

The New Frontier: Exploring Trademark and IP in the Artificial Intelligence Era

NYIPLA Trademark Law and Practice Committee

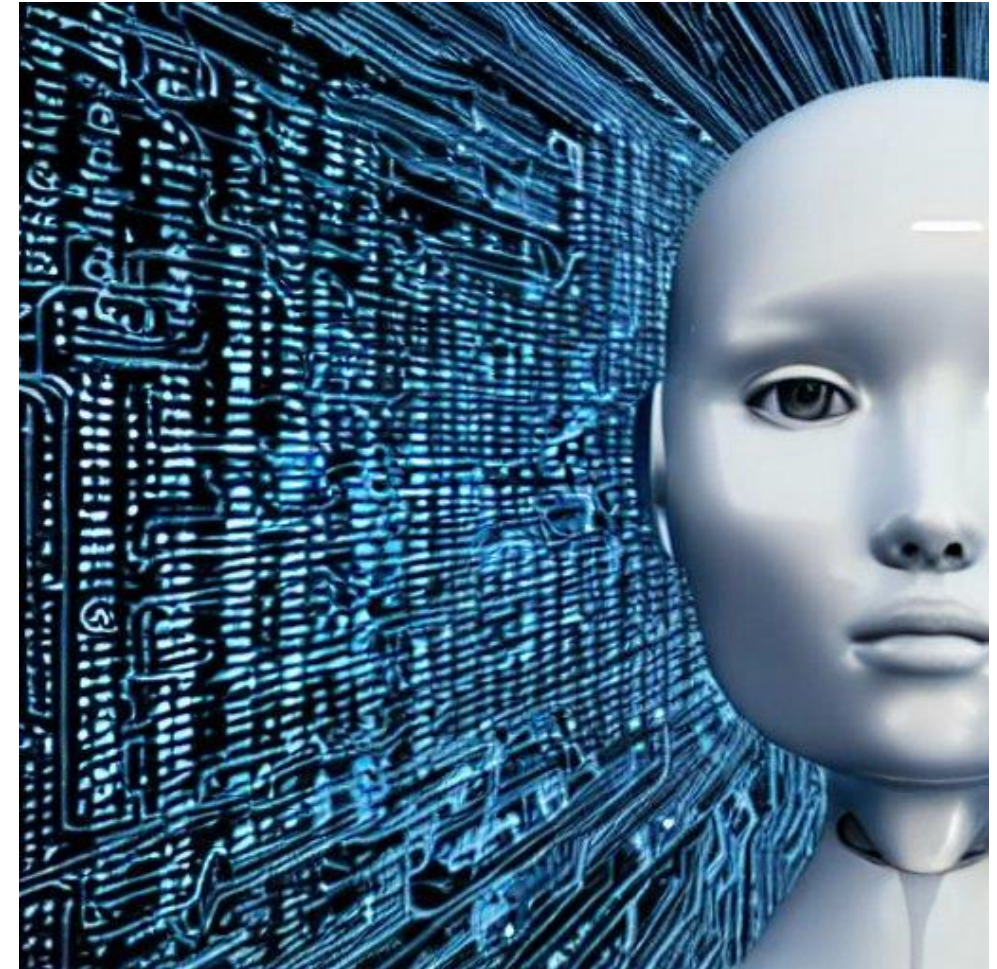
July 2023

- I asked ChatGPT:
 - How do you begin a legal presentation about trademarks and copyrights and the intersection with AI?¹

¹ “How do you begin a legal presentation about trademarks and copyrights and the intersection with AI?” prompt, CHATGPT (July 16, 2023), <https://chat.openai.com/share/b45b56ba-c896-424a-9033-a00cd1cdcff4>

What Is Artificial Intelligence?

- Any perception, synthesis, inferences demonstrated by machines instead of biological entities²
- Artificial intelligence is intelligence demonstrated by computers, as opposed to human or animal intelligence. "Intelligence" encompasses the ability to learn and to reason, to generalize, and to infer meaning
- A form of efficient problem solving through computer science and robust datasets
- **Generative AI—takes raw data and learns to generate outputs³**
 - ChatGPT, DALL-E 2, Midjourney, etc.



“What is artificial intelligence” created with Stable Diffusion

²Winston, P H (1984). Artificial intelligence. Second edition. United States

³See *What is artificial intelligence (AI)?*, IBM (last visited June 13, 2023), <https://www.ibm.com/topics/artificial-intelligence>

ChatGPT Sprints to One Million Users

Time it took for selected online services to reach one million users



* one million backers ** one million nights booked *** one million downloads
Source: Company announcements via Business Insider/LinkedIn



- ChatGPT was the **fastest website or application to reach 100 million users** ever—reaching this milestone in **two months**⁴
- Appeal:
 - Increasing demand for AI-powered solutions across various industries
 - Cost savings
 - Efficiency
 - Enhanced (personal) user experiences
 - People are being asked to do more with less
 - People are drawn to things that are human-like

<https://www.statista.com/chart/29174/time-to-one-million-users/>

⁴ See Krystal Hu, *ChatGPT sets record for fastest-growing user base – analyst note* Reuters (Feb. 2, 2023 10:22AM), <https://www.reuters.com/technology/chatgpt-sets-record-fastest-growing-user-base-analyst-note-2023-02-01/>



“lawyers attempting to understand generative artificial intelligence”
created with DALL·E 2

■ How it works

– Input

- ◆ Text, image, video, design, musical notes

– Output

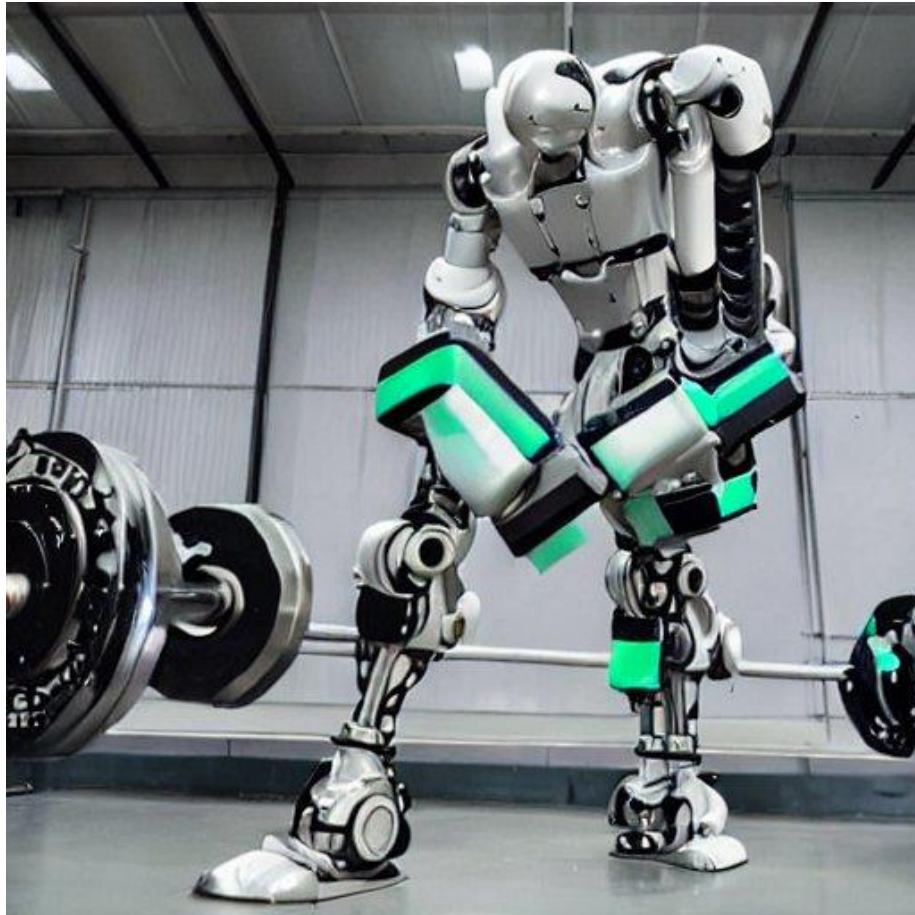
- ◆ Essays, images, videos, musical works

– Training

- ◆ Vast amounts of data
- ◆ Secretive

- GPT-3 was trained on approx. 45 terabytes of text data— that’s about one million feet of bookshelf space, or a quarter of the entire Library of Congress—at an estimated cost of several million dollars⁵
- Midjourney uses a Machine Learning algorithm trained on a large amount of image data

⁵ *What is generative AI?*, McKinsey & Company (Jan. 19 2023), <https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-generative-ai>



“A robot getting strong from training on tons and tons of data.”
created with Stable Diffusion

- Training on Data
 - AI platforms rely on huge amounts of training data
 - Some platforms are scraping the training data **without permission** from internet sources
 - Using this data for training potentially exposes the AI platform and the user to liability for copyright and trademark infringement
- Is this infringement?
 - There are multiple lawsuits pending right now against AI platforms (Stable Diffusion, OpenAI, and others)⁶
 - Some allege, among other things, that artists’ images were scraped without permission to “train” the AI platform
 - **No court decision yet**

⁶ See, e.g., *Andersen et al. v. Stability AI Ltd. et al.*, case number 3:23-cv-00201, N.D. Cal. 2023; *Getty Images v. Stability AI*, Case No. 1:99-mc-09999, D. Del., Complaint (filed Feb 3, 2023); *Silverman et al. v. OpenAI, Inc.*, Case No.3:23-cv-03416, N.D. Cal., Complaint (filed Feb. 7, 2023); *Silverman et al. v. Meta Platforms, Inc.*, Case No.3:23-cv-03417, N.D. Cal., Complaint (filed Feb. 7, 2023).



Mountains oil painting

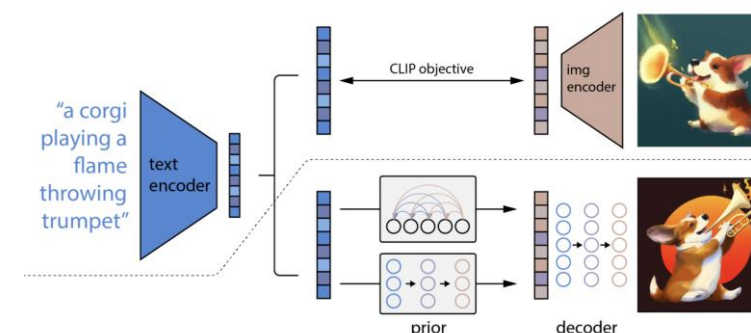


Sleeping puppy



Batman and Superman

- Examples of DALL-E 2 Training data
 - **CLIP** (Contrastive Language-Image Pre-training) scours the internet for image and caption pairs, learning to generate textual representation of the images (the reverse of DALL-E 2)
 - A Diffusion Model (the “**Prior**”) simultaneously has been trained to deconstruct and then re-create images from a similar dataset, learning to generate images
 - Another Diffusion Model (the “**Decoder**”) uses embedded text and image info from CLIP and Prior to generate the output image



⁷ See Ian Spektor *From DALL-E to Stable Diffusion: How Do Text-to-Image Generation Models Work?*, EDGE AI VISION ALLIANCE (Jan. 12, 2023), <https://www.edge-ai-vision.com/2023/01/from-dall%C2%B7e-to-stable-diffusion-how-do-text-to-image-generation-models-work/>

Issues Arising From Output

- Unpredictability/Secretive Nature of Training Data
 - AI platforms don't always identify the source or inspiration for a work
 - AI platforms are glitchy, they can hallucinate, and sometimes they accidentally copy⁸
- Trademark Infringement
 - May be producing output that depicts logos or trademark characters
 - Changing, misusing, splicing, or removing the watermark
 - ◆ *See Getty Images v. Stability AI*, Case No. 1:99-mc-09999, D. Del., Complaint (filed Feb 3, 2023)
 - Using fan-created images of trademarked characters. Making logos, memes, content without permission
- AI platforms disclaim liability for infringement



From *Getty Images v. Stability AI*, Complaint ¶ 59
created with Stable Diffusion

⁸ See Karen Weise & Cade Metz, *When A.I. Chatbots Hallucinate* N.Y. Times (May 9, 2023), <https://www.nytimes.com/2023/05/01/business/ai-chatbots-hallucination.html>

Do You Own the Content?

- To determine if one owns the content/output, you must review the Terms of Use
 - More times than not, the risk as to use of the output is borne by the user
- GAI Terms of Service and Terms of Use
 - Vary widely
 - Many AI platforms do not provide standard legal protections such as representations, warranties and indemnities
 - Some AI platforms require users to indemnify the platforms for the users' exploitation of output
 - Some AI platforms prohibit commercial use of content generated on their platforms
- Many include a copyright and trademark takedown procedure in ToS
 - Includes Midjourney, DALL-E, Stable Diffusion, ChatGPT⁹

⁹ See Terms of Service, MIDJOURNEY (last visited July 17, 2023), <https://docs.midjourney.com/docs/terms-of-service>; Terms of Use, OPENAI (last visited July 17, 2023), <https://openai.com/policies/terms-of-use>; Terms of Service, STABLE DIFFUSION (last visited July 17, 2023), <https://stable-diffusion-art.com/terms-of-service>.

Terms of Service

AI	Input	Output	Disclaimers	Indemnification	Reps and Warranties
ChatGPT (language) Developer: OpenAI	User owns	<ul style="list-style-type: none"> Assigned to user No restriction on commercial use States that it is intended for informational and educational purposes only—should not be relied upon as legal, medical, or professional advice 	<ul style="list-style-type: none"> Services are provided “as is” No warranty of merchantability, fitness, quality, non-infringement 	User indemnifies OpenAI	None regarding the accuracy, reliability, or completeness of the output
Midjourney (images)	User grants license to use to Midjourney	<ul style="list-style-type: none"> Paid User owns unless user is an employee of company with more than \$1mm revenue If not a paid member—license under Creative Commons Noncommercial 4.0 Attribution International License 	<ul style="list-style-type: none"> Services are provided “as is” No warranty of merchantability, fitness, quality, non-infringement 	User indemnifies Midjourney	None

- Language Processor
 - OpenAI ChatGPT
 - Google Bard
- Image Generators
 - DALL-E 2
 - Stable Diffusion
 - Midjourney
- Video Generators
 - Descript
 - Runway
- Music Generators
 - Amper Music
 - AIVA

And many more!



“DALL-E, Midjourney, and Stable Diffusion go to a bar”
created with Stable Diffusion

- Copyright law grants the creator of an original work exclusive rights to its use and distribution. This means that if an AI generates an image that is similar to an existing copyrighted work, it could be considered a violation of copyright law
- A few potential examples of how AI-generated art can potentially infringe copyrights include:
 - ◆ Replicating an existing artwork: AI can be trained on existing artwork to create something similar or identical, which can infringe the original artist's copyright
 - ◆ Using copyrighted images as training data: AI requires large amounts of data to learn, and if copyrighted images are used as part of the training data, the resulting artwork could potentially infringe on the original copyright
 - ◆ Using copyrighted elements in the generated artwork: AI-generated art may incorporate copyrighted elements such as characters or logos, which can infringe on the original copyright

¹⁰ See Devin Miller, *Can Artificial Intelligence (AI) created art violate/infringe Intellectual Property, such as trademarks or copyrights?*, LINKEDIN (Mar. 29, 2023), <https://www.linkedin.com/pulse/can-artificial-intelligence-ai-created-art-property-devin-miller>



“Photorealistic grizzly bear eating a jumping salmon out of a stream.”
created with Hotpot

- ◆ Using AI to reproduce photographs: AI can be trained to generate realistic images, and if it is used to reproduce a photograph, it could infringe on the photographer's copyright
- ◆ Creating derivative works without permission: AI-generated art that is a derivative work of an existing copyrighted work may infringe on the original copyright, particularly if it is created without the permission of the original copyright holder

¹⁰ See Devin Miller, *Can Artificial Intelligence (AI) created art violate/infringe Intellectual Property, such as trademarks or copyrights?*, LINKEDIN (Mar. 29, 2023), <https://www.linkedin.com/pulse/can-artificial-intelligence-ai-created-art-property-devin-miller>



“ChatGPT artificial intelligence describing ownership rights using Shakespearean poetry” created with Stable Diffusion

- The USCO and USPTO say AI-generated works generally do not qualify for copyright or patent protection because **there is no “human authorship” involved**¹¹
 - That decision is being challenged in federal court¹²
- Risks related to Copyright Ownership:
 - You may not have legal recourse against third parties who use your AI-generated work without permission
 - You cannot transfer copyright rights in AI-generated output to others
 - Lack of service reps and warranties

¹¹ *Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence*, 88 Fed. Reg. 16,190 (Mar. 16, 2023) (to be codified at 37 C.F.R. § 202).

¹² See *Thaler v. Perlmutter* Case No. 1:22-cv-01564, D. Wash., Complaint (filed June 2, 2022)

Hypothetical Example of Copyright Infringement in AI¹³

- Here's a hypothetical example to illustrate copyright infringement involving AI:
 - Imagine that a bestselling author named Sarah has written a popular book series called "The Chronicles of Arcadia." The series has gained significant acclaim and a dedicated fan base. Sarah holds the exclusive copyright to her books, which grants her the rights to reproduce, distribute, and create derivative works based on her original literary creations
 - Now, suppose an AI-powered software company named TechGenius develops an advanced natural language processing AI algorithm. They train the algorithm using Sarah's entire book series as input, allowing the AI to learn and generate new text based on the writing style, characters, and plot elements from "The Chronicles of Arcadia"

¹³ "Show me an example of copyright infringement with AI." prompt, CHATGPT (July 16, 2023), <https://chat.openai.com/share/b45b56ba-c896-424a-9033-a00cd1cdcff4>

- TechGenius decides to commercialize this AI-generated content by publishing a new book called "The Lost Chronicles of Arcadia," which is written entirely by their AI algorithm. The book incorporates storylines, characters, and settings that closely resemble Sarah's original works, leading to significant similarities between the AI-generated content and Sarah's books
- In this scenario, TechGenius would likely be committing copyright infringement. By training their AI algorithm on Sarah's copyrighted works and generating new content that substantially copies or imitates her original expression, TechGenius is unlawfully reproducing and distributing derivative works without obtaining proper permission or licensing from Sarah
- The use of AI in creating content does not absolve companies from their responsibility to respect copyright laws. Even if the content is generated by AI algorithms, copyright protection still applies to the original works used as input, and proper authorization or licensing is necessary to avoid infringement

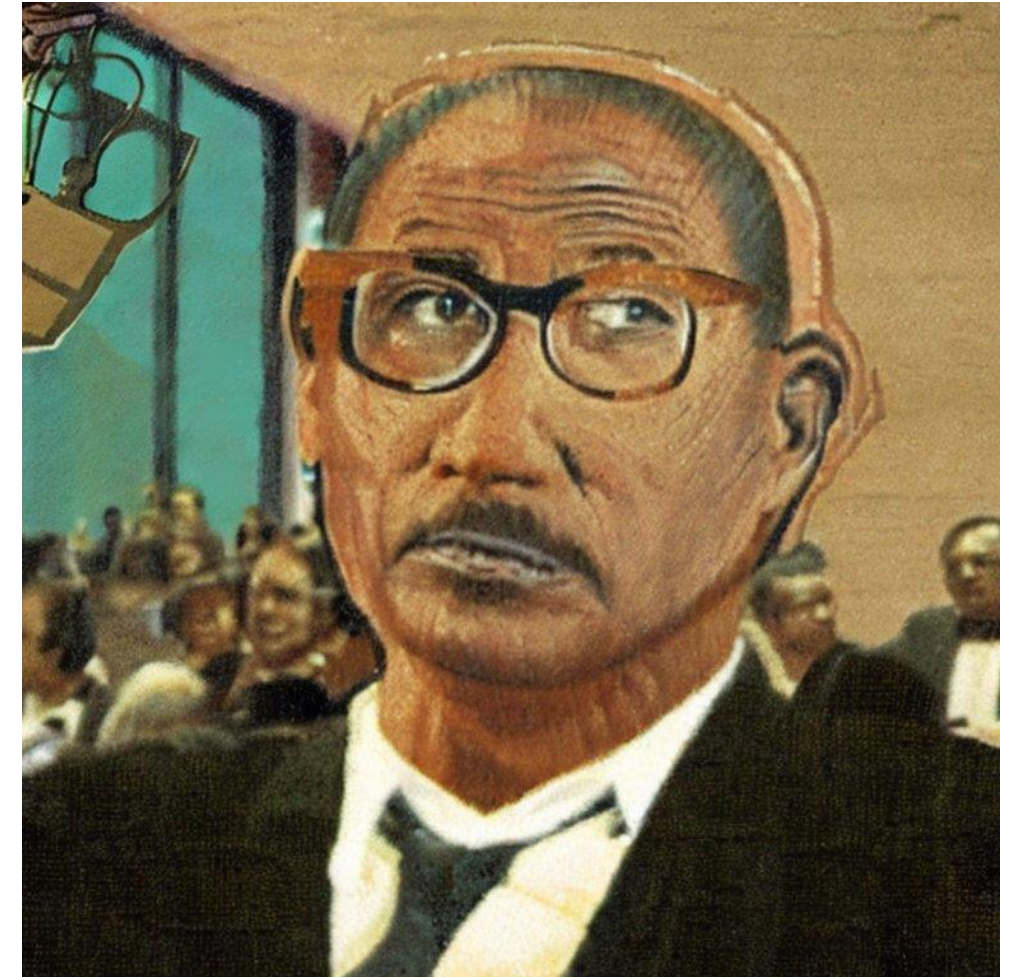
¹⁴ "Show me an example of copyright infringement with AI." prompt, CHATGPT (July 16, 2023), <https://chat.openai.com/share/b45b56ba-c896-424a-9033-a00cd1cdcff4>

- Another area of concern is trademark law.
 - ◆ Trademarks are used to protect a company's branding, and AI-generated images could potentially create confusion among consumers
 - ◆ For example, if an AI generates an image that is similar to a well-known brand's logo, it could be considered a violation of trademark law. However, as with copyright, determining whether an AI-generated image infringes on a trademark is complex and may require a case-by-case analysis
 - ◆ Unlike traditional works, AI-generated images are created using complex algorithms and machine learning techniques. This means that the AI does not necessarily use existing images as a reference, but rather learns from them and generates something new. Additionally, some argue that since an AI does not have a consciousness, it cannot create anything original, and therefore cannot infringe on copyright. There is no such requirement for the creation of a trademark. Instead, it is important that the mark identifies goods and/or services.

¹⁵ See Devin Miller, *Can Artificial Intelligence (AI) created art violate/infringe Intellectual Property, such as trademarks or copyrights?*, LINKEDIN (Mar. 29, 2023), <https://www.linkedin.com/pulse/can-artificial-intelligence-ai-created-art-property-devin-miller>

Certain factors to consider:

- Distinctiveness
- Consumer Perception
- Functionality
- Non-Deceptiveness
- National and International Laws



“Who owns this intellectual property?”
created with Stable Diffusion

¹⁶ *What is a trademark?* United States Patent and Trademark Office (last visited June 12 2023), <https://www.uspto.gov/trademarks/basics/what-trademark>.

Hypothetical Example of Trademark Infringement in AI¹⁷

- Imagine a well-established clothing brand called "Glamour Chic" that has built a strong reputation for its high-quality and stylish clothing. They have obtained trademark registrations for their brand name and logo, which uniquely identify their products in the market
- Now, let's suppose an AI startup called "TechThreads" develops an AI-powered algorithm designed to generate brand names and logos for clothing companies. TechThreads trains their AI algorithm on a vast dataset of existing brand names and logos, including those of renowned fashion brands
- In the process, the AI algorithm generates a brand name and logo for TechThreads' client, a new clothing company called "Glamour Chic Fashion." The AI-generated brand name and logo bear striking similarities to the well-established "Glamour Chic" brand, including similar font styles, color schemes, and design elements

¹⁷ "Show me an example of trademark infringement with AI." prompt, CHATGPT (July 16, 2023), <https://chat.openai.com/share/b45b56ba-c896-424a-9033-a00cd1cdcff4>

Hypothetical Example of Copyright Infringement in AI (cont'd)¹⁸

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- In this scenario, TechThreads and their client, "Glamour Chic Fashion," could be liable for trademark infringement. By using an AI-generated brand name and logo that closely resemble an existing registered trademark (Glamour Chic), they are potentially causing confusion among consumers and diluting the distinctiveness of the original brand
- Trademark infringement occurs when a party uses a similar or identical mark that is likely to cause confusion, mistake, or deception among consumers regarding the source of goods or services. Even if the infringement was unintentional or generated by AI algorithms, it does not absolve the responsible parties from potential liability

¹⁸ "Show me an example of trademark infringement with AI." prompt, CHATGPT (July 16, 2023), <https://chat.openai.com/share/b45b56ba-c896-424a-9033-a00cd1cdcff4>

There are also plenty of AI applications and subsequent issues that arise in the trademark context when using Artificial Intelligence programs that are **not generative.**

- Trademark law is based on human interactions with brands and the purchasing process. What happens to trademark when AI makes retail decisions?¹⁹
- Traditional trademark law has focused on the visual, conceptual, and phonetic similarity in assessing the similarity of two potentially conflicting trademarks
- With AI, brand owners and trademark practitioners may need to reevaluate infringement theories based on initial interest and point of sale confusion and instead explore theories of infringement that place greater emphasis on the harm caused by post purchase confusion²⁰

¹⁹ See Kevin R. Casey, *United States: Artificial Intelligence in the Trademark World*, MONDAQ (Nov. 19, 2020), <https://www.mondaq.com/unitedstates/trademark/1001800/artificial-intelligence-in-the-trademark-world>

²⁰ Comments in Response to: Request for Comments on Intellectual Property Protection for Artificial Intelligence Innovation, 84 Fed. Reg. 58,141 (Oct. 30, 2019), 84 Fed. Reg. 66,176 (Dec. 12, 2019).



“AI computer taking a fashionable influencer picture.”
created with Stable Diffusion

- If AI recommends a purchase for a consumer, who is liable when that purchase involves trademark infringement?²¹
 - i.e. vicarious liability, contributory liability
- A string of European cases suggest that AI platforms could be liable for infringement:²²
 - if they are on notice of infringing activity **OR**
 - if the results shown cause confusion
- Is AI an influencer?

²¹ See *What Does AI Mean for Trademark?*, LICENSING INTERNATIONAL (Feb. 22, 2023), <https://licensinginternational.org/news/what-does-ai-mean-for-trademarks/>

²² See Lee Curtis & Rachel Platts, *Trademark Law Playing Catch-up with Artificial Intelligence?*, WIPO MAGAZINE (June 2020), https://www.wipo.int/wipo_magazine_digital/en/2020/article_0001.html



“Knight protecting a company’s trademarks from danger, fairy tale”
created with Stable Diffusion

- AI can be a powerful tool in protecting and enforcing your trademark
- Certain proprietary AI platforms are being used to “analyze materials, colors, packaging and other attributes to spot fakes”
 - Some use microscopic images to tell counterfeits from the originals
 - Some use deep-learning-based image recognition to review product listings, scanning for misleading advertisements and automatically filing take-down requests²³
- The same technology could be used to scour the web and protect copyrights or other IP

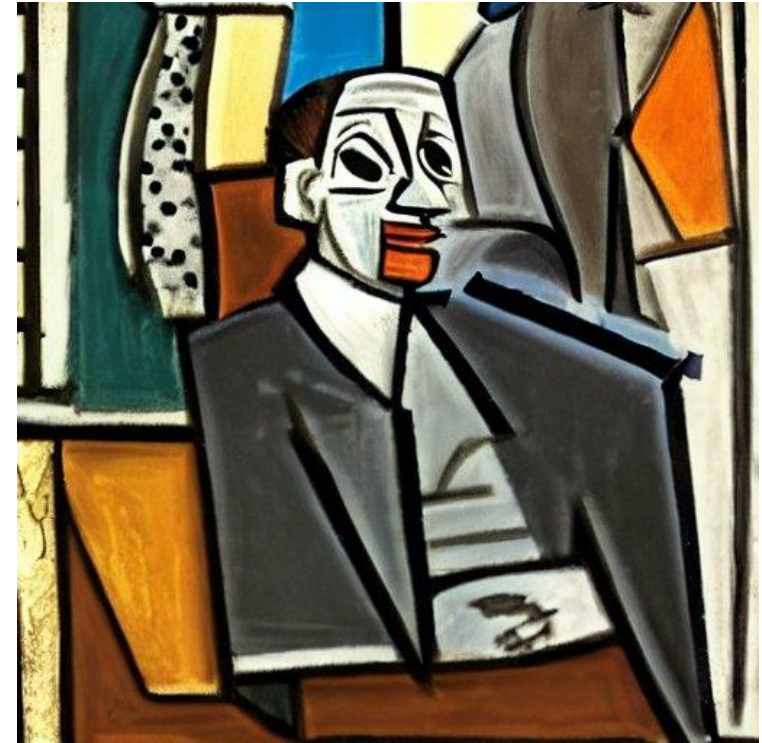
²³ Ani Khachatryan, *The Digital Dilemma: Counterfeit Culture And Brand Protection Reform In The ECommerce Era*, 43 Loyola L.A. Ent. L. Rev. 247, 285 (2023).

- The USPTO has "experimented" with AI and machine learning tools to automate classification, and with prototyped models searching for prior marks
 - So far, implementation has not been successful
- PTO AI Usage concerns²⁴
 - Due process
 - Employment Effects
 - Manipulation
- Gov't registries hope to use AI in their search systems to enhance processes such as:
 - a) recognizing non-abstract elements, which enables the finding of conceptually similar, yet visually dissimilar marks
 - b) finding conceptually similar words and devices from words of different languages
 - c) assisting in mark segmentation such that individual elements within a composite mark could also be searched²⁵

²⁴ See Kevin R. Casey, *United States: Artificial Intelligence in the Trademark World*, MONDAQ (Nov. 19, 2020), <https://www.mondaq.com/unitedstates/trademark/1001800/artificial-intelligence-in-the-trademark-world>

²⁵ Comments in Response to: Request for Comments on Intellectual Property Protection for Artificial Intelligence Innovation, 84 Fed. Reg. 58,141 (Oct. 30, 2019), 84 Fed. Reg. 66,176 (Dec. 12, 2019).

- Risk of Infringing Third-Parties' Publicity and Privacy
 - It is possible the output could contain photos or other materials that infringe someone's right of privacy
- Confidentiality and Other Risks
 - Employees inputting confidential data
 - Relying on misinformation, potential bias
 - ◆ May be discriminatory (in employment, for instance)
 - ◆ Can't always trust the output
- In the Style of
 - Generally, a style is not protectable by copyright. But, if you ask for output in the style of, you might get expression that is substantially similar/potentially infringing
 - Also potentially violates right of publicity/name and likeness



"A lawyer in the style of Picasso" created with Stable Diffusion

Tips

- Avoid using prompts that are "in the style of"
- Try to upload reference materials that you own/in the public domain/are cleared

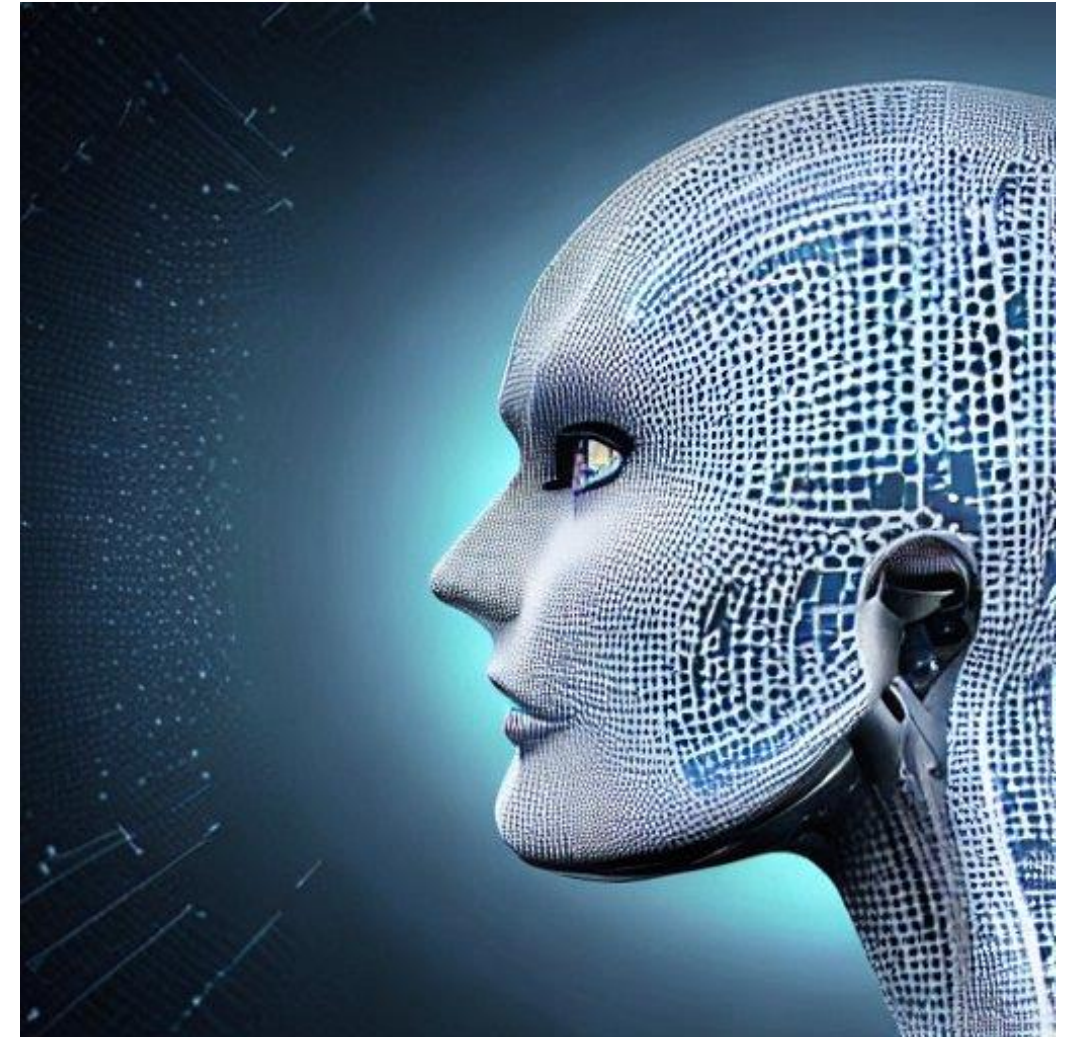
- **Responsible Use Statutes** (MA, CA, CT, DC, HI, IL, NJ, NY, RI, VT, WA)
 - “Any company operating a large-scale generative artificial intelligence model shall adhere to the following operating standards: in order to prevent plagiarism, the model shall be programmed to generate all text with a distinctive watermark or offer an authentication process that allows a user to determine whether a particular output was generated by the model” (“An Act Drafted With The Help Of ChatGPT To Regulate Generative Artificial Intelligence Models Like ChatGPT, S31, Massachusetts State Legislature, 2023.”)

- **Privacy** (personal data)
 - **The right to opt out of automated profiling** (VA, CO and CT soon to follow)
 - **Public disclosures of automated profiling and inferences** (CA and VA, CO and CT soon to follow)
 - **Consent to use** (CO, CT, VA)
 - **Restrictions on sharing with third-party AI platforms** (CA, NJ, CO and CT soon to follow)
 - **Chatbot disclosure laws** (CA and NJ)
 - **Rights to delete, access, and correct** (CA and VA, CO and CT soon to follow)
 - **Purpose limitation, data minimization, and avoidance of dark patterns** (CA)

²⁶ 2023 *State-by-state AI Legislation Snapshot*, Bryan Cave Leighton Paisner (Apr. 13, 2023), <https://www.bclplaw.com/en-US/events-insights-news/2023-state-by-state-artificial-intelligence-legislation-snapshot.html>

What's Next?

- Closely monitor these emerging technologies
- Remain aware of the intellectual property risks and contractual restraints that may impact your use of generative AI outputs
- Keep track of legislation in the AI space, and lobby legislators for regulation and intellectual property protection
- Keep track of AI lawsuits making their way through the courts



“What’s next in the world of Artificial Intelligence?”
created with Stable Diffusion



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