COPYRIGHT PROTECTION OF AI-GENERATED WORKS: WHO SHOULD BE THE AUTHOR?

ABSTRACT

Artificial Intelligence is transforming the creative industry by generating paintings, music, books, software, films, and digital designs with minimal human involvement. While this advancement encourages innovation and creativity, it also raises major copyright concerns regarding authorship and ownership of AI-generated works. Traditional copyright laws are based on human creativity, making it difficult to determine whether rights should belong to the AI developer, the user, or another party involved in the creative process.

This study examines the challenges of copyright protection for AI-generated content, particularly in relation to authorship, ownership, and legal recognition under the Indian Copyright Act, 1957. It further compares the approaches adopted in jurisdictions such as the US, UK, EU, China, and Australia to understand how different legal systems address AI-created works. The research analyses judicial trends, policy debates, and academic opinions to evaluate whether existing copyright frameworks are sufficient for autonomous AI creation.

The paper concludes that granting AI independent authorship is neither practical nor legally appropriate at present. However, denying protection completely may hinder innovation and investment. Therefore, the study recommends a balanced approach that preserves human-centric copyright principles while recognising the realities of AI-assisted creativity through legislative reforms and clearer authorship standards.

Keywords: Artificial Intelligence, AI-Generated Works, Human Authorship, Ownership Rights, Indian Copyright Act, Intellectual Property, AI Creativity.

INTRODUCTION

Evolution of Artificial Intelligence and Creativity

The way Artificial Intelligence is growing so fast is changing everything around us, like how we take care of our health, learn new things, deal with money, move around, talk to each other, have fun, and even how laws are made[1]. One of the biggest and most talked-about changes is how AI can now make creative things like art, music, poems, books, pictures, movies, computer code, and even academic papers that are almost as good as what humans can make. This new technology is making people think really hard about who should own the rights to these creative works, and it's a question that's not easy to answer. When AI makes something new, who should get the credit and be in charge of it?

Rise of Generative AI Technologies

The debate surrounding AI-generated works has become increasingly important because of the extraordinary advancement in generative AI systems in recent years. Technologies such as ChatGPT, Midjourney, DALL·E, Stable Diffusion, Gemini, GitHub Copilot, and numerous other AI tools are now capable of generating sophisticated creative content within seconds. A user can simply provide a short textual instruction or "prompt," and the [2]AI system can generate an artwork, compose music, draft an article, write software code, or produce an entire story. In

many situations, the human contribution may be extremely limited, while the machine independently determines the structure, composition, style, and final expression of the work. This raises a fundamental legal problem because copyright law across most jurisdictions still requires some form of human authorship for protection.

The issue becomes even more complicated because AI-generated works involve multiple stakeholders who may claim ownership over the final output. The developer of the AI system may argue that the work exists only because of the underlying software and algorithms created by them. The user may claim ownership on the ground that the prompts and instructions originated from their creative choices. Companies investing in AI technologies may seek commercial rights over outputs generated through their platforms. At the same time, concerns are also raised by artists, writers, musicians, and programmers whose copyrighted works are often used as training data for AI systems without their consent. Consequently, the question of ownership is no longer limited to identifying a single creator; instead, it involves balancing the interests of developers, users, corporations, and original human creators whose works contribute indirectly to AI-generated outputs.[3]

AI as a Tool or an Independent Creator

The emergence of AI-generated creativity has also blurred the distinction between human creativity and machine automation. Earlier forms of computer technology functioned merely as tools controlled directly by human beings. A camera, for instance, could assist a photographer, but the creative decisions remained human. Similarly, graphic design software operated according to human instructions without independently producing creative outcomes. Generative AI systems, however, function differently. They analyse enormous datasets, identify patterns, learn from examples, and generate outputs that may not have been specifically programmed by human developers. This ability to produce autonomous and unpredictable outputs has created uncertainty regarding whether AI should be treated merely as a tool or as something more complex within copyright law.

1 World Intellectual Property Organization (WIPO), WIPO Technology Trends 2019: Artificial Intelligence 12–15 (2019), https://www.wipo.int/edocs/pubdocs/en/wipo_pub_1055.pdf (last visited May 23, 2026).

2 RYAN ABBOTT, THE REASONABLE ROBOT: ARTIFICIAL INTELLIGENCE AND THE LAW 45–50 (Cambridge Univ. Press 2020).

3 Andres Guadamuz, Artificial Intelligence and Copyright, WIPO MAGAZINE (Oct. 2017), https://www.wipo.int/wipo_magazine/en/2017/05/article_0003.html (last visited May 23, 2026).

Today, artificial intelligence systems are different from traditional software because they can learn and get better on their own. They use something called machine learning and neural networks to look at lots of data and find patterns, which helps them make better outputs over time. This means they can now do things like copy artistic styles, write in a way that sounds like a human, make music that evokes emotions, and even create complex codes. This is changing the way we think about creativity, which we used to believe was something only humans could do. As a result, judges, lawmakers, experts, and policymakers everywhere are trying to figure out how to deal with creative work made by machines in terms of the law. They need to decide what rights machines should have, or if they should have any at all, when it comes to the creative work they produce. This is a hard question because it challenges our old ideas about who can be creative and what it means to be creative.

Human Authorship and the Foundation of Copyright

The concept of copyright is facing a big problem. It's not just about money, but also about who we are, our dignity, hard work, and how we express ourselves. Many old ideas about copyright think that the things we create show who we are, how we feel, and what we think. But Artificial Intelligence is not like us; it doesn't have feelings, doesn't know right from wrong, and isn't a real person in the eyes of the law. So, many experts say that AI can't really be called an "author" like a human would be. Machines don't have goals, they don't know they exist, and they don't want to create things as we do. They just do what they're told, using math and computer code, not imagination or emotions. Because of this, some countries, especially the United States, don't think AI should get copyright protection for things it creates on its own.

Position under Indian Copyright Law

The legal uncertainty surrounding AI-generated works is particularly evident in India. The Indian Copyright Act, 1957, was enacted long before the emergence of modern Artificial Intelligence technologies. Although the Act includes provisions relating to “computer-generated works,” it does not specifically address generative AI or autonomous machine creativity. Section 2(d) of the Act defines the author of a computer-generated work as the “person who causes the work to be created.” While this provision appears flexible, it remains unclear how it should apply in cases involving advanced AI systems capable of generating creative outputs with minimal human intervention.

The law does not clarify whether authorship belongs to the developer, the user, the company operating the AI platform, or another entity entirely. Furthermore, Indian courts have not yet developed a consistent judicial approach regarding AI-generated copyright disputes. This absence of legal clarity creates uncertainty for creators, businesses, software developers, and policymakers. As India continues to expand its digital economy and AI infrastructure, the need for clear legal standards becomes increasingly important.

Scope and Objectives of the Research

The issue also extends beyond legal doctrine and enters broader ethical and societal debates. Many artists, musicians, and writers fear that unrestricted AI-generated creativity may undermine human artistic labour and reduce opportunities for professional creators. Others argue that AI systems trained on copyrighted material exploit human creativity without proper

consent or compensation. Questions are also being raised regarding authenticity, artistic value, and the cultural meaning of creativity itself. If machines can generate art, music, literature, and code at massive speed and scale, society must reconsider what it truly values in creative expression.

This study takes a closer look at how copyright laws protect works created by artificial intelligence, like art, music, books, and software code. It questions who owns these creations and whether current copyright laws can handle the fact that AI systems can work on their own. The study also explores what it means to be a human author and whether our existing copyright laws are up to the task. In India, the Copyright Act of 1957 is examined, and its approach is compared to those of other major countries like the US, UK, EU, China, and Australia, to see how they deal with AI-generated works. The goal is to understand how different places are handling the issue of copyright protection for AI creations and what this means for the future of art, music, and other creative fields. As AI continues to produce more and more original works, it's essential to figure out who owns them and how they should be protected. This is a complex issue that requires a deep understanding of both copyright law and the capabilities of AI systems. By looking at how different countries are approaching this problem, we can start to build a framework for protecting AI-generated works and ensuring that creators are fairly rewarded for their contributions.

UNDERSTANDING ARTIFICIAL INTELLIGENCE AND AI-GENERATED CREATIVITY

The way Artificial Intelligence is changing how we think about creativity and innovation is really interesting. Before, people thought that only humans could be creative because things like painting, writing and making music required imagination and emotions. Now, Artificial Intelligence systems can make really complex and creative things that are similar to what humans make. This is causing a lot of debates about what it means to be creative and who owns the things that are made. [4]Artificial Intelligence is like a computer system that can do things that normally require intelligence, such as reasoning and learning. These systems can look at a lot of data, find patterns and make things based on what they have learned. This means that Artificial Intelligence is not just helping humans be creative. It is also making things on its own. One of the issues with Artificial Intelligence is what happens with copyright law. Artificial Intelligence systems can make text, images, music and videos based on what they have learned from things. This raises questions about whether these things should be protected by copyright and who should be considered the author.

The reason this is such a deal is that Artificial Intelligence is being used more and more in businesses and industries. Companies are using Artificial Intelligence to make advertisements, movies and music because it's faster and cheaper than having humans do it. This means that there needs to be rules about who owns the things that are made with Artificial Intelligence. Artificial Intelligence is making all sorts of things like art, music and books. These things are often really good. It is hard to tell that they were made by a machine. This is also causing problems because some people think that Artificial Intelligence is taking jobs away from

[4] World Intellectual Property Organization (WIPO), *WIPO Technology Trends 2019: Artificial Intelligence*

humans and that it is not fair to use someone else's work without permission. For example, there are Artificial Intelligence systems that can make realistic images and paintings. These systems are trained on datasets of images that are made by humans, and they can use this training to make new images that are similar. Some artists are upset because they think that their work is being used without permission and that Artificial Intelligence is taking away their jobs.

Artificial Intelligence is also being used to make music. Some systems can compose songs and albums without any help from humans. These systems are used in the music industry to make background music for movies and advertisements. There are also concerns about who owns the rights to this music and whether it is fair to use someone else's style without permission. Artificial Intelligence is even being used to write books and articles. Some systems can write novels and scripts without any help from humans. These systems are used in the publishing industry to make books and articles faster and cheaper. There are also concerns about who owns the rights to these writings and whether they are really creative. Overall, Artificial Intelligence is changing the way we think about creativity and innovation. It is making interesting things, but it is also raising questions about who owns these things and whether they are really creative. We need to figure out how to deal with these questions so that we can make sure that everyone is treated fairly and that we can keep making interesting things with Artificial Intelligence.

Meaning and Nature of Artificial Intelligence-Generated Works

Artificial Intelligence-generated works are things that are made either fully or partially by Artificial Intelligence systems. These things can include paintings, music, books and software code. The important thing about Artificial Intelligence-generated works is that they are made using systems that can analyse data and learn from it. The nature of Artificial Intelligence-generated works depends on how much humans are involved in the process. Sometimes humans are very involved. Provide detailed instructions and edit the final product. Times, Artificial Intelligence systems make things on their own with very little help from humans. This is important for copyright law because many legal systems require that things be made with creativity in order to be protected. When humans are very involved in the process, it is clear who owns the rights to the product. When Artificial Intelligence systems make things on their own, it is not as clear. This is because Artificial Intelligence systems are using data and patterns that they have learned from things, and it is not clear whether this is really creative or not.[5]

Another important thing about Artificial Intelligence-generated works is that they can be unpredictable. Traditional computer programs do what they are told and make things. Artificial Intelligence systems are different because they use probabilistic models and machine learning algorithms. This means that even the people who make the Artificial Intelligence systems may not be able to predict what they will make. The originality of Artificial Intelligence-generated works is also a question. Copyright law requires that things be original in order to be protected. Artificial Intelligence systems are making things based on patterns and data that they have learned from other things. This raises questions about whether these things are really original or not.

5 Pamela Samuelson, Allocating Ownership Rights in Computer-Generated Works, 47 U. PITT. L. REV. 1185, 1190–94 (1986).

Artificial Intelligence-Created Art, Music, Books and Software Code

Artificial Intelligence is being used to make all sorts of things, including art, music, books and software code.[67] These things are often really good. It is hard to tell that they were made by a machine.

AI- Created Art

Artificial Intelligence-created art is one of the visible and controversial forms of machine creativity. Some systems can make paintings, illustrations and digital artworks that're really sophisticated. These systems are trained on datasets of images that are made by humans, and they can use this training to make new images that are similar. The rise of Artificial Intelligence-created art has disrupted artistic industries. Artificial Intelligence systems can imitate styles and generate original-looking visual compositions really quickly. Some Artificial Intelligence-created artworks have even been sold at auctions and displayed in galleries, raising questions about artistic authenticity and creative ownership. However, Artificial Intelligence-created art has also generated controversy among artists and copyright scholars. Many artists argue that their creative labour is being exploited because Artificial Intelligence systems are learning from their work and generating competing outputs that can imitate their styles. As a result, lawsuits and legal disputes concerning Artificial Intelligence training datasets and artistic infringement are becoming more common. Another important issue concerns authorship. If a user just enters a prompt and the Artificial Intelligence system makes the rest of the artwork, it is hard to say who the real creator is. Some people think that the user should be considered the author because the prompt reflects intention and direction. Others think that this is not enough to qualify as authorship.

AI-Generated Music

Artificial Intelligence-generated music is also becoming more common. Some systems can compose melodies, harmonies and complete musical tracks without any help from humans. These systems are used in the music industry to make background music for movies and advertisements. Despite these advancements, there is still a lot of uncertainty about the legal status of Artificial Intelligence-generated music. Copyright law traditionally protects compositions as expressions of human creativity and artistic judgment. If an Artificial Intelligence system makes a song without any help from humans, it is hard to say who the author is.

AI-Written Books and Literary Works

Artificial Intelligence-written books and literary works are also becoming more common. Some systems can write essays, articles, poems, novels and scripts that are really sophisticated. These systems are used in the publishing industry to make books and articles faster and cheaper. One of the reasons why AI-written books are becoming popular is that they are efficient. Artificial Intelligence systems can produce a lot of text quickly. Businesses and publishers are using Artificial Intelligence tools to draft content and reduce production costs. At the time, writers are using Artificial Intelligence assistance to brainstorm ideas, edit drafts and generate

[6] Jane C. Ginsburg & Luke Ali Budiardjo, Authors and Machines, 34 BERKELEY TECH. L.J. 343, 347-50 (2019)
7 Daniel J. Gervais, The Machine as Author, 105 IOWA L. REV. 2053, 2058–60 (2020).

creative suggestions. However, Artificial Intelligence-written books raise copyright concerns. Literary creativity has traditionally been linked to personality, imagination and emotional expression. Courts and copyright authorities in jurisdictions require that copyright protection involve meaningful human authorship. Where literary content is produced entirely through Artificial Intelligence without any help from humans, legal protection becomes uncertain. The thing that worries people a lot is plagiarism. Being original. These AI language models are taught with amounts of text from books, articles, websites and other things that people wrote. Some people think that the things AI writes might accidentally copy something that is copyrighted or be much like something that already exists. So we still do not know what happens if someone copies something they should not have.

AI-Generated Software Code

Artificial Intelligence has changed the way we make software with tools like GitHub Copilot, Amazon CodeWhisperer, Tabnine and AlphaCode.[8] These tools can write code, find mistakes, suggest ways to solve problems and do a lot of the work that programmers do. These AI tools that help with coding make things faster and more accurate for developers. A lot of companies and programmers use Artificial Intelligence to do parts of coding, make templates, and make software better. Sometimes, Artificial Intelligence can even make programs with just a little help from people. Even though these tools are helpful, they also bring up big questions about copyright and the law. Code is protected by copyright law like any written work. Since these AI coding tools learned from a lot of existing code, including source and copyrighted software, people are worried about copying something without permission. Some people think that AI-generated code might accidentally copy parts of protected code or repeat programming structures that are copyrighted. This makes us wonder who should be in trouble if something gets copied. The person who made the AI tool, the person who used it or the company that runs the platform. It is also hard to say who owns something that Artificial Intelligence made. If Artificial Intelligence makes code from a few instructions from a user, it is hard to say who the real author is. The laws about copyright were mostly made for people who write code, not for machines that make code on their own.

Artificial Intelligence is now a part of the creative industries, making art, music, books and code. While these technologies can help us make things and be more efficient, they also make us question what it means to be original, who should own creative work and how we protect intellectual property. As Artificial Intelligence keeps getting better, laws around the world will have to think about what copyright means when machines are making things.

COPYRIGHT LAW AND THE HUMAN AUTHORSHIP REQUIREMENT

Copyright law has historically been centred around protecting creativity and intellectual labour.[9] The concept of authorship is key to copyright protection because it recognises and rewards creators who produce works through their skill, judgment, imagination and personal expression. Traditionally, only humans were considered capable of creating works deserving protection. The rapid development of Artificial Intelligence has challenged this assumption by enabling machines to generate creative outputs with little or no human intervention. The

8 Pamela Samuelson, Copyright and AI Generated Code, 34 HARV. J.L. & TECH. 411, 418–20 (2021).

9 LIONEL BENTLY & BRAD SHERMAN, INTELLECTUAL PROPERTY LAW 89–92 (5th ed. Oxford Univ. Press 2018).

emergence of AI-generated content has created uncertainty regarding authorship, human creativity and the scope of copyright protection. Modern AI systems can independently produce paintings, books, poems, music compositions, films, software code and digital content that often resemble human-created works. This raises a question: can copyright remain exclusively human-centric in an era where machines increasingly participate in the creative process?

The issue is significant because copyright law was not designed to deal with machine creativity. Most copyright frameworks assume an author who exercises intellectual effort and creative judgment. When AI systems autonomously generate works, traditional copyright principles struggle to determine authorship, ownership, originality and liability. The debate surrounding authorship involves deeper philosophical questions regarding creativity, personality, labour, and the purpose of copyright protection. As AI technologies evolve, courts, lawmakers and scholars must reconsider whether existing copyright frameworks are sufficient to address machine-generated creativity.

Meaning of Authorship in Copyright Law

Authorship is a concept in copyright law. An author is the creator of a work.[10] Copyright protection is granted to the author to reward effort, encourage creativity and provide economic incentives for cultural and artistic development. Traditionally, authorship has been associated with intelligence, imagination and personal expression. Under copyright systems, authorship requires originality, which means a work must originate from the independent intellectual effort of the creator. Courts emphasise that copyright protects the expression of ideas rather than the ideas themselves. The concept of authorship is deeply rooted in the history and philosophy of copyright law. Early copyright systems protected writers, artists and publishers from copying. Over time, copyright protection expanded to include compositions, films, software programs, photographs and digital content.

International copyright instruments, such as the Berne Convention, assume creative works originate from authors[11]. National copyright laws, like the United States Copyright Office, clarify that works produced without authorship are not entitled to copyright registration. The Indian Copyright Act, 1957, also reflects a centric approach toward authorship. However, the Act contains a provision relating to computer-generated works, where the author is defined as the "person who causes the work to be created."

Human Creativity as the Foundation of Copyright

Human creativity has always been considered the justification for copyright protection[12]. Copyright law rewards intellectual labour and encourages the creation of literature, art, music and cultural expression. The underlying assumption is that creative works reflect the author's personality, emotions, thoughts, skill and imagination.

Several philosophical theories explain why human creativity forms the foundation of copyright law:

10 Copyright Act, 1957, § 2(d), No. 14, Acts of Parliament, 1957 (India).

11 Berne Convention for the Protection of Literary and Artistic Works art. 2 Sept. 9, 1886, 828 U.N.T.S. 221

12 JOHN LOCKE, SECOND TREATISE OF GOVERNMENT 27–30 (1690).

Labour Theory: Individuals acquire rights over the products of their labour because they invest time, effort and skill into creation.

Personality Theory: Creative works represent an extension of the author's personality and identity.

Incentive Theory: Copyright law encourages individuals to invest time and resources into producing works. AI-generated works challenge these theories because machines do not engage in labour, do not possess emotions or personal identity and do not require incentives.

Challenges Posed by Autonomous AI Systems

The emergence of AI systems has created complex challenges in modern copyright law. Traditional copyright frameworks assume creative works originate from human authors. Generated creativity disrupts this assumption because modern AI systems can independently generate sophisticated outputs with limited or no human intervention[13]. One of the challenges involves determining authorship and ownership. In creative processes, identifying the creator is straightforward. In AI-generated works, however, multiple parties may claim involvement. Another major challenge concerns the absence of personality for AI systems. Copyright law generally recognises natural or legal persons as rights holders. AI systems are not recognised as legal entities capable of owning property, entering into contracts or enforcing legal rights.

The issue of originality causes problems.[14] Copyright protection usually requires people to create something using their own ideas and creative skills. AI systems make things by looking at collections of existing works made by humans. Some people think AI-made things might just be copies or rearrangements of material, not truly new. It's hard to decide if AI-made content meets the standards for being original, and this is an argument across different countries. Autonomous AI systems also bring up worries about who's responsible if something is copied. AI models are trained on datasets that include copyrighted material from books, art, music, websites and software. If AI-made things copy-protected parts from the training data, it's hard to figure out who should be blamed. Questions come up about whether it should be the developers, users, platform owners or others in the AI world who're responsible. Another challenge is that AI systems are not transparent. Many modern AI systems use machine learning models that are like "black boxes". Even the people who made them might not fully understand how certain things are created. This lack of transparency makes it hard for courts to figure out things like how people were involved, if something is original or if it's copied. The more businesses use AI systems, the bigger these challenges get. AI-made content is now used a lot in advertising, movies, journalism, publishing, gaming, software and digital media. As AI-made things become valuable, uncertainty about who owns and can protect them might lead to disputes, investment and inconsistent court decisions.

Autonomous AI systems also raise ethical concerns about the future of human creativity. Many artists, writers, musicians and programmers worry that unrestricted AI-made content might reduce opportunities for humans and undermine the value of creativity. Others worry that AI systems trained on copyrighted works unfairly use creativity without permission or payment.

[13] Ryan Abbott, I Think, Therefore I Invent: Creative Computers and the Future of Patent Law, 57 B.C. L. Rev. 1079, 1088-90 (2016)

[14] Pamela Samuelson, Questions Relating to the Ownership of AI- Generated Works, 63 COMMC'NS ACM 20, 21-22 (2020)

In the end, autonomous AI systems challenge the ideas that copyright law is built on. Existing laws still rely heavily on ideas, like human authorship, originality and personal creativity. As AI technologies keep changing, lawmakers and courts will need to think about whether traditional copyright principles can deal with machine-made creativity or if new legal approaches are needed.

OWNERSHIP OF AI-GENERATED WORKS

The question of who owns things made by intelligence is a really tough one[15]. When it comes to copyright law, it was always thought that a human made everything. Now, artificial intelligence is making all sorts of things like art, music and writing, and it is not clear who should own these things. There are a lot of people involved in making things with intelligence. The person who made the intelligence system, the company that owns the system, and the person who uses the system all play a role. The artificial intelligence system itself also does a lot of the work, which makes it hard to figure out who should own what. Owning the copyright to something is a big deal because it gives you the right to decide how it is used. You can say who can copy it, who can sell it, and who can use it to make money. So not knowing who owns something made by intelligence can cause a lot of problems. Different countries have ideas about who should own things made by artificial intelligence. Some say that only things made by humans can be owned, while others say that the person who told the intelligence what to do should own it.

Ownership of AI-Created Art

One of the things to figure out is who owns art made by artificial intelligence. These systems can make pictures and designs that look like they were made by humans. It is not clear if the person who made the system, the person who used the system, or someone else should own the art. Some people think that the person who used the system should own the art because they told the system what to do. Others say that the system itself did most of the work, so it is not clear if the person who used it should own it. Another problem is that these systems use pictures and designs made by humans to learn how to make art. This means that the people who made the pictures and designs might not get the credit they deserve.

Ownership of AI-Generated Music

Then there is the question of who owns music made by intelligence. These systems can make music that sounds like humans made it. It is not clear who should own the music: the person who made the system, the person who used the system, or someone else[16]. Some people think that the person who used the system should own the music because they told the system what to do. Others say that the system itself did most of the work, so it is not clear if the person who used it should own it. There is also the problem that intelligence systems can copy the voices of famous singers. This can be a problem because it might be seen as stealing someone's identity.

[15] TANYA APLIN & JENNIFER DAVIS, *INTELLECTUAL PROPERTY LAW: TEXT, CASES, AND MATERIALS* 512-15 (3d ed. 2021)

[16] Annemarie Bridy, Coding Creativity: Copyright and the Artificially Intelligent Author, 5 STAN. TECH. L. REV. 1, 5-8 (2012)

Ownership of AI-Written Literary Works and Books

The question of who owns writing made by intelligence is also a tough one. These systems can make writing that looks like humans wrote it.[17] It is not clear who should own the writing, the person who made the system, the person who used the system or someone else. Some people think that the person who used the system should own the writing because they told the system what to do. Others say that the system itself did most of the work, so it is not clear if the person who used it should own it. There is also the problem that intelligence systems can copy the writing styles of famous authors. This can be a problem because it might be seen as stealing someone's identity.

Ownership of AI-Generated Software and Code

Finally, there is the question of who owns software and code made by intelligence. These systems can make software and code that is used in all sorts of things[18], from phones to computers. It is not clear who should own the software and code: the person who made the system, the person who used the system, or someone else. Overall, the question of who owns things made by intelligence is a really tough one. It is not clear who should own these things, and different countries have ideas about it. It is a problem that will need to be solved as artificial intelligence becomes more and more common. Artificial Intelligence is changing the way we make software and write computer programs. There are systems like GitHub Copilot, Amazon CodeWhisperer, AlphaCode and Tabnine that can write code, suggest ways to solve problems, find errors and do tasks on their own. These technologies are making software companies work efficiently and get more done.

Artificial Intelligence is helping programmers write code faster. However, it is not clear who owns the code that Artificial Intelligence generates. This is a problem because the law says that computer programs are protected like books and stories. The law assumes that people write code, not machines. Artificial Intelligence systems are changing this by writing code on their own. Some people think that the person using the Artificial Intelligence system should own the code because they tell the system what to do and use the code it generates. In this way, Artificial Intelligence is a tool to help programmers. If the Artificial Intelligence system writes code all by itself, it is not clear who owns it. The law does not say what to do when machines write code without people helping. Another problem is that Artificial Intelligence systems learn from code that other people have written. Many of these systems use open-source code, which is code that people can use for free. If the Artificial Intelligence system generates code that is similar to someone else's code, it could be against the law. This is a deal because software companies need to know who owns the code they use. If they do not know, they could get in trouble for using someone's code without permission. It is also not clear who is responsible if the code that Artificial Intelligence generates causes problems. For example, if the code has a security flaw, who's to blame? Artificial Intelligence is changing the way we make software. The law needs to catch up. While Artificial Intelligence is making software development more efficient and innovative, it is also showing that the law has some gaps.

The question of who owns code generated by Artificial Intelligence is part of a debate about copyright law and technology. Artificial Intelligence is generating art, music, stories and code

[17] Jane C. Ginsburg, People Not Machines: Authorship and What It Means in the Berne Convention, 49 INT'L REV. INTELL. PROP. & COMPETITION L. 131, 135-37 (2018)
18 Doe 1 v. GitHub, Inc., No. 4:22-cv-06823 (N.D. Cal. filed Nov. 3, 2022).

that challenge our assumptions about creativity and originality. Different countries are trying to figure out what to do. There is no one solution that everyone agrees on. As Artificial Intelligence keeps evolving, laws around the world will need to rethink what it means to be a creator and find a balance between protecting innovation and human creativity. Artificial Intelligence will keep changing the way we make things. We need to make sure the law is ready. Artificial Intelligence is a tool, and we need to use it in a fair way for everyone. The future of Artificial Intelligence and copyright law is uncertain. One thing is clear: Artificial Intelligence is here to stay, and we need to figure out how to deal with it. Artificial Intelligence is changing the world. We need to change with it.

The issue of ownership of AI-generated works ultimately reflects a broader conflict between traditional copyright principles and modern technological advancement. AI-created art, music, literary works, and software code challenge long-standing assumptions regarding human creativity, originality, and intellectual labour. Although different jurisdictions have adopted varying approaches, there is still no universally accepted solution regarding ownership of AI-generated outputs. As Artificial Intelligence continues to evolve, legal systems across the world will increasingly need to reconsider the meaning of authorship and develop balanced frameworks capable of protecting both technological innovation and human creativity.

ACADEMIC DEBATE ON AI AUTHORSHIP AND OWNERSHIP

Many scholars think that copyright protection should only be for human-created works. They believe AI systems can't be authors because they don't have feelings, emotions or intentions as humans do. Copyright law was made to reward creativity, so extending protection to machine-generated works might weaken its foundation. Scholars also argue that AI systems can't have rights like a reputation or a personal connection to a work.

On the one hand, some academics think copyright law needs to change with technology. They believe that not protecting AI-generated works might discourage innovation and investment in AI. Since companies invest a lot in AI systems, some scholars think AI-generated outputs should be protected for certain reasons. Others think users who give prompts and directions should be recognised as authors because AI is a tool.

There's also a debate about who should own AI-generated works.[19] Some scholars think users should own them because they choose prompts and outputs. Others think developers should own them because AI-generated works are only possible with their algorithms and infrastructure. A few scholars suggest giving AI systems limited legal personality, but this idea is widely criticised. Some scholars think autonomous AI-generated works should be in the public domain. They believe copyright protection is to encourage creativity, and AI systems don't need incentives or recognition. Excessive protection might give much power to big tech companies and hurt human creators. Scholars have also raised concerns about AI-generated creativity.

19 Pamela Samuelson, Allocating Ownership Rights in Computer-Generated Works, 47 U. PITT. L. REV. 1185, 1190–94 (1986)., 47 U. PITT. L. REV. 1185, 1190-94 (1986)

Many AI systems are trained on copyrighted works collected without permission, which might unfairly exploit creativity. There are concerns about originality, plagiarism and the future impact of AI on industries. Despite opinions, many scholars support a balanced approach. They think copyright protection should depend on how much humans are involved in the creative process. Assisted works with substantial human creativity might receive protection, while fully autonomous AI-generated works might not. The debate on AI authorship and ownership shows the challenge of balancing innovation with traditional copyright law principles.

As Artificial Intelligence evolves, these discussions will likely shape legal reforms and policy developments relating to AI-generated works. Artificial Intelligence will continue to play a role in this conversation. The future of AI-generated works and their ownership will be influenced by the development of Artificial Intelligence.

CRITICAL ANALYSIS

The issue of copyright protection for Artificial Intelligence-generated works is really complicated. Artificial Intelligence is getting better and better. This has shown that the old copyright laws are not good enough. These laws were made with the idea that only humans can be creative. Now, Artificial Intelligence systems can make art, music, books and software code with very little help from humans. This is causing problems with the laws about who owns these things and how they are protected. One of the problems is that the laws are still based on the idea that only humans can create things. Most countries, like India, the United States and the European Union, say that copyright protection is for things made by humans. This is good because it protects the idea that humans are creative, but it causes problems when Artificial Intelligence systems make things on their own. If we do not protect Artificial Intelligence-generated works, it might stop people from investing in Artificial Intelligence. If we give them too much protection, it might make human creativity seem less important.

The Indian Copyright Act is an example of this problem. The Act says that the person who makes the work is the owner. It is not clear who that person is when Artificial Intelligence is used. Is it the person who uses the Artificial Intelligence system, the person who made the system, or someone else? This is causing a lot of confusion.

Another big problem is whether Artificial Intelligence-generated works are really original. Artificial Intelligence systems make things by looking at a lot of data that was made by humans. So it is not clear if the things they make are really new or just copies of something that already exists. Sometimes, Artificial Intelligence-generated works might even copy the style of another artist or writer without meaning to. The question of who owns Artificial Intelligence-generated works is also a problem. If we say that the person who made the Artificial Intelligence system owns everything, it could give them much power. If we say that the person who uses the system is the owner, that might not be fair because they did not really create anything. We cannot say that the Artificial Intelligence system itself is the owner because it is just a machine. The laws in countries are also not the same, which is causing more problems. The United States says that only humans can own copyrights, while the United Kingdom is more flexible. China is willing to protect some Artificial Intelligence-generated works. The European Union is still focused on human creativity. This is causing a lot of confusion around the world. There is also a problem with how Artificial Intelligence systems are trained. They are often trained using copyrighted

material, like books and music, without permission from the creators. This is not fair to the humans who made those things. It is not clear if it is legal. We cannot just ignore the fact that Artificial Intelligence is becoming more and more important in the creative industries. Artificial Intelligence can help humans make things efficiently and come up with new ideas. So we need to find a way to protect creativity while also recognising the role of Artificial Intelligence.

A good approach might be to focus on protecting creativity, but also to recognise when humans have worked with Artificial Intelligence to make something. If a human has contributed significantly to the creation of an Artificial Intelligence-generated work, maybe it should be protected. If an Artificial Intelligence system makes something all on its own, maybe it should not have the same protection. We also need to update the laws to deal with Artificial Intelligence. This means making clear rules about what is not protected and how we deal with problems like infringement. We need to work together internationally because Artificial Intelligence-generated works can be made and shared all around the world.

Overall, the question of Artificial Intelligence and copyright is complicated. We need to protect creativity, but we also need to adapt to the fact that Artificial Intelligence is becoming more and more important. We need to find a way to balance these two things so that we can ensure fairness and innovation in this age. Artificial Intelligence is changing the way we create things. We need to change the laws to deal with it.

JUDICIAL APPROACHES AND IMPORTANT CASE LAWS

Courts and people who deal with copyright issues around the world still think that a human must create something for it to be protected by copyright. Even though there is no agreement on what to do with things made by Artificial Intelligence, some important cases have helped shape the rules.

One big case is *Naruto v. Slater,* also known as the "Monkey Selfie Case", in the United States. The court said that only humans can own copyright because the law is meant for authors. This case did not involve Artificial Intelligence directly. It is important when talking about Artificial Intelligence and copyright because it says that humans must be involved.

The United States Copyright Office has also said no to protecting things made entirely by Artificial Intelligence without humans being involved. For example, they did not allow copyright for "An Entrance to Paradise", which was made by an Artificial Intelligence system called Creativity Machine. They said this was because copyright needs creativity. Similarly, in the Zarya of the Dawn case, they only protected the parts that humans created, like the arrangement and text and not the Artificial Intelligence-made images.

The United Kingdom is a bit more flexible. They say that the person who makes the arrangements for a computer-made work is the author. The courts have not yet figured out how this applies to modern Artificial Intelligence systems that can make things on their own. The European Union thinks that for something to be protected by copyright, it needs to be an " intellectual creation”. Even though they have not made a ruling on things made entirely by Artificial Intelligence, it seems like they think humans need to be involved for something to be protected.

China is a bit more open to things made with Artificial Intelligence. In one case, *Shenzhen Tencent v. Shanghai Yingxun,* a court said that an Artificial Intelligence-made financial article could be protected by copyright because humans were involved in making it. This shows a practical approach that focuses on whether humans were part of the creative process. In India, there is no court decision yet on who owns the copyright for things made by Artificial Intelligence. There was a case where the Indian Copyright Office initially said that an Artificial Intelligence system named "RAGHAV" could be a co-author, but then they changed their minds. This shows that there is still uncertainty about what to do with Artificial Intelligence-made things in India.

Overall, courts around the world are still saying that human creativity and involvement are necessary for something to be protected by copyright, even as they try to figure out what to do with the challenges posed by Artificial Intelligence, Artificial Intelligence-made works and Artificial Intelligence systems.

CONCLUSION

The rise of Artificial Intelligence has made copyright rules, based on human creativity and authorship, very challenging. AI systems can now create art, music, books and software code with human help. This has made it unclear who owns these works, if they are original, and how they are legally protected.

The current copyright laws, like the Indian Copyright Act of 1957, were not made to handle AI-generated works on their own. So they are not enough in ways. Most countries still focus on authorship as the main reason for copyright protection, but they differ in their approaches. Completely denying protection to AI-generated works might stop innovation. On the one hand, giving unlimited rights might reduce the value of human creativity and artistic work. A balanced approach is therefore necessary. The law needs to change to fit today's technology while still protecting contributions.

Clear laws about AI-generated works, ownership, originality and infringement are crucial. They will ensure fairness, innovation and legal certainty in the age. The discussion around AI-generated works shows the need to balance progress with the basic principles of copyright law. Artificial Intelligence and copyright law need to work together to find a solution. The Artificial Intelligence systems are getting better and better. Artificial Intelligence has an impact on copyright law. Copyright law and Artificial Intelligence are interrelated.

DECLARATION OF AI USE

This research paper is for educational purposes. Artificial Intelligence tools helped a little with language structuring, grammar refinement and drafting. The author independently reviewed, edited and supervised all ideas, legal analysis, interpretation, organisation and final content selection.

The use of AI tools does not replace doing your academic research, critical analysis or understanding of legal matters. The author carefully. Organised relevant legal principles,

judicial decisions, statutory provisions and academic discussions to keep this paper academically honest and original.

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