Ethical and Legal Considerations of Generative AI: How Is It Hurting?

Open Access Teaching Case Developed for the Tech for Humanity Pathways Minor

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Background

Recently, the possibilities of generative AI have sparked interest among internet users. Through simple prompts on free platforms available online, users have seen new images and texts being generated in a few seconds, without clear explanations about how this is made possible. With increasingly popular text-to-image generator deployments, multiple concerns have emerged as a result, especially among artists and authors.

The main point of contention is that generative AI platforms scrape the internet for data indiscriminately, using any material available to produce images, texts, etc. based on a given command. Artists resent the use of their artworks as training data to generate derivative images. A lot of art is posted online, because commercial and freelance artists post their works as e-portfolios in order to get feedback and attract new clients to purchase their original digital or printed work. Generative AI scrapes the internet for data, and uses the work of these artists without acknowledgement or compensation. AI-generated images are therefore contested as *copied* or *derivative* of artists' *original* and *creative* works. The questions this case study raises are: how is generative AI changing the niche of digital artworks? Is generative AI art legal and ethical, or is it plagiarism?

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Plagiarism is defined as incorporating, in full or part, someone's work without their permission or consent. The University of Oxford's student handbook regulations state that "All published and unpublished material, whether in manuscript, printed or electronic form, is covered under this definition, as is the use of material generated wholly or in part through use of artificial intelligence".[2] This means that their students must not utilize material that was created using AI but not declared as AI-generated—that is considered use of plagiarized content. For example, using ChatGPT in a task and then submitting it as one's own original work without acknowledging the specifics of its use is considered plagiarism under this definition.

Artists, as well as writers and inventors, have some systems in place to protect their work from unauthorized copying by being legally granted intellectual property (IP) over their authorship. Examples of IP are trademarks (known by the symbol ®), commonly assigned for brands and logos; patents, granted to new inventions; and copyright, which protects original writings, artworks, etc.[4]

> Copyright is a type of intellectual property right that "protects original works of authorship as soon as an author fixes the work in a tangible form of expression."[3]

With the emergence of new technologies, the United States Copyright Office (USCO) has deployed provisional guidelines regarding AI-generated images, in that they distinguish works created by human authors and those made by AI. Authors now also have to declare use of AI in a piece submitted for copyrighting to the Office, which will be judged on a case-by-case basis until the USCO announces their final policy decision. USCO has privileged the innovative impetus of human authors in creating their own work. This means that, as for current policies, AI generated works cannot be considered as original works protected by copyrights.

Generative Adversarial Networks (GANs) are the techniques behind the most popular generative AI tools,[5] such as digital meetings backgrounds, image filters, noise cancellation, recommender systems on smartphones, and home assistants like Siri or Alexa.[6] GANs are

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[2] University of Oxford. (n.d.). Plagiarism. Oxford Students. Retrieved July 17, 2024, from https://www.ox.ac.uk/students/academic/guidance/skills/plagiarism

[3] What is Copyright? (n.d.). Copyright.Gov. Retrieved July 17, 2024, from https://www.copyright.gov/what-is-copyright/. Emphasis Original

[4] (*What is Intellectual Property (IP)?* (n.d.). https://www.wipo.int/about-ip/en/)

[5] Brownlee, J. (2019, July 19). A Gentle Introduction to Generative Adversarial Networks (GANs) [Online]. Machine Learning Mastery. https://machinelearningmastery.com/what-are-generative-adversarial-networks-gans/

[6] Littman, M. L., Ajunwa, I., Berger, G., Boutilier, C., Currie, M., Doshi-Velez, F., Hadfield, G., Horowitz, M. C., Isbell, Kitano, H., Levy, K., Lyons, T., Mitchell, M., Shah, J., Sloman, S., Vallor, S., & Walsh, T. (2021). Gathering

based on machine learning, a branch of computer science and AI whose algorithms are trained to develop certain tasks, aiming to create types of autonomous systems in continuous deployment.[7] Recently, machine learning has become more sophisticated, owing in part to the availability of large training data sets and vast computing resources made available.

Since AI machine learning models depend on the availability of data as learning material, generative AI becomes a contentious area, as it affects the livelihoods of freelance artists, as well as larger, corporate art studios, in unprecedented ways. By following through the different ways in which Generative AI is being protested and valorized, this case study will question the moral and legal boundaries of using AI from the perspective of artists being directly affected by it.

Case Study

In January of 2023, three prominent artists in the United States teamed up and filed a class-action lawsuit against AI image generators Midjourney, Stability, and DeviantArt. Seven more artists from different countries joined the class-action lawsuit later on, and Google's Imagen and RunwayAI were also added to the list of defendants. According to the legal team, the case complains that these platforms used Stable Diffusion, a "collage mixer that uses copyrighted work of millions of artists",[8] for their image outputs. Having learned from images scraped from the internet, these platforms can generate digital illustrations in the style of artists it has learned from, or combine various styles to create a specified kind of image. Not only can generative AI draw illustrations and other types of digital works, but it seems to do so as an artist might have done, by learning from the artists' works it sees online.

The crux of the issue is that, for the artists, these platforms make images and works that can only be considered derivative of the original and are in no way creative new works. For them, making the distinction between original and derivative artwork is important because it directly threatens their artistic integrity and economic viability as professionals. In this case, Stable Diffusion, the machine learning technique used to create new images, is declared as strictly

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Strength, Gathering Storms: The One Hundred Year Study on Artificial Intelligence (AI100) 2021 Study Panel Report (AI100) [Study Panel Report]. Stanford University. http://ai100.stanford.edu/2021-report.

[7] What is machine learning (ML)? (2021). IBM. Retrieved August 12, 2024, from https://www.ibm.com/topics/machine-learning (Accessed: 13 August 2024).

[8] Saveri, J., & Butterick, M. (n.d.). We've filed lawsuits challenging AI image generators for using artists' work without consent, credit, or compensation. Because AI needs to be fair & ethical for everyone. [Image Generator Litigation]. Image. Retrieved July 17, 2024, from https://imagegeneratorlitigation.com/

derivative because its output is strictly limited by the source material it is provided. In this machine learning instance, images can only be combined in various configurations to make a new image.[9] So, while none of the output images look exactly like copyrighted ones scraped from the internet based on a user prompt, they are derived from artists' artworks, mostly without their knowledge or consent.[10]

The lawsuit brings to focus the issue of derivative works, infringement of copyrights, and damages to artists' image and sales. By making copyrighted works for sale, in a derivative style, these platforms make a profit off of popular artists' names, distinctive styles, and so forth, without their authorization. For example, the lawsuit points out that Stability's executives know that the appeal for their platform is their software's ability to copy and mimic popular artists.[11] The litigation report explains that it is nearly impossible for other artists to be able to recreate someone else's style in a convincing manner.[12] To be able to recreate an illustration in the artists' style, a tremendous amount of skill, practice, and knowledge of the artists' work is needed. However, for an AI that trained on the works of such artists, this becomes accessible through a click of a button rather than years of hard work and learning. It is eerie for the artists to come across these derivative images on the web. Cartoonish Sarah Andersen, one of the primary complainants, recounts her experience in a guest piece for *The New York Times*:

> In October, I was sent via Twitter an image generated by A.I. from a random fan who had used my name as a prompt. It wasn't perfect, but the contours of my style were there. The notion that someone could type my name into a generator and produce an image in my style immediately disturbed me. This was not a human creating fan art or even a malicious troll copying my style; this was a generator that could spit out several images in seconds. With some technical improvement, I could see how the process of imitating my work would soon become fast and streamlined, and the many dark potentials bubbled to the forefront of my mind. I felt violated.[13]

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[9] Andersen v. Stability AI Ltd., 3:23-cv-00201. Retrieved July 17, 2024, from https://imagegeneratorlitigation.com/pdf/00201/1-1-stable-diffusion-complaint.pdf
[10] Ibid.
[11] Andersen v. Stability AI Ltd., 3:23-cv-00201. Document 129. Page 57. Retrieved July 17, 2024, from https://imagegeneratorlitigation.com/pdf/00201/1-1-stable-diffusion-complaint.pdf
[12] Ibid.
[13] Andersen, S. (2022, December 31). Opinion | The Alt-Right Manipulated My Comic. Then A.I. Claimed It. The New York Times. Andersen, S. (2022, December 31). Opinion | The Alt-Right manipulated my comic. Then A.I.

Andersen felt wronged not only because this work was used without consent and permission, but also because it represented a corruption of the work she had already put out. All it took was a widely scraped training data consisting of Andersen's work, with associated meta-data accordingly tagged with her name.

Similarly, Greg Rutkowski, a Polish concept artist and illustrator of popular games such as Dungeons and Dragons, strongly opposes the AI-generated art linked to his style and name and disseminated all over the internet. He joined the class action lawsuit when his unique style became such a common output of the AI-generator that works he had no personal hand in are now associated with his name.[14] As a full-time artist, he relies on his artistic work to earn a living. Moreover, the portfolio he has created for himself sets him apart as the esteemed illustrator of fantasy-style art featured on popular games. His personal projects are also available to purchase on his website,[15] Their availability for scraping is a necessity for him to sell his art online, and it's clear to see how the easily available derivative works in his style pose a direct threat to his livelihood and professional credit.

As the first most prolific case of litigation against generative AI and the platforms that enable it, this case fights to protect the rights and hard work of the artists against derivative images being sold on the market. These derivations cheapen the value of artists' work, generating financial loss for them in both short and long term. In the short term, it makes freely available a "new" image that would have ideally been a commission for the artists to create for a paying client. In the long-term, as Rutkowski and Anderson discovered, it muddles their portfolio searches on the internet. Thousands of Ai-generated, derivative images in their style and associated with their names, continue to appear on the web, and specifically on these platforms. Consequently, the lawsuit filed is listed for unclassified damages, meaning that the exact loss of the artists revenue has not been determined and is still unfolding.

In this regard, Xu YingYing, an illustrator in Chongqing, China, who developed designs for major game development companies, worries how her earnings have plummeted to almost one-tenth

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claimed it. *The New York Times*.
https://www.nytimes.com/2022/12/31/opinion/sarah-andersen-how-algorithim-took-my-work.html

[14] Heikilla, M. (2022, September 16). This artist is dominating AI-generated art. And he's not happy about it. MIT Technology Review.
https://www.technologyreview.com/2022/09/16/1059598/this-artist-is-dominating-ai-generated-art-and-hes-not-happy-about-it/

[15] (n.d.) Greg Rutkowski. Retrieved August 12, 2024, from https://rutkowski.artstation.com/

of the original because of AI's use in making images.[16] Ideas that should have been commissioned works for Xu are now developed using AI by her contracting studios. In this way, while profit is generated for a larger company through the cutting-edge AI technology, it cuts the artists out of profiting. What makes this picture bleaker is that it is the artists whose skills have enabled AI to learn and grow, and it is their style which is automatized for the sake of "efficiency" in content creation, solely to the platform's benefit.

One ongoing argument in favor of the continued use and development of generative AI for visual image rendering is that it saves time otherwise spent on repeatable, tedious tasks, and makes art fun for the users—that is to say, the tools make a sense of artistic accomplishment accessible for those not as disposed of time, talent, or ability to create illustrations for themselves. While the lay user may or may not understand where this art is originally coming from, companies that continue to invest in generative AI do. The AI products are used to generate art for fun or frivolous purposes, such as entertaining memes, but they also turn out political propaganda and deliberate misinformation (manipulated news photos, for example) very quickly. When artists are protected by the lawyers of a company to pursue copyrights and the terms of signed contracts, they can fight for intellectual property (IP) rights over their original creations and artistic works. However, freelance artists are in a more vulnerable position, because once their talent becomes fodder for the same AI without any recognition or consequence, their small niche is destroyed for them.

Given the complicated nature of relationships between artists, AI developers and the generative AI userbase, some of the critical questions that arise is how, in what capacity, and in what form should this technology continue to develop? Given the nature of artists' work and engagement, the niche that commercial, digital, and freelance artists occupy must change drastically for generative AI to become acceptable in the arena of competition for their work and pay.

Perhaps in much the same way as technology evolved from paint-on-canvas to digital brushes to create artworks, today, Generative AI may come to occupy a new niche in the realm of art. Pro-innovation arguments persist in claiming that development of generative AI, even with its method of mass-scraping copyrighted and non-copyrighted works off the internet, is the only way forward to meet the market's demands for content. Nevertheless, as it currently stands,

[16] Zhou, V. (2023, April 11). AI is already taking video game illustrators' jobs in China. Rest of World. https://restofworld.org/2023/ai-china-video-game-layoffs-illustrators/

generative AI has been seen more as a threat to artistic recognition and creativity than as a welcome solution for the creative community.

Processing Questions

a) What is Generative AI? How does it work?
b) What is the difference in the production of original artworks developed by humans and derivative artworks developed by Generative AI?
c) What does that mean for an artwork to be copyrighted? What are other types of intellectual property mechanisms?
d) What is plagiarism? How is it defined pertaining to AI and material generated through it?
e) What have been the arguments that artists have mobilized against corporations developing Generative AI technology?
f) Generative AI has impacted the work of different artists not always equally. Please explain.

4. Thematic Reflection and Discussion

Derivative and Creative Works

One of the critical discussions surrounding Generative AI is whether AI works can be considered creative. Read this cartoon on Scientific American, "See How AI Generates Images From Text" (link:https://www.scientificamerican.com/article/see-how-ai-generates-images-from-text/).[17] Then consider tracing over the picture of the guy in the orange shirt by your own hand. Following that, inspired by the style of the artist who designed the image "dog, man, beach," in another piece of paper, please draw a new image from scratch. By keeping their work as an inspiration, you learn how to balance line weight, brush or pencil strokes, and the common denominators of how they draw shapes of various items, perhaps eyes, nose, and hair. Look at the two images you have created and then respond:

a) Do you consider the works you have produced creative works or not? Why?

[17] Bushwick, S., Twombly, M., & Hobbs, A. (2023, October 1). See How AI Generates Images from Text: Generative AI algorithms use probability to create visuals from noise. https://www.scientificamerican.com/article/see-how-ai-generates-images-from-text/

b) In your opinion, how much is time spent with a task a critical factor in defining creativity? Please explain.
c) After this exercise, in which ways do you think the derivative images created by generative AI can be considered creative, and in which ways they cannot? Why?

Plagiarism

In academic settings, plagiarism is clearly defined in policies of conduct, which are disseminated via proper documentation such as the syllabi. However, in informal settings such as social media sites, you will often encounter the same meme, joke, or quote of the day on various sites without any proper form of crediting, or even the wrong credits attributed. Sometimes, pages are created for the sole purpose of reposting interesting content found online – much to the dismay of the original creators. Considering the academic environment, social media settings, and your own experience in both, please respond:

a) Have you ever been plagiarized? Have you heard of cases of plagiarism? If so, how were these cases addressed?
b) What are the main ethical issues regarding plagiarism?
c) How has the boom of generative AI brought up problems with plagiarism in your world?

Corporate Accountability and Fake News

With the inundation of AI-generated images and material on the internet, Meta, the company who owns Facebook, Instagram and other platforms, took the initiative to add metadata and mark the images "Made with AI". This is to prevent misinformation in the form of altered and doctored images from being spread via social media. This is also an attempt to mark images that may not be original works. However, Meta's identification processes are not accurate in this markup, lumping together pictures that just have AI components and other kinds of filters.[18]

a) In your opinion, why do companies like Meta feel the need to mark images as Made with AI? What pressures might be affecting these decisions?
b) In your experiences, have you encountered any instances where false information and manipulated images have led you to believe in fake news? How can we prevent AI from contributing to this undesirable outcome?

[18] Cantisano, T. (2024, June 25). Meta can't tell AI-generated images from real photos. Android Police. https://www.androidpolice.com/meta-cant-tell-ai-generated-images-from-real/

Regulation, Rights, and Responsibilities

This case study highlighted some of the vulnerabilities that artists face because of Generative AI and its widespread use. One of the ways artists can protect their creative expression and economic ventures is through intellectual property (IP) rights such as copyrights, patents, and trademarks. However, pro-innovation ideas push back against IP in the interest of development.

a) How important is it for an artist to have the right to protect their work from unauthorized copies?
b) Why do different classes of artists, from freelancers to more established artists not have the same access to copyrights and are differently affected by Generative AI?
c) What considerations would a future policy need to consider in order to address current frictions between AI developers and a diverse group of artists to the best possible outcome?