
AN ANALYSIS OF INTELLECTUAL PROPERTY CHALLENGES FOR AI-GENERATED WORKS IN THE ENTERTAINMENT INDUSTRY

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ABSTRACT

The rapid advancement of generative artificial intelligence (AI) has transformed creative processes within the entertainment industry, enabling new forms of content production. However, existing intellectual property (IP) frameworks largely fail to address the complexities arising from AI-generated works, particularly regarding authorship and ownership. Most jurisdictions require a natural person to be named as an author or inventor, leaving fully autonomous AI creations unprotected. This paper examines the legal ambiguities surrounding both the input data used to train AI models and the resulting AI-generated outputs, highlighting divergent international approaches. Through an analysis of landmark cases and evolving legislation, it explores how current IP laws struggle to balance innovation, protection of human creators, and ethical AI usage, further examining the implications for the entertainment industry, specifically within the music and film sectors. The study argues for urgent reform of international IP frameworks to establish clear guidelines for AI-generated content to ensure fairness, foster innovation, and address emerging risks in the global entertainment landscape.

Keywords: AI-generated content, intellectual property law, entertainment industry, authorship, legal reform

Research Question: To what extent does the existing intellectual property framework adequately address rights related to AI-generated works in the entertainment industry?

Introduction

Has the thought ever struck you that the movie you were last watching may have been the work of artificial intelligence? It may sound strange, but the likelihood of this happening could increase exponentially in the coming years.

Before we delve into this vast topic, let's first understand what the term 'intellectual property' means. As per WIPO (2020), "Intellectual property (IP) refers to creations of the mind, such as inventions, literary and artistic works, designs, symbols, names, and images used in commerce". Intellectual property rights are the rights given to persons over the creations of their minds. They usually grant the creator an exclusive right to use their creation for a certain period of time. However, what one may not understand is that they do a whole lot more than solely establishing ownership over creations. For instance, in the entertainment industry, they aid producers in obtaining the funds to begin a particular project, enable the directors, actors, and artists working on the same film to have a steady source of income, and even play a role in protecting the film's post-production through trademarks and copyrights.

Let's now move to our next aspect of discussion: artificial intelligence (AI). IBM defines AI as "a category of technology that enables computers and machines to simulate human learning, comprehension, problem solving, decision making, creativity, and autonomy" (Stryker and Kavlakoglu, 2024). It is highly valued for its ability to process data at incredible speeds, uncovering data trends and patterns in seconds or minutes, allowing for real-time insights into critical operations. Additionally, it may also be used to draw inferences through trial-and-error learning.

With the rapid advancement of generative AI technologies such as Grok, Gemini, and OpenAI's models, creators in the entertainment industry, including filmmakers, music producers, and writers, are increasingly using AI to generate original content. These AI-generated works challenge the conventional boundaries of authorship and ownership, raising legal and ethical questions about whether existing intellectual property (IP) frameworks can adequately account for non-human creators. It is hence the question that arises: To what extent does the existing

intellectual property framework adequately address rights related to AI-generated works in the entertainment industry?

This paper explores the extent to which the current IP framework addresses rights related to AI-generated works in the entertainment industry, arguing that conventional approaches may be insufficient and that reform may be necessary to ensure fairness, innovation, and legal clarity.

Rights in Input Data Used to Train AI Models and Infringement of IP

Before exploring the rights associated with AI-generated outputs, it is essential to examine the status of the data used to train these models. Large Language Models (LLMs), which power many generative AI systems used in entertainment, are trained on massive datasets, typically having a vast dataset of up to 570 GB in storage. However, much of this training data comprises original intellectual and artistic creations that are protected under copyright law (Hayward et al., 2024). This raises a foundational legal question: Does the use of such copyrighted material in training AI constitute infringement, or does it fall under fair use or similar exceptions?

Let's first understand the meaning of 'infringement'. Infringement of IP laws can be said to have taken place if there is a direct reproduction or distribution of another individual's copyrighted work without permission. Different judicial systems around the world have varying stances on the matter. For instance, as per an article by Hayward et al. (2024), in the EU, there are multiple exceptions and limitations (E&Ls) which apply to areas such as education and teaching, research purposes but limit blatant text and data mining for commercial purposes, while in China and Australia there are exceptions to copyright infringement if they are "fair dealings" or used for purposes including personal study, private research, journalism and news reports among others.

In the United States, the fair use doctrine is often invoked to justify data training on copyrighted content (Khurana, 2025). This is done by applying a four-factor test that considers the manner in which the AI is used, the nature of the copyrighted work, the percentage of the material copied, and the effect on the market for the original work. This aims to determine whether an AI's output is in the interest of fair use, which ensures due importance to the rights of the creator.

Singapore and Japan, on the other hand, take an unconventional stance regarding the handling of infringement; they permit the use of copyrighted material in the training of AI systems, provided that the information has been obtained through lawful access. On the contrary, the current legal framework in the UK does not allow for unauthorized usage of copyright-protected material for synthesizing generative AI datasets, except where it is carried out with the permission of the copyright owner and for purely non-commercial purposes (Smith-Higgins, 2025).

The ambiguity on this matter leads to real-world legal conflicts, as seen in the Getty Images vs Stability AI case. Getty claims Stability AI used close to 12 million of its copyrighted images without a license to train its text-to-image generator (Behan, Connolly, and Lambert, 2025). Getty argues that this completely goes against European copyright laws as a whole. Similarly, artists and authors have launched lawsuits against generative AI companies such as OpenAI and Meta, with the argument that their works were used for training large language models without requisite approvals/permissions.

Intellectual Property Rights in AI-Generated Output Data

Intellectual property laws are and have been designed to protect creations of the mind, allowing the creators significant control over their use, authorized or otherwise, thus allowing them to be the sole legal beneficiaries of these creations (World Trade Organization, 2025). The steady increase in the effectiveness and independence of AI in replicating such works thus brings about legal uncertainties, which raise important questions such as where actual ownership lies, rendering existing IP laws backward in terms of adapting to the regeneration of copyright-protected content by AI (Kaur, 2024).

There are almost no specific laws that clearly govern AI-generated creations, and the majority of courts around the world require that a documented individual or a group of individuals be registered as the inventors (Abbott, 2019). In 1988, the United Kingdom became the first country to provide explicit copyright protection for AI-generated works, and is one of the few countries worldwide that has a specific set of laws regarding it. The English CDPA (Copyright Designs and Patents Act) takes a unique approach on the matter; it defines ‘computer-generated’ works as those generated by an instrument of technology in the absence of any human aiding or prompts, while if an individual is involved in the generation of content through utilization of AI, they are deemed as the ‘authors’, thereby creating a gap regarding the

traditional meanings of authorship and creativity (Boggs, 2023).

In the European Union, on the other hand, there is an overall agreement that AI-generated content without any natural or human element cannot be considered eligible for protection under existing copyright laws, due to the Berne Convention, which states that only a person can be regarded as an author (De Muyter et al., 2025). However, legal discourse on this issue remains divided, with differing interpretations emerging across jurisdictions. For instance, Hong Kong continues to apply its traditional copyright framework, which protects the expression of ideas but not the underlying ideas themselves. Under this approach, only works that can be attributed to human creativity receive protection, leaving AI-generated outputs in a legal grey area (The Chinese University of Hong Kong Library, 2025).

The matter of who may be legally defined as the owner of AI-generated work is ambiguous. Some argue that the developers responsible for creating the LLM, in particular, i.e., those who collate the data and train the software, should be considered the owners (Chouffani, 2025). Still others believe that users who offer prompts to the AI software, enabling its creation, should be granted ownership if their contribution is substantial. And at present, the most debated issue is the original creators of the IP law-protected data, who should be given some form of legal safeguard in return for their work having been used, being awarded minority ownership, or at the very least, monetary compensation.

The murkiness of the matter deepens further when considering whether and to what extent human input in the form of prompts is essential enough to warrant a copyright (Chhabra and Pandey, 2024). Therefore, responsibility for copyright infringement in AI-generated content can be complex, potentially involving a distribution of the content between the AI developer and the user. There have been recent exceptions, such as in Kazakhstan where, realizing that it was grappling with complexities in many situations, the country has introduced copyright certificates, marking its first introduction through the obtaining of such a certificate for a book which was created using AI, granting protection for the human activity involved during the task, however still leaving out ambiguity with respect to the illustrations generated by chatbot software such as ChatGPT (Chatwood, 2025).

A patent is a form of intellectual property that exercises the owner's authority over their creation, giving them the power to prevent others from replicating their information for personal gain (WIPO, 2021). While AI is not a new concept, there are still challenges that

emerge in its patenting, including demarcating what specifics of the artificially generated information are eligible for patent protection. The main reason for this is the ambiguity in the operation of AI generators, which operate as black boxes. This ensures that even inventors may not fully understand the model's intricacies, making it difficult to describe the invention in detail. Consequently, applying for a patent application form becomes almost useless.

A prominent legal test case that brings these issues to the forefront is the DABUS case, which exemplifies the uncertainty surrounding inventorship in the age of AI. DABUS (Device for the Autonomous Bootstrapping of Unified Sentience), developed by Dr. Stephen Thaler, was claimed to have generated two inventions independently, without any human input or prompts. This challenged the foundational assumption of patent law that inventorship must be human. In 2021, South Africa became the first country to grant a patent naming an AI system as the inventor, making headlines as a landmark legal moment (Swabey, 2021). However, this decision was met with mixed reactions globally. Critics pointed out that South Africa's patent system lacked enforceability beyond its borders. In contrast, countries like the UK and Australia rejected the application, insisting that only a 'natural person' could be listed as an inventor (Dreyfus, 2019). Similarly, in the United States, the judiciary reaffirmed that the term "individual" in the Patent Act refers exclusively to human beings.

Moving further to deepfakes, which are media created by AI, often indistinguishable from reality, are raising significant legal concerns due to their potential for misuse, resulting from their relatively easy access to the general public (Vig, 2024). There arise many risks to privacy, reputation, and intellectual property, with potential for defamation and even unauthorized use of copyrighted material. Current IP laws are, hence, strikingly inadequate in providing an appropriate legal framework to deal with these creations. However, legal systems across the world are beginning to respond to the rise in crimes and scandals involving deepfakes and AI-generated content. For example, in Australia, new legislation came into effect on September 3, 2024, specifically targeting the non-consensual creation and distribution of explicit material online, including content generated or manipulated using generative AI (Swan, 2024). Similarly, in the United States, Congress acknowledged that the current U.S. Copyright Act does not explicitly address unauthorized digital replicas of individuals. In response, lawmakers have recommended the creation of a federal legal framework to protect individuals from digital exploitation and the misuse of AI-generated likenesses (Kukkonen III and Tait, 2024). These developments indicate that while regulatory responses may be gradual, governments are taking

increasingly concrete steps to confront the legal and ethical challenges posed by generative AI technologies.

Implications for the Entertainment Industry (Music and Movies) and Real-Life Cases

As the twenty-first century rolls on, there is a stark increase in the usage of AI in the entertainment industry, particularly in music as well as filmmaking. It is common knowledge that most performers and artists; be it singers and songwriters, or actors and film directors, and especially those who attain positions of recognition in their fields, can reap the fruits of their labor in the form of financial gains and other benefits through exercising control over their work with the help of existing intellectual property laws. Thus, existing IP frameworks need to ensure that artists can continue to exercise ownership rights over copyright-protected works, despite the ambiguity that arises due to the replication of such copyrighted data by AI.

The use of AI in music production continues to evolve as well, with a shocking statistic showing that more than 60% of musicians are using AI to produce music in some capacity, either for generating lyrics or for overall production (Frampton, 2023). However, as always, a major question arises regarding the ownership of music created by such software. While the United States and the EU, on one hand, rule that music created entirely by AI is not suitable for copyright protection, nations like Japan and China display openness in terms of protecting music generated by AI, reflecting a lack of worldwide consensus on the matter (Soni, 2025).

However, the use of AI in the entertainment industry doesn't just stop here but extends even into the film industry. AI can be used for a variety of purposes (Krishnan, 2024). It can be used to cut costs during movie filming and production by making use of specially generated effects in place of actual greenscreens, which are not only cumbersome to edit out, but also require multiple takes, thus saving time during filmmaking as well. It can also be used to generate potential story ideas, saving time and effort for filmmakers and increasing the quality of overall writing. And of course, it can also be used to pick out the best-suited actors for a role through detailed analysis.

Thus, we can safely say that AI not only simplifies the workload for filmmakers during production but also enables greater financial efficiency, ensuring that projects do not need to be halted midway due to insufficient funds. It also has the added advantage of being more accessible to a broader range of filmmakers, granting individuals who may not have as liberal

access to scriptwriting software an opportunity to display their talent on a larger stage and thus receive long due recognition, therefore contributing to a diversification in film production and filmmakers.

However, the advantages of using AI in the film and music industry are not without their challenges as well. These challenges are further accentuated through certain real-life cases like the song, 'my heart on a sleeve', which was generated by AI to mimic the vocals and singing style of artists Drake and the Weeknd (Veltman, 2023). However, it was promptly removed from all streaming services due to copyright infringement and other ethical concerns. Another such case was regarding a well-known actor, Bruce Willis. Although he retired from the film industry due to a language-based disorder that inhibited his communication, it was speculated that in order to continue his appearance in everyday films, he sold his image rights to a deepfake company, thus allowing them to use his likeness in future films (Wilson, 2022). Although these speculations were never proven to be true, this highlighted the ethical considerations surrounding deepfakes, particularly those that are used in an unregulated manner. The technology raises questions about who owns an actor's likeness and how it should be used, increasing the debate surrounding the topic.

Another case of interest to this research paper is the legal battle between Disney and Universal Studios V AI firm Midjourney. The reason for this was that Midjourney pirated the libraries of the two Hollywood studios to create and distribute countless unauthorized copies of their famed characters, such as Darth Vader from the renowned Star Wars franchise and the Minions from "Despicable Me" (The Hindu, 2025). This lawsuit in particular is a testament to the fact that there is a definite need for a concrete set of laws with regard to the infringement of copyright laws by AI, in order to protect the rights of artists, and at the same time allow for sufficient freedom of creativity and innovation.

Aside from the ethical concerns regarding intellectual property and data privacy, there are also problems like displacement of jobs, and even a decline in originality of artists as they increase their reliance on generative AI software (Mukherjee, 2025). Therefore, in order to counter such ethical and professional concerns, certain steps should be taken by the entertainment industry. Firstly, under self-regulation, the industry itself must set down proper guidelines prescribing the ethical and justified use of generative AI (Hemraj, 2025). Additionally, pre-existing clauses and agreements must be adapted to incorporate new clauses in relation to licensing and data

usage. Lastly, of course, the present legal framework should undergo strict modification to ensure that stronger copyright protection is enforced, and that compensation in the form of AI-based royalties can be tried out, and if successful, be introduced (Jacques and Flynn, 2025).

Conclusion

The current intellectual property framework largely fails to accommodate the possibility of non-human authorship, leading to widespread uncertainty over the ownership of AI-generated content. Most jurisdictions still require a 'natural' person to be identified as the author or inventor, which excludes fully autonomous AI-generated works from protection under existing laws. While some countries, such as Japan and Singapore, have begun to explore more flexible approaches, these remain exceptions rather than the norm.

Additionally, the training of generative AI models on copyright-protected data raises significant legal challenges. The unauthorized use of such content has led to lawsuits worldwide, with courts divided on whether this constitutes infringement. The absence of a unified legal standard has created confusion over who, if anyone, should be credited and compensated for AI-generated works, further complicating the distribution of economic and creative rights.

Despite the legal ambiguity, AI has significantly transformed the entertainment industry by reducing production costs, expanding creative possibilities, and increasing access to professional tools. However, these advantages are accompanied by serious concerns, including potential job displacement, the proliferation of deepfakes, and questions about the originality and integrity of AI-created content.

Given these developments, there is an urgent need for the international intellectual property framework to evolve. More straightforward guidelines regarding authorship, licensing, and royalty structures for AI-generated works would ensure ethical use of the technology while safeguarding the rights of human creators. Although harmonizing these reforms globally will take time, they are essential for addressing the legal vacuum surrounding AI-generated content and ensuring a fair, inclusive, and future-ready IP system for the entertainment industry.

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