and reset the system's results before applying them.

5. Al and the Challenge of Authorship and Ownership

At present, the debate on the control over Al-generated works is at the core of Al-copyright discussion (Werzansky-Orland, 2024). The human creativity in Al-generated products is not enough to emit copyright protection (Oda, 2023). The topic of the identification of Al creators and the related legal issues is a focal point of research on Al and copyright in the present (Chesterman, 2025). On this subject, scholars engage in a debate that involves the perspective that Al-generated works are not sufficiently creative to deserve copyright protection. In this discussion the complexities of Al and copyright in the digital age are demonstrated through the fragmented discourse on copyright issues (Vebritha, 2024).

5.1. Traditional IP frameworks and the requirement of human authorship

It goes without stating that what is inarguably the largest step forward in terms of artificial intelligence lies in its ability to create a creative piece or write (Brandenburg et al., 2025). This is a major threat to the conventional copyrights that were implemented exclusively by human authors. The current structure for IP belonging and protection is largely applied to human authors and does not incorporate contribution from non-human sources (Rotolo, 2025).

The growing prominence of the use of AI technology presents a strong challenge to the endeavors to adjust the existing intellectual property laws to AI technology (Unnikrishnan, 2024). In this case there is a significant amount of obfuscation regarding what rights and responsibilities designers and users of AI systems should follow. At some point, the instructions from the government were necessary to solve the resulting uncertainty.

Intellectual property law's key issue focuses on protecting the rights of people who are generators of various forms of literary and artistic and musical work (Obianyo, 2025). The bulk of these rights revolve around the concept of authorship, which is associated with humanity. As for the Berne Convention, the central agreement for copyright and protection of intellectual property is awarded based on the authorship, that assumes that the creators are human (Xiao, 2023).

Today, the existing rules and protection of Al-produced content are not open to clear specifications on ownership. The framework created by existing laws is based in 'human authorship', which results in partial or not-readily available legal protection to Al content in some scenarios. There is a lot of divergence in legal definitions among countries that run from progressive nations that adopt innovation to traditional domains of Human Centricity.

5.2. Ownership by the AI System

One such radical suggestion is to take the idea that AI should be legally entitled to any products it makes further (Hacker, 2023). It is also receiving skepticism for reasons ranging from legal to philosophical realms. The law now only recognizes ownership in legals persons, which AI systems cannot be eligible for. And it is for this reason that it is so important to provide an AI with legal personhood, as such change will radically change legal systems in the aspect of responsibility and liability already now (Lovell, 2023).

5.3. Ownership by the AI Developer

One way that is possible is to pass on the ownership rights of the AI system to the creator or even the group in charge of the development of the system (Tully, 2024). Under this framework, the developer is identified as the main innovator since it is he/she that develops the algorithm as well as guiding the training of the system. This scenario becomes problematic if the user enters some data or uses the AI in such a way as to significantly influence other outputs the system itself did not anticipate.

5.4. Ownership by the User

The second less radical model is the user who engages AI in the production of content, particularly as a user may add their own information during the use of the AI, such as text instructions relating to emphasis and highlighting (Walter, 2024). Yet, questions remain about the input level of humanity for someone to qualify as the proprietor of any given piece.

5.5. Joint Ownership

Another deficiency could be resolved using joint ownership - the ownership resides with the developer and the user (Padmanabhan & Wadsworth, 2024). It places an agency in both agents and can have some issues included in its execution, for instance, with regards to topics like use of the generated content or potential sale of it.

5.6. No Ownership

Lawyers made by AI suggest that it should be thought of as a public domain rather than subject to the law of copyright (Lemley, 2024). This solves the ownership issue but in the long run it may inhibit people from using Artificial Intelligence and Machine, learning technologies and developing creative ideas.

6. AI-generated work and the legal vacuum

It goes without saying, there are tremendous legal conundrums when addressing questions of ownership regarding works made by artificial intelligence (Chaudhary, 2022). Contemporary intellectual property laws delineate the right of authors or copyright owners to rights conferred by the existing legal framework (Al-Busaidi et al., 2024). With Al-generated works one of the fundamental challenges is still the difficult and relevant question of validating owners as uniquely identifiable parties (Lucchi, 2024). Given that Al systems can pursue no form of legal actions, they forfeited the right to act upon their intellectual property rights, and thus a legal lacuna. There are several copyright and patent statutes that underscore that the creator cannot be an organization (Cohen, 2017). This is problematic as no human creativity exists in a built-in capacity, for Al is autonomous; however, ownership questions remain related to ownership rights extended by copyright or patent laws.

From the point of contention that authorship of the work is a substantial facet of human creativity, the end goal of copyright laws makes ownership determinations difficult. While AI systems can independently of a provided prompt create content in some cases using automation, the notion of trying to function devoid of human inputs complicates the workings. The specificity and scope of the text prompt, or input parameters, established by the author, contribute to, of course, both the style and the quality of the creative product. That leads to the question: Is the human influence in these works of originality and distinctiveness enough merit to justify inclusion under copyright law? In terms of agency in AI-generated work, the author role has the highest impact (Lee et al., 2025); the nature of the work can be defined which provides flexibility when overseeing and can effectively track its evolution to a product that is not finalized until the feedback loop has been completed. In academic output the author's role leaves its mark of individualistic style and a perception of creative purpose.

Moreover, the range of output from AI and the distinctions between human authorship and algorithmic functions have intrinsic value (Darewych, 2023). There is no doubt in relation to the author in the transfer of final product. However, the AI algorithms for calculations in composition were not an author role, whereas of course, the unique input of human authorship as an author is a distinction of value (Craig & Kerr, 2025). The collaborative effort demonstrates the foundation of traditional notions of authorship, as well as commencing meaningful conversations about the boundaries of authorization with copyright law in our digital age.

Requiring human activity as a minimum threshold for copyrightability has practical challenges, particularly when AI is involved, challenges exist in determining how much human activity is sufficient, once again, a range here could be very wide from a human just calling upon an AI output to a human not only calling upon and AI output to curating and changing/altering significantly the AI output; but even in the most clear case, how would

a judge (in either case a judge ruling over a copyright infringement matter, or a judge ruling in an alternative dispute resolution) or a professional from law would adjudicate human threshold of activity?

When we develop approaches to inject AI copyright accountability into the potential issues with AI copyright, we maintain the notion that it is going to take some judicial and legal courage. The legal frameworks must allow rights holders and authors legal protections for their rights to their creative expression, but we also need to consider what they must innovate to deal with technological innovation. The legal systems need to supersede their existing practices, that are just at odds with the characteristics of the AI objects they protect and instead consider how they are pursuing the notions of fairness, equity and certainty (Kirakosyan, 2024). This drawing upon notions of fairness, equity (proportionality), and certainty, might either accompany or couple with actions of a principles-based, or guideline-based approach, or it prescribes a possible rationale and guidance for a person or original author attribution for AI creative acts, by leveraging ambiguities that cause some certainty for judges dealing with AI, but could also, as a consequence, start to create boundaries/formalism that creates some consistency and coherence around judging.

Al-generated works can accurately be described as an emergent novel based on transformations (creative products) made from the deployment of sophisticated algorithms and along with computational processing of data or prompts (Mohamed et al., 2024). Al-created output may rely upon existing knowledge or patterns to produce output, however, the work produced generally demonstrates an emerging novelty/originality, which is greater than the sum of its individual components (Boo et al., 2025). Just as Al can be understood as a tool or instrument within human creativity processes, individual users can also use Al to explore different means of creating art and allowing their creativity to be expressed in new modes (Ali Elfa & Dawood, 2023).

7. Impact on human creators

Creativity is often considered the distinguishing feature of being human in times of technological change, less likely to be impacted by or mitigate by disruptive technology and tagged for our future (Evans & Chen, 2023). Behavioral scientists, for example, have suggested creativity, an idea and/or product, is an artifact of humanity (Blok, 2022). Still today, generative AI applications, as in ChatGPT, will likely disrupt our uniqueness, and alter creative work of freelance or paid work (Amankwah-Amoah et al., 2024). Generative AI models leverage an immense amount of data and user inputs, which means any text, image, audio, and a combined variation can be generated (Bandi et al., 2023). This is somewhat unique in that jobs related to content delivery transpire not with human agency (writing, generating images, writing code, etc.), its workplaces propelled by jobs pertaining to delivery of information or knowledge-based content, and it is quite imaginable that generative AIs are constrained to creative work.

8. Fair Use, and Bias in Al-Generated IP

8.1. Fair use dilemmas

Copyright issues are very much at the center of the GenAl conversation (Hacohen & Elkin-Koren, 2024). More specifically, some of the more complex and ongoing issues concern the legality of using copyrighted works to train GenAl models and whether Al companies should be entitled to assert a defense of fair use (Vig, 2024). The first factor of fair use (the purpose or character of the use) evaluates two things: (i) whether the use of the original work is commercial versus non-commercial, and (ii) whether the use is transformative. To determine 'transformativeness', one must assess whether the defendant and made some new meaning, message, or purpose as to the plaintiffs (i.e. the original work).

The effects of bias and stereotypes in AI are illustrated in automated decision-making (Cossette-Lefebvre et al., 2023). Automated decision-making reflects the social thought processes that created prior practices and are therefore an accomplice to the negative stereotype and subsequent discrimination (Jan, 2023). Algorithms, for example, may be historically biased towards male candidates for a leadership role (Kyriakidou, 2025). Obviously, this is discrimination against women. Stereotyping can occur in a positive or negative context, but whichever context distortion of social reality and inequality will occur. Accordingly, bias and stereotypes are also interrelated and critical to understanding how AI can perpetuate or intensify existing social inequalities.

8.2. Bias in Al-generated creations

Bias in AI is appropriately defined as systematic and unfair preference, prejudice, preferential treatment, or bias that cause harmful, discriminatory results (Ferrara, 2023). There are three primary causes of bias in AI models: (1) data bias, when a model is trained using underrepresented data (Shahbazi et al., 2022); (2) development bias, when an AI developer's algorithms are not implemented properly in development (Xivuri & Twinomurinzi, 2023); and (3) interaction bias, when users varied their formal interactions and expectancies with the model (Grimes et al., 2021).

A major issue when justifying biases associated with Al-generated text, is that when we go back to a biased process, we are left with an invisible product often viewed as objective and neutral (e.g., the original AI is seen as having already made the choice-in that is mechanically stubborn to be scrutinized further). When readers read an AI text, comparing it to human texts, readers are expected to grant authority to authorship as the authoring of the AI text originated based on factual content-stripped of any social subjectivity, it is disillusioned at this point (with the biases re-embedded) where not only did the content originally contain the biases, but they had been confused and likely accepted as an unquestioned truth.

9. Mitigating the Risk of Generative AI IP Problem

One possibility AI developers could consider is to cover the legal ground since they are grabbing the source data, they are using to build their models (Rodríguez et al., 2023). This process should involve licensing and compensating any individuals that own the intellectual property that developers want to include in their training data through either licensing, or a portion of any revenue generated using the AI tool. Users of AI tools should inquire about the providers; if their model was trained with any protected content and consider reading the terms or use, privacy policy, and to be cautious about generative AI tools promoted by companies that cannot guarantee the training data is legally licensed to, or even open-source licenses that those companies comply with (Dwivedi et al., 2023).

9.1. Considering Potential Downstream Impacts

Artificial intelligence influences the trajectory of the broad array of cases, especially, for patent laws (Bianchini et al., 2022). Individuals using AI, either directly or through the services of a third party that includes an AI engine in their technology, is only one difficult problem for IP ownership (Picht & Thouvenin, 2023). If one person or company has asserted infringed rights, there may be thousands of others, including plaintiffs and defendants, and so forth, who might have an impact. The impact can be handled simply as ensuring you and your vendors utilize technologies that keep pace with an ever-changing environment, and even your service of process vendors can handle extreme variations in volume without impacting your delivery.

9.2. The dawn of IP Law and Artificial Intelligence

Intellectual property law and artificial intelligence together present new opportunities and issues for lawyers, businesses, and creative people (Vescovo, 2023). To be part of the future of intellectual property law and AI requires understanding and keeping up with the changing legal environment and how to face the full force of change in the new landscape called artificial intelligence, and intellectual property law. This represents a climate and environment for the law that is constantly fluid and everchanging. Given that we are navigating a field called artificial intelligence, there is a subclass of intellectual property law that changes law and creates legal issues and questions as it changes in AI and how traditional intellectual property law is always being modified (Endeshaw, 2004).

10. Policy and Legal Recommendations

Expansion of existing regulations to require human participation in various phases of creative AI development and in the creation of works by AI. This includes defining roles

such as 'programmer, 'developer', 'operator, server', 'data author', 'data provider' and other in regulatory frameworks.

Enable contractual agreements on IP ownership pooling among parties involved. This empowers parties like programmers, developers, data authors, etc., to establish the scope of their ownership through contractual arrangements.

Need for legal entities to assume control and accountability over the works produced by AI. The goal is to prevent harm and set ethical boundaries for these systems. It is proposed to use existing studies, such as the EU study on robotics, to determine whether an author should be commissioned for works created by AI.

Treat AI-generated works as works for hire and grant rights to the person or organization commissioning the AI. However, this approach could lead to problems such as market saturation or manipulation through excessive work orders.

Current legislation recognizes the difference between human authorship and machine production and considers people who take the necessary precautions to be the creators of the works. As legal cases related to 'authorship' and 'generation' emerge, the laws governing these concepts are expected to become more refined.

Address challenges such as determining the extent of human involvement in machinegenerated works and establishing the basis for human authorship of such works.

Conclusion

Copyright law offers lawyers the protection of original works of human expression. Copyright law, as it stands, does not allow for protection of AI generated works where the human contribution for originality is little or non-existent (e.g. typing a prompt). Copyright law does allow for protection of works through some use or assistance of AI depending on the overall work. It is not clear how much creativity or contribution there will need to be (or what courts require) for there to be Copyright protection of AI assisted works.

As AI technologies evolve, there will be new opportunities and challenges for protection and enforcement of intellectual property rights. The legal landscape will continue to evolve as courts and regulators deal with the challenges related to the complex and novel issues described above. The impact of AI on intellectual property has barriers and challenges but also great potential opportunities. As AI continues to evolve, it is very likely that the legal landscape will evolve as well to address the definitions and parameters of inventorship, ownership, and protection.

The field of AI and intellectual property is a fast-changing field. The legal issues surrounding AI patents, copyright issues surrounding intellectual property in AI-generated content, and trade secrets protection are just the starting point. Through advances

in AI technology, we will also witness the evolution of intellectual property laws that will need to be adaptable to provide the necessary clarity to inventors, creators, and users of AI technologies. International and other collaborative approaches, permitted by enhanced cybersecurity and ethics, will also play an important role in the future of AI and intellectual property. All stakeholders of the AI ecosystem must remain vigilant to the latest legal developments and trends, obtain professional advice from experts in this field, and take all reasonable steps to mitigate the legal risks if there are any questions.

References

- Afaq, S. A., Husain, M. S., Bello, A., & Sadia, H. (2023). A critical analysis of cyber threats and their global impact. In *Computational Intelligent Security in Wireless Communications* (pp. 201–220). CRC Press. https://doi.org/10.1201/9781003323426-12
- Ai, J., Gursoy, D., Liu, Y., & Lv, X. (2022). Effects of offering incentives for reviews on trust: Role of review quality and incentive source. *International Journal of Hospitality Management*, 100, 103101. https://doi.org/10.1016/j.ijhm.2021.103101
- Ajani, G. (2020). Contemporary Artificial Art and the Law: Searching for an Author. *Brill Research Perspectives in Art and Law*, 3(4), 1–84. https://doi.org/10.1163/24519201-12340034
- Al Da'jeh, A. K. M., & Alzubi, A. A. (2024). The Solutions for The Conflict of Laws Relating to Copyright and Its Exploitation «A Comparative Study». *Journal of Ecohumanism*, *3*(7), 2842–2853. https://doi.org/10.62754/joe.v3i7.4421
- Al-Busaidi, A. S., Raman, R., Hughes, L., Albashrawi, M. A., Malik, T., Dwivedi, Y. K., Al- Alawi, T., AlRizeiqi, M., Davies, G., Fenwick, M., Gupta, P., Gurpur, S., Hooda, A., Jurcys, P., Lim, D., Lucchi, N., Misra, T., Raman, R., Shirish, A., & Walton, P. (2024). Redefining boundaries in innovation and knowledge domains: Investigating the impact of generative artificial intelligence on copyright and intellectual property rights. *Journal of Innovation & Knowledge*, 9(4), 100630. https://doi.org/10.1016/j.jik.2024.100630
- Aldoseri, A., Al-Khalifa, K. N., & Hamouda, A. M. (2024). Al-powered innovation in digital transformation: Key pillars and industry impact. *Sustainability*, *16*(5), 1790. https://doi.org/10.3390/su16051790
- Ali Elfa, M. A., & Dawood, M. E. T. (2023). Using artificial intelligence for enhancing human creativity. *Journal of Art, Design and Music*, 2(2), 3. https://doi.org/10.55554/2785-9649.1017
- Ali, M., Khan, T. I., Khattak, M. N., & ŞENER, İ. (2024). Synergizing Al and business: Maximizing innovation, creativity, decision precision, and operational efficiency in high-tech enterprises. *Journal of Open Innovation: Technology, Market, and Complexity,* 10(3), 100352. https://doi.org/10.1016/j.joitmc.2024.100352
- Amankwah-Amoah, J., Abdalla, S., Mogaji, E., Elbanna, A., & Dwivedi, Y. K. (2024). The impending disruption of creative industries by generative Al: Opportunities, challenges, and research agenda. *International Journal of Information Management*, 79, 102759. https://doi.org/10.1016/j.ijinfomgt.2024.102759
- Arif, A., Khan, M. I., & Khan, A. R. A. (2024). An overview of cyber threats generated by Al. *International Journal of Multidisciplinary Sciences and Arts*, 3(4), 67–76. https://doi.org/10.47709/ijmdsa.v3i4.4753
- Aveni, A., & Faria, L. C. (2024). Clarify Artificial Intelligence (AI) decisions models rights in Intelectual Property (IP) system. *Revista JRG de Estudos Acadêmicos*, 7(14), e141033–e141033. https://doi.org/10.55892/jrg.v7i14.1033
- Bandi, A., Adapa, P. V. S. R., & Kuchi, Y. E. V. P. K. (2023). The power of generative AI: A review of requirements, models, input-output formats, evaluation metrics, and challenges. *Future Internet*, 15(8), 260. https://doi.org/10.3390/fi15080260
- Bianchini, S., Müller, M., & Pelletier, P. (2022). Artificial intelligence in science: An emerging general method of invention. *Research Policy*, *51*(10), 104604. https://doi.org/10.1016/j.respol.2022.104604
- Blok, V. (2022). The Role of Human Creativity in Human-Technology Relations. *Philosophy & Technology*, 35, 59. https://doi.org/10.1007/s13347-022-00559-7
- Boo, C., Kim, Y., & Suh, A. (2025). A Collaborative Creative Process in the Age of Al: A Comparative Analysis of Machine and Human Creativity. In *Proceedings of the 58th Hawaii International Conference on System Sciences* (pp. 212–221). https://doi.org/10.24251/hicss.2025.025

- Brandenburg, J. M., Müller-Stich, B. P., Wagner, M. et al. (2025). Can surgeons trust Al? Perspectives on machine learning in surgery and the importance of eXplainable Artificial Intelligence (XAI). *Langenbeck's Archives of Surgery*, 410, 53. https://doi.org/10.1007/s00423-025-03626-7
- Castaldi, C., Giuliani, E., Kyle, M., & Nuvolari, A. (2024). Are intellectual property rights working for society? Research Policy, 53(2), 104936. https://doi.org/10.1016/j.respol.2023.104936
- Chaudhary, G. (2022). Artificial intelligence: copyright and authorship/ownership dilemma? *Indian Journal of Law and Justice*, 13(2), 212.
- Chen, Y., Bao, J., Weng, G., Shang, Y., Liu, C., & Jiang, B. (2024). Al-Enabled Multi-Mode Electronic Information Innovation Practice Teaching Reform Prediction and Exploration in Application-Oriented Universities. Systems, 12(10), 442. https://doi.org/10.3390/systems12100442
- Chesterman, S. (2025). Good models borrow, great models steal: intellectual property rights and generative Al. *Policy and Society*, *44*(1), 23–37. https://doi.org/10.1093/polsoc/puae006
- Cohen, J. E. (2017). Creativity and culture in copyright theory. In *Copyright Law* (pp. 473–527). Routledge. https://doi.org/10.4324/9781315095400-17
- Contreras, J. L. (2022). Ownership and Assignment of Intellectual Property. In *Intellectual Property Licensing* and *Transactions: Theory and Practice* (pp. 19–46). Cambridge: Cambridge University Press. https://doi.org/10.1017/9781009049436.003
- Cossette-Lefebvre, H., & Maclure, J. (2023). Al's fairness problem: understanding wrongful discrimination in the context of automated decision-making. *Al Ethics*, 3, 1255–1269. https://doi.org/10.1007/s43681-022-00233-w
- Craig, C., & Kerr, I. (2025). The death of the Al author. In *Robot Law: Volume II* (pp. 250–285). Edward Elgar Publishing. https://doi.org/10.4337/9781800887305.00014
- Darewych, T. (2023). The impact of authorship on aesthetic appreciation: A study comparing human and Algenerated artworks. *Art and Society*, 2(1), 67–73. https://doi.org/10.56397/as.2023.02.11
- de la Durantaye, K. (2025). Control and Compensation. A Comparative Analysis of Copyright Exceptions for Training Generative Al. *IIC-International Review of Intellectual Property and Competition Law*, 1–34. https://doi.org/10.1007/s40319-024-01350-7
- Dwivedi, Y. K., Kshetri, N., Hughes, L., Slade, E. L., Jeyaraj, A., Kar, A. K., Baabdullah, A. M., Koohang, A., Raghavan, V., Ahuja, M. K., Albanna, H., Albashrawi, M. A., Al-Busaidi, A. S., Balakrishnan, J., Barlette, Y., Basu, S., Bose, I., Brooks, L. D., Buhalis, D., Carter, L. D. ... et al. (2023). Opinion Paper: «So what if ChatGPT wrote it?» Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. *International Journal of Information Management*, 71, 102642. https://doi.org/10.1016/j.ijinfomgt.2023.102642
- Elkhatat, A. M., Elsaid, K., & Almeer, S. (2023). Evaluating the efficacy of AI content detection tools in differentiating between human and AI-generated text. *International Journal for Educational Integrity*, 19(1), 17. https://doi.org/10.1007/s40979-023-00140-5
- Endeshaw, A. (2004). Reconfiguring intellectual property for the information age: Towards information property. *The Journal of World Intellectual Property*, 7, 327. https://doi.org/10.1111/j.1747-1796.2004.tb00211.x
- Evans, G., & Chen, X. (2023). Creativity and Disruptive Technology. In *The Future of Responsible Management Education: University Leadership and the Digital Transformation Challenge* (pp. 19–34). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-031-15632-8_2
- Ferrara, E. (2023). Fairness and bias in artificial intelligence: A brief survey of sources, impacts, and mitigation strategies. *Sci*, 6(1), 3. https://doi.org/10.3390/sci6010003
- Gaffar, H., & Albarashdi, S. (2025). Copyright protection for Al-generated works: Exploring originality and ownership in a digital landscape. *Asian Journal of International Law*, 15(1), 23–46. https://doi.org/10.1017/s2044251323000735
- Geiger, C. (2024). Elaborating a Human Rights-Friendly Copyright Framework for Generative AI. *IIC-International Review of Intellectual Property and Competition Law*, 55(7), 1129–1165. https://doi.org/10.1007/s40319-024-01325-8
- Ghiurău, D., & Popescu, D. E. (2024). Distinguishing Reality from Al: Approaches for Detecting Synthetic Content. *Computers*, *14*(1), 1. https://doi.org/10.3390/computers14010001
- Giordani, J. (2024). Mitigating chatbots AI data privacy violations in the banking sector: A qualitative grounded theory study. *European Journal of Applied Science, Engineering and Technology*, 2(4), 14–65. https://doi.org/10.59324/ejaset.2024.2(4).02
- Gorwa, R., Binns, R., & Katzenbach, C. (2020). Algorithmic content moderation: Technical and political challenges in the automation of platform governance. *Big Data & Society*, 7(1), 1–15. https://doi.org/10.31235/osf.io/fj6pg

- Grimes, G. M., Schuetzler, R. M., & Giboney, J. S. (2021). Mental models and expectation violations in conversational Al interactions. *Decision Support Systems*, *144*, 113515. https://doi.org/10.1016/j.dss.2021.113515
- Haase, J., & Hanel, P. H. (2023). Artificial muses: Generative artificial intelligence chatbots have risen to human-level creativity. *Journal of Creativity*, 33(3), 100066. https://doi.org/10.1016/j.yjoc.2023.100066
- Hacker, P. (2023). The European AI liability directives—Critique of a half-hearted approach and lessons for the future. *Computer Law & Security Review*, *51*, 105871. https://doi.org/10.1016/j.clsr.2023.105871
- Hacohen, U. Y., & Elkin-Koren, N. (2024). Copyright regenerated: harnessing genAl to measure originality and copyright scope. *Harvard Journal of Law & Technology*, 37(2). https://doi.org/10.2139/ssrn.4530717
- Huang, K., Wang, Y., Goertzel, B., Li, Y., Wright, S., & Ponnapalli, J. (2024). Generative Al Security. In *Future of Business and Finance*. https://doi.org/10.1007/978-3-031-54252-7
- Hutson, J. (2024). The Evolving Role of Copyright Law in the Age of Al-Generated Works. *Journal of Digital Technologies and Law*, 2(4), 886–914. https://doi.org/10.21202/jdtl.2024.43
- Iguh, N. A., & Anyanor, O. E. (2023). The impact of technology and the use of the internet on copyright enforcement in Nigeria. *Nnamdi Azikiwe University Journal of International Law and Jurisprudence*, 14(2), 1–12.
- Jan, A. (2023). Algorithmic Justice: Bias in Code, Bias in Society. *Journal for Social Science Studies*, 1(2), 113–121.
- Kelly, S., Kaye, S. A., White, K. M., & Oviedo-Trespalacios, O. (2023). Clearing the way for participatory data stewardship in artificial intelligence development: a mixed methods approach. *Ergonomics*, 66(11), 1782–1799. https://doi.org/10.1080/00140139.2023.2289864
- Khalaf, M. A. (2025). Does attitude towards plagiarism predict aigiarism using ChatGPT? *Al and Ethics*, *5*(1), 677–688. https://doi.org/10.1007/s43681-024-00426-5
- Kim, S. (2024). Research ethics and issues regarding the use of ChatGPT-like artificial intelligence platforms by authors and reviewers: a narrative review. *Science Editing*, 11(2), 96–106. https://doi.org/10.6087/kcse.343
- Kirakosyan, A. (2024). Intellectual Property Ownership of Al-Generated Content. *Digital Law Journal*, 4(3), 40–50. https://doi.org/10.38044/2686-9136-2023-4-3-3
- Knutson, K. R. (2020). Anything you can do, Al can't do better: An analysis of conception as a requirement for patent inventorship and a rationale for excluding Al inventors. *Cybaris*, 11(2), Article 2.
- Kumar, P. (2024). Intellectual Property Rights (IPR): Nurturing Creativity, Fostering Innovation. *Idealistic Journal of Advanced Research in Progressive Spectrums (IJARPS) eISSN*-2583-6986, 3(02), 32–38.
- Kyriakidou, O. (2025). Algorithms and global diversity management. In Research Handbook on Global Diversity Management (pp. 148–163). Edward Elgar Publishing.
- Lalanda, P., & Roig, N. A. (2025). Ethical and Legal Challenges of Artificial Intelligence with Respect to Intellectual Property. In A. Baraybar-Fernández, S. Arrufat-Martín, B. Díaz Díaz (Eds.), *The AI Revolution. Research Series on Responsible Enterprise Ecosystems* (pp. 63–80). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-80411-3_6
- Lee, D. C., Jhang, J. H., & Baek, T. H. (2025). Al-Generated News Content: The Impact of Al Writer Identity and Perceived Al Human-Likeness. *International Journal of Human–Computer Interaction*, *41*(21), 13862–13874. https://doi.org/10.1080/10447318.2025.2477739
- Lemley, M. A. (2024). How Generative Al Turns Copyright Upside Down. *Science and Technology Law Review*, 25(2). https://doi.org/10.52214/stlr.v25i2.12761
- Lopez, M., & Gonzalez, I. (2024). Artificial Intelligence Is Not Human: The Legal Determination of Inventorship and Co-Inventorship, the Intellectual Property of AI Inventions, and the Development of Risk Management Guidelines. *J. Pat. & Trademark Off. Soc'y*, 104, 135.
- Lovell, J. (2024). Legal Aspects of Artificial Intelligence Personhood: Exploring the Possibility of Granting Legal Personhood to Advanced Ai Systems and the Implications for Liability, Rights and Responsibilities. *International Journal of Artificial Intelligence and Machine Learning*, 4(2), 23–40. https://doi.org/10.51483/ijaiml.4.2.2024.23-40
- Lucchi, N. (2024). ChatGPT: A Case Study on Copyright Challenges for Generative Artificial Intelligence Systems. *European Journal of Risk Regulation*, 15(3), 602–624. https://doi.org/10.1017/err.2023.59
- Marchenko, V., Dombrovska, A., & Prodaivoda, V. (2024). Comparative Analysis of Regulatory Acts of the EU Countries on the Protection of Intellectual Property in the Conditions of the Use of Artificial Intelligence. *Public Administration and Law Review*, 3(19), 44–66. https://doi.org/10.36690/2674-5216-2024-3-44-66
- Margoni, T., & Kretschmer, M. (2022). A deeper look into the EU text and data mining exceptions: harmonisation, data ownership, and the future of technology. *GRUR international*, 71(8), 685–701. https://doi.org/10.1093/grurint/ikac054

- Marsoof, A., Luco, A. C., Tan, H. H., & Joty, S. R. (2022). Content-filtering AI systems—limitations, challenges and regulatory approaches. *Information & Communications Technology Law*, 32, 64–101. https://doi.org/10.1080/13600834.2022.2078395
- Mary, T., & Enoch, O. (2024). Legal Considerations in the Development and Commercialization of Corporate Intellectual Property. *International Journal of Rural Development, Environment and Health Research*, 8(3), 01–20. https://doi.org/10.22161/ijreh.8.3.1
- Md, S., Md Saiful, I., & Jannatul, F. (2025). Harnessing Al Adoption in the Workforce A Pathway to Sustainable Competitive Advantage through Intelligent Decision-Making and Skill Transformation. *American Journal of Economics and Business Management*, 8(3), 954–976.
- Mohamed, Y. A., Mohamed, A. H., Kannan, A., Bashir, M., Adiel, M. A., & Elsadig, M. A. (2024). Navigating the Ethical Terrain of Al-Generated Text Tools: A Review. *IEEE Access*, *12*, 197061–197120. https://doi.org/10.1109/access.2024.3521945
- Obianyo, C. I. (2025). Legal challenges of artificial intelligence as a creator in patent and copyright. *Nnamdi Azikiwe University Journal of Private and Property Law*, 2(1), 88–99.
- Oda, B. (2023). No Ghost in the Machine: On Human Creativity and Why Al-Generated Images from Text Prompts Are Not Protected by Copyright. *The SciTech Lawyer*, 20(1), 20–28.
- Olaniyi, G. (2024). Enterprise Architects Leveraging AI for Business Innovation. https://doi.org/10.2139/ssrn.5033526
- Olwan, R., & Al-Balushi, R. (2023). The Requirement of Originality in the Copyright Laws of the Arab Gulf States: Perspectives from Author's Rights Jurisdictions. *GRUR International*, 72(11), 1030–1052. https://doi.org/10.1093/grurint/kiad065
- Ooi, K. B., Tan, G. W. H., Al-Emran, M., Al-Sharafi, M. A., Capatina, A., Chakraborty, A., ... & Wong, L. W. (2025). The potential of generative artificial intelligence across disciplines: Perspectives and future directions. *Journal of Computer Information Systems*, 65(1), 76–107. https://doi.org/10.1080/08874417.2023.2261010
- Padmanabhan, A., & Wadsworth, T. J. (2024). A common law theory of ownership for Al-created properties. Journal of the Patent and Trademark Office Society, 104, 155–182.
- Peukert, C., & Windisch, M. (2024). The economics of copyright in the digital age. *Journal of Economic Surveys*. https://doi.org/10.1111/joes.12632
- Picht, P. G., & Thouvenin, F. (2023). Al and IP: Theory to policy and back again–policy and research recommendations at the intersection of artificial intelligence and Intellectual Property. *IIC-International Review of Intellectual Property and Competition Law*, 54(6), 916–940. https://doi.org/10.1007/s40319-023-01344-5
- Pokrovskaya, A. (2025). The Legal Status of Artificial Intelligence: The Need to Form a Legal Personality and Regulate Copyright. *Artificial Intelligence and Applications*, 3(2). https://doi.org/10.47852/bonviewaia52023901
- Prakash, G., & Sabharwal, D. (2024). Al Revolution in Online Media: Transforming Content Creation, Distribution, and Consumption. *Media and Al: Navigating*, 179.
- Rodríguez, N. D., Ser, J. D., Coeckelbergh, M., Prado, M. L., Herrera-Viedma, E. E., & Herrera, F. (2023). Connecting the Dots in Trustworthy Artificial Intelligence: From Al Principles, Ethics, and Key Requirements to Responsible Al Systems and Regulation. *Information Fusion*, 99, 101896. https://doi.org/10.1016/j.inffus.2023.101896
- Rotolo, A. (2025). Human, All Too Human: A Philosophical Investigation on Intellectual Property Rights for Albased Creativity. In *The Cyber-Creativity Process* (pp. 239–263). Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-031-84535-2_8
- Salle, S., & Rini, W. S. D. (2025). Development of artificial intelligence regulations and implications for intellectual property rights protection. *Contemporary Issues on Indonesian Social Justice and Legal Reform*, 1(1), 58–77.
- Schmit, C. D., Doerr, M. J., & Wagner, J. K. (2023). Leveraging IP for Al governance. *Science*, 379(6633), 646–648. https://doi.org/10.1126/science.ade3743
- Shahbazi, N., Lin, Y., Asudeh, A., & Jagadish, H. V. (2022). A survey on techniques for identifying and resolving representation bias in data. *CoRR*, *abs/2203.11852*. https://doi.org/10.48550/arXiv.2203.11852
- Shalaby, A. (2024). Digital Sustainable Growth Model (DSGM): Achieving synergy between economy and technology to mitigate AGI risks and address Global debt challenges. *Journal of Economy and Technology*. https://doi.org/10.1016/j.ject.2024.08.003
- Singh, S. (2024). Adapting Copyright in the Age of Al: Rethinking Authorship and Safeguarding Generative Al Work. Srivastava, A. (2024). Asserting Ownership of Intellectual Property Rights: Protection under Intellectual Property Law. Issue 2 Int'l JL Mgmt. & Human., 7, 3593.
- Tan, T. J. (2024). Artificial intelligence as inventor? SAcLJ, 36, 346.

- Tiwari, S. (2025). Biases and Fairness in LLMs. In *Generative AI: Techniques, Models and Applications* (pp. 229–242). Cham: Springer Nature Switzerland.
- Tully, R. (2024). Who owns artificial intelligence? In DS 131: Proceedings of the International Conference on Engineering and Product Design Education (E&PDE 2024) (pp. 545–550). https://doi.org/10.35199/epde.2024.92
- Tunç, A. (2025). Can Al determine its own future? *Al & Society*, *40*(2), 775–786. https://doi.org/10.1007/s00146-024-01939-3
- Tyagi, K. (2024). Copyright, text & data mining and the innovation dimension of generative Al. *Journal of Intellectual Property Law & Practice*, 19(7), 557–570. https://doi.org/10.1093/jiplp/jpae028
- Uddagiri, C., & Isunuri, B. V. (2024). Ethical and Privacy Challenges of Generative Al. In *Generative Al: Current Trends and Applications* (pp. 219–244). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-97-8460-8_11
- Unnikrishnan, A. (2024). Analyzing the impact of emerging technologies on intellectual property rights (IPR): a comprehensive study on the challenges and opportunities in the digital age. *Law & World*, 29, 66. https://doi.org/10.36475/10.1.6
- Varona, D., & Suárez, J. L. (2022). Discrimination, bias, fairness, and trustworthy Al. *Applied Sciences*, 12(12), 5826. https://doi.org/10.3390/app12125826
- Vărzaru, A. A., & Bocean, C. G. (2024). Digital transformation and innovation: The influence of digital technologies on turnover from innovation activities and types of innovation. Systems, 12(9), 359. https://doi.org/10.3390/ systems12090359
- Vebritha, S. (2024). Redefining Ownership and Originality in the Age of AI: A Legal and Ethical Review. *Sinergi International Journal of Law*, 2(4), 312–314. https://doi.org/10.61194/law.v2i4.726
- Vescovo, S. (2023). Rise of the Machines: The Future of Intellectual Property Rights in the Age of Artificial Intelligence. *Brooklyn Law Review*, 89, 221.
- Vig, S. (2024). Intersection of generative artificial intelligence and copyright: an Indian perspective. *Journal of Science and Technology Policy Management*. https://doi.org/10.1108/jstpm-08-2023-0145
- Walter, Y. (2024). Managing the race to the moon: Global policy and governance in Artificial Intelligence regulation—A contemporary overview and an analysis of socioeconomic consequences. *Discover Artificial Intelligence*, *4*, 14. https://doi.org/10.1007/s44163-024-00109-4
- Wang, L., Chen, X., Deng, X., Wen, H., You, M.H., Liu, W., Li, Q., & Li, J. (2024). Prompt engineering in consistency and reliability with the evidence-based guideline for LLMs. *NPJ Digital Medicine*, 7. https://doi.org/10.1038/s41746-024-01029-4
- Werzansky-Orland, Y. (2024). Al-generated content and the question of copyright. *Market: International Journal of Business*, 5, 2–20.
- Xiao, Y. (2023). Decoding authorship: is there really no place for an algorithmic author under copyright law? *IIC-International Review of Intellectual Property and Competition Law*, 54(1), 5–25. https://doi.org/10.1007/s40319-022-01269-5
- Xiong, H. (2024). Research on confusing responses based on ChatGPT. *Applied and Computational Engineering*, 57, 90–97. https://doi.org/10.54254/2755-2721/57/20241315
- Xivuri, K., & Twinomurinzi, H. (2023). How AI developers can assure algorithmic fairness. *Discover Artificial Intelligence*, 3(1), 27. https://doi.org/10.1007/s44163-023-00074-4
- Zhang, Z., Ning, H., Shi, F., Farha, F., Xu, Y., Xu, J., ... & Choo, K. K. R. (2022). Artificial intelligence in cyber security: research advances, challenges, and opportunities. *Artificial Intelligence Review*, 55, 1029–1053. https://doi.org/10.1007/s10462-021-09976-0

Author information



Kolawole Afuwape – LLM International Energy Law and Policy, Lecturer, Jindal Global Law School, O.P. Jindal Global University

Address: Sonipat Narela Road, Near Jagdishpur Village, Sonipat 131001, Haryana,

India

E-mail: afuwapekolawole@gmail.com

ORCID ID: https://orcid.org/0009-0001-5686-230X

Scopus Author ID: https://www.scopus.com/authid/detail.uri?authorId=59496613300 WoS Researcher ID: https://www.webofscience.com/wos/author/record/LPP-5259-2024

Google Scholar ID: https://scholar.google.com/citations?user=2tZOhdcAAAAJ

Conflict of interest

The author declares no conflict of interest.

Financial disclosure

The research had no sponsorship.

Thematic rubrics

OECD: 5.05 / Law **PASJC**: 3308 / Law **WoS**: OM / Law

Article history

Date of receipt – July 25, 2025

Date of approval – August 10, 2025

Date of acceptance – December 20, 2025

Date of online placement – December 25, 2025



Научная статья

УДК 34:004:340.1:004.8:808.1:347.779

EDN: https://elibrary.ru/burdtt

DOI: https://doi.org/10.21202/jdtl.2025.27

Этические последствия применения искусственного интеллекта при создании объектов интеллектуальной собственности: проблемы авторства, владения и ответственности

Колаволе Афувапе

Глобальный университет имени О. П. Джиндала, Сонипат, Индия

Ключевые слова

авторское право, алгоритмическая предвзятость, генеративный искусственный интеллект, интеллектуальная собственность, искусственный интеллект, патентное право, право, право собственности, цифровые технологии, этика

Аннотация

Цель: осуществить критическую оценку этических вопросов, связанных с использованием искусственного интеллекта при разработке объектов интеллектуальной собственности, с акцентом на проблемы авторства, права собственности, оригинальности и ответственности.

Методы: исследование базируется на всестороннем анализе существующей нормативной правовой базы и прецедентного права в области интеллектуальной собственности и искусственного интеллекта. Проведен систематический обзор научной литературы, включающий публикации в рецензируемых научных журналах и аналитические отчеты, посвященные этическим аспектам применения искусственного интеллекта, законодательству в сфере интеллектуальной собственности и трансформации цифрового ландшафта. Осуществлено критическое обобщение научных аргументов и теоретических дискуссий относительно этического статуса искусственного интеллекта как создателя и соавтора творческих произведений. Выполнена оценка систем искусственного интеллекта через призму концепций справедливости, подотчетности и прозрачности.

Результаты: выявлено отсутствие юридического признания искусственного интеллекта в качестве автора или изобретателя в большинстве правовых систем мира, где парадигма интеллектуальной собственности по-прежнему основана на человекоцентричных представлениях о творчестве и изобретательстве, что создает регуляторный пробел. Установлена значительная неясность в вопросах владения и подотчетности, поскольку искусственный интеллект, не обладая правосубъектностью, порождает этическое затруднение относительно того, должна ли интеллектуальная собственность, созданная автономной системой, принадлежать разработчику, пользователю, поставщику

© Афувапе К., 2025

Статья находится в открытом доступе и распространяется в соответствии с лицензией Creative Commons «Attribution» («Атрибуция») 4.0 Всемирная (СС ВУ 4.0) (https://creativecommons.org/licenses/by/4.0/deed.ru), позволяющей неограниченно использовать, распространять и воспроизводить материал при условии, что оригинальная работа упомянута с соблюдением правил цитирования.

данных или оставаться в общественном достоянии. Определены риски предвзятости и эксплуатации в креативных индустриях, где искусственный интеллект обучается с использованием материалов, защищенных авторским правом, без разрешения или компенсации их создателям. Зафиксирован переход к двойным этическим стандартам вследствие юрисдикционных и отраслевых различий в отношении произведений, созданных с помощью искусственного интеллекта, что порождает несправедливые глобальные различия в защите прав интеллектуальной собственности.

Научная новизна: представлен многогранный междисциплинарный анализ, интегрирующий правовую, этическую и технологическую сферы исследования проблематики интеллектуальной собственности, создаваемой с использованием искусственного интеллекта. Разработана концептуальная основа для комплексного решения этических и нормативных вопросов, возникающих в связи с произведениями, созданными при участии искусственного интеллекта, включая обоснование необходимости правовой реформы с учетом этических императивов современного технологического развития.

Практическая значимость: исследование содержит этически обоснованные рекомендации для законодателей, юристов-практиков и разработчиков технологий по внесению поправок в законодательство об интеллектуальной собственности, позволяющие эффективно решать вопросы авторства, права собственности и подотчетности в отношении произведений, созданных при помощи искусственного интеллекта, обеспечивая баланс между стимулированием инноваций и защитой прав человека-творца.

Для цитирования

Афувапе, К. (2025). Этические последствия применения искусственного интеллекта при создании объектов интеллектуальной собственности: проблемы авторства, владения и ответственности. *Journal of Digital Technologies and Law*, 3(4), 677–704. https://doi.org/10.21202/jdtl.2025.27

Список литературы

- Afaq, S. A., Husain, M. S., Bello, A., & Sadia, H. (2023). A critical analysis of cyber threats and their global impact. In *Computational Intelligent Security in Wireless Communications* (pp. 201–220). CRC Press. https://doi.org/10.1201/9781003323426-12
- Ai, J., Gursoy, D., Liu, Y., & Lv, X. (2022). Effects of offering incentives for reviews on trust: Role of review quality and incentive source. *International Journal of Hospitality Management*, 100, 103101. https://doi.org/10.1016/j.ijhm.2021.103101
- Ajani, G. (2020). Contemporary Artificial Art and the Law: Searching for an Author. *Brill Research Perspectives in Art and Law*, 3(4), 1–84. https://doi.org/10.1163/24519201-12340034
- Al Da'jeh, A. K. M., & Alzubi, A. A. (2024). The Solutions for The Conflict of Laws Relating to Copyright and Its Exploitation «A Comparative Study». *Journal of Ecohumanism*, 3(7), 2842–2853. https://doi.org/10.62754/joe.v3i7.4421
- Al-Busaidi, A. S., Raman, R., Hughes, L., Albashrawi, M. A., Malik, T., Dwivedi, Y. K., Al- Alawi, T., AlRizeiqi, M., Davies, G., Fenwick, M., Gupta, P., Gurpur, S., Hooda, A., Jurcys, P., Lim, D., Lucchi, N., Misra, T., Raman, R., Shirish, A., & Walton, P. (2024). Redefining boundaries in innovation and knowledge domains: Investigating the impact of generative artificial intelligence on copyright and intellectual property rights. *Journal of Innovation & Knowledge*, 9(4), 100630. https://doi.org/10.1016/j.jik.2024.100630
- Aldoseri, A., Al-Khalifa, K. N., & Hamouda, A. M. (2024). Al-powered innovation in digital transformation: Key pillars and industry impact. *Sustainability*, *16*(5), 1790. https://doi.org/10.3390/su16051790

- Ali Elfa, M. A., & Dawood, M. E. T. (2023). Using artificial intelligence for enhancing human creativity. *Journal of Art, Design and Music*, 2(2), 3. https://doi.org/10.55554/2785-9649.1017
- Ali, M., Khan, T. I., Khattak, M. N., & ŞENER, İ. (2024). Synergizing Al and business: Maximizing innovation, creativity, decision precision, and operational efficiency in high-tech enterprises. *Journal of Open Innovation: Technology, Market, and Complexity,* 10(3), 100352. https://doi.org/10.1016/j.joitmc.2024.100352
- Amankwah-Amoah, J., Abdalla, S., Mogaji, E., Elbanna, A., & Dwivedi, Y. K. (2024). The impending disruption of creative industries by generative Al: Opportunities, challenges, and research agenda. *International Journal of Information Management*, 79, 102759. https://doi.org/10.1016/j.ijinfomgt.2024.102759
- Arif, A., Khan, M. I., & Khan, A. R. A. (2024). An overview of cyber threats generated by Al. *International Journal of Multidisciplinary Sciences and Arts*, 3(4), 67–76. https://doi.org/10.47709/ijmdsa.v3i4.4753
- Aveni, A., & Faria, L. C. (2024). Clarify Artificial Intelligence (AI) decisions models rights in Intelectual Property (IP) system. *Revista JRG de Estudos Acadêmicos*, 7(14), e141033–e141033. https://doi.org/10.55892/jrg.v7i14.1033
- Bandi, A., Adapa, P. V. S. R., & Kuchi, Y. E. V. P. K. (2023). The power of generative AI: A review of requirements, models, input-output formats, evaluation metrics, and challenges. *Future Internet*, 15(8), 260. https://doi.org/10.3390/fi15080260
- Bianchini, S., Müller, M., & Pelletier, P. (2022). Artificial intelligence in science: An emerging general method of invention. *Research Policy*, *51*(10), 104604. https://doi.org/10.1016/j.respol.2022.104604
- Blok, V. (2022). The Role of Human Creativity in Human-Technology Relations. *Philosophy & Technology*, 35, 59. https://doi.org/10.1007/s13347-022-00559-7
- Boo, C., Kim, Y., & Suh, A. (2025). A Collaborative Creative Process in the Age of Al: A Comparative Analysis of Machine and Human Creativity. In *Proceedings of the 58th Hawaii International Conference on System Sciences* (pp. 212–221). https://doi.org/10.24251/hicss.2025.025
- Brandenburg, J. M., Müller-Stich, B. P., Wagner, M. et al. (2025). Can surgeons trust AI? Perspectives on machine learning in surgery and the importance of eXplainable Artificial Intelligence (XAI). *Langenbeck's Archives of Surgery*, 410, 53. https://doi.org/10.1007/s00423-025-03626-7
- Castaldi, C., Giuliani, E., Kyle, M., & Nuvolari, A. (2024). Are intellectual property rights working for society? Research Policy, 53(2), 104936. https://doi.org/10.1016/j.respol.2023.104936
- Chaudhary, G. (2022). Artificial intelligence: copyright and authorship/ownership dilemma? *Indian Journal of Law and Justice*, 13(2), 212.
- Chen, Y., Bao, J., Weng, G., Shang, Y., Liu, C., & Jiang, B. (2024). Al-Enabled Multi-Mode Electronic Information Innovation Practice Teaching Reform Prediction and Exploration in Application-Oriented Universities. *Systems*, 12(10), 442. https://doi.org/10.3390/systems12100442
- Chesterman, S. (2025). Good models borrow, great models steal: intellectual property rights and generative Al. *Policy and Society*, *44*(1), 23–37. https://doi.org/10.1093/polsoc/puae006
- Cohen, J. E. (2017). Creativity and culture in copyright theory. In *Copyright Law* (pp. 473–527). Routledge. https://doi.org/10.4324/9781315095400-17
- Contreras, J. L. (2022). Ownership and Assignment of Intellectual Property. In *Intellectual Property Licensing* and *Transactions: Theory and Practice* (pp. 19–46). Cambridge: Cambridge University Press. https://doi.org/10.1017/9781009049436.003
- Cossette-Lefebvre, H., & Maclure, J. (2023). Al's fairness problem: understanding wrongful discrimination in the context of automated decision-making. *Al Ethics*, *3*, 1255–1269. https://doi.org/10.1007/s43681-022-00233-w
- Craig, C., & Kerr, I. (2025). The death of the AI author. In *Robot Law: Volume II* (pp. 250–285). Edward Elgar Publishing. https://doi.org/10.4337/9781800887305.00014
- Darewych, T. (2023). The impact of authorship on aesthetic appreciation: A study comparing human and Algenerated artworks. *Art and Society*, 2(1), 67–73. https://doi.org/10.56397/as.2023.02.11
- de la Durantaye, K. (2025). Control and Compensation. A Comparative Analysis of Copyright Exceptions for Training Generative Al. *IIC-International Review of Intellectual Property and Competition Law*, 1–34. https://doi.org/10.1007/s40319-024-01350-7
- Dwivedi, Y. K., Kshetri, N., Hughes, L., Slade, E. L., Jeyaraj, A., Kar, A. K., Baabdullah, A. M., Koohang, A., Raghavan, V., Ahuja, M. K., Albanna, H., Albashrawi, M. A., Al-Busaidi, A. S., Balakrishnan, J., Barlette, Y., Basu, S., Bose, I., Brooks, L. D., Buhalis, D., Carter, L. D. ... et al. (2023). Opinion Paper: «So what if ChatGPT wrote it?» Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. *International Journal of Information Management*, 71, 102642. https://doi.org/10.1016/j.ijinfomgt.2023.102642

- Elkhatat, A. M., Elsaid, K., & Almeer, S. (2023). Evaluating the efficacy of AI content detection tools in differentiating between human and AI-generated text. *International Journal for Educational Integrity*, 19(1), 17. https://doi.org/10.1007/s40979-023-00140-5
- Endeshaw, A. (2004). Reconfiguring intellectual property for the information age: Towards information property. *The Journal of World Intellectual Property*, 7, 327. https://doi.org/10.1111/j.1747-1796.2004.tb00211.x
- Evans, G., & Chen, X. (2023). Creativity and Disruptive Technology. In *The Future of Responsible Management Education: University Leadership and the Digital Transformation Challenge* (pp. 19–34). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-031-15632-8_2
- Ferrara, E. (2023). Fairness and bias in artificial intelligence: A brief survey of sources, impacts, and mitigation strategies. *Sci*, 6(1), 3. https://doi.org/10.3390/sci6010003
- Gaffar, H., & Albarashdi, S. (2025). Copyright protection for Al-generated works: Exploring originality and ownership in a digital landscape. *Asian Journal of International Law*, 15(1), 23–46. https://doi.org/10.1017/s2044251323000735
- Geiger, C. (2024). Elaborating a Human Rights-Friendly Copyright Framework for Generative Al. *IIC-International Review of Intellectual Property and Competition Law*, 55(7), 1129–1165. https://doi.org/10.1007/s40319-024-01325-8
- Ghiurău, D., & Popescu, D. E. (2024). Distinguishing Reality from AI: Approaches for Detecting Synthetic Content. *Computers*, *14*(1), 1. https://doi.org/10.3390/computers14010001
- Giordani, J. (2024). Mitigating chatbots AI data privacy violations in the banking sector: A qualitative grounded theory study. *European Journal of Applied Science, Engineering and Technology*, 2(4), 14–65. https://doi.org/10.59324/ejaset.2024.2(4).02
- Gorwa, R., Binns, R., & Katzenbach, C. (2020). Algorithmic content moderation: Technical and political challenges in the automation of platform governance. *Big Data & Society*, 7(1), 1–15. https://doi.org/10.31235/osf.io/fj6pg
- Grimes, G. M., Schuetzler, R. M., & Giboney, J. S. (2021). Mental models and expectation violations in conversational Al interactions. *Decision Support Systems*, *144*, 113515. https://doi.org/10.1016/j.dss.2021.113515
- Haase, J., & Hanel, P. H. (2023). Artificial muses: Generative artificial intelligence chatbots have risen to human-level creativity. *Journal of Creativity*, 33(3), 100066. https://doi.org/10.1016/j.yjoc.2023.100066
- Hacker, P. (2023). The European Al liability directives—Critique of a half-hearted approach and lessons for the future. *Computer Law & Security Review*, *51*, 105871. https://doi.org/10.1016/j.clsr.2023.105871
- Hacohen, U. Y., & Elkin-Koren, N. (2024). Copyright regenerated: harnessing genAl to measure originality and copyright scope. *Harvard Journal of Law & Technology*, *37*(2). https://doi.org/10.2139/ssrn.4530717
- Huang, K., Wang, Y., Goertzel, B., Li, Y., Wright, S., & Ponnapalli, J. (2024). Generative Al Security. In *Future of Business and Finance*. https://doi.org/10.1007/978-3-031-54252-7
- Hutson, J. (2024). The Evolving Role of Copyright Law in the Age of Al-Generated Works. *Journal of Digital Technologies and Law*, 2(4), 886–914. https://doi.org/10.21202/jdtl.2024.43
- Iguh, N. A., & Anyanor, O. E. (2023). The impact of technology and the use of the internet on copyright enforcement in Nigeria. *Nnamdi Azikiwe University Journal of International Law and Jurisprudence*, 14(2), 1–12.
- Jan, A. (2023). Algorithmic Justice: Bias in Code, Bias in Society. *Journal for Social Science Studies*, 1(2), 113–121. Kelly, S., Kaye, S. A., White, K. M., & Oviedo-Trespalacios, O. (2023). Clearing the way for participatory data stewardship in artificial intelligence development: a mixed methods approach. *Ergonomics*, 66(11),
- Khalaf, M. A. (2025). Does attitude towards plagiarism predict aigiarism using ChatGPT? *AI and Ethics*, *5*(1), 677–688. https://doi.org/10.1007/s43681-024-00426-5

1782-1799. https://doi.org/10.1080/00140139.2023.2289864

- Kim, S. (2024). Research ethics and issues regarding the use of ChatGPT-like artificial intelligence platforms by authors and reviewers: a narrative review. *Science Editing*, 11(2), 96–106. https://doi.org/10.6087/kcse.343
- Kirakosyan, A. (2024). Intellectual Property Ownership of Al-Generated Content. *Digital Law Journal*, 4(3), 40–50. https://doi.org/10.38044/2686-9136-2023-4-3-3
- Knutson, K. R. (2020). Anything you can do, AI can't do better: An analysis of conception as a requirement for patent inventorship and a rationale for excluding AI inventors. *Cybaris*, 11(2), Article 2.
- Kumar, P. (2024). Intellectual Property Rights (IPR): Nurturing Creativity, Fostering Innovation. *Idealistic Journal of Advanced Research in Progressive Spectrums (IJARPS) eISSN*-2583-6986, 3(02), 32–38.
- Kyriakidou, O. (2025). Algorithms and global diversity management. In Research Handbook on Global Diversity Management (pp. 148–163). Edward Elgar Publishing.

- Lalanda, P., & Roig, N. A. (2025). Ethical and Legal Challenges of Artificial Intelligence with Respect to Intellectual Property. In A. Baraybar-Fernández, S. Arrufat-Martín, B. Díaz Díaz (Eds.), *The AI Revolution. Research Series on Responsible Enterprise Ecosystems* (pp. 63–80). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-80411-3_6
- Lee, D. C., Jhang, J. H., & Baek, T. H. (2025). Al-Generated News Content: The Impact of AI Writer Identity and Perceived AI Human-Likeness. *International Journal of Human–Computer Interaction*, 41(21), 13862–13874. https://doi.org/10.1080/10447318.2025.2477739
- Lemley, M. A. (2024). How Generative Al Turns Copyright Upside Down. *Science and Technology Law Review*, 25(2). https://doi.org/10.52214/stlr.v25i2.12761
- Lopez, M., & Gonzalez, I. (2024). Artificial Intelligence Is Not Human: The Legal Determination of Inventorship and Co-Inventorship, the Intellectual Property of AI Inventions, and the Development of Risk Management Guidelines. *J. Pat. & Trademark Off. Soc'y*, 104, 135.
- Lovell, J. (2024). Legal Aspects of Artificial Intelligence Personhood: Exploring the Possibility of Granting Legal Personhood to Advanced Ai Systems and the Implications for Liability, Rights and Responsibilities. International Journal of Artificial Intelligence and Machine Learning, 4(2), 23–40. https://doi.org/10.51483/ijaiml.4.2.2024.23-40
- Lucchi, N. (2024). ChatGPT: A Case Study on Copyright Challenges for Generative Artificial Intelligence Systems. *European Journal of Risk Regulation*, 15(3), 602–624. https://doi.org/10.1017/err.2023.59
- Marchenko, V., Dombrovska, A., & Prodaivoda, V. (2024). Comparative Analysis of Regulatory Acts of the EU Countries on the Protection of Intellectual Property in the Conditions of the Use of Artificial Intelligence. *Public Administration and Law Review*, 3(19), 44–66. https://doi.org/10.36690/2674-5216-2024-3-44-66
- Margoni, T., & Kretschmer, M. (2022). A deeper look into the EU text and data mining exceptions: harmonisation, data ownership, and the future of technology. *GRUR international*, 71(8), 685–701. https://doi.org/10.1093/grurint/ikac054
- Marsoof, A., Luco, A. C., Tan, H. H., & Joty, S. R. (2022). Content-filtering AI systems—limitations, challenges and regulatory approaches. *Information & Communications Technology Law*, 32, 64–101. https://doi.org/10.1080/13600834.2022.2078395
- Mary, T., & Enoch, O. (2024). Legal Considerations in the Development and Commercialization of Corporate Intellectual Property. *International Journal of Rural Development, Environment and Health Research*, 8(3), 01–20. https://doi.org/10.22161/ijreh.8.3.1
- Md, S., Md Saiful, I., & Jannatul, F. (2025). Harnessing Al Adoption in the Workforce A Pathway to Sustainable Competitive Advantage through Intelligent Decision-Making and Skill Transformation. *American Journal of Economics and Business Management*, 8(3), 954–976.
- Mohamed, Y. A., Mohamed, A. H., Kannan, A., Bashir, M., Adiel, M. A., & Elsadig, M. A. (2024). Navigating the Ethical Terrain of Al-Generated Text Tools: A Review. *IEEE Access*, *12*, 197061–197120. https://doi.org/10.1109/access.2024.3521945
- Obianyo, C. I. (2025). Legal challenges of artificial intelligence as a creator in patent and copyright. *Nnamdi Azikiwe University Journal of Private and Property Law*, 2(1), 88–99.
- Oda, B. (2023). No Ghost in the Machine: On Human Creativity and Why Al-Generated Images from Text Prompts Are Not Protected by Copyright. *The SciTech Lawyer*, 20(1), 20–28.
- Olaniyi, G. (2024). Enterprise Architects Leveraging AI for Business Innovation. https://doi.org/10.2139/ssrn.5033526
- Olwan, R., & Al-Balushi, R. (2023). The Requirement of Originality in the Copyright Laws of the Arab Gulf States: Perspectives from Author's Rights Jurisdictions. *GRUR International*, 72(11), 1030–1052. https://doi.org/10.1093/grurint/kiad065
- Ooi, K. B., Tan, G. W. H., Al-Emran, M., Al-Sharafi, M. A., Capatina, A., Chakraborty, A., ... & Wong, L. W. (2025). The potential of generative artificial intelligence across disciplines: Perspectives and future directions. *Journal of Computer Information Systems*, 65(1), 76–107. https://doi.org/10.1080/08874417.2023.2261010
- Padmanabhan, A., & Wadsworth, T. J. (2024). A common law theory of ownership for Al-created properties. Journal of the Patent and Trademark Office Society, 104, 155–182.
- Peukert, C., & Windisch, M. (2024). The economics of copyright in the digital age. *Journal of Economic Surveys*. https://doi.org/10.1111/joes.12632
- Picht, P. G., & Thouvenin, F. (2023). Al and IP: Theory to policy and back again—policy and research recommendations at the intersection of artificial intelligence and Intellectual Property. *IIC-International Review of Intellectual Property and Competition Law*, 54(6), 916–940. https://doi.org/10.1007/s40319-023-01344-5

- Pokrovskaya, A. (2025). The Legal Status of Artificial Intelligence: The Need to Form a Legal Personality and Regulate Copyright. *Artificial Intelligence and Applications*, 3(2). https://doi.org/10.47852/bonviewaia52023901
- Prakash, G., & Sabharwal, D. (2024). Al Revolution in Online Media: Transforming Content Creation, Distribution, and Consumption. *Media and Al: Navigating*, 179.
- Rodríguez, N. D., Ser, J. D., Coeckelbergh, M., Prado, M. L., Herrera-Viedma, E. E., & Herrera, F. (2023). Connecting the Dots in Trustworthy Artificial Intelligence: From Al Principles, Ethics, and Key Requirements to Responsible Al Systems and Regulation. *Information Fusion*, 99, 101896. https://doi.org/10.1016/j.inffus.2023.101896
- Rotolo, A. (2025). Human, All Too Human: A Philosophical Investigation on Intellectual Property Rights for Albased Creativity. In *The Cyber-Creativity Process* (pp. 239–263). Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-031-84535-2_8
- Salle, S., & Rini, W. S. D. (2025). Development of artificial intelligence regulations and implications for intellectual property rights protection. *Contemporary Issues on Indonesian Social Justice and Legal Reform*, 1(1), 58–77.
- Schmit, C. D., Doerr, M. J., & Wagner, J. K. (2023). Leveraging IP for Al governance. *Science*, 379(6633), 646–648. https://doi.org/10.1126/science.ade3743
- Shahbazi, N., Lin, Y., Asudeh, A., & Jagadish, H. V. (2022). A survey on techniques for identifying and resolving representation bias in data. *CoRR*, *abs/2203.11852*. https://doi.org/10.48550/arXiv.2203.11852
- Shalaby, A. (2024). Digital Sustainable Growth Model (DSGM): Achieving synergy between economy and technology to mitigate AGI risks and address Global debt challenges. *Journal of Economy and Technology*. https://doi.org/10.1016/j.ject.2024.08.003
- Singh, S. (2024). Adapting Copyright in the Age of Al: Rethinking Authorship and Safeguarding Generative Al Work. Srivastava, A. (2024). Asserting Ownership of Intellectual Property Rights: Protection under Intellectual Property Law. Issue 2 Int'l JL Mgmt. & Human., 7, 3593.
- Tan, T. J. (2024). Artificial intelligence as inventor? SAcLJ, 36, 346.
- Tiwari, S. (2025). Biases and Fairness in LLMs. In *Generative AI: Techniques, Models and Applications* (pp. 229–242). Cham: Springer Nature Switzerland.
- Tully, R. (2024). Who owns artificial intelligence? In DS 131: Proceedings of the International Conference on Engineering and Product Design Education (E&PDE 2024) (pp. 545–550). https://doi.org/10.35199/epde.2024.92
- Tunç, A. (2025). Can Al determine its own future? *Al* & Society, 40(2), 775–786. https://doi.org/10.1007/s00146-024-01939-3
- Tyagi, K. (2024). Copyright, text & data mining and the innovation dimension of generative Al. *Journal of Intellectual Property Law & Practice*, 19(7), 557–570. https://doi.org/10.1093/jiplp/jpae028
- Uddagiri, C., & Isunuri, B. V. (2024). Ethical and Privacy Challenges of Generative AI. In *Generative AI: Current Trends and Applications* (pp. 219–244). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-97-8460-8_11
- Unnikrishnan, A. (2024). Analyzing the impact of emerging technologies on intellectual property rights (IPR): a comprehensive study on the challenges and opportunities in the digital age. *Law & World*, 29, 66. https://doi.org/10.36475/10.1.6
- Varona, D., & Suárez, J. L. (2022). Discrimination, bias, fairness, and trustworthy Al. *Applied Sciences*, *12*(12), 5826. https://doi.org/10.3390/app12125826
- Vărzaru, A. A., & Bocean, C. G. (2024). Digital transformation and innovation: The influence of digital technologies on turnover from innovation activities and types of innovation. *Systems*, *12*(9), 359. https://doi.org/10.3390/systems12090359
- Vebritha, S. (2024). Redefining Ownership and Originality in the Age of AI: A Legal and Ethical Review. *Sinergi International Journal of Law*, 2(4), 312–314. https://doi.org/10.61194/law.v2i4.726
- Vescovo, S. (2023). Rise of the Machines: The Future of Intellectual Property Rights in the Age of Artificial Intelligence. *Brooklyn Law Review*, 89, 221.
- Vig, S. (2024). Intersection of generative artificial intelligence and copyright: an Indian perspective. *Journal of Science and Technology Policy Management*. https://doi.org/10.1108/jstpm-08-2023-0145
- Walter, Y. (2024). Managing the race to the moon: Global policy and governance in Artificial Intelligence regulation—A contemporary overview and an analysis of socioeconomic consequences. *Discover Artificial Intelligence*, *4*, 14. https://doi.org/10.1007/s44163-024-00109-4
- Wang, L., Chen, X., Deng, X., Wen, H., You, M.H., Liu, W., Li, Q., & Li, J. (2024). Prompt engineering in consistency and reliability with the evidence-based guideline for LLMs. *NPJ Digital Medicine*, 7. https://doi.org/10.1038/s41746-024-01029-4

- Werzansky-Orland, Y. (2024). Al-generated content and the question of copyright. *Market: International Journal of Business*, *5*, 2–20.
- Xiao, Y. (2023). Decoding authorship: is there really no place for an algorithmic author under copyright law? *IIC-International Review of Intellectual Property and Competition Law*, 54(1), 5–25. https://doi.org/10.1007/s40319-022-01269-5
- Xiong, H. (2024). Research on confusing responses based on ChatGPT. *Applied and Computational Engineering*, 57, 90–97. https://doi.org/10.54254/2755-2721/57/20241315
- Xivuri, K., & Twinomurinzi, H. (2023). How AI developers can assure algorithmic fairness. *Discover Artificial Intelligence*, 3(1), 27. https://doi.org/10.1007/s44163-023-00074-4
- Zhang, Z., Ning, H., Shi, F., Farha, F., Xu, Y., Xu, J., ... & Choo, K. K. R. (2022). Artificial intelligence in cyber security: research advances, challenges, and opportunities. *Artificial Intelligence Review*, *55*, 1029–1053. https://doi.org/10.1007/s10462-021-09976-0

Сведения об авторе



Афувапе Колаволе — магистр права в области международного энергетического права, преподаватель, Школа права, Глобальный университет им. О. П. Джиндала **Адрес**: 131001, Индия, Харьяна, г. Сонипат, район Джагдишпур, ул. Сонипат Нарел

E-mail: afuwapekolawole@gmail.com

ORCID ID: https://orcid.org/0009-0001-5686-230X

Scopus Author ID: https://www.scopus.com/authid/detail.uri?authorId=59496613300 WoS Researcher ID: https://www.webofscience.com/wos/author/record/LPP-5259-2024 Google Scholar ID: https://scholar.google.com/citations?user=2tZOhdcAAAAJ

Конфликт интересов

Автор сообщает об отсутствии конфликта интересов.

Финансирование

Исследование не имело спонсорской поддержки.

Тематические рубрики

Рубрика OECD: 5.05 / Law Рубрика ASJC: 3308 / Law Рубрика WoS: OM / Law

Рубрика ГРНТИ: 10.07.45 / Право и научно-технический прогресс **Специальность ВАК**: 5.1.3 / Частно-правовые (цивилистические) науки

История статьи

Дата поступления – 25 июля 2025 г. Дата одобрения после рецензирования – 10 августа 2025 г. Дата принятия к опубликованию – 20 декабря 2025 г. Дата онлайн-размещения – 25 декабря 2025 г.