ASSESSING THE ORIGINALITY OF WORKS CREATED WITH THE ASSISTANCE OF GENERATIVE AI: AN INDONESIAN LEGAL PERSPECTIVE

Using generative AI to produce work raises questions about the originality of the work. Originality requires not only labour, but also skill and creativity efforts. Applying this standard to works generated by or with the assistance of AI is problematic because the works do not necessarily qualify as works protected by copyright law. AI systems rearrange existing knowledge rather than create something entirely new, challenging the idea that their outputs could be considered original under copyright law. This issue of originality is important to determine whether the work could be protected by copyright. That is why an appropriate method is needed to assess the originality of work produced with the help of generative AI. This article provides a proposed method for assessing originality from an Indonesian legal perspective.

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I. Authorship

1 The Berne Convention for the Protection of Literary and Artistic Works lacks a definition for the term "author".[1] Consequently, it is the responsibility of the contracting states to determine it. Having noted this, one could contend that the phrasing and historical background of the Convention suggest that only natural individuals who produce a work can be considered writers.[2] This is reinforced by the Convention's widespread application of the word "author" concerning the originator of creations and beneficiary of safeguards.

2 The European Union's ("EU") InfoSoc Directive[3] does not define what an "author" is. European laws usually do not explain the basic

1 (9 September 1886), 828 UNTS 221 (entered into force 29 January 1970).
2 Paul Goldstein & P Bernt Hugenholtz, *International Copyright: Principles, Law, and Practice* (Oxford University Press, 3rd Ed, 2012) at p 247.
3 Directive on the Harmonisation of Certain Aspects of Copyright and Related Rights in the Information Society, EC Council Directive 2001/29/EC, [2001] OJ L 167/10.

requirements for someone to be considered an author.[4] However, some parts of the EU InfoSoc Directive suggest that an author is likely to be a human being. The author has the right to allow others to copy their work, share it with the public, and distribute it. It is unclear how non-human entities, like animals or computers, could exercise these rights. This question becomes even more complicated because the Court of Justice of the European Union has said that authors have the exclusive right to the economic benefits of their work – a right which non-human authors cannot exercise.[5]

3 The case law from the Court of Justice of the European Union has made it clear that there needs to be a consistent approach across the entire EU for things like the rules about work and originality. This same approach should be used for all the basic requirements needed to protect copyright, including what is considered "authorship".[6] However, many aspects of authorship are still handled according to the laws of individual member countries. This is especially true when it comes to situations involving multiple authors or co-authors. Looking at national laws can therefore give more insight into the idea of authorship.

4 National laws generally follow the idea that the author is the person who creates the work. When two or more people work together on a piece and their individual contributions cannot be told apart, the result is seen as a joint work, and each person is considered a co-author. Most countries also say that co-authors must work together with a common plan, which is called a "concerted creative effort". If only one person makes the important creative choices, the others are seen as just helping to write down what the main person decides, and only the person making the creative choices is considered the real author.[7]

5 These findings show two key things. First, to be considered an author, the person who made the work must be involved in making creative decisions. When more thought is given to this, the need for creative input suggests that the author must be a real person. To meet the standards of originality, only humans can truly be creative in this way and therefore qualify as authors. This idea is supported by, *eg*,

4 Eleonora Rosati, *Copyright and the Court of Justice of the European Union* (Oxford University Press, 2023) at p 138.

5 Judgment of 12 November 2015, *Hewlett-Packard Belgium SPRL v Reprobel SCRL*, C572/13, EU:C:2015:750 at [48].

6 Eleonora Rosati, *Copyright and the Court of Justice of the European Union* (Oxford University Press, 2023) at p 137.

7 P Bernt Hugenholtz & João Pedro Quintais, "Copyright and Artificial Creation: Does EU Copyright Law Protect AI-Assisted Output?" (2021) 52 *IIC-International Review of Intellectual Property and Competition Law* 1190 at 1195 *ff*.

Art L 113-7 of the French Intellectual Property Code,[8] which states that the author of an audio-visual work is the natural person or people who do the creative work involved in making it.[9]

6 In comparison with the UK Copyright, Design and Patents Act 1988[10] ("CDPA"), an author is defined as a person who makes a work. There are requirements for a work to receive copyright protection: namely, that the work must be "original"[11] and must show a certain level of work contribution, skill, or judgment.[12] The CDPA also regulates computer-generated works. It stipulates that if a work does not have a "human author" and is produced by a computer, then the copyright is owned by the person who made the "necessary arrangements" to produce the work.[13] There is no further explanation regarding the meaning of "necessary arrangements". However, according to case law, "necessary arrangements" refer to the human actions involved in setting up, programming, or organising the creative process carried out by a computer, such as in *Nova Productions Ltd v Mazooma Games Ltd*,[14] where the game developer – not the player – was considered to have undertaken the "necessary arrangements," since the developer designed the system that produced the images.

7 According to the US Compendium Chapter 300[15] on copyrightable authorship, the US Copyright Act[16] protects original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device.[17] The US copyright law only protects "the fruits of intellectual labour" that "are founded in the creative powers of the mind".[18] Because copyright law is limited to "original intellectual conceptions of the author", the US Copyright Office will refuse to register a claim if it determines that a human being did not create the work.[19]

8 (consolidated version as of 13 March 2025) (France).
9 Jane C Ginsburg, "The Concept of Authorship in Comparative Copyright Law" (2003) 52 *DePaul Law Review* 1063 at 1079.
10 (c 48) (UK).
11 Copyright, Design and Patents Act (c 48) (UK) s 1(1)(a).
12 *University of London Press Ltd v University Tutorial Press Ltd* [1916] 2 Ch 601.
13 Copyright, Design and Patents Act (c 48) (UK) s 9(3).
14 *Nova Productions Ltd v Mazooma Games Ltd* [2007] EWCA Civ 219.
15 US Copyright Office, *Compendium of U.S. Copyright Office Practice* (3rd Ed, 22 December 2014) Chapter 300.
16 Copyright Act 17 USC (US).
17 Copyright Act 17 USC (US) § 102(a).
18 *Trade-Mark Cases* 100 US 82 at 94 (1879).
19 *Burrow-Giles Lithographic Co v Sarony* 111 US 53 at 58 (1884).

8 To qualify for copyright protection under US copyright law, a work must be original to the author, which means that the work must be independently created by the author, and it must possess at least some minimal degree of creativity. The term "independent creation" means that the author created the work without copying from other works.[20]

9 According to the Indonesian Copyright Law,[21] the definition of "author" is a person or several people who individually or together produce a work that is unique and personal.[22] Meanwhile, the definition of "work" is a creative work created from thought, inspiration, ability, imagination, skill, dexterity, or expertise, in the fields of science, art and literature, which is expressed in a tangible form.[23]

10 Referring to this definition, those who can be qualified as "authors" according to the Indonesian Copyright Law are human beings who are natural legal subjects. Apart from that, the works created by an author must also have the unique and personal characteristics of their author as an embodiment of the principle of originality, which refers to the concept of independent creation. This means that the work is not a copy or adaptation of a previously existing work of another party.

11 Although there is no further explanation in the Indonesian Copyright Law regarding this "distinctive and personal nature", it is interpreted based on jurisprudence, namely in Indonesian Supreme Court Decisions No 056 PK/Pdt.Sus/2010 and No 141 K/Pdt.Sus-HaKI/2013. These decisions suggest that if a person can explain the reasons for the creation of his work, or explain how a work (*eg*, in the form of a computer program) functions, then the work can be considered to have unique and personal characteristics of that person. If a work does not have the distinctive and personal characteristics of its author, then the principle of originality is not fulfilled, and that person cannot be considered the author of the work.

20 *Feist Publications Inc v Rural Telephone Service Co Inc* 499 US 340 at 347 (1991).
21 Law No 28 of 2014 on Copyright (Indonesia) (enacted on 16 October 2014).
22 Law No 28 of 2014 on Copyright (Indonesia) s 1(2).
23 Law No 28 of 2014 on Copyright (Indonesia) s 1(3).

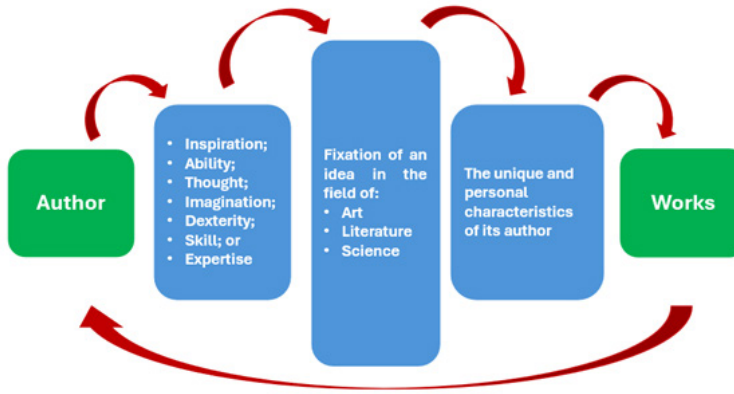

Figure 1. Concept of originality

12 Therefore, based on Indonesian copyright law, the originality of a work is shown by the result of thought, inspiration, ability, imagination, skill, dexterity, or expertise of its author, and by the existence of "the unique and personal characteristics" of its author. Of course, keeping in mind that the work must also be a fixation of ideas in the fields of art, literature and science.

II. The development of artificial intelligence

13 Artificial intelligence ("AI") is increasingly developing and progressively being used in various aspects of life. The rapid growth of AI is driven by the availability of large amounts of data and increasingly affordable high computing power.[24]

14 The term AI was first introduced at the Dartmouth Summer Research Project on Artificial Intelligence conference in 1956. During its development, it was recorded that there had been more than one million scientific publications on topics discussing AI, and patent applications submitted by inventors had exceeded 340,000 inventions with titles or invention claims regarding AI.[25]

24 World Intellectual Property Organisation, *IP and Frontier Technologies* (2019) <https://www.wipo.int/about-ip/en/frontier_technologies/ai_and_ip.html> (accessed 25 August 2025).

25 World Intellectual Property Organisation, *The Story of AI in Patents* (2019) <https://www.wipo.int/tech_trends/en/artificial_intelligence/story.html> (accessed 15 August 2025).

15 There is no uniform definition of AI to date. When referring to the opinion of Professor John McCarthy, a scientist who introduced the term "artificial intelligence" in 1956, AI is a science and technique in creating intelligent machines, especially intelligent computer programs. This is closely related to the understanding of carrying out a series of commands using a computer to study human intelligence.[26]

16 In addition, based on the definition of AI from a study carried out by the European Commission in 2018, AI refers to a system that displays intelligent behaviour by analysing its environment and acting, with a certain degree of autonomy, to achieve certain goals. AI-based systems can be purely software-based, acting in a virtual world (*eg* voice assistants, image analysis software, search engines, voice and facial recognition systems) or AI can be embedded in hardware (*eg* advanced robots, autonomous cars, drones or Internet of Things applications).[27]Under the Artificial Intelligence Act of the European Commission,[28] an "AI system" is defined in Art 3(1) of Regulation (EU) 2024/1689 as "a machine-based system that is designed to operate with varying levels of autonomy, and that may exhibit adaptiveness after deployment, and that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments".

17 Referring to the definition above, AI refers to a system or machine that exhibits intelligent behaviour to achieve certain goals. In its implementation, a stand-alone computer program, or a computer program embedded in hardware that has a specific function, is a form of AI.

18 Based on its development theory, AI is divided into three main categories, namely:[29]

> (a) Artificial Narrow Intelligence ("ANI"), otherwise known as weak-AI, is developed to perform a specific task. The simplest examples of ANI can be found in computer chess games

26 John McCarthy, "What is Artificial Intelligence?", *Standford University* (12 November 2007) <http://jmc.stanford.edu/articles/whatisai.html> (accessed 25 August 2025).

27 European Commission, High-Level Expert Group on Artificial Intelligence, *A Definition of AI: Main Capabilities and Scientific Disciplines* (2018) at p 1.

28 Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act) [2024] OJ L 1689/1.

29 Mikhail Batin & Alexey Turchin, "Artificial Intelligence in Life Extension: From Deep Learning to Superintelligence" (2017) 41 *Jurnal Informatica* 401.

and the identification of a person's face based on photos on social media.

(b) Artificial General Intelligence ("AGI"), is a machine whose capabilities are parallel to human intelligence so that it can learn, reason and plan effectively when presented with complex data.

(c) Artificial Super Intelligence ("ASI"), is a system that surpasses AGI in human intelligence and capabilities.

19 Machine learning is a part of AI that triggers the development of AI and accelerates its implementation in many fields today. Referring to Tom M Mitchell's opinion, machine learning is any computer program that develops its abilities in various tasks through the experience it obtains.[30] In detail, it is explained as follows:

> Definition: A computer program is said to learn from experience *E* with respect to some class of tasks *T* and performance measure *P*, if its performance at tasks in *T*, as measured by *P,* improves with experience *E*.

20 For example, a computer program that learns to play Xiangqi, a traditional Chinese chess game, can accelerate its performance – which is assessed by its performance in winning various types of assignments based on the game Xiangqi – through the experience gained by playing Xiangqi against itself. By doing this, there are three main features in the learning process of machine learning, namely: division of types of tasks, size of abilities to be accelerated, and sources of experience.[31]

21 There are two main categories for classifying problems based on training data carried out by machine learning:[32]

(a) Generative models can produce "fake" data that is convincing and looks the same as the training data it obtains. For example, new flower photos that look like real flowers can be produced from a generative model based on training data in the form of flower photos.

(b) Discriminative models can differentiate between various types of training data examples. For example, various patterns from training data in the form of photos of various types of flowers, including orchids, can be analysed with a discriminative

30 Tom M Mitchell, *Machine Learning* (McGraw-Hill, 2019) at p 3.
31 Tom M Mitchell, *Machine Learning* (McGraw-Hill, 2019) at pp 3–4.
32 Tony Jebara, *Machine Learning: Discriminative and Generative* (Springer Science+Business Media, 2004) at pp 17–58.

model to distinguish whether an object is an "orchid" or "not an orchid".

22 According to how it works in processing input data, machine learning is divided into three types, namely:[33]

(a) Supervised learning, which labels input data to tell machine learning clearly what patterns it should look for. The example is like giving an object to a bloodhound to smell so that it can find a target that has the same smell.

(b) Unsupervised learning, which does not give a specific label to the input data so that machine learning looks for any patterns that can be found.

(c) Reinforcement learning, which does not label the input data. The algorithm learning process is carried out by trial and error so that machine learning tries various things to be able to identify the patterns found according to its objectives.

23 After that, deep learning became known as a development of machine learning that uses deep neural networks techniques. This technique is used to accelerate performance in finding and uncovering the smallest patterns from the training dataset.[34] Basically, it is the way the human brain works that inspires these neural networks. The nodes work like neurons in the human brain. Likewise, the network works like the human brain.[35]

24 Large language models ("LLM") are a type of neural network that works on deep learning systems. Specifically, LLM uses a specific neural network architecture called a transformer, which is designed to sequentially process and generate data, such as text. The architecture explains how neurons connect to each other. All neural networks group neurons into several different layers. If there are many layers, the network is described as "deep", so that is where the term "deep learning" comes from.[36]

25 Generative AI is a form of AI that can generate new content independently, such as text, images, audio and video. Conceptually,

33 Karen Hao, "What is Machine Learning?", *MIT Technology Review* (17 November 2018) <https://www.technologyreview.com/2018/11/17/103781/what-is-machine-learning-we-drew-you-another-flowchart/> (accessed 25 August 2025).

34 John D Kelleher, *Deep Learning* (The MIT Press, 2019) at p 5.

35 John D Kelleher, *Deep Learning* (The MIT Press, 2019) at p 8.

36 Lewis Tunstall, Thomas Wolf & Leandro von Werra, *Natural Language Processing with Transformers* (O'Reilly Media, 2022) at p 32.

generative AI was developed from the use of machine learning, natural language processing ("NLP"), image processing and computer vision.[37]

26 The role of machine learning in generative AI is to help build effective algorithms from datasets, thereby enabling computers to gain new knowledge from these datasets. This can facilitate generative AI to learn new content from large amounts of data and create diverse content based on different datasets. Meanwhile, NLP facilitates generative AI to understand human language, making it possible to create a variety of content based on varied language data. Additionally, image processing and computer vision are also important foundations for generative AI as they involve analysing image information to gain new knowledge and generate diverse content from different collections of images.[38]

27 Based on the development of AI, it is evident that AI has been applied for a long time to create works. Since 1981, Professor David Cope has created an AI application called "Experiments in Musical Intelligence", which can create classical music compositions in the style of Chopin, Bach, Vivaldi, or Mozart.[39] In 2016, a painting entitled "The Next Rembrandt" was exhibited in the Netherlands. The interesting thing is that this painting was created with the help of an AI application that had analysed more than 300 paintings by Rembrandt, a famous painter born in the Netherlands in the 17th century.[40] In 2016, a short novel written with the help of an AI application in Japan almost won a national literary competition.[41]

28 Subsequently, discussions about AI applications started to heat up again when ChatGPT was launched in November 2022. ChatGPT is a generative AI application created by OpenAI, an AI research and

37 Matteo Poggi, *et al*, "On the Synergies Between Machine Learning and Binocular Stereo for Depth Estimation From Images: A Survey" (2021) 44(9) *IEEE Transactions on Pattern Analysis and Machine Intelligence* 5314.

38 Matteo Poggi, *et al*, "On the Synergies Between Machine Learning and Binocular Stereo for Depth Estimation From Images: A Survey" (2021) 44(9) *IEEE Transactions on Pattern Analysis and Machine Intelligence* 5314.

39 Chris Garcia, "Algorithmic Music – David Cope and EMI", *Computer History Museum* (29 April 2015) <https://computerhistory.org/blog/algorithmic-music-david-cope-and-emi/> (accessed 25 August 2025).

40 Staf NPR, "A 'New' Rembrandt: From the Frontiers of AI and Not the Artist's Atelier", *NPR* (6 April 2016) <https://www.npr.org/sections/alltechconsidered/2016/04/06/473265273/a-new-rembrandt-from-the-frontiers-of-ai-and-not-the-artists-atelier> (accessed 25 August 2025).

41 David Nield, "A Novel Written by AI Passes the First Round in a Japanese Literary Competition", *Science Alert* (24 March 2016) <https://www.sciencealert.com/a-novel-written-by-ai-passes-the-first-round-in-a-japanese-literary-competition> (accessed 25 August 2025).

development company based in San Francisco, US. ChatGPT became the fastest growing application in history after reaching 100 million active users in just two months after its launch in November 2022.[42]

III. Use of generative artificial intelligence

29 The question that arises then is: Who can be considered the author of work produced with the assistance of generative AI? Apart from that, questions also arise regarding copyright ownership of works produced with the help of generative AI.

30 As explained at the beginning, even though there is no official definition of "author" in the laws made by the EU Legislature or in the current case law of the Court of Justice of the European Union, in practice, it is agreed that an author must be a real person, a human being, who is actively involved in the creative process and makes their own creative choices. The author also needs to show their own ideas through their work. The EU copyright law system has an "anthropocentric" focus, which means that for something to be considered a protected work, it must involve human intellectual effort and be created by an author.[43] This shows that the general understanding of the concept of an "author" is that it refers to a human being.

31 In connection with the use of machines to help create works, existing case law of the Court of Justice of the European Union provides guidance on who can be an author and what makes one an author. One case law that is relevant to the use of machines is *Eva-Maria Painer v Standard Verlags GmbH*[44] ("*Painer*"). Eva-Maria Painer, the plaintiff, was a freelance photographer specialising in taking portrait photos of children. One of the children whom Eva-Maria photographed, a 10-year-old girl, was abducted. After authorities launched a search and requested the help of the public, various newspapers in Germany and Austria printed the photos taken by Eva-Maria as well as a computer-created image based on one of her photos. These publications were made without the plaintiff's consent or attribution. Eva-Maria sued Vienna-based newspaper publisher Standard Verlags GmbH as well as various German publishers (the defendant newspapers), seeking a court order that the

42 Krystal Hu, "ChatGPT Sets Record for Fastest-Growing User Base – Analyst Note", *Reuters* (2 February 2023) <https://www.reuters.com/technology/chatgpt-sets-record-fastest-growing-user-base-analyst-note-2023-02-01> (accessed 25 August 2025).

43 Oleksandr Bulayenko *et al*, *AI Music Outputs: Challenges to the Copyright Legal Framework* (reCreating Europe Report, 2022) at p 73.

44 Judgment of 1 December 2011, *Eva-Maria Painer v Standard Verlags GmbH*, C-145/10, EU:C:2011:798.

newspapers cease publication and distribution of the photos and the computer-generated image.

32 The ruling in *Painer* determined that a portrait photograph is copyrightable as an "intellectual creation" if it reflected the author's personality through their free and creative choices, giving it the same protection as any other work. The court outlined three stages of the creative process when making a work with the help of a machine: preparation, execution, and finalisation. During the preparation phase, the photographer has the freedom to choose the background, the subject's pose, and the lighting. While taking the photograph, they can decide on the framing, angle, and the mood they want to create. Finally, when choosing from different ways to develop the image, the photographer can pick one method or use computer software to edit the photo.[45]

33 In the UK, the CDPA regulates computer-generated works, stipulating that if a work does not have a "human author" and is produced by a computer, then the copyright is owned by the person who made the "necessary arrangements" to produce the work. According to a consultation meeting on copyright and AI between UK Parliament and the Secretary of State for Science, Innovation, and Technology in December 2024, if a work is generated without human authorship, that work may be protected as a "computer-generated work" under UK copyright law. For example, this could be in response to a simple prompt. Its author will be whoever undertook the arrangements necessary for its creation. Sometimes generative AI outputs may be the co-creation of a human and a generative AI application. Examples may include photographs which are digitally enhanced using generative AI application and software written with suggestions from a generative AI assistant. In such cases, the human creator will be considered the author.

34 According to the *Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence* ("Copyright Registration Guidance") issued by the US Copyright Office, it is well known that copyright can protect only things that are made by humans using their creativity. At the most basic level, the word "author", which is used in both the US Constitution and the US Copyright Act, is meant to refer to people, not animals or other non-human beings. The rules and policies of the US Copyright Office follow guidance from legislation and court decisions on this topic.[46]

45 Judgment of 1 December 2011, *Eva-Maria Painer v Standard Verlags GmbH*, C-145/10, EU:C:2011:798.

46 US Copyright Office, *Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence* (16 March 2023).

35 According to the US Copyright Registration Guidance, a person can register a work containing AI-generated material as his or her work protected by copyright if:

> (a) the person has selected or arranged the AI-generated material in a sufficiently creative manner so that the resulting creation is, as a whole, an original creation of the creator; and
>
> (b) the person modifies AI-generated material in such a way that the modification contains a sufficient amount of the creation's originality.

36 Based on these guidelines, it is known that a person must make adequate efforts, whether by selecting, arranging, or modifying AI-generated material, to fulfil the elements of originality in his creation. Thus, in order for someone to be recognised as the creator of a creation according to these guidelines, the emphasis is on fulfilling the elements of originality of the creation.

37 In an important case, the US Supreme Court used language that clearly excluded non-human beings when explaining Congress's power to give "authors" the copyright to their "writings". In the case of *Burrow-Giles Lithographic Co v Sarony*[47] ("*Burrow-Giles*"), a company accused of making copies of a photograph claimed that expanding copyright to include photographs was unconstitutional because a photograph is not writing and is not produced by an author, but rather by a camera. The court ruled against this argument, saying that the US Constitution does allow photographs to be protected by copyright if they reflect the original ideas and creativity of the person who made them.

38 Early doubts about whether photographs could be copyrighted often included this argument, along with the idea that a camera is not just a machine, but one that copies reality. In *Burrow-Giles*, the court noted that while most photographs are merely a mindless capture of reality, the one in question showed detailed and almost obsessive arrangement of light, camera angles, the subject's clothing, and the background. In short, Napoleon Sarony's image was full of artistic expression and met the legal standard for being considered as "writing" by an "author", as it showed the photographer's ideas made visible.[48]

47 111 US 53 at 56 (1884).

48 *Ets-Hokin v Skyy Spirits* 225 F 3d 1068 at 1077 (9th Cir, 2000) (the photographer's decisions – about lighting, shad[e], angle, background and so forth was recognised as sufficient to convey copyright protection even of a "single bottle, shot straight on, centered, with back-lighting").

39 In *Burrow-Giles*, the US court defined an author as someone who creates something from their own thoughts and ideas, and it repeatedly referred to authors as "people". The court also said that copyright is the right of a person to the results of their own creativity and intelligence. Federal appellate courts have also reached the same conclusion when looking at the US Copyright Act, which states that copyright is only for "works of authorship". The Ninth Circuit Court of Appeals has stated that a book containing words said to be written by non-human spirits can still receive copyright protection, but only if a human has selected and arranged those words.[49] In another case, the court held that a monkey cannot obtain copyright for photos it takes because the US Copyright Act refers to an author's family members, *ie*, children, wife, and so on – terms that clearly apply to humans and not animals.[50]

40 The US Copyright Office that manages copyright registration has a lot of experience looking at works that include both human-made content and things that cannot be copyrighted, like material made by or with the help of technology. They start by asking if the work is mainly made by a human, with the computer or device just helping, or if the creative parts like writing, art, or music were made by a machine instead of a person.[51] When it comes to works with AI-generated parts, the Office checks if the AI's contributions are merely copying things automatically or if they stem from the author's own original ideas, which are then put into a form people can perceive. The answer depends on the specific situation, especially how the AI works and how it was used to create the result. This is something that must be looked at on a case-by-case basis. If the traditional parts of a work that show authorship were made by a machine, then the work does not have human authorship, and the Office would not register it. For instance, if an AI receives only a prompt from a person and then creates a complex piece of writing, art, or music, the creative elements are made by the technology, not the person who gave the prompt.[52]

41 On 29 January 2025, the US Copyright Office published its second instalment in a series of reports on copyright and AI ("Second Report"), focusing on issues of copyrightability posed by works generated by or with the assistance of AI tools. The Second Report states

49 *Urantia Foundation v Maaherra* 114 F 3d 955 (9th Cir, 1997).

50 *Naruto v Slater* 888 F 3d 418 (9th Cir, 2018).

51 US Copyright Office, *Sixty-Eighth Annual Report of the Register of Copyrights for the Fiscal Year Ending June 30, 1965* (1966) at p 5.

52 US Copyright Office Review Board, *Decision Affirming Refusal of Registration of a Recent Entrance to Paradise* (14 February 2022) at pp 2–3 (determining a work "autonomously created by artificial intelligence without any creative contribution from a human actor" was "ineligible for registration").

that using AI as a tool to help with the creative process does not stop the final work from being protected by copyright. The Second Report gives several examples of how AI is used in creative tasks, like coming up with ideas, making a basic plan for a story, making actors look older or younger, finding music progressions, checking for mistakes in computer code, and removing items from a scene. The Second Report makes a clear difference between using AI to replace human creativity – which might not be allowed under copyright rules because it lacks original expression – and using AI to help with the creation of a work.[53]

42 The Second Report also discusses user prompts, noting that people have paid a lot of attention to how copyright works when it comes to the questions they ask an AI system. Most people said that a prompt itself could be protected by copyright if it meets the usual requirements, like being original. But there was not much agreement on whether the person who writes a prompt can claim copyright over the final output from the AI. The Second Report states that simply having a prompt does not give the user enough control over the result, at least for now, to claim copyright on the output. Prompts are more like instructions that share general ideas, not something that can be protected by copyright – like someone who only gives ideas to a friend, and the friend does the actual creative work. The Second Report also notes that as technology improves and users have more control over what the AI creates, this conclusion might change. But if the technology becomes more automatic, this will support the idea that the person writing a prompt does not have a right to claim copyright over the result.

43 The Second Report also draws a difference between simple prompts that simply say what the user wants and more creative inputs that have a personal touch. For example, if someone uploads a drawing into an AI and asks it to make changes, that input is considered more expressive. The Second Report explains that if the input itself is a protected work and parts of that work can be seen in the output, then the original creator can claim copyright over the output for those recognisable parts. Besides that, creative selection, co-ordination, arrangement, or modification of AI-generated content by humans may qualify for copyright protection.

44 In late 2023, the Beijing Internet Court first recognised copyright protection for AI-generated images in *Li Yunkai v Liu Yuanchun*[54] ("*Li Yunkai*"). Li, the plaintiff, created a portrait of a woman

53 US Copyright Office, *The Second Part of the Copyright Office's Report on Copyright and Artificial Intelligence* (January 2025).

54 Beijing Internet Court Civil Judgment (2023) Jing 0491 Min Chu No 11279.

using Stable Diffusion, a generative AI application. He then published the portrait on the internet. Liu apparently posted an article using the portrait without Li's permission. This led Li to sue Liu and the case was heard before the Beijing Internet Court. On 17 November 2023, the court ruled in favour of the plaintiff.

45 The court decided that throughout the whole process – from the formulation of the idea to the final choice of the image – Li had contributed his intellectual effort. He set the subject and how it should be shown by using prompts to decide the visual layout and composition. The court held that these decisions showed the plaintiff's personal style. Also, after getting the first image by using prompts and settings, the plaintiff kept adding more prompts and changing the settings, making continuous improvements until the final image was completed. Because of this, the court dismissed the defence that the work was just a "mechanical intellectual achievement".

46 Under Art 11 of the Copyright Law of the People's Republic of China,[55] only natural persons, legal entities, or unincorporated groups can be considered authors. As a result, AI models are not recognised as authors under Chinese copyright law. The court in *Li Yunkai* ruled that the true author was the person who directly adjusted the AI model based on their specific requirements and preferences. The image produced was a direct outcome of the plaintiff's intellectual effort and showed their unique personal expression. Therefore, the plaintiff was identified as the author of the image and held the copyright to it.

47 The court also addressed its view on the "new generation of generative artificial intelligence technology". It explained that generative AI is changing the way people create art. It compared this to the invention of the camera: before cameras existed, people had to be very skilled painters to copy the real look of things. Now, with the easy-to-use camera on smartphones, anyone can take photos. However, if a photo taken with a smartphone shows the photographer's creative thinking, it is still considered a photographic work and is protected by copyright law.

48 On 16 September 2025, the Beijing Internet Court released another notable decision. In the case, the court said that even though AI can make images, the person who created them must show that they have put in their own creative effort to make the image reflect their personal style. If someone wants to claim rights over an AI-generated work, they need to explain how they thought about the idea, what instructions they

55 (effective 1 June 2021).

gave to the AI, and how they picked and changed the image. They must also provide proof of all of those steps.[56]

49 The case mentioned above concerned a copyright disagreement between Zhou, a content creator, and a Beijing Technology Company. Zhou claimed he created an AI image called "Cat Crystal Diamond Pendant" on his own using AI software, probably Midjourney, during a business project with the company. He shared the image in a WeChat group. In October 2023 and again in March 2024, he found the company using the image without permission on different platforms for promotion. He claimed that they had stolen his images and asked for credit, compensation, and a public apology.

50 The company disagreed, asserting that Zhou did not create the image himself and that they worked together on choosing the material and the AI instructions. They argued Zhou could not show he was the real creator and that he did not use the image for business or profit. The main issue was that Zhou did not provide a record of how the AI image was made. Instead, he tried to recreate the process during the legal case using the same AI software. The court said that was not sufficient proof, because it was merely a way to describe the image using the AI's own word generator, and was not a real copy of the original commands or prompts that he used.

51 The Beijing Internet Court decided in favour of the defendant, and this decision was upheld during the appeal. The decision illustrates that when judging whether AI-generated products are original, parties should follow the general rule that the person making a claim must provide evidence. Authors must show they did the work involved in making the content. This can be understood through two main points: *firstly*, the requirement to prove originality for AI-generated content is similar to that for traditional copyrighted material.

52 Both follow the rule that the person who makes a claim must provide evidence. However, creating content with AI usually requires much less human creativity compared to using traditional tools like brushes or software. Thus, whether this process shows originality depends on a case-by-case analysis to determine if the author put in original creative effort.

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56 Aaron Wininger, "Beijing Internet Court Requires Evidence of Creative Effort to Claim Copyright Protection in AI-Generated Images", *China IP Law Update* (16 September 2025) <https://www.chinaiplawupdate.com/2025/09/beijing-internet-court-requires-evidence-of-creative-effort-to-claim-copyright-protection-in-ai-generated-images/?utm_source=chatgpt.com> (accessed 25 August 2025).

53 *Secondly*, when claiming rights to AI-generated content, authors can explain their creative thoughts, the commands they gave, and how they chose and edited the content. They can use things like prompts, steps taken, sketches, selections, and changes made. These documents should show whether and how much creativity the user put into using AI to create the content.

54 In addition, the Beijing Internet Court also suggested that content creators keep detailed records of the creation process, as this can support their claims. The court also recommend that industry players improve the computing, generation, and tracking abilities of AI models. This will help prevent misuse of the copyright system and support the goal of using AI to encourage innovation.

IV. Indonesian legal perspective

55 The Indonesian Copyright Law does not specifically regulate works produced by computers (computer-generated works) or with the assistance of generative AI. However, the Indonesian Copyright Law contains provisions that can accommodate the assistance of other parties and the use of tools in producing works, namely provisions in Art 34.

56 Article 34 stipulates that in the case of a work designed by one person but is then carried out by another under the direction and supervision of the person who designed it, then the person who designed the work is considered the author. The phrase "under the direction and supervision" according to the Indonesian Copyright Law means with the guidance, direction, or correction, of the person who owns the design of the work.

57 This confirms that an "author" is someone who comes up with an idea for a work and maintains control over how it is made. For example, in the US, a court found that a printer who helped turn a client's idea into something real but did not change or improve the client's original idea in any way – except for arranging it so it could be photographed during printing – was not considered an "author" of the final work.[57]

58 French courts also make a distinction between "authors" and "executants", referring to those who simply follow others' directions. Even though French law considers film directors as potential authors of audio-visual works, this assumption can be challenged. If a producer

57 *Andrien v Southern Ocean County Chamber of Commerce* 927 F 2d 132 (3d Cir, 1991).

shows that the directors followed a clear and detailed set of instructions, making each contribution fit into a unified whole, the court may rule that the directors were not the true authors. In such cases, the court might say that the directors had no real creative freedom or personal expression, and that they were only carrying out the producer's plan.[58]

59 If Art 34 of the Indonesian Copyright Law is to be explained, the following illustration can be made: if someone wants to make a statue but that person does not have the skills to carve statues, then that person can order a sculptor who has skills to carve statues to make a statue for him. The person must of course make a draft drawing of the statue and give it to the sculptor. The sculptor then uses his carving tools to make the statue according to the design given to him. During the process of working on the statue, the person who created the design of the statue supervises the sculpting process to provide direction or corrections to the sculptor.

60 Referring to Art 34, the person who ordered the sculptor to make the statue is the author of the statue. This is because the person who ordered the sculptor has made a draft drawing of the statue and supervised the process of working on the statue by giving directions or corrections to the sculptor so that the statue is done according to his design.

61 Likewise, consider someone who wants to make an independent film. If a person wants to take pictures from the air but does not have a drone or the skills to use a drone, then he may need to contact someone who has the skills to use a drone to take pictures from the air. The person making the film writes a scenario to give to the person who controls the drone. During the shooting process, the person who wants to make the film directs the person controlling the drone to take pictures at shooting angles that suit the scenario, as well as carry out the image editing process. Thus, if we refer to Art 34, the person who is considered the author is the person who wants to make the film, because that person has created a design in the form of a scenario, and supervised the shooting process by giving directions to the person controlling the drone, as well as editing the image.

62 If a person uses generative AI, such as the ChatGPT application to create written work, then basically that person has asked for help from OpenAI, as the developer of ChatGPT, to produce written work. Prompts or instructions to ChatGPT can be considered its draft work.

58 CA Poitiers 3e ch, Dec 7 1999 (SARL Chamelu et SA Editions Atlas c Cts Chaye).

This is because the ChatGPT application is basically the same as carving tools used by sculptors or drones used to take pictures from the air.

63 Carving tools are used and directed in such a way by the sculptor to sculpt the statue, and drones that appear to be floating by themselves in the air are controlled and directed in such a way *via* remote control by people on the ground. Likewise, generative AI applications, such as ChatGPT, are programmed with a series of computer codes and algorithms by generative AI developers to produce work according to the instructions given.

64 Therefore, Art 34 can be used to determine if the person using the generative AI application can be seen as the author of the work created with the assistance of the generative AI. This is because the person using the generative AI is essentially asking the AI developer to help create a work using generative AI as a tool.

V. The four-step test

65 To assess (a) whether a person who uses a generative AI application to produce a work can be qualified as an author; and (b) whether the work produced by a generative AI application is a work protected by copyright according to Art 34 of the Indonesian Copyright Law, a "four-step test" can be carried out, by answering four questions developed from the provisions of Art 34, as follows: *Firstly*, did the person create his own design/prompt? In using generative AI to produce work, someone must create clear prompts or instructions so that the results are as desired. Basically, these prompts or instructions can be considered as creative designs as intended in Art 34, if they reflect the thoughts, inspiration, abilities, imagination, skills, dexterity, or expertise, of the person who created them.

66 Therefore, the person must have "free and creative choices" in formulating the prompt they will use. If that person includes a style or composition that is characteristic of another person as part of his prompt, then he does not have "free and creative choices", hence the prompt cannot be considered his own creative design. However, it would be better if there were further regulations from the competent authorities regarding the criteria for prompts or instructions as to what can be considered a creative design.

67 *Secondly*, did the person make corrections to the output of the generative AI? It is important to consider the extent to which the person responsible for designing the creation is involved in making changes to the work created by the assistance of generative AI. Without this process

of correction, individuals using generative AI cannot be recognised as authors. The correction must also reflect the thoughts, inspiration, abilities, imagination, skills, dexterity, or expertise of the person who created them. It would be preferable if the relevant authorities established clearer guidelines on how significant the changes a person makes to a work created with generative AI need to be for that person to be considered an author under Art 34.

68 *Thirdly*, is the generative AI output included in works in the fields of science, art, and literature that are protected by copyright? Generative AI can produce text, images, moving pictures, or sounds, which may not necessarily be protected by copyright under Indonesian law. Based on Art 40 of the Indonesian Copyright Law, works protected by copyright include works in the field of science, art and literature, consisting of:

(a) books, pamphlets, displays of written works published, and all other written works;

(b) lectures, speeches and other similar works;

(c) teaching aids made for educational purposes and science;

(d) songs and/or music with or without text;

(e) drama, musical drama, dance, choreography, *wayang*, and pantomime;

(f) works of fine art in all forms such as paintings, drawings, carvings, calligraphy, sculpture, statues, or collages;

(g) works of applied art;

(h) architectural works;

(i) maps;

(j) batik artwork or other motif arts;

(k) photographic works;

(l) portraits;

(m) cinematographic works;

(n) translations, adaptations, anthologies, databases, arrangements, modifications and other derivative works;

(o) translations, adaptations, arrangements, transformations, or modification of traditional cultural expressions;

(p) compilation of works or data, either in any format that can be read with a computer program or other media;

(q) compilation of traditional cultural expressions whereby the compilation itself is an original work;

(r) video games; and

(s) computer programs.

69 However, according to Art 41 of the Indonesian Copyright Law, there are several works which do not receive copyright protection, namely works in the form of ideas, systems, procedures, principles, methods, concepts, findings or data, even though they have been expressed, explained, depicted, or combined, in a work. In addition, tools, objects, or products created just for resolving technical or similar problems, and intended only for functional needs, are also not protected by copyright.

70 *Fourthly*, does the output of generative AI show the unique and personal characteristics of the person who designed the work? This is the most important question in assessing the originality of work produced with the assistance of generative AI, considering that the training data used in developing generative AI can come from creations belonging to other parties who have their own unique and personal characteristics. Works that have unique and personal characteristics are a requirement for a creator to make a claim on the work as his creation. Even though there is no explanation in the Indonesian Copyright Law, based on Indonesian jurisprudence, the unique and personal characteristics of a creator can be assessed from the reasons for creating a work, or the ability of a creator to explain reasons for creating the work and/or how a work in the form of a computer program functions. Apart from that, one can also consider EU jurisprudence regarding the assessment of the unique and personal nature of a creation, namely by assessing whether a creator has free and creative choices in creating his work.[59] Based on this jurisprudence, if a creator has free and creative choices in creating his work, then the creator can make a claim that the work was created with his personal touch.

59 Judgment of 1 December 2011, *Eva-Maria Painer v Standard Verlags GmbH*, C-145/10, EU:C:2011:798.

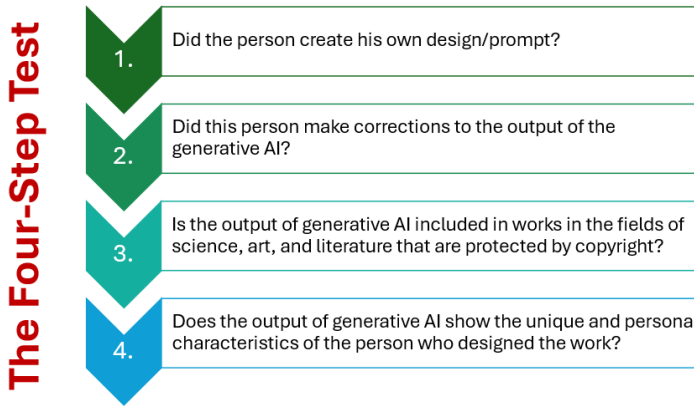

Figure 2. The four-step test method

71 If these four questions can be answered with "yes" conclusively, then the originality of the work can be justified. However, if even one of these questions cannot be answered convincingly, then the originality of the work created with the assistance of generative AI is doubtful.

VI. Conclusion

72 The originality of work is an important issue in using generative AI to create works because it raises questions about human contribution in creating the work. Based on the Second Report on copyright and AI published by the US Copyright Office, assessing whether a work created with the assistance of generative AI can be copyrighted requires careful assessment of both the input and output of the generative AI which are closely related to human creativity.

73 Considering the importance of originality, and the need to anticipate legal disputes regarding the originality of works created with the assistance of generative AI, an appropriate method to assess that originality is necessary. To assess the originality of works created with the assistance of generative AI, the "four-step test" can be used by answering four questions developed from the provisions of Art 34 of the Indonesian Copyright Law.