COMPARATIVE ANALYSIS OF THE LEGAL FRAMEWORK FOR THE PROTECTION OF AI-GENERATED PRODUCTS IN UK, USA, AUSTRALIA, CHINA, EU & NIGERIA*[1]

Abstract

The rapid evolution of Artificial Intelligence (AI) has transformed the global landscape of creativity, obscuring the traditional boundaries of human authorship and innovation. Through the use of machine learning and algorithmic processes, AI now independently produces literature, music, designs, and inventions, challenging the central principles of Intellectual Property (IP) law that have traditionally been centered on human creativity and authorship. The research aims at studying the extent to which other jurisdictions protect works that are AI generated, highlighting their varied legislative, judicial, and policy responses. Employing a qualitative doctrinal approach, complemented by comparative legal analysis and policy evaluation, this study examines how AI-generated products are protected under the intellectual property regimes of the United Kingdom, United States, Australia, China, the European Union, and Nigeria. The study finds that while jurisdictions such as the UK and China are making significant strides in adapting their legal frameworks through statutory provisions, judicial interpretation, and policy innovation, Nigeria remains bound by traditional human-centered legal framework that recognizes only human creators. The work further identifies emerging judicial inclinations, particularly in China, towards a hybrid model that recognizes AI-assisted works where substantial human input was demonstrated. The study concludes that Nigeria's current IP laws are inadequate to address the intricacies of AI-generated works. It recommends dedicated legislative reform to protect AI-generated and AI-assisted works, capacity-building for judges and stakeholders. These measures are necessary to ensuring that Nigeria's IP law advances simultaneously with global technological advancements, thereby promoting innovation, creativity, and sustainable economic growth.

Keywords: AI, IP, Innovation, Copyright, Patent

1. Introduction

The advent of AI has transformed the creative landscape, producing works with minimal human involvement and challenging traditional Intellectual Property (IP) systems. AI-generated content raises fundamental questions: can AI qualify as an author or inventor? Who owns the rights? Are existing IP frameworks adequate? Different jurisdictions approach these challenges variably. The UK, China, and Australia have made strides in adapting their legal frameworks, while Nigeria remains bound by traditional human-centered laws. China has established Smart IP Courts to handle IP and internet-based disputes, demonstrating a technologically responsive judiciary. This paper compares the legal frameworks governing AI-generated products in the UK, USA, Australia, China, EU, and Nigeria, examining interpretations of authorship, inventorship, and ownership. The study highlights gaps and intersections in their approaches, emphasizing the urgent need for legal reform and international harmonization. The goal is to ensure IP law evolves with technological advancement, promoting creativity, fairness, and economic growth. As AI continues to reshape the creative landscape, adapting IP laws is crucial to maintaining a balance between innovation and IP system integrity.

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2. The Protection of AI-Generated Products in the United Kingdom

The UK lacks general statutory regulation of AI, but existing laws like the Data Protection Act 2018[2] impose some restrictions. For computer-generated works, the UK's copyright framework attributes authorship and ownership to the person who makes the 'arrangements necessary' for creation, typically the person who provided the prompt, developed the system, or operated it.[3] This provision applies to works with indirect human involvement, identifying the author as the person who established the conditions or parameters for the computer to generate the work. However, uncertainty remains regarding the magnitude of a person's involvement required for authorship rights. The application of UK copyright law to AI training models is also challenging. Training AI often involves using copyrighted materials without express consent, raising questions about infringement or fair dealing exceptions. This ambiguity creates uncertainty for developers, rights owners, and policymakers. Rights holders struggle to control their works' use in AI training and seek remuneration, while AI developers face difficulties navigating UK copyright law, undermining investment and adoption of AI technology. The UK Government is obviously, not inclined to maintain the status quo at the risk of limiting investment, innovation, and growth in the AI sector, and the wider economy.[4] The UK Government seeks to promote clarity, incentives, and balance in AI application, and is consulting on reforms to protect computer-generated works. The goal is to ensure IP law evolves with technological advancements, promoting innovation, fairness, and economic growth. The UK government has made and is making wide consultations on the possible reform to protect computer-generated works in the following directions: a) Supporting right holders' control of their content and ability to be remunerated for its use; b) Supporting the development of world-leading AI models in the UK by ensuring wide and lawful access to high-quality data; c) Promoting greater trust and transparency between the sectors.[5] In this light, on 29 March 2023, the United Kingdom (UK) government published its AI Regulation White Paper, a 'Proportionate and Pro-innovation Regulatory Framework' for AI, designed to support innovation, identify and address risks.[6] It is hoped that the UK would achieve a worthy legislative intervention that will promote development and innovation while at the same time, preserving the incentives of creators.

With respect to patent, the current position under the UK Patents Act 1977, is that a patent applicant must be a natural person.[7] The case of Stephen *Thaler v. UK Intellectual Property Office*[8] is very instructive in this regard. Thaler attempted to list his AI system, Dabus, as the inventor on patent filings and it was rejected by UKIPO. He went on appeal up to the Supreme Court and the UK Supreme Court held in 2023 that only a human inventor is acceptable for patent registration. An AI system cannot own or be granted rights to inventions and Thaler also could not claim inventorship on behalf of DABUS. The clear implication of the ruling is that AI-generated inventions are not

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[2] UK Parliament, 'Artificial Intelligence: Ethics, Governance and Regulation' <https://post.parliament.uk/artificial-intelligence-ethics-governance-and-regulation/> accessed 15 June 2025

[3] UK Copyright, Designs and Patents Act 1988, s 9(3)

[4] UK Intellectual Property Office, 'Copyright and AI: Consultation' Presented to the Parliament by the Secretary of State for Science, Innovation and Technology by Command of His Majesty <https://www.gov.uk/government/consultations/copyright-and-artificial-intelligence/copyright-and-artificial-intelligence> accessed 14 June 2025

[5] *ibid*

[6] H Roberts *e tal* 'Artificial Intelligence Regulation in the United Kingdom a Path to Good Governance and Global Leadership' (2023) (12) (2) *Internet Policy Review*, p.1-5 <https://policyreview.info/pdf/policyreview-2023-2-1709.pdf>

[7] UK Copyright, Designs and Patents Act 1988, section 60

[8] [2023] UKSC 49 <https://supremecourt.uk/uploads/uksc_2021_0201_judgment_3f445a5dc7.pdf> accessed 13 June 2025

patentable in UK unless a human is involved as the inventor. Aside the above requirement, patenting AI technologies in the UK can generally, be challenging due to the specific requirements for patentability. AI algorithms, often considered abstract mathematical models, must be tied to a technical solution or contribute to a technical field to be patentable.[9] The recent UK Court of Appeal case, *Symphony Solutions Ltd v. Comptroller General of Patents* (2022)[10], emphasized the need for a 'technical effect' beyond a mere abstract idea for an AI invention to qualify for a patent. This ruling highlights the difficulty in securing patents for AI algorithms unless they are clearly integrated into a practical application.

Trademarks are generally unaffected by AI origin. If the resulting product e.g., brand name or logo from AI is distinctive and used in commerce, it can be registered regardless of whether it was created by a human or AI, provided a human or legal entity owns it. All that is required is for the mark to meet the standard criteria including distinctiveness. For designs, UK offers two types of design protection: Registered Designs (up to 25 years) and Unregistered Design Rights (typically up to 15 years). Registered designs are governed by the Registered Designs Act 1949 (RDA) while unregistered designs are governed by the Copyright, Designs and Patent Act 1988 (CDPA). There exist also, other subsidiary legislations applicable to both types of designs. Generally, there is nothing in the legislation that says who is allowed to apply to register a design. However, there is a requirement that an application must include the identity of the maker.[11] The RDA and the CDPA both provide that where a design is generated by a computer, the person who made the arrangements necessary for the creation of the design will be considered the author.[12] In other words, if AI is used to generate a product's design, the person who instructed the AI or undertook the arrangements is typically considered the designer. The language of the RDA and CDPA therefore suggests that it is only a legal person capable of owning a property that can be the owner of a UK registered or unregistered design. It is not currently possible for AI, which does not have legal personality, to be recognized under the UK law as the author or owner of a design. However, a work generated by AI, which meets the requirements of distinctiveness would be acceptable for registration in the name of a legal entity.

3. The Protection of AI-Generated Products in the United States of America
The current legal position on the protection of AI-generated works in the United States of America will be discussed under the different types of IP rights.

Copyright: In the United States, copyright law generally only protects works created by human authors.[13] This principle was reinforced in the notable case of *Naruto v. Slater,*[14] where the court ruled that animals cannot own copyrights. The case involved a crested black macaque named Naruto, who took selfies using a camera owned by photographer David Slater. In 2015, the People for the Ethical Treatment of Animals (PETA)[15] filed a lawsuit on Naruto's behalf, claiming he was the author and

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[9] T Khan 'The Evolving Landscape of AI in the UK: Patents, Trademarks, Copyright, and Trade Secrets' The Barrister Group Blog https://thebarristergroup.co.uk/blog/the-evolving-landscape-of-ai-in-the-uk-patents-trademarks-copyright-and-trade-secrets accessed June 15 2025
[10]*ibid*
[11] UK Registered Design Rules 2006, Rule 4(1)(a)
[12]RDA, s 2 (4) and CDPA, s 214 (2)
[13] U.S. Code, Title 17
[14] '*Naruto v. Slater:* Case Summary' Published by PETA Foundation on <https://www.peta.org/features/peta-foundation-legal/case-summaries/naruto-v-slater/> accessed June 16 2025
[15] An organization which supports animal protection and rights and has its address at Norfolk, East of England <https://www.peta.org/about-peta/> accessed 30 June 2025.

owner of the photos. PETA argued that U.S. copyright law doesn't prohibit animals from owning copyrights, and since Naruto took the photos, he should own the rights. The suit sought to have Naruto declared the author and owner of the photos, with proceeds from the images used for his benefit and the preservation of his habitat. The trial court dismissed the suit, ruling that animals lack standing in court and can't sue for copyright infringement. The court noted that the Copyright Act doesn't mention animals or non-humans, supporting its decision. The case was appealed but ultimately settled out of court. The *Naruto v. Slater* case highlights the challenges of applying traditional copyright law to non-human creators. As AI-generated works become more prevalent, questions about authorship and ownership are likely to arise, sparking debates about the need for updated laws and regulations. The U.S. approach contrasts with some other jurisdictions, such as the UK, which recognizes computer-generated works and attributes authorship to the person who made the arrangements necessary for creation. As AI technology continues to evolve, the global community may need to reassess and harmonize laws to address the complexities of AI-generated content

In the case of a purely AI-generated work, or work autonomously generated by a machine, the position in US is that they are not eligible for copyright. This position was demonstrated in the case of *Thaler v. Shira Perlmutter, U.S. Copyright Office*[16] where Stephen Thaler attempted to register an artwork (an image) created solely by his AI machine, the U.S. Copyright Office and courts denied protection, affirming that human authorship is required. The central legal issue revolved around whether a work autonomously generated by an AI system could be deemed copyrightable. The U.S. District court had to uphold the validity of the USCO's refusal based on the lack of human authorship, considering constitutional provisions, statutory history, and established copyright precedents. Dissatisfied, Dr. Thaler appealed against the judgement. The Appeal court affirmed the judgment of the District Court that a work autonomously generated by AI cannot enjoy copyright.[17]

Where a work is created with AI as a tool, it may qualify, if a human contributed original, creative input**.** For AI-generated work to qualify for copyright, the work must contain 'sufficient human authorship', creator must in the application, disclose AI involvement and only the human-authored portions are copyrightable.[18] In 2023, the U.S. Copyright Office issued a guidance on works containing AI-generated material, emphasizing that human authorship is a requirement for copyright registration. The guidance clarifies that while works wholly created by AI are not copyrightable, works with sufficient human input and creativity can be registered. Applicants are expected to disclose the presence and extent of AI-generated material in their applications.

Patent and Designs Protection: As a general rule, **o**nly natural persons can be listed as inventors on U.S. patents.[19] There is no special provision in U.S. for the protection of AI-generated works. The *DABUS* case aptly illustrates the position of the United States on the patentability of AI-generated inventions. The position is same as in the UK. In the US, there are no specific provisions for unregistered design rights. Registered Designs, known as design patents, are used to protect the visual ornamental features of a product. Design rights may be granted to any person who has invented any

[16]*Thaler v. Perlmutter,* (2023) No. 22-384-1564-BAH <https://www.wipo.int/wipolex/en/text/588769> accessed 16 June 2025

[17]*Thaler v. Shira Perlmutter, US Copyright Office* <https://www.copyright.gov/ai/docs/us-brief-for-appellees.pdf> accessed 26 June 2025

[18] U.S. Copyright Office Guidance 2023

[19] U.S. Code, Title 35, ss 101 & 102

new, original and ornamental design for an article of manufacture. Thus, it follows that an AI-generated design, without having a person as an inventor, would not qualify for US Design Patent protection. AI-assisted designs are only registrable if a human meets the inventorship requirement.[20]

Trademarks and Trade Secrets: In the US, AI-generated content can be trademarked, but only if it is used in commerce and meets the criteria for trademark registration. The U.S. Copyright Office's stance that AI-generated works without human authorship are ineligible for protection applies specifically to copyright and patent law. Trademarks, however, are not bound by the same human authorship requirement. Consequently, if an AI system generates a logo or brand name that is distinctive and used in commerce, it may still qualify for trademark protection. Trademarks in the U.S. are tied to use in commerce, not authorship. AI-generated brand names, slogans, or logos may be registered if a person or entity uses them in commerce or the marks are distinctive and not misleading. This implies that AI can be used to create trademarks, but ownership lies with the human or company that applies and uses them commercially.[21]

The U.S. Patent and Trademark Office (USPTO) has developed a new Artificial Intelligence (AI) Strategy to guide their efforts toward fulfilling the potential of AI within USPTO operations and across the intellectual property (IP) ecosystem.[22] The Strategy offers plans on how the USPTO can foster responsible and inclusive AI innovation, harness AI to support, and advance a positive future for AI to ensure that the country maintains its leadership in innovation. The strategy aims:
(i)   Advance the development of IP policies that promote inclusive AI innovation and creativity.
(ii)   Build best-in-class AI capabilities by investing in computational infrastructure, data resources, and business-driven product development.
(iii) Promote the responsible use of AI within the USPTO and across the broader innovation ecosystem.
(iv) Develop AI expertise within the USPTO's workforce.
(v)   Collaborate with other U.S. government agencies, international partners, and the public on shared AI priorities.

The USPTO and other sister agencies within the Department of Commerce, as well as the U.S. Copyright Office, are providing critical guidance and recommendations to advance AI-driven innovation and creativity. In 2022, the USPTO created the AI and Emerging Technology (ET) Partnership, which has worked closely with the AI/ET community to gather public feedback through a series of sessions on topics related to AI and innovation, biotech, and intellectual property (IP) policy. Since its launch in 2022, over 6,000 stakeholders have engaged with the agency on these key issues. Furthermore, the USPTO continues to collaborate with other government bodies to strengthen U.S. leadership in artificial intelligence by fostering innovation and healthy competition.[23] The US government continues to hold meetings with a view to straightening the contours of creativity and innovation.

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[20] 'IP Ownership of AI-generated Designs' <https://www.marks-clerk.com/insights/latest-insights/102jvso-ip-ownership-of-ai-generated-designs/> accessed 27 June 2025
[21] 'Trademark Issues Arising from the Use of Generative AI' <https://www.marks-clerk.com/insights/latest-insights/102k38m-trade-mark-issues-arising-from-use-of-generative-ai/#:~:text=Generative%20AI%20has%20mined%20the,to%20a> accessed 24 June 2025
[22] US Patent and Trademarks Office, 'USPTO announces new Artificial Intelligence Strategy to empower responsible implementation of innovation' Press Release <https://www.uspto.gov/subscription-center/2025/uspto-announces-new-artificial-intelligence-strategy-empower-responsible> accessed 27 June 2025
[23]*ibid*

4. The protection of AI-Generated Products in Australia

In Australia, as in the UK and the US, AI-generated works are not eligible for copyright protection unless the applicant can establishes that a human author contributed sufficient skill, judgment, or intellectual effort to the creation or production of the work.[24] Intellectual efforts require the exercise of personal judgment and discretion; activities such as research, analysis, investigation, evaluation, selection, arrangement and expression. If a person relies solely on AI to generate images or text and cannot demonstrate meaningful human involvement, the resulting work may not qualify for copyright protection. To be eligible, there must be clear evidence of considerable human intellectual effort in the creation process.[25] At present, there are no clear guidelines defining what amounts to 'sufficient effort' thereby creating uncertainty, especially in cases involving arts where an artist provides prompts, additional instructions, or later modifies the AI-generated output to achieve the ultimate effect. Australian copyright law presently lacks specific provisions addressing data mining or the use of copyrighted works for machine learning. It also remains uncertain whether existing copyright exceptions extend to such activities. If AI training involves unlawfully copied materials and the resulting output can be traced back to those sources, there is a risk that the individual using the output could receive a takedown or infringement notice from the original rights holder. Unlike the United Kingdom, Australia has yet to amend its Copyright Act to provide explicit protection for computer-generated works.

The Australian patent system is governed by the Patents Act 1990. Section 6 of the Statute of Monopolies 1623 (which is expressly referred to in Section 18(1)(a) of the Patents Act 1990) provides an exception for patents, to the general position that monopolies were contrary to law. The Patents Act 1990 provides protection for two types of patents in Australia; the 'standard patent' and the 'innovation patent'. The main distinction is that innovation patents have a shorter duration of eight years and require only an 'innovative step,' rather than the higher 'inventive step' standard applicable to regular patents.[26] The Act has undergone amendment several times since its enactment, including the reforms introduced by the Intellectual Property Laws Amendment (Raising the Bar) Act 2012. More recently, the Australian Government passed the Intellectual Property Laws Amendment (Productivity Commission Response Part 1 and Other Measures) Act 2018.

5. The Protection of AI-Generated Products in China

China operates a civil law system with multiple layers of regulation including national laws and administrative guidelines. In the Copyright Law of the PRC (as amended in 2021)[27], Civil Code, Administrative Measures on Deep Synthesis Internet Information Services (2022),[28]there is no express recognition of AI as an author. Human authorship is a prerequisite for copyright protection, so authorship is tied to natural persons. The law also provides that copyright holders and holders of copyright-related rights must, in exercising their rights, not violate the Constitution or other laws, and must not harm the public interest. The state is also, to conduct oversight and management of the

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[24] Copyright in Australia is governed by Copyright Act 1968
[25]University of South Australia 'Artificial Intelligence' <https://guides.library.unisa.edu.au/copyrightforcreatives/AI> accessed 21 June 2025
[26] WIPO – 'An International Guide to Patent Case Management for Judges' <https://www.wipo.int/patent-judicial-guide/en/full-guide/australia> accessed 26 June 2025.
[27]China Law Translate 'Copyright Law of PRC (2021 Version)' <https://www.chinalawtranslate.com/en/Copyright-Law-of-the-PRC-(2021-Version)/> accessed 27 June 2025.
[28]*ibid*

publication and dissemination of works in accordance with the law.[29] This is a unique provision intended to prevent the publication of harmful, immoral or offending content.

There is no provision under the Chinese law, admitting the authorship of AI-generated works. Besides, given the requirement of human involvement for a work to qualify for copyright protection, AI-generated works do not stand a chance. If AI is a tool and the human guides it, the human may claim authorship. There is however, a growing State's interest in AI which has birthed the New Generation Artificial Intelligence Development Plan (2017).[30] Recent rules require labelling of AI-generated content. Proactive regulatory approach, including content labelling, liability allocation, and risk mitigation. China has strong IP enforcement agencies and specialized IP courts and also active in WIPO AI discussions - working towards global norms on AI and IP.

Two courts in China took the lead in answering judicially, the question of copyrightability of AI-generated works. The Beijing Internet Court concluded in *Beijing Film Law Firm v Beijing Baidu Netcom Science & Technology Co Ltd* (*Film*)[31] that being created by natural persons was a prerequisite for written works to be protected under the Copyright Law of the People's Republic of China. The output intelligently generated by computer software therefore was not a copyrightable subject matter although it possessed originality.[32] The case of *Shenzhen Tencent Computer System Co Ltd v Shanghai Yingxun Technology Co Ltd*[33] however, marks the first judicial decision in China to affirm that AI-generated outputs can be granted copyright protection. In this case, the Nanshan District Court of Shenzhen recognized the human creator's selection and arrangement involved in producing the relevant output, and ruled that the output generated by Dreamwriter, an intelligent writing computer software-satisfied the requirements for written works and therefore was protectable under the Copyright Law of China.

Similarly, on November 27, 2023, the Beijing Internet Court (BIC) ruled in an infringement case of *Li v. Liu*[34] that an AI-generated image is copyrightable and that a person who prompted the AI-generated image is entitled to the right of authorship under Chinese Copyright Law. Plaintiff generated an image of a woman by using Stable Diffusion, an open-source generative AI model that creates images from textual prompts. After publishing the image on a Chinese social media platform (Xiaohongshu), Plaintiff discovered that Defendant had used the same image to illustrate an article on a different website, without permission. Plaintiff then sued Defendant in the BIC. The court in giving its decision, paid special attention to the 'intellectual achievement' and 'originality' elements of copyright works. The court ruled that, using Stable Diffusion, the plaintiff selected over 150 prompts, arranged them in a specific order, and set detailed parameters. He then, over and over again adjusted and refined these prompts and settings until the ultimate image matched his creative vision. These

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[29] Copyright Law of China, Article 4.

[30] The Chinese State Council has issued a guideline on the development of artificial intelligence (AI) and the establishment of a goal to become a global innovation center in this field by 2030 <https://flia.org/notice-state-council-issuing-new-generation-artificial-intelligence-development-plan/> accessed 25 June 2025

[31] (2018) Jing 0491 Min Chu No. 239 <https://www.chinadaily.com.cn/specials/BeijingInternetCourtCivilJudgment(2018)Jing0491MinChuNo.239.pdf> accessed 26 June 2025.

[32] Y Wan and X Lu 'Copyright Protection for AI-Generated Output: The Experience from China' (2021) (42) *Computer Law and Security Review,* p.1-2. <https://www.sciencedirect.com/science/article/abs/pii/S0267364921000546> accessed 26 June 2025.

[33] (2019). Guangdong 0305 Civil First Trial No 14010 <https://www.scirp.org/reference/referencespapers?referenceid=3501479> accessed 28 June 2025

[34] Beijing Internet Court Civil Judgment (2023) Jing 0491 Min Chu No. 11279 <https://law.nus.edu.sg/trail/legal-implications-beijing-internetcourt-copyright/> accessed 26 June 2025

actions, the court held, clearly demonstrated that the work resulted from the plaintiff's intellectual input. The court further stated that originality was evident in the plaintiff's personal choices and aesthetic judgment throughout the creation process, ranging from the selection and arrangement of prompts to the refinement of the final output. Such intellectual effort, the court reasoned, went beyond mere mechanical operation and qualified as creative activity. However, the court rejected the notion that the AI model could be considered the author, as Article 11 of China's Copyright Law limits authorship to natural persons or legal entities. It also ruled that the AI developers were not the authors, since their contribution pertained to designing the AI tool, not the specific image produced. Recognizing his direct intellectual contribution, the court attributed authorship to Plaintiff.[35]

Zhou Bo, a senior judge in the Intellectual Property Rights Division of the Supreme People's Court of China, has articulated a position consistent with this line of reasoning in a paper published by WIPO.[36] While there is a global clamour for amendment of legal frameworks to accommodate AI-generated works, he holds the view that the current legal system in China can adequately accommodate issues arising from AI-generated work and should not be disturbed. Discussing the case of *Shenzhen Tencent v. Shanghai Yingxun,*[37] he drew a distinction between 'works autonomously generated by AI and those 'generated with AI assistance'. He explained that although the Court found the content generated by Dreamwriter software to constitute a written work, it did not break the established legal principle that the work must result from the author's intellectual creation. To establish that the AI-generated material qualified as a 'work,' the Court emphasized that the article was produced by the plaintiff, Shenzhen Tencent's creative team, using the Dreamwriter software. The Court noted that the team's activities, including data input, setting trigger conditions, and selecting templates and corpus styles constituted intellectual contributions directly linked to the specific expression of the resulting article. Accordingly, same is within the ambit of protection by China's Copyright Law.

In a similar case of *Gao Yang v Youku,*[38] the plaintiff attached a sports camera to a hot air balloon, and by freeing the balloon, the camera automatically took pictures of the outer space of the earth surface, and then selected appropriate screenshots from the video automatically captured by the camera for processing. The court held that despite the camera's automatic recording, human involvement in selecting equipment, angles, and settings was sufficient to establish authorship and copyright protection.

The judicial experience of China indicates that certain AI-generated outputs can qualify for copyright protection even without a major legislative reform. However, legal uncertainties remain, particularly concerning the degree of human involvement required for such works to meet authorship standards. Nonetheless, the judicial reasoning in these cases indicates that China is already operating a hybrid framework, one that recognizes 'AI-assisted' creations, provided they reflect meaningful human direction and control.

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[35] Y Wang and J Zhang 'Beijing Internet Court Grants Copyright to AI-Generated Images for the First Time' (2024) *Kluwer Copyright Blog* <https://copyrightblog.kluweriplaw.com/2024/02/02/beijing-internet-court-grants-copyright-to-ai-generated-image-for-the-first-time/> accessed 23 June 2025.
[36] Zhou Bo, 'Artificial Intelligence and Copyright Protection: Judicial Practice in Chinese Courts', A Paper Presented at WIPO Seminar, <https://www.wipo.int/export/sites/www/about-ip/en/artificial_intelligence/conversation_ip_ai/pdf/ms_china_1_en.pdf> accessed June 25 2025
[37] *Supra* (n 37)
[38] Beijing Intellectual Property Court (2017) Jing 73 Min Zhong No. 797 Civil Judgment; April 2, 2020

6. The Protection of AI-Generated Products in European Union

EU copyright law is also, based on the concept of a human author's intellectual creation. This means that for a work to be protected, it must be the result of a person's free and creative choices. Like in UK, China and US and Australia, there is no copyright for works autonomously generated by AI because an AI system lacks the capacity for independent thought and creative expression. Works produced solely by them are generally not considered eligible for copyright protection. AI-assisted works are different. So when a human uses AI tools, such as through prompts, creative modifications or arrangement, and his input significantly contributes to the final work, copyright protection may be possible. The degree of human contribution is crucial in determining whether the work would be considered original enough to warrant copyright.[39] In other words, under existing EU copyright law there does not appear to be any impediment to human authorship and copyright protection in AI-assisted outputs. Copyright protection applies to any work that is 'the author's own intellectual creation'. In order to reach the threshold of an intellectual creation, the author must express free and creative choices that imprint the work with his own personality.[40]

On 13 June 2024, the European Union's Artificial Intelligence Act Regulation (EU) 2024/1689 'EU AI Act' was published in the EU Official Website,[41] making it the first comprehensive horizontal legal framework for the regulation of AI systems across the EU. The EU AI Act entered into force across all 27 EU Member States on 1 August 2024[42]. It must be mentioned that the AI Act of 2024 does not directly address copyright issues, but it contains provisions that imply concern for copyright in the datasets used to train AI systems, as well as potential issues related to copyright and freedom of expression in outputs. The preamble of the Act explains that its purpose is 'to promote the uptake of human centric and trustworthy artificial intelligence (AI) while ensuring a high level of protection of health, safety, fundamental rights and to support innovation.'[43] As the AI Act does not tackle the specific issue of ownership over works created through generative AI tools,[44] the EU still requires definite legislative answers to the issues posed by AI-generated works.

7. The Protection of AI-Generated Products in Nigeria

The Nigerian legal framework for IP recognizes only works of human authorship for IP rights. Human authorship is a prerequisite for copyright protection.[45] In essence, under current Nigerian law, only human beings, not machines or computers, can be granted intellectual property rights. The question of whether legal protection can be extended to AI-generated works does not have a simple

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[39] K Erickson 'Copyright Protection in AI-generated Works: Evolving Approaches in the EU and China' (2024) *Creative Industries Policy and Evidence Centre* <https://pec.ac.uk/blog_entries/copyright-protection-in-ai-generated-works-2/#:~:text=Under%20existing%20EU%20copyright%20law,works%20to%20attract%20copyright%20protection.> accessed 28 June 2025

[40]*ibid*

[41]European Union – 'Artificial Intelligence Act 2024'<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202401689> accessed 28 June 2025

[42] European Commission, 'AI Act Enters into Force' <https://commission.europa.eu/news-and-media/news/ai-act-enters-force-2024-08-01_en> accessed 30 June 2025

[43] K Erickson (Note 43)

[44] European Commission (IP Helpdesk) – 'Artificial Intelligence and Copyright: Use of Generative AI Tools to Generate Content' (16 July 2024) <https://intellectual-property-helpdesk.ec.europa.eu/news-events/news/artificial-intelligence-and-copyright-use-generative-ai-tools-develop-new-content-2024-07-16-0_en> accessed 28 June 2025

[45] Copyright Act, section 108(1) (a) – (e) uses the term 'person to define 'an author; PDA also uses the term 'person and the pronoun 'he' to refer to the right holder under the Act – see particularly sections 2 and 14. Trade Marks Act also (sections 17 and 18) uses the term 'person, and the pronoun 'his' to describe an applicant for registration of Trademark.

'yes' or 'no' answer. It depends on the specific legal requirements for recognizing a work under each category of intellectual property rights. In the case of copyright for example, the requirement of originality and fixation must be met.[46] Originality means that the person must have expended some effort in making the work to give it an original character. It speaks of the creative inputs, skill and labour invested in producing the work. For patent, the work must meet the condition of novelty and non-obviousness.[47] A design is required to be new and not contrary to public order and morality,[48] while a trademark must be distinctive or capable of distinguishing.[49]

The key issue is whether a work can qualify for intellectual property protection when the required conditions are fulfilled by AI technology rather than by a human creator. We have two possible situations as demonstrated by Zhou Bo.[50] The first is with a works autonomously generated by AI, while the second is with works produced by human beings with AI assistance. There is no legal framework in Nigeria for the protection of works which are purely of AI origin without any form of human contribution. This is so because the language of the various IP laws clearly shows that those tasks are reserved for only humans. In the case of AI-assisted outputs however, the position in UK and China can be accommodated under the Nigerian legal framework. Where in the case of copyright, a person is able to demonstrate his creative inputs in the work generated by AI; such as prompts, commands, arrangement, etc., the work would likely be considered as one of human creation but with AI assistance. For such a work to be considered, the degree of effort must be overwhelming and adjudged sufficient by the appropriate agency or the court. Unfortunately, current research has not revealed any judicial precedent or pending case before Nigerian courts addressing this issue. If reliance is placed on the existing legal framework, the key question becomes what constitutes 'sufficient' human involvement in an AI-assisted work to qualify it for copyright or patent protection. This is an issue that can only be conclusively determined through legislation or judicial interpretation, an area where China has already taken the lead.

UK, EU, US and China appear to be at the forefront of confronting these challenges posed by AI with strong legislative and judicial intervention. Nevertheless, although Nigeria currently lacks a comprehensive legal framework for AI regulation, it is making remarkable progress by integrating AI considerations into several of its recent national policies and strategic initiatives. Nigeria has taken major steps toward establishing an enabling environment for AI governance through the enactment of the Nigerian Data Protection Act 2023 and the Nigerian Data Protection Regulation 2019, both of which regulate the acquisition and processing of data, an essential component of AI systems. The development of a National Artificial Intelligence Policy, the establishment of the National Centre for Artificial Intelligence and Robotics[51] and other potential legislations before the National Assembly, signal a growing awareness of the need for a robust and targeted AI governance framework. It is expected that Nigeria will continue along this trajectory and ultimately develop a comprehensive legal regime addressing key concerns about authorship, accountability and liability in relation to AI-generated works.

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[46] Copyright Act, s 2 (a) (b)

[47] PDA, s 1

[48] PDA, s 13

[49] TMA, ss 9 and 10

[50] Zhou Bo (Footnote no. 36)

[51] It aimed at promoting research, innovation, and adoption of AI, robotics, and other Fourth Industrial Revolution technologies for economic growth and competitiveness),

8. Conclusion and Recommendations

The above comparative analysis of the legal and regulatory frameworks governing AI-generated works in the selected countries reveals a significant variance in legal readiness, policy intricacy and judicial implementation. While jurisdictions such as the United Kingdom and China have begun to judicially interpret the inclusion of AI-assisted works within existing intellectual property (IP) regimes, others like Nigeria remain bound by traditional doctrines that recognize only human authorship and inventorship. This human-centric framework poses a serious limitation in the era of AI, where creativity and innovation increasingly transcend human input. In essence, the existing Nigerian IP laws are inadequate to address questions of authorship, inventiveness and liability with regards to AI-generated works. The study concludes that without deliberate legal reforms and pragmatic judicial interpretation, Nigeria risks lagging behind in the global innovation landscape and may discourage technological investment and creativity. Accordingly, the work recommends as follows:

Legislative Action: The various Nigeria's intellectual property laws should be amended to explicitly recognize and accommodate AI-generated works under copyright, patent, and related IP categories. A specific legal provision should be introduced to define authorship and ownership of AI-assisted work autonomously generated by AI.

Specialized Training of Judges and Stakeholders: Judges, clerks of court, staff of the regulatory agencies such as NCC, and legal practitioners should be given specialized training on evolving technologies and AI-related IP disputes to ensure informed adjudication, and enforcement. In like manner, the creators should be sensitized on their rights and encouraged to always channel their grouses to the court in the event of any breach of their right.

Creation of Specialized IP Courts: Establishing dedicated IP courts that would facilitate timely, expert handling of complex AI-related intellectual property matters is of the essence. The IP Court should adopt a pragmatic judicial interpretation of the extant laws in tune with reality.

Global Collaboration: Nigeria should engage vigorously in international IP dialogues and treaties on AI governance to tone its legal framework with international practices and also benefit from mutual expertise and innovation exchange.