

ARTIFICIAL INTELLIGENCE AS BRAND CREATOR AND INFRINGER: A CRITICAL LITERATURE REVIEW OF BRAND OWNERSHIP, REGISTRATION AND LEGAL PROTECTION IN THE ERA OF GENERATIVE AI

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Abstract

Artificial intelligence, particularly generative AI, has transformed the role of brands as human creative products by enabling the automatic creation of names, logos and visual identities. This article examines AI as both a creator and an infringer of brands, focusing on three key aspects: ownership, registration, and legal protection of brands in the era of generative AI. It is analysed that the regulatory framework for brands based on human authorship faces serious challenges when AI output is not fully controlled by humans, thereby raising uncertainties regarding the subject of rights, uniqueness, and the validity of registration. On the other hand, AI also has the potential to be a source of trademark infringement when its outputs resemble or incorporate elements of registered trademarks, whether through data learning processes or irresponsible use, thus requiring a re-evaluation of legal liability and protection mechanisms. This article argues that trademark law needs to evolve towards a more adaptive, responsive, and risk-based approach, so as to accommodate the dynamics of AI without compromising the principles of legal certainty, justice, and the protection of exclusive rights for businesses.

Keywords: artificial intelligence, generative AI, brands, brand ownership, trademark registration, trademark infringement, legal protection, intellectual property rights.

Introduction

The development of artificial intelligence (AI), particularly generative AI, has brought about significant transformation across various industrial sectors, including the creative and branding industries. This technology enables the automatic creation of content, ranging from text and images to visual brand identities, which were previously the exclusive domain of humans. The presence of AI in the creative process raises fundamental questions regarding the shifting role of humans as the primary creators within the intellectual property ecosystem (R. A. Waelen, 2023).

Generative AI such as GPT, DALL·E and various similar models is now widely used to generate brand names, slogans, logos and marketing strategies. This creates efficiency whilst opening up opportunities for innovation in the business world. However, the use of AI in brand creation also presents new complexities, particularly regarding the legal aspects and ownership of such works (Beverley-Smith et al., 2005).

In the context of trademark law, the fundamental principle that has long applied designates individuals or legal entities as the primary subjects holding rights to trademarks. However, with the emergence of AI as an entity capable of producing

works independently or semi-ly, a debate has arisen as to whether AI can be regarded as a creator or merely as an aid in the creative process (Zeng, 2020).

Ownership issues become increasingly complex when AI outputs are not entirely controlled by the user, but are generated through extensive data-driven machine learning processes. This raises questions regarding who is entitled to the resulting trademarks—whether the AI developer, the user, or indeed whether no party can legitimately claim ownership (Spinello, 2007). In addition to ownership issues, the aspect of trademark registration also faces new challenges in the era of generative AI. Current trademark registration systems require elements of uniqueness and distinctiveness, which can become problematic when AI generates trademarks based on patterns already present in its training dataset (Spinello, 2007).

On the other hand, AI does not merely act as a creator, but also has the potential to become a trademark infringer. Generative AI may inadvertently generate names or logos that resemble registered trademarks, thereby potentially giving rise to legal disputes. This phenomenon highlights the ambivalent nature of AI as both an innovator and a threat within the intellectual property system (Lemley & Casey, 2020). The issue of trademark infringement by AI is also closely linked to the data sources used in the model training process. Many AI systems are trained using data extracted from the internet without explicit permission, including protected trademarks. This raises issues regarding indirect infringement and legal liability for the use of such data (Putra, 2015).

Questions regarding legal liability are becoming increasingly relevant in cases of trademark infringement involving AI. Does liability lie with the system developer, the end user, or the platform provider? This lack of clarity highlights a legal gap in the regulation of the interaction between AI and intellectual property systems (Syahronny & Dewayanto, 2024).

At the global level, various jurisdictions are beginning to respond to these developments with differing approaches. The European Union, the United States and several Asian countries have begun discussing regulatory reforms covering AI and intellectual property. However, to date there is no comprehensive international consensus regarding the legal status of works generated by AI (Truli, 2018).

In the Indonesian context, the trademark regulations set out in Law No. 20 of 2016 on Trademarks and Geographical Indications have not yet explicitly addressed the phenomenon of generative AI. This has the potential to create legal uncertainty, both for businesses and for law enforcement agencies when dealing with disputes involving AI (Oktavia & Sudarwanto, 2025). Beyond legal aspects, ethical issues are also a key concern in the use of AI for brand creation. Reliance on AI may diminish the originality and diversity of human creativity, and has the potential to lead to the homogenisation of brand identities in the global market. This raises questions regarding the value of authenticity in modern branding (R. Waelen, 2022).

In light of these various issues, this study aims to examine the role of AI as both a creator and an infringer of trademarks, focusing on the aspects of ownership, registration and legal protection. It is hoped that this study will make a theoretical and practical contribution to the development of a legal framework that is adaptable to advancements in AI technology in the digital age.

Research Methodology

This study employs a literature review method using a qualitative approach, with the aim of critically analysing various sources of literature concerning the role of artificial intelligence in the creation and infringement of trademarks. Data was obtained from secondary sources, including books, scientific journal articles, reports from international organisations, and legislation relevant to intellectual property law and AI technology. Data collection was carried out through systematic searches of academic databases such as Google Scholar and Scopus, as well as official legal sources, and was subsequently analysed using descriptive-analytical methods to identify patterns, gaps, and developments in existing legal concepts. This approach enables the authors to compile a critical synthesis of issues regarding ownership, registration, and legal protection of trademarks in the era of generative AI (Eliyah & Aslan, 2025) ; (Farrukh & Sajjad, 2023) .

Results and Discussion

AI as a Brand Creator: Issues of Ownership and Registration

The development of generative AI has transformed the way brands are created, with artificial intelligence systems now capable of automatically generating names, slogans, logos and visual identities according to user instructions (R. Waelen, 2022) . In this context, AI is no longer merely a tool, but an actor that contributes significantly to the creative process, thereby raising new questions about who should be considered the “creator” of a brand (Zeng, 2020) .

Within the legal framework of trademarks, the concept of creation still rests on the principle of *human authorship*, namely that a human being or a legal entity is the sole subject capable of acquiring trademark rights (Spinello, 2007) . The emergence of AI capable of independently generating trademark outputs challenges the fundamental assumption that ownership of intellectual property rights can only reside with human actors (Spinello, 2007) . If AI generates a trademark without direct human influence, a dilemma arises: can such a trademark be considered to fulfil the element of ‘human creation’ that forms the basis of legal protection? A number of studies confirm that, according to many trademark regulations, works generated entirely by automated systems without human intervention are likely to be deemed ineligible for exclusive rights (Beverley-Smith et al., 2005) .

An examination of Indonesian regulations reveals that Law No. 20 of 2016 on Trademarks and Geographical Indications (MIG Law) explicitly stipulates that the legal

subjects of a trademark are “natural persons or legal entities”, whereas AI does not fall within this category (Rizaldi, 2024). Consequently, AI-generated works used as trademarks are unlikely to be directly recognised as objects of trademark rights without human involvement as the creator or applicant.

In practice, AI often acts as a co-creator: users formulate instructions, select the output, and decide on the name or logo to be registered, ensuring that the element of ‘human creativity’ remains evident (Syahronny & Dewayanto, 2024). In this scenario, ownership of the trademark is usually transferred to the human or legal entity utilising the AI, on the assumption that the human contribution is sufficiently significant in the selection and adaptation process (Truli, 2018).

Nevertheless, the level of human involvement in AI-based creative processes can vary greatly, ranging from initial setup to minor modifications, making it difficult for law enforcement to determine the threshold of ‘human contribution’ required to qualify for trademark protection. A number of analyses indicate the need for clear normative parameters so that human involvement can be objectively measured in the context of AI-generated trademarks (Putra, 2015). In addition to the issue of authorship, AI also affects the elements of “originality” and “distinctiveness” required for trademark registration. As AI is trained using massive datasets encompassing numerous existing brands and designs, its output has the potential to resemble or incorporate familiar patterns, thereby diminishing the brand’s uniqueness (Votto et al., 2021). This phenomenon raises the risk that AI-generated brands may not be sufficiently distinct to meet the legal criteria for registration.

A concrete example can be seen in trademark registration practices in other countries; for instance, OpenAI’s failure to register ChatGPT as a trademark because the term “GPT” was deemed descriptive and generic within the AI industry ((et al., 2023)). This demonstrates that trademarks generated by or associated with AI may be rejected if they do not meet the criteria of distinctiveness, clarity, and distinctiveness, even if the creative process involves advanced technology (Shatila, 2025).

In Indonesia, the trademark registration system has also begun to adopt AI technology to speed up trademark searches and the detection of similarities. However, the regulations governing trademark registration do not yet explicitly address AI-generated creations, leading to uncertainty regarding the registration criteria for trademarks produced by automated systems (Rizaldi, 2024).

From an ethical perspective, ownership of AI-generated brands also raises questions regarding fairness and the distribution of economic value. If AI is trained using data that includes brands and copyrighted works belonging to others, then ‘new creations’ by AI may be viewed as a form of indirect exploitation of works belonging to the public or third parties (Binns, 2018). This calls for stricter regulations regarding the origin of data and the principles of recognising rights over training outputs (Samuelson, 2017). Uncertainty regarding ownership and registration requirements also opens the door to future legal disputes. For instance, conflicts may arise between

AI users, platform developers, and third parties who feel their trademarks have been diluted or imitated by AI outputs. Within the Indonesian legal framework, the Trademark Law (UU MIG) stipulates that trademark rights are exclusive rights held solely by the registered applicant; consequently, any party using the same trademark or a substantially similar one without permission may be deemed an infringer (Rachbini et al., 2023).

Therefore, the issue of ownership and registration of AI-generated trademarks is not merely technical in nature, but also relates to legal certainty and the protection of businesses (Votto et al., 2021). Without adaptive regulation, the use of AI as a creator of trademarks may lead to an imbalance between the drive for innovation and the protection of third parties' exclusive rights.

A number of comparative studies indicate that the European Union is beginning to adopt a *risk-based approach* through the AI Act, which emphasises the principles of transparency, human oversight, and compliance assessment (Act, 2024). Such an approach could be adopted as a model for the trademark system in Indonesia, for example by requiring disclosure of AI involvement and human contribution in the trademark creation process.

Thus, AI as a creator of trademarks presents a twofold challenge: on the one hand, it drives efficiency and innovation; on the other, it challenges the fundamental principles of ownership and registration under trademark law. To address this challenge, regulatory reforms are required that explicitly accommodate the role of AI whilst upholding the principles of legal certainty, fairness, and the protection of exclusive rights for trademark owners.

AI as a Trademark Infringer: Risks and Legal Protection

Generative AI not only acts as a creator, but also has the potential to be a source of trademark infringement when its output resembles or imitates a registered trademark (SIP Law Firm, 2026). In the context of trademark law, the mere existence of 'substantial similarity' is sufficient to cause consumer confusion; thus, AI-generated results resembling a well-known trademark may be categorised as an infringement, even in the absence of any intent to copy (Oktavia & Sudarwanto, 2025).

This risk is exacerbated by the way AI operates, having been trained on massive datasets comprising text, images and brand designs circulating on the internet, including registered trademarks (Dewi, 2020). Although the process does not always involve direct copying, the patterns, colours, shapes and visual compositions adopted by AI can produce outputs that are substantially similar to external brands, thereby triggering potential confusion regarding the source (Binns, 2018).

Under the Indonesian Trademarks and Geographical Indications Act (Law No. 20/2016), trademark infringement occurs where a trademark is used, without authorisation, in a manner that is substantially or entirely similar for similar goods or services, thereby misleading consumers. This condition remains relevant even when a

similar trademark is generated by AI; the form of use, medium, and technology of its creation do not negate the element of infringement provided that the elements of unauthorised use and consumer confusion are met (Oktavia & Sudarwanto, 2025).

Consequently, the phenomenon of 'AI clone branding' poses a new threat to brand owners, namely when AI generates names, logos or visual identities that are so similar to well-known brands that consumers are harmed or misled (Rachbini et al., 2023). Case examples such as the lawsuit against Perplexity AI by Merriam-Webster and Encyclopaedia Britannica, which accused the AI of displaying other parties' brand names and copyrighted content in search results, demonstrate that AI output can have dual implications regarding trademark and copyright infringement.

Under the Indonesian legal system, AI itself is not recognised as a legal entity that can be held criminally or civilly liable; consequently, liability for infringements is attributed to the relevant individuals or legal entities. The criminal law framework stipulates that liability is limited to "any person", thereby positioning AI as a legal object rather than an independent legal actor (Dewi, 2020).

Consequently, when a trademark infringement occurs due to AI-generated work, three main parties may be held liable: the trademark owner as the victim, the AI developer or service provider as the creator of the system, and the AI user who instructs the production of the content. Critical analysis suggests that AI users are most likely to be held liable as they are the ones using the AI output commercially, although developers may also be considered jointly liable if they fail to provide adequate control mechanisms (Gultom, 2018).

Article 100(2) of the Trademark Law stipulates that any person who uses a trademark that is substantially similar to a registered trademark for similar goods or services may be subject to criminal penalties of up to four years' imprisonment and a fine of Rp2 billion (SIP Law Firm, 2026). The Indonesian government has also established a legal enforcement mechanism through the Directorate General of Intellectual Property (DJKI) for administrative proceedings, accompanied by criminal reports and civil lawsuits in the event of AI-based trademark infringements (Oktavia & Sudarwanto, 2025).

From a protection perspective, advancements in AI technology are also being utilised as a tool for detecting trademark infringements, for example through automated monitoring systems that use artificial intelligence to identify visual and textual similarities in trademarks across various digital platforms. Such approaches enhance the capacity of trademark owners to carry out *trademark monitoring* and accelerate the identification of infringements, thereby making enforcement more efficient (Gultom, 2018).

In substance, AI has also led to the expansion of trademark infringement into the digital realm, such as the sale of counterfeit goods featuring AI-generated branding, programmatic advertising, and promotional content on social media containing imitation trademarks. In this context, infringement takes the form not only of name

imitation, but also the use of colours, fonts, layouts, and visual patterns reminiscent of well-known brands, thereby creating a risk of wider consumer confusion (Binns, 2018).

A number of legal studies emphasise the need for preventive strategies for trademark owners, such as conducting *trademark clearance* checks prior to adopting AI-generated content for commercial purposes, as well as monitoring the use of names and visuals similar to their trademarks (Novyana et al., 2024). Trademark owners are also encouraged to strengthen their IP portfolios, register various variants of names and designs, and utilise technology-based monitoring mechanisms to enable a swift response to all infringements involving AI.

The risk of infringement by AI also raises ethical and reputational concerns, as the use of similar or imitative trademarks can undermine consumer trust and diminish the value of the original brand (R. Waelen, 2022). Owners of well-known trademarks are at risk of suffering economic losses, a decline in brand equity, and reputational damage, particularly when AI generates promotional content that is of poor quality or fails to meet the brand's standards (Rachbini et al., 2023).

From a comparative perspective, the EU's regulation through the AI Act promotes a risk-based approach and the principle of transparency, which could be adapted as a model to strengthen trademark protection in Indonesia. This model emphasises the need for human oversight of AI systems, disclosure of AI involvement in creation, and assessment of the impact on intellectual property rights, thereby providing a basis for an update to the MIG Law that is more responsive to technology (Act, 2024).

In practice, brand owners are advised not only to rely on legal mechanisms, but also to establish partnerships with AI developers and platform service providers to draw up ethical guidelines for brand usage. Such partnerships may include the implementation of content filters, the removal of infringing content, and the development of automated reporting systems that enable faster responses to claims of brand infringement (Sinaga & Ferdian, 2020).

Thus, AI as a trademark infringer underscores that technological innovation must not disregard the principles of protecting exclusive economic rights and legal certainty. Moving forward, synergy is required between regulatory updates, adaptive law enforcement, and the strengthening of an IPR compliance culture so that AI can contribute to a sustainable, innovative trademark ecosystem that continues to respect the property rights of others.

Conclusion

Artificial intelligence, particularly generative AI, has transformed the status of brands from human creative products into entities that can emerge through semi-automated or even almost entirely automated processes. In the context of ownership and registration, AI raises legal uncertainties because traditional regulatory

frameworks are still based on the assumption that humans or legal entities are the sole subjects of trademark rights, whilst AI is treated as an object or a tool. This necessitates a re-evaluation of the concepts of *authorship* and the criteria for distinctiveness in AI-based trademark registration to ensure that exclusive rights are not undermined, whilst still facilitating innovation.

On the other hand, AI also has the potential to infringe on trademarks when its output resembles or incorporates elements of registered trademarks, whether through the data training process or irresponsible use by users. As AI is not recognised as a legal entity, liability for infringements falls on the user, developer, or platform provider, with criminal and civil implications under the Trademarks Act and the existing legal framework. Uncertainty in defining the boundaries of human involvement and AI oversight mechanisms increases the risk of global infringements and damage to brand reputation.

Overall, the era of generative AI is forcing trademark law to transform from a linear, human-centric system towards a more adaptive, responsive and risk-based framework. Regulatory updates are required that explicitly acknowledge the dynamics of AI's involvement in the creation and registration processes, whilst strengthening protection mechanisms through technical monitoring systems, robust enforcement, and ethical collaboration with AI developers.

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