EISSN: 2622-9668|PISSN: 2622-982X
Volume 9 Nomor 2 Agustus 2026: 615-635
DOI: 10.30996/jhbbc.v9i2.133567
Jurnal Hukum Bisnis Bonum Commune

Who Owns Machine Creativity? Rethinking Intellectual Property Protection for and from Artificial Intelligence-Generated Works

Audrey Davita Ariella[1], Bima Kumara Dwi Atmaja[2*]
[1,2]Universitas Udayana, Indonesia
*Corresponding Author: bimakumara@unud.ac.id

Article History:
Submitted:
22-05-2026
Received:
29-05-2026
Accepted:
09-08-2026

Keywords:
intellectual property rights; artificial intelligence; artist's protection

Abstract
The study at hand aims to elaborate on growing tension regarding authorship, ownership, and unauthorized use of copyrighted works in Artificial Intelligence (AI) training datasets through the battle of generative AI and Indonesia's intellectual property protections. Generative AI's continued growth, resulting in systems such as ChatGPT, Midjourney, and DALL-E has challenged the anthropocentric foundations of Law Number 28 of 2014 concerning Copyright, which bestows these copyrights only to human creators. Accordingly, this research analyzes the extent to which Indonesia's existing legal framework is negated by AI-generated content and formulates models capable of responding to intellectual property issues caused by generative AI. In doing so, it employs a normative juridical method through the examination of legislation, legal doctrines, comparative legal studies, and relevant scholarly literature. It shall be concluded that Indonesia's copyright framework is not yet capable of addressing issues relating to AI-generated works, unauthorized data scraping, protection of moral and economic rights, and legal accountability within the AI ecosystem. This research proposes several responsive regulatory models, including the reformulation of authorship doctrine, the development of sui generis protection, mandatory transparency obligations for AI developers, compulsory licensing and collective remuneration mechanisms, to create a layered accountability framework. Ergo, a balanced and adaptive intellectual property system capable of protecting human creativity while accommodating technological innovation in Indonesia.

1. Introduction

Generative Artificial Intelligence (AI) has moved beyond a narrow computational function into a pervasive force reshaping creative production worldwide. The global generative AI market, valued at approximately USD 394.66 billion in 2026, is projected to sustain double-digit annual growth through the next decade, reflecting adoption at a scale that has outpaced most prior waves of digital technology.[1] Systems such as ChatGPT, Midjourney, DALL-E, Stable Diffusion, and Suno are now embedded in mainstream content production spanning text, visual art, music, software code, and audiovisual media, to the extent that a generated image or video circulating on social media is rarely treated as remarkable, but rather met with a baseline scepticism regarding its authenticity. This expansion has not occurred without legal consequence. Since 2023, more than seventy copyright infringement lawsuits have been filed against generative AI developers in the United States alone, culminating in the USD 1.5 billion settlement in *Bartz v. Anthropic*, the largest copyright settlement in United States history.[2] The World Intellectual Property Organization has likewise responded to the urgency of the issue, publishing the *WIPO Guide to Generative AI and Intellectual Property* in 2024 to signal a growing international consensus that existing copyright frameworks require

[1] Statista, "Generative AI – Worldwide," 2026.
[2] Copyright Alliance, "AI Copyright Lawsuit Developments in 2025: A Year in Review," 2026.

reassessment.[3] Indonesia's stake in this discussion is far from marginal: the creative economy contributed 7.28 percent to national GDP in 2024, valued at IDR 1,611.2 trillion, and absorbed 27.4 million workers 18.70 percent of the national workforce, in 2025 alone.[4] Legal uncertainty surrounding the ownership, authorship, and unauthorized use of copyrighted material in AI training, therefore, carries direct economic consequences for a labour force whose scale rivals that of Indonesia's other primary industries. At the same time, this growth has destabilized the philosophical and doctrinal foundations of copyright law, raising urgent questions concerning originality, authorship, ownership, and consent where copyrighted works are used as AI training data. The emergence of AI-generated content ultimately raises the question of who owns machine-produced creativity, and to what extent existing intellectual property frameworks can protect human creators from the unauthorized exploitation of their works by AI systems.

In Indonesia, intellectual property protection is primarily governed through Law Number 28 of 2014 concerning Copyright (hereinafter referred to as Law No. 28/2014). In it, the concept of a "*pemegang hak cipta*" or "*pencipta*" also understood as "creator" is one or several persons who individually or jointly produce a unique and personal work. This understanding reflects vehemently the traditional anthropocentric doctrine of copyright law; only human beings are recognized as legal creators capable of holding moral and economic rights. Consequently, regardless of their sophistication, AI systems, shall not presently be recognized as "creators" under Indonesian law. Currently, the problem does not stop there. Instead, it gets increasingly complex as generative AI systems produce outputs that reproduce and, most importantly, substantially derive from copyrighted materials. These original works were then "scraped" from the internet without the consent of their creators. Thus, AI training datasets, data scraping, and ownership of AI-generated works has created legal uncertainty for creators whose works are stolen. Furthermore, it raises a question for those who develop and will someday, eventually, hope to gain copyright from an AI generated work.

This issue is no longer theoretical. Globally, numerous lawsuits have emerged against AI companies accused of using copyrighted materials without permission to train generative AI systems. Cases involving Getty Images against Stability AI and lawsuits brought by artists against Midjourney and DeviantArt illustrate the growing conflict between technological innovation and copyright protection. Books that are increasingly viral due to social media have become another breeding ground for what is deemed as "AI slop". Similar concerns have begun to emerge in Indonesia, particularly among digital artists, illustrators, musicians, and writers whose works can easily be collected and processed by AI systems through automated web scraping. Such practices potentially violate the exclusive economic rights guaranteed under Article 9 of Law No. 28/2014, which grants copyright holders exclusive authority over reproduction, adaptation, distribution, and commercial use of their works. Nevertheless, Indonesian legislation has not yet clearly addressed whether AI training constitutes copyright infringement or whether AI-generated outputs may qualify as protected works.

[3] WIPO, "WIPO Guide to Generative AI and Intellectual Property," 2024.
[4] Badan Pusat Statistik & Kementerian Ekonomi Kreatif, "Statistik Ekonomi Kreatif Indonesia 2025," 2025, https://www.bps.go.id/id/news/2025/11/17/805/bps--ekonomi-kreatif-serap-tenaga-kerja-27-4-juta-tahun-2025.html.

These gaps in the current regulation concerning generative AI lays a foundation of worry that Indonesia's copyright regime remains reactive rather than adaptive toward technological disruption. Existing legal provisions were drafted within a paradigm that assumed creativity originated solely from human intellectual labor. As a result, the law struggles to respond to situations where AI autonomously generates creative outputs based on massive datasets collected from human-created works. The ambiguity becomes particularly evident regarding whether AI-generated content fulfills the originality requirement under copyright law and whether users, developers, or corporations operating AI systems can claim ownership over such outputs.

Several previous studies have attempted to analyze the relationship between AI and copyright law in Indonesia. Chrisna Bagus Edhita Praja et al., in "Authorship and Ownership of AI-Generated Works in Indonesia: A Doctrinal and Comparative Review," argue that Indonesia's copyright framework remains firmly centered on human authorship and therefore cannot directly recognize AI-generated works as copyrightable creations. The study proposes adapting the doctrine of Work Made for Hire to address ownership ambiguity in AI-generated content.[5] However, the research mainly focuses on ownership allocation and does not comprehensively discuss the issue of unauthorized scraping of copyrighted materials for AI training datasets.

Similarly, Martha Tri Lestari, in "The Ownership Status of Copyrighted Works Resulting from the Use of AI Chat GPT Reviewed from Law No. 28 of 2014," concludes that Indonesian positive law currently lacks explicit regulation recognizing autonomous AI-generated works as protected creations.[6] Although the study provides important doctrinal analysis regarding legal certainty, it primarily examines ownership status and does not explore mechanisms to protect artists whose works are exploited by generative AI systems without consent.

Another relevant study by Muhammad Akmal Mukhasibi and Selamat Widodo entitled "Analysis of the Principle of Copyright Ownership of Works Produced by Artificial Intelligence (AI) in a Positive Legal Perspective" emphasizes that only humans can be recognized as copyright holders under Indonesian law because originality and creativity are interpreted as products of human intellectual effort.[3] Nevertheless, the study does not sufficiently examine comparative approaches from other jurisdictions regarding licensing systems, opt-out mechanisms, or transparency obligations for AI developers in the use of copyrighted training data.[7]

Taken together, these three studies expose a shared analytical boundary rather than a set of unrelated shortcomings. The first study confines its inquiry to ownership allocation

[5] Chrisna Bagus Edhita Praja, Budi Agus Riswandi, Sri Wartini, Hary Abdul Hakim, and Gerald Antang Espares, "Authorship and Ownership of AI-Generated Works in Indonesia: A Doctrinal and Comparative Review," *Jurnal Media Hukum* 32, no. 1 (May 20, 2025):151–70, https://doi.org/10.18196/jmh.v32i1.25383.

[6] Martha Tri Lestari, "Status Kepemilikan Terhadap Karya Cipta Hasil Dari Pengagunaan Artificial Intelligence (AI) Chat GPT Ditinjau Dari UU No 28 Tahun 2014," *Majelis: Jurnal Hukum Indonesia* 3, no. 1 (February 3, 2026):160–69, https://doi.org/10.62383/majelis.v3i1.1516.

[7] Muhammad Akmal Mukhasibi and Selamat Widodo, "Analisis Prinsip Ownership Hak Cipta Terhadap Karya Hasil Artificial Intelligence (AI) Dalam Perspektif Hukum Positif," *Jurnal Penelitian Serambi Hukum* 18, no. 02 (2025): 297–307.

through an adapted Work Made for Hire doctrine.[8] The second study restricts its analysis to the doctrinal status of ChatGPT-generated output under existing positive law.[9] The third study limits its discussion to the threshold requirement of human authorship. None of these studies connects the question of AI-generated works' copyrightability to the parallel problem of unauthorized data scraping, and none extends its analysis into a comparative regulatory model capable of protecting Indonesian artists while accommodating the operational realities of generative AI training.[10] This unaddressed intersection between authorship doctrine, data-scraping accountability, and comparative regulatory design constitutes the research gap this article seeks to fill.

Building on this gap, this research possesses several novelties. First, this article not only examines whether AI-generated works can receive intellectual property protection under Indonesian law, but also critically analyzes how Indonesia's existing copyright framework fails to adequately protect artists from unauthorized scraping and use of their works in generative AI training systems. Second, this article integrates comparative legal developments from other jurisdictions, particularly the United States and the European Union, concerning transparency obligations, consent-based data usage, and human-authorship requirements in AI-generated works. Third, this research proposes a responsive regulatory model that balances technological innovation with the protection of creators' economic and moral rights through mechanisms such as compulsory licensing, opt-out protections, AI transparency obligations, and human-centered copyright standards.[11]

From a comparative perspective, this study selects the United States and the European Union as comparator jurisdictions rather than surveying AI copyright regulation globally, for three convergent reasons. First, both jurisdictions host the majority of the world's leading generative AI developers, including OpenAI, Google, Anthropic, Microsoft, and Stability AI, which places their courts and legislatures at the forefront of AI-related copyright adjudication and rule-making. [12] Second, the two jurisdictions represent contrasting legal traditions: common law adjudication through case-by-case judicial reasoning in the United States, and codified, harmonized regulation through directly applicable legislation in the European Union, thereby offering two structurally different models against which Indonesia's own civil law framework can be meaningfully measured. [13] Third, both jurisdictions' regulatory choices

[8] Chrisna Bagus Edhita Praja, "Authorship and Ownership of AI-Generated Works in Indonesia: A Doctrinal and Comparative Review," 2025.
[9] Martha Tri Lestari, "Status Kepemilikan Terhadap Karya Cipta Hasil Dari Pengagunaan Artificial Intelligence (AI) Chat GPT Ditinjau Dari UU No 28 Tahun 2014," 2026.
[10] Elirica Aliyah and Irwan Bauw, "Dilema Kepengarangan Manusia Dan Urgensi Perlindungan Sui Generis Dalam Pengaturan Hak Cipta Terhadap Karya Kecerdasan Buatan (AI)" 1, no. 1 (2025): 192–201.
[11] Nanda Yuniza Eviani, Maskun Maskun, and Ahmad Fachri Faqi, "Legal Challenges of AI-Induced Copyright Infringement: Evaluating Liability and Dispute Resolution Mechanisms in Digital Era," *Jambura Law Review* 6, no. 2 (2024): 403–28.
[12] Nicola Lucchi, "ChatGPT: A Case Study on Copyright Challenges for Generative Artificial Intelligence Systems," *European Journal of Risk Regulation* 15, no. 3 (August 29, 2024): 602–24, https://doi.org/10.1017/err.2023.59.
[13] Andres Guadamuz, "The EU ' s Artificial Intelligence Act and Copyright," no. October 2024 (2025): 213–19, https://doi.org/10.1111/jwip.12330.

carry substantial extraterritorial influence on developing legal systems, since international technology governance frequently follows standards set in Washington and Brussels, making their approaches the most consequential reference points for an emerging jurisdiction such as Indonesia. [14] Empirically, developments in these two systems increasingly demonstrate that copyright regimes worldwide continue to prioritize human authorship. In the United States, the Copyright Office's refusal to register a purely AI-generated work was affirmed at both the district and appellate levels, confirming that works lacking sufficient human creative contribution cannot receive copyright protection. Likewise, the European Union's AI Act, which entered into force in August 2024, imposes transparency and accountability obligations on providers of general-purpose AI models regarding the copyrighted data used for training purposes.[15] These developments suggest a growing global consensus that, while AI may function as a creative tool, legal protection must remain centered on human intellectual contribution and the protection of creators' rights.

Although Article 40 of Law No. 28/2014 recognizes various forms of creative works protected by copyright, the law implicitly assumes the existence of human creators behind such works. Furthermore, Article 1 paragraph (2) and Article 1 paragraph (27) reinforce the conception that copyright originates from human intellectual ability. Consequently, AI-generated outputs that emerge autonomously without substantial human intervention occupy an uncertain legal position. At the same time, artists whose works are scraped into AI training datasets remain vulnerable due to the absence of consent mechanisms, remuneration systems, or regulatory safeguards ensuring transparency from AI companies.

Therefore, this research becomes significant because it addresses an urgent legal issue arising from the intersection between technological advancement and intellectual property protection. This article aims to analyze the extent to which Indonesia's existing regulatory framework can respond to intellectual property issues caused by generative AI and to formulate a legal model capable of protecting artists from unauthorized exploitation while also determining the legal status of AI-generated works within Indonesia's copyright regime. By doing so, this research seeks to contribute toward the development of adaptive, balanced, and future-oriented intellectual property regulation in Indonesia amidst the growing influence of artificial intelligence.

2. Methods

The research used in this scientific article is a theoretical aspect of legal science, therefore, the normative legal research method is used within the context of legal science as a science of norms.[16] The aim is to gather legal materials and information using various sources, such as those found in libraries and other scientific papers available online. Several approaches are recognized in legal research. The approaches used in this research are the statute approach

[14] Lu Sudirman, Hari Sutra Disemadi, Henry Soelistyo Budi, Jihyun Park, and Ninne Zahara Silviani, "Intellectual Property Challenges for AI-Driven Creativity: A Focus on Copyright and Patents in Emerging Economies," *Lex Scientia Law Review* 9, no. 1 (May 31, 2025): 1285–1312, https://doi.org/10.15294/lslr.v9i1.20611.
[15] Guadamuz, "The EU ' s Artificial Intelligence Act and Copyright."
[16] Peter Mahmud Marzuki, *Penelitian Hukum: Edisi Revisi* (Jakarta: Kencana, 2016).

and the case approach. This research uses a normative legal research method (normative juridical) which starts from the existence of normative problems.

In keeping with the normative nature of research,[17] this study utilizes both primary and secondary legal materials. Primary legal materials are binding legal materials in the form of statutory regulations, particularly those governing or relating to the subject matter discussed in this research. The secondary legal materials provide explanations of primary legal materials in the form of books or journals by legal experts, specialists, and scholars.

3. Results and Discussion

3.1. The Extent of Indonesia's Existing Protection of Intellectual Property Rights Against AI-Generated Content

Indonesia's copyright framework is premised upon an exclusively anthropocentric conception of authorship, wherein only human beings are recognized as legal subjects capable of generating works deserving of protection. Law No 28/2014 defines "Creator" under Article 1(2) as one or more persons who, individually or collectively, produce a distinctive and personal creation, a formulation that philosophically presupposes the exercise of human consciousness, subjective judgment, and intellectual volition as indispensable preconditions for authorship. Similarly, Article 1(3) defines "Creation" as any work in the fields of science, art, or literature that arises from inspiration, thought, imagination, dexterity, skill, or expertise attributes long understood within copyright doctrine as exclusively human in character. However, such a categorical reading risks oversimplifying the actual process by which contemporary AI-generated outputs are produced. In practice, the outputs of generative AI platforms, such as Midjourney, DALL-E, or Stable Diffusion, rarely emerge in the absence of human involvement; rather, they are the product of deliberate human actions, including prompt engineering, iterative refinement, parameter configuration, and creative curation. Accordingly, the legally significant question is not whether AI can function as an author in the abstract, but rather to what degree human intellectual contribution is present and whether that contribution suffices to satisfy the statutory requirements of authorship and originality under Law No 28/2014.

A conceptually rigorous analysis of this issue necessitates a tripartite distinction among categories of AI-related creative output that give rise to materially different legal consequences. The first category consists of *human-authored works employing AI as a tool*, wherein AI functions merely as a technical instrument subordinate to the author's overriding creative direction; such works retain full eligibility for copyright protection under the existing framework. The second category encompasses *human–AI collaborative works*, wherein the human contribution manifested through substantive creative decisions, selective judgment, or meaningful curatorial intervention co-constitutes the final output alongside the AI system's generative capacity; the copyright status of such works turns on whether the human contribution independently satisfies the threshold of originality required under Article 1(2) and Article 40 of Law No 28/2014. The third category involves *fully autonomous AI-generated works*, wherein no meaningful human creative agency is exercised beyond the mere activation of the system; under the current statutory framework, such outputs occupy a condition of normative indeterminacy rather than a complete legal vacuum, insofar as existing provisions

[17] Nur Solikin, *Pengantar Metodologi Penelitian Hukum* (Jawa Timur: Penerbit Qiara Media, 2021).

remain operable for human-generated works yet provide no definitive criteria for attributing authorship, determining initial rights-holding, or establishing liability in contexts where creative output is produced without substantive human intellectual intervention.[18]

This normative vacuum is further exacerbated by the absence of a single article in Law No 28/2014 that explicitly mentions the existence of AI, both as a means of creation and as an entity that has the potential to produce works. The law was drafted in an era when AI had not yet reached the generative capacity it has today, so all its legislative assumptions rested on the paradigm that creativity is the exclusive domain of humans. As a result, when a work is generated entirely by an AI system without substantial human creative intervention, Indonesian law is unable to determine who holds the exclusive rights to the work, whether it is the AI developer, the AI user, or no one else.[19]

The normative incapacities of Indonesia's copyright framework become most apparent when its key provisions are tested against the operational realities of generative AI. Under Article 9 of Law No 28/2014, creators are granted a set of exclusive rights encompassing reproduction, translation, adaptation, arrangement, transformation, distribution, public performance, announcement, communication, and rental of their works rights designed to afford human authors comprehensive control over the exploitation of their creative output. When generative AI systems are trained on vast corpora of copyrighted works harvested through automated web scraping without the knowledge or consent of the rights holders, a large-scale process of reproduction and adaptation occurs that is substantively analogous to the acts enumerated under Article 9. Whether such training constitutes actionable infringement, however, remains a contested legal question: courts in multiple jurisdictions are still deliberating whether the ingestion of works into an AI training dataset amounts to reproduction in the copyright sense, whether vector embeddings constitute copies of protected expression, and whether outputs generated from latent space representations qualify as derivative works as illustrated by ongoing proceedings in *Andersen v. Stability AI* and *Getty Images v. Stability AI*. Law No 28/2014 provides no mechanism to resolve these questions within the Indonesian legal order, leaving both creators and AI developers without adequate legal certainty.[20]

The analytical gap widens further when Article 40, Article 27, and Article 16 of Law No 28/2014 are considered in conjunction. Article 40 enumerates the categories of protected works spanning literary, artistic, musical, cinematographic, photographic, and digital creations, all of which presuppose the existence of a human creative subject. When AI-generated outputs are aesthetically indistinguishable from these protected categories, a foundational question of copyrightability arises. Two competing doctrinal approaches have emerged in this debate: the first maintains that copyright protection must remain conditional upon human authorship,

[18] Aliyah and Bauw, "Dilema Kepengarangan Manusia Dan Urgensi Perlindungan Sui Generis Dalam Pengaturan Hak Cipta Terhadap Karya Kecerdasan Buatan (AI)."
[19] Randy Artawijaya, Dyah Permata, and Budi Asri, "Analisis Asas Orisinalitas Dalam Pasal 1 Undang – Undang No. 28 Tahun 2014 Tentang Hak Cipta Terhadap Karya Yang Dihasilkan Oleh Artificial Intelligence," *Jurnal Sosial Teknologi* 5, no. 12 (December, 2025): 4287–95, https://doi.org/10.59188/jurnalsostech.v5i12.32572.
[20] Nanda Yuniza Eviani, "Legal Challenges of AI-Induced Copyright Infringement : Evaluating Liability and Dispute Resolution Mechanisms in Digital Era" 6, no. 02 (2024): 403–28.

since the statutory criteria of originality and personal expression cannot be satisfied absent genuine human intellectual contribution; the second contends that copyright eligibility may be extended to AI-assisted or AI-collaborative outputs where human involvement manifested through substantive prompt engineering, iterative selection, or creative curation is sufficiently present to meet the originality threshold. This article aligns with the first approach as the normatively superior position, while acknowledging that hybrid works involving meaningful human creative agency may warrant protection under the existing framework, provided the human contribution independently satisfies the requirements of Articles 1(2) and 40. Separately, Article 1(27) defines a license as written authorization granted by a rights holder to another party to exercise economic rights, a mechanism premised entirely on a human-to-human legal relationship that fails to accommodate the multilateral and automated nature of AI platform licensing. More critically, Article 16 of Law No 28/2014, which classifies copyright as an intangible movable property right subject to transfer, assignment, or inheritance, raises a question the existing framework leaves entirely unanswered: if an AI-generated output were to qualify for protection, who would be recognized as the initial rights holder from whom any subsequent transfer could legally originate? Whether the AI developer would occupy that position, the end user, the platform operator, or a designated third party remains normatively indeterminate, and the absence of any provision addressing this proprietary dimension constitutes one of the most consequential lacunae in Indonesia's current copyright regime.[21]

A comparative legal analysis of how other jurisdictions have responded to the intersection of generative AI and copyright law reveals not merely that Indonesia lags regulatorily, but more fundamentally that the legal principles and institutional mechanisms adopted elsewhere offer transferable frameworks whose underlying rationale warrants careful examination. The selection of the European Union, the United States, and Singapore as comparator jurisdictions is not arbitrary: each represents a distinct regulatory philosophy, rule-based supranational governance, jurisprudence-driven common law development, and pragmatic statutory adaptation, respectively and together they delineate the principal approaches available to policymakers navigating the tension between technological innovation and copyright protection. In the European Union, the AI Act of July 2024 imposes mandatory transparency obligations on developers of general-purpose AI models, requiring disclosure of training data sources and compliance with applicable copyright law. The *ratio legis* of this instrument rests upon the principle of accountability by design: the EU legislature determined that the systemic information asymmetry between AI developers and rights holders constitutes a structural market failure that cannot be corrected through ex post litigation alone, and therefore requires ex ante disclosure obligations as a precondition for market access. What Indonesia may meaningfully adapt from this model is not the specific institutional architecture of EU law, but the underlying regulatory logic, namely, that transparency obligations imposed at the point of model development, rather than at the point of output commercialization, more effectively protect the interests of creators whose works enter training datasets without consent.[22]

---

[21] Gede Puja Darmadinata, Si Ngurah Ardhya, and Ratna Artha Windari, "Urgensi Regulasi Baru UU ITE Untuk Mengatasi Plagiarisme Karya AI Generatif," 2026, 2872–79.
[22] Guadamuz, "The EU ' s Artificial Intelligence Act and Copyright."

In the United States, the judicial resolution of *Thaler v. Perlmutter* reaffirmed the human authorship requirement as a non-negotiable precondition for copyright protection, thereby providing a doctrinal anchor that Indonesia currently lacks. The legal principle extractable from this jurisprudence that the degree of human creative contribution, rather than the mere involvement of AI as a production tool, is determinative of copyright eligibility is directly applicable to the interpretive challenges posed by Articles 1(2) and 40 of Law No 28/2014. Significantly, ongoing litigation in *Andersen v. Stability AI* and *Getty Images v. Stability AI* further indicates that the boundaries of infringement liability in AI training remain judicially unsettled even in the world's most advanced copyright jurisdiction, underscoring that Indonesia's normative indeterminacy is not an anomaly but part of a broader global legal evolution. Singapore's approach through the Copyright Act 2021 represents yet another regulatory philosophy: rather than prohibiting the use of copyrighted works in AI training, Singapore enacted a statutory exception for computational data analysis that permits such use subject to defined conditions, grounded in the legislative judgment that enabling data-driven innovation constitutes a legitimate public interest justifying a bounded limitation of exclusive rights. The transferable lesson for Indonesia is structural rather than textual, that a carefully delimited statutory exception, accompanied by opt-out rights and remuneration mechanisms, may resolve the tension between creator protection and technological development more efficiently than blanket prohibition or unrestricted permissiveness. Without integrating these comparative insights into a coherent reform agenda, Indonesia risks not merely regulatory backwardness, but the more consequential outcome of becoming a jurisdiction whose legal indeterminacy effectively subsidizes the unauthorized exploitation of its creators' works.

The negation caused by AI content to Indonesia's IPR framework is not only technical-normative, but also touches on the substance of the protection of moral and economic rights, which is the core of the copyright system itself. Article 5 of Law No 28/2014 guarantees the moral rights of creators that are eternal and non-transferable, including the right to include names, the right not to make changes that are detrimental to one's honor, and the right to defend rights in the event of distortion of their creations. When generative AI systems generate works that aesthetically closely resemble the visual style of a particular artist without permission and without attribution to the artist in question, there is a substantial violation of that moral right. AI systems learn to "mimic" human artistic styles through processing thousands of such artists' works in training datasets, but Indonesian law does not provide a mechanism that allows artists to refuse or obtain compensation for such use.[23]

Similarly, Article 8 of Law No 28/2014 guarantees the economic rights of creators in the form of exclusive rights to obtain economic benefits from their creations. However, when AI companies use the works of Indonesian artists as training materials for their systems and then commercialize the system globally, the artists whose works are exploited do not receive any compensation. There is no remuneration mechanism, no legally protected opt-out system, and

[23] Christophe Geiger, "Elaborating a Human Rights-Friendly Copyright Framework for Generative AI," *IIC - International Review of Intellectual Property and Competition Law* 55, no. 7 (June 3, 2024): 1129–65, https://doi.org/10.1007/s40319-024-01481-5.

no transparency obligation that can force AI developers to disclose which works are used in their training process.[24]

The inadequacy of Indonesia's copyright framework in the context of generative AI is not confined to technical-normative deficiencies; it simultaneously implicates the state's obligations under international human rights law. Article 27(2) of the Universal Declaration of Human Rights and Article 15(1)(c) of the International Covenant on Economic, Social and Cultural Rights, to which Indonesia is a state party, guarantee every person the right to the protection of moral and material interests resulting from scientific, literary, or artistic productions. These provisions establish that the protection of creators' rights is not merely a matter of domestic intellectual property policy, but a binding obligation of international law. When generative AI systems appropriate the works of Indonesian artists as training data without consent and without remuneration, and when the national legal framework provides no operative mechanism to prevent or remedy such exploitation, Indonesia fails to discharge this obligation in a manner consistent with its treaty commitments. The normative force of this argument derives not from general principle alone, but from the demonstrable absence of three specific legal instruments that international human rights standards require: a consent mechanism enabling creators to authorize or refuse the use of their works in AI training datasets, a remuneration system ensuring that creators whose works are commercially exploited receive equitable compensation, and a transparency obligation compelling AI developers to disclose which works have been incorporated into their training corpora.[25]

The cumulative effect of these deficiencies, the structural incapacity of the authorship doctrine, the absence of a proprietary framework for AI-generated outputs under Article 16, the unresolved infringement questions surrounding AI training under Article 9, and the failure to meet international human rights obligations reveal that the limitations of Indonesia's existing copyright regime are not remediable through piecemeal statutory interpretation alone. Three interconnected dimensions of regulatory failure must be established before any comprehensive reform can be adequately justified. First, copyright law is inherently constrained in its capacity to govern AI-generated outputs because its foundational premises that protected works originate from human intellectual labor and that authorship can be attributed to an identifiable natural or legal person are structurally ill-suited to autonomous generative processes. Second, the governance of AI training data implicates questions of data collection, processing, and use that extend beyond the scope of copyright into the domain of data law, raising concerns about consent, purpose limitation, and the commercial exploitation of large-scale data aggregation that copyright doctrine was never designed to address. Third, the allocation of liability for harms arising from AI-generated outputs, including copyright infringement, reputational damage caused by deepfakes, and the economic displacement of human creators, requires a framework of legal accountability capable of distributing responsibility proportionately among developers, platform operators, and end users across a

[24] Asep Hakim Zakiran, Muhammad Raihan Nugraha, and M. Pharrel Fauzhia Sya'bani Putra Faisal, "Legal Implications Of AI-Generated Works On Intellectual Property Subjects And Exclusive Rights In Indonesia," *Alauddin Law Development Journal* 7, no. 2 (2025): 167–181, https://doi.org/10.24252/aldev.v7i2.57126.

[25] Darmadinata, Ardhya, and Windari, "Urgensi Regulasi Baru UU ITE Untuk Mengatasi Plagiarisme Karya AI Generatif."

complex and often transnational supply chain. Only upon establishing these three dimensions of regulatory failure does the case for a *Lex AI* framework, a comprehensive, *sui generis* regulatory regime capable of governing the AI ecosystem as a whole, become analytically warranted rather than merely asserted.[26]

One solution that can be considered in the context of regulatory reform is the development of a compulsory licensing mechanism that allows AI developers to use copyrighted works in their dataset training, with the obligation to pay remuneration to creators through collective management institutions. Similar models have been applied in the music and broadcasting industries, and can be adapted for the context of using works in AI training. In addition, it is also worth considering an opt-out mechanism that gives creators the right to actively prohibit the use of their work in AI datasets, along with adequate sanctions for violators.[27] From the perspective of international law, the TRIPS Agreement, which is a reference for the Indonesian IPR system, has also not explicitly regulated the legal status of works produced without human contribution, thus creating legal space and differences in interpretation between countries. Indonesia has the opportunity to play an active role in pushing for the amendment of TRIPS to include a clear definition of "AI work", while at the same time strengthening its national regulations so as not to become a weak jurisdiction in the protection of IPR in the AI era.[28]

The necessary reforms are not just partial amendments to certain articles of Law No 28/2014, but a comprehensive update that includes: first, the establishment of clear criteria regarding the level of human involvement required for an AI-based work to obtain copyright protection; second, setting transparency obligations for AI developers regarding the training data sources used; third, the establishment of a fair remuneration mechanism for creators whose work is used in AI training; and fourth, affirmation of standards for the protection of human works from the risk of imitation and exploitation by generative AI systems.[29]

Without such reforms, Indonesia's IPR regulatory framework will continue to face deeper negativity as the sophistication and widespread adoption of generative AI technology increase. This condition not only harms individual creators but also has the potential to hinder the development of the national creative economy ecosystem, which should be one of the pillars of Indonesia's economic development in the digital era. Furthermore, persistent legal uncertainty in this area will ultimately undermine creative industry players' confidence in the state's ability to protect their intellectual output, which could lead to reduced incentives to create and innovate in the long run.[30]

---

[26] Darmadinata, Ardhya, and Windari.

[27] Nicola Lucchi, "ChatGPT: A Case Study on Copyright Challenges for Generative Artificial Intelligence Systems," *European Journal of Risk Regulation* 15, no. 3 (August 29, 2024): 602–24, https://doi.org/10.1017/err.2023.59.

[28] Ferdinand Lisaldy, Ismail, and Dewi Iryani, "Lex AI sebagai Tata Kelola Kecerdasan Buatan Sui Generis di Indonesia," *Technology and Economics Law Journal* 3, no. 1 (November 2, 2024):429–44, https://doi.org/10.21143/TELJ.vol3.no1.105.

[29] Reinhart Sebastian Pakasy, Ryan Adhi Pratama, and Hafidz Lukman Hakim, "Implikasi Hukum Penggunaan Artificial Intelegent Mempengaruhi Hak Cipta Karya Tulis Ilmiah," *Jurnal Media Akademika* 2, No. 11 (December 7, 2024): 1–15, https://doi.org/10.62281/v2i11.1062.

[30] Chama Lamellosa Nararya, Sudirman, Wahyudi Umar, "Kepastian Hukum Kekayaan Intelektual Terhadap Karya Ilmiah yang Dihasilkan Chatgpt," *Rewang Rencang : Lex Generalis Law Journal* 5, no. 4

3.2. Methods or Models That Can Be Implemented to Respond to Intellectual Property Rights Issues Caused by Generative AI

Any regulatory model designed to address the intellectual property challenges posed by generative AI must begin from a critical examination of the concept of authorship itself, rather than from the assumption that it requires immediate revision. Two competing doctrinal positions have emerged in academic and policy discourse on this question. The first maintains that the traditional requirement of human authorship must be preserved as a non-derogable condition for copyright protection, on the ground that copyright law is philosophically premised upon the protection of human intellectual labor and personal creative expression values that cannot, by definition, be instantiated in an algorithmic process. Proponents of this position argue that extending copyright protection to AI-generated outputs would dilute the incentive structure that copyright is designed to create, since AI systems do not require legal protection as an inducement to generate creative works. The second position contends that a rigid insistence on human authorship renders the copyright system incapable of responding to the practical reality of human–AI collaborative creation, and that a more calibrated approach, one that evaluates the nature and degree of human contribution rather than the mere presence or absence of a human author, would better serve the law's underlying purposes. This article takes the view that the first approach represents the normatively superior baseline, insofar as the foundational premises of Law No 28/2014 and the international instruments upon which it draws are irreconcilably premised upon human intellectual agency; however, its application must be rendered sufficiently flexible to accommodate hybrid works in which human creative contribution is substantive and independently satisfying of the originality threshold, lest the law become entirely unresponsive to the dominant mode of contemporary creative production.[31]

Within this doctrinal framework, two specific reform mechanisms warrant careful but critical consideration. The first is the adaptation of the *Work Made for Hire* doctrine originating in United States copyright law to the AI context. Under this doctrine, works produced by an employee within the scope of employment, or by an independent contractor under certain commissioning arrangements, vest initially in the employer or commissioning party rather than the individual creator. Its proponents argue that an analogous logic could be applied to AI-generated outputs, treating such works as produced "on behalf of" the developer or user who directs the system, thereby assigning initial rights to a human party without requiring the attribution of authorship to a non-human entity. However, this analogy is doctrinally strained: the *Work Made for Hire* doctrine presupposes an employment or commissioning relationship grounded in legal agency, contractual obligation, and the voluntary exercise of creative labor, none of which can be meaningfully attributed to an AI system. AI lacks legal personhood, cannot enter into contractual relationships, and exercises no volitional creative judgment; consequently, transposing the doctrine without first resolving these foundational incompatibilities risks introducing conceptual incoherence into the Indonesian legal system.

(November 29, 2024): 1–15, https://www.ojs.rewangrencang.com/index.php/JHLG/article/view/596.

[31] Aliyah and Bauw, "Dilema Kepengarangan Manusia Dan Urgensi Perlindungan Sui Generis Dalam Pengaturan Hak Cipta Terhadap Karya Kecerdasan Buatan (AI)."

A more defensible approach would be to treat the doctrine not as a direct analogical transplant, but as a structural model from which Indonesia may derive the principle of functional rights attribution, assigning initial ownership to the human party who bears meaningful creative and operational responsibility for the output while developing juridically autonomous criteria suited to the domestic legal order. The second mechanism concerns the development of a *sui generis* protection scheme for AI-generated works. Such a scheme must be constructed upon a conceptually rigorous standard of protectability that does not conflate *originality* with *uniqueness*: in copyright doctrine, originality denotes the independent intellectual creation of an author exercising personal creative judgment, whereas uniqueness denotes the statistical distinctiveness of an output relative to a reference corpus a criterion that is objectively measurable but legally insufficient to ground copyright protection, since a work may be unique yet entirely devoid of human creative authorship. A defensible *sui generis* standard would therefore assess the degree of human creative agency exercised in the generation, selection, and refinement of the output, complemented by a proportionally reduced protection term reflecting the non-human character of the productive process, and a mandatory benefit-sharing mechanism directing a portion of commercialization revenues to a collective compensation fund for creators whose works formed part of the AI training corpus.[32]

This *sui generis* model is relevant to consider in the Indonesian context because it opens up space for the state to establish protection regimes tailored to national needs without having to be tied to international precedents that may not fully suit the conditions of Indonesia's creative ecosystem. As a country with a huge population of artists, musicians, writers, and digital content creators, Indonesia has a strategic interest in ensuring that the protection model developed not only protects the interests of AI developers, most of whom are foreign companies, but also provides real protection for domestic creators whose works are vulnerable to exploitation.[33]

One of the root problems of IPR caused by generative AI is the lack of transparency regarding the datasets used in the AI model training process. Developers of generative AI systems generally do not disclose in detail which copyrighted works go into their training datasets, so creators have no way of knowing if their work has been exploited without permission. This lack of transparency not only magnifies the risk of undetected copyright infringement but also creates a fundamentally unfair information asymmetry between big tech companies and individual creators.

An effective response model should include a mandatory disclosure mechanism that requires developers and operators of generative AI systems to transparently document and disclose the data sources used in their model training. This mechanism can be realized through several concrete legal instruments. First, the obligation to register AI datasets with authorized

[32] Lu Sudirman, Hari Sutra Disemadi, Henry Soelistyo Budi, Jihyun Park, and Ninne Zahara Silviani, "Intellectual Property Challenges for AI-Driven Creativity: A Focus on Copyright and Patents in Emerging Economies," *Lex Scientia Law Review* 9, no. 1 (May 31, 2025): 1285–1312, https://doi.org/10.15294/lslr.v9i1.20611.
[33] Lu Sudirman, Hari Sutra Disemadi, Henry Soelistyo Budi, Jihyun Park, and Ninne Zahara Silviani, "Intellectual Property Challenges for AI-Driven Creativity: A Focus on Copyright and Patents in Emerging Economies," *Lex Scientia Law Review* 9, no. 1 (May 31, 2025): 1285–1312, https://doi.org/10.15294/lslr.v9i1.20611.

state institutions, such as the Directorate General of Intellectual Property (DJKI), is a prerequisite for obtaining an operational license in Indonesia. Second, the obligation to publish periodic transparency reports detailing the categories of works used, the estimated volume, and the mechanism taken to obtain permission for use. Third, the establishment of proportionate administrative sanctions for AI operators who fail to meet these transparency obligations.

From a comparative perspective, this approach to transparency obligations is in line with that already set out in the European Union's AI Act, which requires developers of general-purpose AI models to provide technical documentation regarding the training data used. Indonesia can adapt this kind of regulatory model by adapting it to existing institutional capacity and the characteristics of the domestic creative industry. In the context of Law No 28/2014, this kind of transparency obligation can be integrated through the addition of a special article or through the issuance of an implementing Government Regulation that technically regulates the mechanism for disclosure of AI datasets.[34]

The economic dimension of the IPR problem posed by generative AI demands the development of a remuneration model that allows creators to be fairly compensated for the use of their work in AI systems, without having to hinder the development of the technology itself. One of the most promising models in this context is the compulsory licensing system adapted for the AI ecosystem. In this system, AI developers are allowed to use copyrighted works for model training purposes, but with the obligation to pay regulatively determined royalties to collective management institutions that then distribute them to rights holders.[35]

This kind of mandatory licensing model has a strong precedent in the music and broadcasting industry, where blanket licensing has long been implemented to allow radio stations and streaming platforms to use a wide repertoire of songs without having to negotiate one-on-one permissions with each creator. Adapting this model for the AI context of training datasets will certainly require a number of technical adjustments, given the complexity and much larger scale of use. However, the basic principle of allowing for broad use while still guaranteeing compensation for creators remains relevant and can be operationalized through appropriate regulation.[36] The implementation of a mandatory licensing system for AI training requires amendments to Articles 80 to 87 of Law No 28/2014 which govern the licensing mechanism, by adding specific provisions regarding licensing for the use of works in artificial intelligence system training. In addition, the capacity of collective management institutions as stipulated in Articles 88 to 100 of Law No 28/2014needs to be strengthened to be able to

[34] Fauzan Iraldi Singarimbun, "Implikasi Hukum Penggunaan AI dalam Seni Grafis Terhadap Hak Kekayaan Intelektual," *JPPI (Jurnal Penelitian Pendidikan Indonesia)* 10, no. 3 (September 30, 2024): 886–93, https://doi.org/10.29210/020243889.

[35] Tanissa Mayra Tsabitha, "Perlindungan Hak Kekayaan Intelektual atas Karya AI: Studi Kasus ChatGPT dan DeepSeek dalam Perspektif TRIPS Agreement," *UNES Law Review* 8, no. 1 (September 23, 2025): 192–204, https://doi.org/10.31933/unesrev.v8i1.2472.

[36] Cokorda Gede Yasnu Suwargit, I Nyoman Suandika, and I Gusti Agung Ika Laksmi Mahadewi, "Perlindungan Hukum Terhadap Hasil Karya Artificial Intelligence Dalam Perspektif Hak Cipta Di Indonesia," *Nusantara Hasana Journal* 5, no. 7 (December 30, 2025): 289–305, https://doi.org/10.59003/nhj.v5i7.1813.

manage, distribute, and audit royalty streams from AI companies effectively and accountably.[37]

This collective remuneration mechanism ideally also comes with an opt-out system that gives creators the right to actively withdraw their work from the AI training dataset if they do not want their work to be used for that purpose, even if they choose not to participate in the available compensation system. This opt-out right is a manifestation of the moral rights of the creator as stipulated in Article 5 of Law No 28/2014, which guarantees the right of the creator not to give consent to the use of his work in certain ways that are contrary to his will.

The issue of legal liability for IPR violations caused by generative AI is one of the most complex challenges that must be answered by a comprehensive regulatory model. This complexity arises because in the AI ecosystem, there is a multiplicity of actors who each have a different level of contribution to the occurrence of breaches: developers who design and train AI models, platform operators who commercialize those systems, and users who generate specific outputs through interaction with AI systems. The ambiguity about who is responsible among these three groups of actors is one of the most significant weaknesses of the current legal framework.[38]

The tiered liability model offers a more nuanced and proportionate approach to addressing this complexity. In this model, legal responsibilities are distributed in tiers based on the level of control and economic benefits obtained by each actor. The AI developer, as the party who designs the system architecture and determines the composition of the training dataset, bears primary responsibility for violations sourced from the model training process. Platform operators, who commercialize AI systems to the public and derive economic benefits from their operations, bear secondary responsibility for the output generated through their platforms. The user, who provides specific instructions to the AI system to generate a specific output, bears tertiary responsibility for the use of the output that infringes the copyright of a third party.[39]

This layered accountability framework can be operationalized in the Indonesian legal system through the addition of a provision on "tiered liability for AI-based copyright infringement" to Law No 28/2014, or through the issuance of a special regulation governing the accountability mechanism. In addition, existing dispute resolution mechanisms need to be strengthened by considering the context of AI technology, including the possibility of utilizing alternative dispute resolution mechanisms that are faster and cheaper than conventional litigation.[40]

---

[37] Xukang Wang and Ying Cheng Wu, "Balancing Innovation and Regulation in the Age of Generative Artificial Intelligence," *Journal of Information Policy* 14, (July 2, 2024): 385–416, https://doi.org/10.5325/jinfopoli.14.2024.0012.

[38] Salma Naila Wandani, "Perlindungan Hak Cipta bagi Karya Seni oleh Sistem AI dalam Perspektif Hukum Teknologi Informasi: Studi Kasus AI Studio Ghibli," *STUDIA: Journal of Humanities and Education Studies* 1, no. 2 (November 20, 2025): 112–22.

[39] Syifa' Silvana, "Reformulasi Pengaturan Hak Cipta Karya Buatan Artificial Intelligence Melalui Doktrin Work Made For Hire," *Jurnal Kertha Semaya* 12, no. 1 (2023): 3094–3112, http://repository.upnvj.ac.id/id/eprint/28655.

[40] Tasya S. Ramli, Ahmad M. Ramli, Ranti F. Mayana, Ega Ramadayanti, and Rizki Fauzi, "Artificial Intelligence as Object of Intellectual Property in Indonesian Law," *The Journal of World Intellectual Property* 26 no. 2 (February 13, 2023): 142–54, https://doi.org/10.1111/jwip.12264.

A holistic and sustainable response model to IPR issues posed by generative AI cannot rely solely on a reactive top-down legislative approach. The speed of development of AI technology far exceeds the speed of the conventional legislation process, so a more adaptive and responsive approach to governance is needed. In this context, several complementary mechanisms can be considered as part of a comprehensive model. A holistic regulatory response to the intellectual property challenges posed by generative AI requires institutional and legislative reform that operates simultaneously across multiple levels. At the institutional level, the establishment of a dedicated AI regulatory authority merits serious consideration, but only upon the resolution of foundational questions of governance design that the existing literature has largely left unaddressed. Three institutional configurations are available to the Indonesian government: first, the expansion of the mandate and technical capacity of the DJKI under the Ministry of Law, which would have the advantage of locating AI governance within an existing body of sectoral expertise and international treaty obligations, though it risks limiting the regulatory scope to IPR-specific issues at the expense of the broader data governance and liability dimensions that AI regulation requires; second, the placement of AI oversight within the Ministry of Communication and Digital Affairs (*Kementerian Komunikasi dan Digital* - Komdigi), which would enable integration with existing digital infrastructure governance but may lack the legal expertise necessary to adjudicate copyright disputes; and third, the creation of an independent regulatory authority directly accountable to the President, modeled on analogous bodies in the financial and telecommunications sectors, which would provide the institutional autonomy and cross-sectoral mandate necessary to govern AI comprehensively, though at the cost of establishing an entirely new bureaucratic structure. The case for a new institution rather than an expanded mandate for existing bodies rests on a specific empirical premise that the regulatory complexity of AI governance exceeds the absorptive capacity of any single existing ministry, and this premise must be explicitly substantiated rather than assumed. Complementing formal institutional arrangements, principles-based regulatory instruments, industry codes of conduct, and soft law mechanisms offer the flexibility necessary to keep governance frameworks current with technological developments whose pace consistently outstrips the legislative cycle, and Indonesia's active engagement in WIPO and WTO forums on AI governance will be essential to ensuring that the regulatory standards being formed at the international level reflect the interests of developing countries and their creative communities.[41]

The legislative dimension of reform requires a degree of specificity that generic calls for amendment of the 2014 Law have thus far failed to provide. At a minimum, six targeted amendments are necessary to render Indonesia's copyright framework capable of governing the generative AI ecosystem. First, Article 1 of the 2014 Law must be supplemented with operational definitions of "artificial intelligence-based works" and "generative artificial intelligence systems," establishing with legal certainty the factual circumstances to which all subsequent provisions apply. Second, a new provision appropriately situated between Articles 1 and 40 must establish juridically measurable criteria for the minimum threshold of human creative contribution required for human–AI hybrid works to qualify for copyright

[41] Praja, "Authorship and Ownership of AI-Generated Works in Indonesia: A Doctrinal and Comparative Review."

protection, drawing upon the tripartite categorical framework of human-authored, collaborative, and fully autonomous AI works developed in the analytical sections above.

Third, Articles 80 to 87 governing licensing mechanisms must be amended to incorporate a compulsory licensing regime for the use of copyrighted works in AI training datasets, accompanied by a mandatory remuneration system administered through strengthened collective management institutions under Articles 88 to 100. Fourth, Articles 113 to 119 establishing sanctions for copyright infringement must be reconstructed to explicitly encompass infringements committed through or facilitated by AI systems, with liability distributed proportionately among developers, platform operators, and end users in accordance with the tiered accountability framework elaborated above. Fifth, a new provision modeled on the transparency obligations of the EU AI Act must require AI developers operating within Indonesian jurisdiction to register their training datasets with DJKI and publish periodic disclosure reports as a precondition for obtaining operational authorization. Sixth, Article 16, which classifies copyright as an intangible movable property right subject to transfer, must be supplemented with provisions specifying the initial rights holder of qualifying AI-assisted works and the permissible mechanisms for subsequent assignment, licensing, and inheritance of such rights. Without this level of legislative precision, the regulatory models proposed in this study will remain normatively aspirational rather than operationally enforceable, and Indonesia's creative economy will continue to bear the costs of a legal framework that was designed for a world in which machines could not create.[42]

4. Conclusions

This research has answered two main objectives that are the focus of the study, namely analyzing the extent to which Indonesia's intellectual property rights regulatory framework is negated by the phenomenon of content generated by generative AI, and formulating models or methods that can be implemented as an adaptive legal response to these challenges.

Regarding the first objective, this study emphasizes that Law No. 28/2014 contains structural incapacities that are fundamental in responding to the reality of generative AI. This inability is not merely an outdated problem, but is rooted in the anthropocentric construction that underlies the entire normative building of the law, in which creativity is exclusively understood as the domain of man. Consequently, there are layered negations against the Indonesian IPR system, including the unclear ownership status of AI works, the absence of a protection mechanism for artists from the practice of unauthorized data scraping, the weak guarantee of the moral and economic rights of creators in the AI ecosystem, and the absence of transparency obligations for AI system developers operating in Indonesian jurisdiction. This negation is exacerbated by the fact that Indonesia does not yet have a sectoral or specific legal instrument that directly regulates AI governance in relation to intellectual property protection, placing Indonesia far behind jurisdictions such as the European Union, the United States, and Singapore that have begun to build more responsive regulatory frameworks.

With regard to the second objective, this study formulates a number of complementary implementation models that need to be applied simultaneously so that the resulting legal response is truly effective. These models include: reformulation of authorship doctrine by

[42] Guadamuz, "The EU ' s Artificial Intelligence Act and Copyright."

integrating adaptation of the concept of work made for hire with the establishment of juridical indicators regarding human contribution thresholds in hybrid work; development of sui generis protection schemes specifically designed for AI works with distinctive standards of originality, duration of protection, and economic benefit-sharing mechanisms; implementation of dataset transparency obligations AI training as an instrument of developer accountability; the development of a mandatory licensing system accompanied by a collective remuneration mechanism and opt-out rights for creators; as well as the construction of a layered accountability framework that distributes legal responsibilities proportionately to developers, operators, and users of AI systems.

The findings of this study suggest that the comprehensive amendment to Law No. 28/2014 is a legislative step that can no longer be postponed. The amendment should ideally be complemented by the establishment of an AI regulatory body that has the technical capacity and authority to issue derivative regulations more responsively. In addition, Indonesia needs to take a more proactive position in international forums such as WIPO to ensure that the interests of developing countries, including the interests of domestic creators, are articulated in the global standards of AI governance that are being formed. At a more strategic level, IPR regulatory reform in the AI era must be understood not as an obstacle to innovation, but as a prerequisite for the creation of a fair innovation ecosystem, where technological advances and the protection of human creativity can develop synergistically and sustainably.

5. Acknowledgements

The author would like to express his deepest gratitude to all parties who have provided support, input, and assistance during the research and writing process of this article, so that this scientific work can be completed properly and on time.

6. Funding (optional)

-

7. References

Al-busaidi, Adil S, Raghu Raman, Laurie Hughes, Mousa Ahmed, Tegwen Malik, Yogesh K Dwivedi, Thuraiya Al- Alawi, et al. “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, no. 4 (2024): 100630. https://doi.org/10.1016/j.jik.2024.100630.

Aliyah, Elirica, and Irwan Bauw. “Dilema Kepengarangan Manusia dan Urgensi Perlindungan Sui Generis dalam Pengaturan Hak Cipta terhadap Karya Kecerdasan Buatan (AI).” STUDIA: Journal of Humanities and Education Studies 1, no. 1 (August 29, 2025): 192–201, https://doi.org/10.66749/cstzve64.

Anggarini, Ni Kadek Listya, Bagus Gede Ari Rama, Putu Eva Ditayani Antari, and Komang Satria Wibawa Putra. “Tinjauan Yuridis Terhadap Kebutuhan Pembaharuan Regulasi Hak Cipta Di Indonesia Dalam Menghadapi Perkembangan Karya Cipta Berbasis Artificial Intelligence (AI).” Consensus: Jurnal Ilmu Hukum 4, no. 1 (August 30, 2025): 87–98, https://ojs.stihpada.ac.id/index.php/consensus.

Artawijaya, Randy, Dyah Permata, and Budi Asri. “Analisis Asas Orisinalitas Dalam Pasal 1 Undang – Undang No. 28 Tahun 2014 Tentang Hak Cipta Terhadap Karya Yang

Dihasilkan Oleh Artificial Intelligence." Jurnal Sosial Teknologi 5, no. 12 (December, 2025): 4287–95, https://doi.org/10.59188/jurnalsostech.v5i12.32572.

Copyright Alliance. (2026, January 8). AI copyright lawsuit developments in 2025: A year in review. https://copyrightalliance.org/ai-copyright-lawsuit-developments-2025/

Badan Pusat Statistik & Kementerian Ekonomi Kreatif. (2025). Statistik ekonomi kreatif Indonesia 2025. Badan Pusat Statistik. https://www.bps.go.id/id/news/2025/11/17/805/bps--ekonomi-kreatif-serap-tenaga-kerja-27-4-juta-tahun-2025.html

Darmadinata, Gede Puja, Si Ngurah Ardhya, and Ratna Artha Windari. "Urgensi Regulasi Baru UU ITE untuk Mengatasi Plagiarisme Karya AI Generatif." Al-Zayn: Jurnal Ilmu Sosial & Hukum 4, no. 3 (May 1, 2026): 2872–79, https://doi.org/10.61104/alz.v4i3.574.

Ekawardani, Dibit Yuniar and Mochamad Cholil, "Pelindungan Hak Cipta Atas Karya Ilmiah Yang Dihasilkan Oleh Kecerdasan Buatan." Jurnal Hukum Lex Generalis 6, no. 4 (2025): 1–34. doi:10.56370/JHLG.V6I4.1276.

Eviani, Nanda Yuniza, Maskun Maskun, and Ahmad Fachri Faqi. "Legal Challenges of AI-Induced Copyright Infringement: Evaluating Liability and Dispute Resolution Mechanisms in Digital Era." Jambura Law Review 6, no. 2 (June 30, 2024): 403–28, https://doi.org/10.33756/jlr.v6i2.24459.

Geiger, Christophe. "Elaborating a Human Rights-Friendly Copyright Framework for Generative AI." IIC - International Review of Intellectual Property and Competition Law 55, no. 7 (June 3, 2024): 1129–65, https://doi.org/10.1007/s40319-024-01481-5.

Guadamuz, Andres. "The EU's Artificial Intelligence Act and Copyright." The Journal of World Intellect Property 29, no. 1 (July 21, 2024): 213–19, https://doi.org/10.1111/jwip.12330.

Jubaidi, Didi and Khoirunnisa. "Legal Analysis of the Advancement of AI and Blockchain Amid Lagging Digital Copyright Regulation in Indonesia." Journal of Judicial Review 27, no. 2 (December 1, 2025): 393–420, https://doi.org/10.37253/jjr.v27i2.11069.

Lestari, Martha Tri. "Status Kepemilikan Terhadap Karya Cipta Hasil Dari Pengagunaan Artificial Intelligence (AI) Chat GPT Ditinjau Dari UU No 28 Tahun 2014." Majelis: Jurnal Hukum Indonesia 3, no. 1 (February 3, 2026):160–69, https://doi.org/10.62383/majelis.v3i1.1516.

Lisaldy, Ferdinand, Ismail, and Dewi Iryani. "Lex AI sebagai Tata Kelola Kecerdasan Buatan Sui Generis di Indonesia," Technology and Economics Law Journal 3, no. 1 (November 2, 2024):429–44, https://doi.org/10.21143/TELJ.vol3.no1.105.

Lucchi, Nicola. "ChatGPT: A Case Study on Copyright Challenges for Generative Artificial Intelligence Systems." European Journal of Risk Regulation 15, no. 3 (August 29, 2024): 602–24, https://doi.org/10.1017/err.2023.59.

Mukhasibi, M. A., & Widodo, S. (2025). Analisis prinsip ownership hak cipta terhadap karya hasil artificial intelligence (AI) dalam perspektif hukum positif. Jurnal Penelitian Serambi Hukum, 18(2), 297–307. https://doi.org/10.59582/sh.v18i02.1337

Marzuki, Peter Mahmud. Penelitian Hukum: Edisi Revisi. Jakarta: Kencana, 2016.

Nararya, Chama Lamellosa, Sudirman, Wahyudi Umar. "Kepastian Hukum Kekayaan Intelektual Terhadap Karya Ilmiah yang Dihasilkan Chatgpt." Rewang Rencang: Lex

Generalis Law Journal 5, no. 4 (November 29, 2024): 1–15, https://www.ojs.rewangrencang.com/index.php/JHLG/article/view/596.

Noegroho, Dharmawan Setyo, and Rifki Fahrial Zainal. "Menelaah Tiga Pandangan Tentang Hak Kekayaan Intelektual Untuk Menjembatani Reformasi Kelembagaan Dan Hukum Di Era Ai." Jurnal Semeru 02, no. 01 (May, 2025): 170–77, https://doi.org/10.55499/semeru.v2i1.1546.

Pakasy, Reinhart Sebastian, Ryan Adhi Pratama, and Hafidz Lukman Hakim. "Implikasi Hukum Penggunaan Artificial Intelegent Mempengaruhi Hak Cipta Karya Tulis Ilmiah," Jurnal Media Akademika 2, no. 11 (December 7, 2024): 1–15, https://doi.org/10.62281/v2i11.1062.

Pasetti, Marcelo, James William Santos, Nicholas Kluge Corrêa, Nythamar de Oliveira, and Camila Palhares Barbosa. "Technical, Legal, and Ethical Challenges of Generative Artificial Intelligence: An Analysis of the Governance of Training Data and Copyrights." Discover Artificial Intelligence 5 (2025):193, https://doi.org/10.1007/s44163-025-00379-6.

Pokrovskaya, Anna V. "Infringement of AI Intellectual Property Rights and Legal Liability on E-Commerce Marketplaces: New Challenges." Society and Security Insights 7, no. 2 (February 5, 2024): 91–103, https://doi.org/10.14258/ssi.

Praja, Chrisna Bagus Edhita, Budi Agus Riswandi, Sri Wartini, Hary Abdul Hakim, and Gerald Antang Espares. "Authorship and Ownership of AI-Generated Works in Indonesia: A Doctrinal and Comparative Review." Jurnal Media Hukum 32, no. 1 (May 20, 2025):151–70, https://doi.org/10.18196/jmh.v32i1.25383.

Pratama, Muh Ersandi Rizki and Syahrul Hafiidz Syam. "Comparison of Laws Related to the Copyright of Visual Artworks Based on Generative AI (Artificial Intelligence) Reviewed from Indonesian and UK Laws." RechtIdee 19, no. 1, (June 30, 2024): 167–83, https://doi.org/10.21107/ri.v19i1.24265.

Praja, C. B. E., Riswandi, B. A., Wartini, S., Hakim, H. A., & Espares, G. A. (2025). Authorship and ownership of AI-generated works in Indonesia: A doctrinal and comparative review. Jurnal Media Hukum, 32(1), 151–170. https://doi.org/10.18196/jmh.v32i1.25383

Putri, Rizka Aminni, Saidin, and Jelly Leviza. "Pelindungan Hak Cipta Karya Sinematografi Atas Penggunaan Ai Generati Di Berbagai Platform Media Sosial." Journal of Science and Social Research 8, no. 4 (November 6, 2025): 3944–53, http://jurnal.goretanpena.com/index.php/JSSR.

Raharja, Made Doni Darma Dananjaya, Ida Ayu Sadnyini, Michael Angelo. "Copyright Regulation for AI-Generated Images Legal Approaches in Indonesia and the United States." SASI 30, no. 4 (December 21, 2024): 355–68, https://doi.org/10.47268/sasi.v30i4.2228.

Ramli, Tasya S., Ahmad M. Ramli, Ranti F. Mayana, Ega Ramadayanti, and Rizki Fauzi. "Artificial Intelligence as Object of Intellectual Property in Indonesian Law." The Journal of World Intellectual Property 26 no. 2 (February 13, 2023): 142–54, https://doi.org/10.1111/jwip.12264.

Samudra, Lintang Akbar and Yudho Taruno Muryanto, "Copyright Law Analysis Related to the Use of Artistic Image Works in Artificial Intelligence Training Data in Indonesia and

Singapore." International Journal of Law and Society 2, no. 2 (February 2, 2025): 167–183, https://doi.org/10.62951/ijls.v2i2.378.

Silvana, Syifa'. "Reformulasi Pengaturan Hak Cipta Karya Buatan Artificial Intelligence Melalui Doktrin Work Made For Hire." Jurnal Kertha Semaya 12, no. 1 (2023): 3094–3112, http://repository.upnvj.ac.id/id/eprint/28655.

Singarimbun, Fauzan Iraldi. "Implikasi Hukum Penggunaan AI dalam Seni Grafis Terhadap Hak Kekayaan Intelektual." JPPI (Jurnal Penelitian Pendidikan Indonesia) 10, no. 3 (September 30, 2024): 886–93, https://doi.org/10.29210/020243889.

Solikin, Nur. Pengantar Metodologi Penelitian Hukum. Jawa Timur: Penerbit Qiara Media, 2021.

Sudirman, Lu, Hari Sutra Disemadi, Henry Soelistyo Budi, Jihyun Park, and Ninne Zahara Silviani. "Intellectual Property Challenges for AI-Driven Creativity: A Focus on Copyright and Patents in Emerging Economies." Lex Scientia Law Review 9, no. 1 (May 31, 2025): 1285–1312, https://doi.org/10.15294/lslr.v9i1.20611.

Suwargit, Cokorda Gede Yasnu, I Nyoman Suandika, and I Gusti Agung Ika Laksmi Mahadewi. "Perlindungan Hukum Terhadap Hasil Karya Artificial Intelligence Dalam Perspektif Hak Cipta Di Indonesia." Nusantara Hasana Journal 5, no. 7 (December 30, 2025): 289–305, https://doi.org/10.59003/nhj.v5i7.1813.

Statista. (2026). Generative AI – Worldwide. Statista Market Insights. https://www.statista.com/outlook/tmo/artificial-intelligence/generative-ai/worldwide/

Tsabitha, Tanissa Mayra. "Perlindungan Hak Kekayaan Intelektual atas Karya AI: Studi Kasus ChatGPT dan DeepSeek dalam Perspektif TRIPS Agreement." UNES Law Review 8, no. 1 (September 23, 2025): 192–204, https://doi.org/10.31933/unesrev.v8i1.2472.

Wandani, Salma Naila. "Perlindungan Hak Cipta bagi Karya Seni oleh Sistem AI dalam Perspektif Hukum Teknologi Informasi: Studi Kasus AI Studio Ghibli." STUDIA: Journal of Humanities and Education Studies 1, no. 2 (November 20, 2025): 112–22.

Wang, Xukang and Ying Cheng Wu. "Balancing Innovation and Regulation in the Age of Generative Artificial Intelligence." Journal of Information Policy 14, (July 2, 2024): 385–416, https://doi.org/10.5325/jinfopoli.14.2024.0012.

World Intellectual Property Organization. (2024). WIPO guide to generative AI and intellectual property. WIPO. https://www.wipo.int/en/web/frontier-technologies/

Zakiran, Asep Hakim, Muhammad Raihan Nugraha, and M. Pharrel Fauzhia Sya'bani Putra Faisal. "Legal Implications of AI-Generated Works on Intellectual Property Subjects and Exclusive Rights in Indonesia," Alauddin Law Development Journal 7, no. 2 (2025): 167–181, https://doi.org/10.24252/aldev.v7i2.57126.