
AI AS CREATIVE COLLABORATOR: RETHINKING AUTHORSHIP AND COPYRIGHT IN THE DIGITAL ERA

Tanisha Chellani, SVKM's NMIMS

ABSTRACT

Artificial Intelligence (AI) has seen a smooth integration into almost every aspect of modern life, transforming industries and revolutionizing creativity. This research focuses on the emerging role AI will take as co-author in creative processes, starting with specific GenAI systems that produce original novel content. These have constituted generating text, images, music, or code through synthesizing large datasets, providing outputs that challenge traditional ideas about authorship. Although AI models like ChatGPT, DALL-E, and Codex perform most of the creative work, there remains the question of authorship: does the author belong to the user who initiated the creative process or the AI that performs the majority of the task? This paper investigates how AI contributes to content creation by extending the process beyond simple data compilation as these systems generate new connections, insights, and artistic expressions. This, in turn, raises crucial legal and philosophical questions about authorship, particularly in the context of copyright law. Traditionally, under the Indian Copyright Act of 1957, authorship is assigned to those who create a work. The autonomous and innovative role of AI complicates this definition by blurring the lines between human input and machine-generated creativity. As AI continues to assume a central place in artistic and intellectual pursuits, the paper recommends a review of copyright law and the nature of authorship in light of an argument that AI is not merely a tool but a creative collaborator. This dynamic human-AI relationship demands a new legal framework, which acknowledges the collaborative nature of AI-generated works and protects both human creators' rights and AI systems. The paper here is an effort to rethink authorship and intellectual property rights in the context of AI in a more balanced and forward-looking manner for creativity and innovation in the digital era.

Keywords: Tanisha Chellani, Artificial Intelligence, Generative AI, Intellectual Property Rights, Copyright, Author, Indian Copyright Act, 1957

Introduction

Artificial Intelligence is now a very integral part of our daily life, influencing the way we work and interact with technology in so many different areas. Its widespread presence is reshaping our habits, making it more efficient and personalizing experience in ways previously unimaginable. Artificial intelligence (AI) has elicited much attention across disciplines and industries.¹ From curating recipes to developing codes and finding references for this article, AI has permeated itself into almost every sphere imaginable. AI has been defined as "a system's ability to correctly interpret external data, to learn from such data, and to use those learnings to achieve specific goals and tasks through flexible adaptation."²

AI and its Sub-fields

AI is a broad field with several subfields, one of the most important of which is Machine Learning (ML). ML involves the development of algorithms that enable computers to find patterns and make predictions based on data without explicit instruction. Machine learning (ML) algorithms work differently from traditional computer programs: instead of requiring explicit instructions to function, these systems infer instructions from examples.³

Within ML, NLP is a specialized field that focuses on enabling machines to understand, interpret, and generate human language. This is a combined field of linguistics and computer science, as it processes massive amounts of text or speech data, making machines interact with humans in more natural and intuitive ways. Applications of NLP include chatbots, translation services such as Google Translate, sentiment analysis, and speech recognition such as virtual assistants like Siri or Alexa.

Generative AI is quite a very exciting and rapidly developing field of AI, differentiated by the fact that it generates new content rather than just analyzing or classifying data, like algorithms trained on big datasets that will generate absolutely new and original outputs. Popular techniques in generative AI include Generative Adversarial Networks, consisting of two types of neural networks-one is responsible for content generation and the other for evaluation. This

¹ Hyder, Z., Siau, K., & Nah, F. F. H. (2019). Artificial intelligence, machine learning, and autonomous technologies in mining industry. *Journal of Database Management*, 67–79.

² Kaplan, A., & Haenlein, M. (2019). Siri, Siri, in my hand: Who's the fairest in the land? On the interpretations, illustrations, and implications of artificial intelligence. *Business Horizons*, 62 , 15–25)

³ Polanyi, Michael, *The Tacit Dimension*, Chicago, IL: University of Chicago Press, May 1966.

tends to bring about extremely high quality and realistic content generation. The functions of generating new content range from text to images, music, and even code.

These models can do many things, from being a general question and answering system to creating artistic images autonomously, thereby revolutionizing a few sectors. Therefore, the impact these generative models are creating in the industry and within society is colossal because a whole set of jobs might be replaced. For instance, Generative AI could totally flip the scenes on transforming texts into images, as in DALLÉ-2; images into 3D images, as in Dreamfusion model; text into images, as in Flamingo; videos from texts like the Phenaki model; audio from texts like AudioLM model; other texts from texts, as in the case of ChatGPT; codes from texts, as in the Codex model; scientific texts from texts, as in Galactica model, and even Algorithms as in AlphaTensor. Not only ChatGPT.⁴

The advent of such systems marks an era that profoundly changes the ground on which creativity occurs. As if at every other pace, the functionality of AI seems to speed the process further than ever in history, one finds people relying more and more on it as a way of making artistic productions easier and less demanding. Whereas its uses vary from writing content to composing music to software coding and visual artwork, AI offers tools that might simplify, augment, or even go completely autonomous in various aspects of creation. But though AI does take a great load off the task, the real question arrives in understanding how accurate the creative aspect of GenAI works when it comes to text-output production.

Human-in-the-Loop

The Human-in-the-Loop conception will be extensive about the research carried at the interface between computer science, cognitive science along with psychology. Human-in-the-Loop strives to train the model for correct prediction at lowest cost incorporating the human knowledge experience. Through the aid of machine-based approaches, humans can also give training data to the machine learning applications and can directly accomplish those tasks that are difficult for computers to perform in the pipeline.⁵ This work suggests that humans and computers should be doing the very same thing at the very same moment, doing what each of

⁴ A State of the Art Review of large Generative AI models] Roberto Gozalo-Brizuela Eduardo C. Garrido-Merchan

⁵ Abdul A, Vermeulen J, Wang D et al (2018) Trends and trajectories for explainable, accountable and intelligible systems: an hci research agenda. In: Proceedings of the 2018 CHI conference on human factors in computing systems. Association for Computing Machinery, New York, NY, USA, CHI '18, pp 1–18

them does best at a given time. Different methodologies stem from the position which is given to humans in the workflow. On one hand, humans can reach the end of the flow, correcting the results of a machine learning system—e.g., using humans for validation, cleaning, and corrections. On the other hand, humans might be used first to do the tasks that are easy for them but difficult for machines—e.g., interactive image segmentation, where humans provide input with basic annotation tools. Authors go as far as saying that it promises IML in that it will construct systems where the interaction between machines and humans will be dynamic, optimized to each strength in much the same way that crowdsourcing enables human beings to perform tasks which are traditionally reserved for machines.

The reliance on Generative AI (GenAI) software in contemporary society has increasingly been pronounced as a means to create content. It is an undisputed fact that AI-generated content requires human input for accuracy and to ensure that the meanings intended are properly conveyed. An important question here is: Does such content come under copyright law? If it does, how much?

Is AI an author?

According to the Indian Copyright Act, 1957, "author" refers to a person who creates the work and especially for any such work of literature, drama, music, or other graphic art and, in particular for any work produced by a computer.⁶ The term "gives rise to the work to be created" might be taken in a rather basic sense as it describes the initiator of the whole process of generating the work in question. Applying this definition does become somewhat convoluted with the assistance of generative AI tools, specifically those using GenAI in an operation where there is a use of prompts through users, leading to vaguery on how to demarcate the act of authorship. Although it's the user who initiates the prompt, it's the AI system itself that is entrenched in the major working of the creative process. The AI gathers, organizes, curates, and delivers the final output based on the prompt. Therefore, while user input takes place as the first step, the execution of the task by the AI raises questions about authorship. The user will be the starter of the process, but the AI will do all the heavy lifting in terms of research, synthesis, and creation.

Legal definitions of authorship further become entangled with the reality that one merely

⁶ Section 2(d)(iv) of the Indian Copyright Act, 1957

providing aid to the creative process is not thereby considered a co-author.⁷ Traditional notions of creative process are thus under assault from AI-aided creativity. The capabilities of AI systems have become so broad that they now carry out significant portions of creative tasks that were earlier carried out by humans.

While human input remains indispensable for guiding AI applications, the actual creative work—which is still an effort involving much innovation—is performed by the AI system. The transformation in the creative process makes it necessary to reevaluate authorship in a work that is composed with AI. The final output is created after the collected information has been organized and synthesized by the author. In the same way, if a user engages with a GenAI model, such as ChatGPT, he is offering a prompt to tell the AI to dig into all resources it has access to, gather that information, and come up with the final output. The user may choose to expand the content—whether that be through providing more data, using proper grammar and sentence structure, or simply swapping some facts over to be better—by continuing to feed prompts into the model.

Even though people may argue that since the core prompt has already been provided by the user himself, the basic act of collection and curation of data automatically falls upon the model. Human input is required, but the generated content's every detail may not be called for. Instead, the output of the AI often amazes its users through novel connections or insights that might not have directly been anticipated. This is to place an emphasis on the changing state of human content input and how the machine, through its input, contributes a value that isn't just adding up third parties' sources as mere compilation for the creative, but rather to the generative mechanism.

Some arguments state that they are only assembling pre-existing information from third parties. While that is true—ChatGPT and other AI models use already existing data—this is more than a simple compiling of information. AI systems create entirely novel content by synthesizing and reconfiguring data in ways that never existed before.⁸ This process converts raw data into unique combinations that may include new narratives, ideas, or solutions not clearly present in

⁷ *Childress v. Taylor*, 945 F.2d 500 (2d Cir. 1991) US Court of Appeals for the Second Circuit case opinion

⁸ Adib Bin Rashid, MD Ashfakul Karim Kausik, AI revolutionizing industries worldwide: A comprehensive overview of its diverse applications, *Hybrid Advances*, Volume 7, 2024, 100277, ISSN 2773-207X, <https://doi.org/10.1016/j.hybadv.2024.100277>.

the source material. Therefore, AI is not only compilation but also an active creation, which is essential to the argument for recognizing AI-generated works as original.⁹

AI models, such as large language models, operate independently in generating their outputs.¹⁰ Once the prompt is received, they automatically process large amounts of data by applying learned patterns to decide which content to include and which to exclude. Thus, AI does more than serve as a simple tool for collecting and presenting data in the production of responses or creative works. That means that the process of organizing, transforming, and generating content for this AI does not resemble traditional ways of data compilation where human interference is needed step by step.

Contrasting with the usual data compilation, AI systems are able to determine patterns and connections that may not be apparent for human beings.¹¹ These models can make new connections between seemingly unrelated pieces of information, leading to the generation of innovative ideas, insights, or even artistic expressions. The ability to produce new and unexpected results suggests that the AI is not merely compiling data but rather contributing to the creative process in ways that transcend the limits of pre-existing material. For instance, The Washington Post has an AI system called Heliograf, which generates news articles independently. Heliograf is not a passive collector of data; it actually analyzes sports statistics or election results, synthesizes them into coherent, structured reports, and produces personalized articles. While the information obtained is third party, the self-drafting of articles on its own as the AI suggests that it doesn't simply pull information together; it generates fresh content on defined criteria and based on a determined logic.¹²

The argument that AI merely compiles existing data misunderstands the creative and decision-

⁹ Yongjun Xu, Xin Liu, Xin Cao, Changping Huang, Enke Liu, Sen Qian, Xingchen Liu, Yanjun Wu, Fengliang Dong, Cheng-Wei Qiu, Junjun Qiu, Keqin Hua, Wentao Su, Jian Wu, Huiyu Xu, Yong Han, Chenguang Fu, Zhigang Yin, Miao Liu, Ronald Roepman, Sabine Dietmann, Marko Virta, Fredrick Kengara, Ze Zhang, Lifu Zhang, Taolan Zhao, Ji Dai, Jialiang Yang, Liang Lan, Ming Luo, Zhaofeng Liu, Tao An, Bin Zhang, Xiao He, Shan Cong, Xiaohong Liu, Wei Zhang, James P. Lewis, James M. Tiedje, Qi Wang, Zhulin An, Fei Wang, Libo Zhang, Tao Huang, Chuan Lu, Zhipeng Cai, Fang Wang, Jiabao Zhang, *Artificial intelligence: A powerful paradigm for scientific research*, *The Innovation*, Volume 2, Issue 4, 2021, 100179, ISSN 2666-6758, <https://doi.org/10.1016/j.xinn.2021.100179>.

¹⁰ What Are Generative AI, Large Language Models, and Foundation Models? By Helen Toner

¹¹ Alowais SA, Alghamdi SS, Alsuhebany N, Alqahtani T, Alshaya AI, Almohareb SN, Aldairem A, Alrashed M, Bin Saleh K, Badreldin HA, Al Yami MS, Al Harbi S, Albekairy AM. Revolutionizing healthcare: the role of artificial intelligence in clinical practice. *BMC Med Educ*. 2023 Sep 22;23(1):689. doi: 10.1186/s12909-023-04698-z. PMID: 37740191; PMCID: PMC10517477

¹² The Washington Post used automated storytelling as it covers the high school football by WashpostPR

making content generation process involved. A basic fact about AI is that AI systems work based on their trainings in large datasets, enabling them to mimic creativity. A model has choices on the language, structure, and format, which contribute to their final outputs in a manner similar to a human creative process. For example, IBM Watson for Oncology scans the medical literature and patient data to aid doctors in cancer diagnosis and treatment. It does not collect all of the already known medical information but discovers new associations between treatment alternatives and characteristics of patients. Sometimes, Watson came up with treatment procedures that no person would have fathomed the possibility of anything such before that is a proof of how well the AI can manufacture new relations between vast data.¹³ A human writer gathers together some information rearranged to portray new ideas. An AI system can do that in a very innovative and original way, although it is getting its ideas from the data that already existed.

Although AI systems depend on third-party sources for their data, their ability to process and deliver content in response to specific prompts makes them more than just passive conduits for existing information. The algorithms of the AI model determine how to present the information in a coherent and contextually relevant manner. For instance, if a user requests an article based on a certain topic, the AI reflects what that request is and sometimes with adjustments in tone, depth, and even style to fit what the user requires. Such an altered creation, as formed by the understanding of the AI on context and subtlety, shows how it has added value to the final product beyond just collecting data. Jasper AI is one of those content generation tools that produces unique articles, blog posts, and marketing copy. Although it uses all the pre-existing data, its actual contribution shows itself in how creatively it structures and formats content on specific-user prompts. A user could request an article about a certain product and, in this way, Jasper might write a totally new piece, taking in all the appropriate keywords, structures, and even words used. That's beyond data assembly, really it is based on guidelines on the input itself to create new text.

The active role AI plays as a content producer is underestimated through viewing it just as a mere data compiler. AI systems generate new expressions, structures, and forms of expression. This cannot be compared with traditional tools whose only function lies in repetitive jobs under human instruction. For example, a word processor simply collates text inputs from the user but

¹³ <https://www.ibm.com/watson>

does not generate new ideas, content, or creativity. Contrary to this, AI models produce new outputs using complex algorithms. In a sense, this could be seen as an autonomous act of creation even though it's based on pre-existing information.

The dynamic relationship between the user and the AI model creates a need for further inquiry into the definition of authorship with respect to works created by an AI model. It remains to be seen who is the author: the initiating user or the AI system performing most of the creative work, or even whether it's both. This dynamic human-AI collaboration in the creative process calls for a sharp understanding of what authorship is and how copyright is protected in the digital age.

The emergent use of Artificial Intelligence in creativity processes forces a re-evaluation of the concepts of authorship and copyright jurisprudence. Because Generative AI and other AI technologies challenge the traditional understanding of creativity and ownership, the definition of "author" under the Indian Copyright Act, 1957 becomes much more complicated in ascertaining works created with AI assistance. While users set off the creative process with a prompt, the AI does most of the research, synthesis, and content generation. This duality raises some very important questions about the nature of authorship: if a user is the initiator but the AI executes the majority of the creative work, who rightly holds the title of author? Moreover, legal precedents indicate that mere assistance in a creative work does not bestow co-authorship. The principle is however challenged by the capabilities of AI, which may perform substantial creative tasks that hitherto only humans were considered to perform.

Human involvement and AI-produced content have evolved to become related, though the execution and innovation still fall upon the AI itself, even though human guidance is crucial. This development requires further analysis on the way authorship is to be ascribed in creative works that incorporate AI. Consequences reach beyond legal definition into ethical matters involving recognition and credit for creative outputs. As AI systems generate new content through the synthesis of existing information in novel ways, it becomes impossible to classify such outputs as simple compilations. Rather, these systems produce original works that reflect an active role in the creative process. This active participation by AI underscores its importance in contemporary creativity and calls for a change in the way we perceive authorship. In conclusion, in a world where Generative AI spreads to every corner of creative fields, there is the need to re-think all that copyright laws have come to mean and how authorship has been

defined in the new paradigm of this era. Human input and machine-generated content interplay should be reflected in the realities of modern creativity through clear legal standards. That recognises AI's strong contribution toward creating original works would not only make authorship clearer but also ensure that legal frameworks had a path to keep up with technological advancements, thereby paving the way for innovation while also giving the human creator and AI systems fair contributions toward determining the future of artistic expression.

REFERENCES:

García-Peñalvo, F., & Vázquez-Ingelmo, A. (2023). What do we mean by GenAI? A systematic mapping of the evolution, trends, and techniques involved in Generative AI.

Law, L. (2024). Application of generative artificial intelligence (GenAI) in language teaching and learning: A scoping literature review. *Computers and Education Open*, 100174.

Brynjolfsson, E., Li, D., & Raymond, L. R. (2023). *Generative AI at work* (No. w31161). National Bureau of Economic Research.

Frey, C. B., & Osborne, M. (2023). Generative AI and the future of work: a reappraisal. *Brown J. World Aff.*, 30, 161.

Brynjolfsson, Erik and Tom Mitchell, “What Can Machine Learning, Do? Workforce Implications,” *Science*, December 2017, 358, 1530–1534.

Hristov, K. (2016). Artificial intelligence and the copyright dilemma. *Idea*, 57, 431.

Quintais, J. P. (2024). Generative AI, copyright and the AI Act. *Available at SSRN*.

Ren, J., Xu, H., He, P., Cui, Y., Zeng, S., Zhang, J., ... & Tang, J. (2024). Copyright protection in generative ai: A technical perspective. *arXiv preprint arXiv:2402.02333*.

Lucchi, N. (2024). ChatGPT: a case study on copyright challenges for generative artificial intelligence systems. *European Journal of Risk Regulation*, 15(3), 602-624.

Lemley, M. (2024). How generative ai turns copyright law upside down. *Science and Technology Law Review*, 25(2).