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The Impact of “AI” on IP and its Monetization

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ArentFox
Schiff

“Two attorneys giving a presentation to an audience in Quito, Ecuador about intellectual property and artificial intelligence”



An Overview of Generative AI

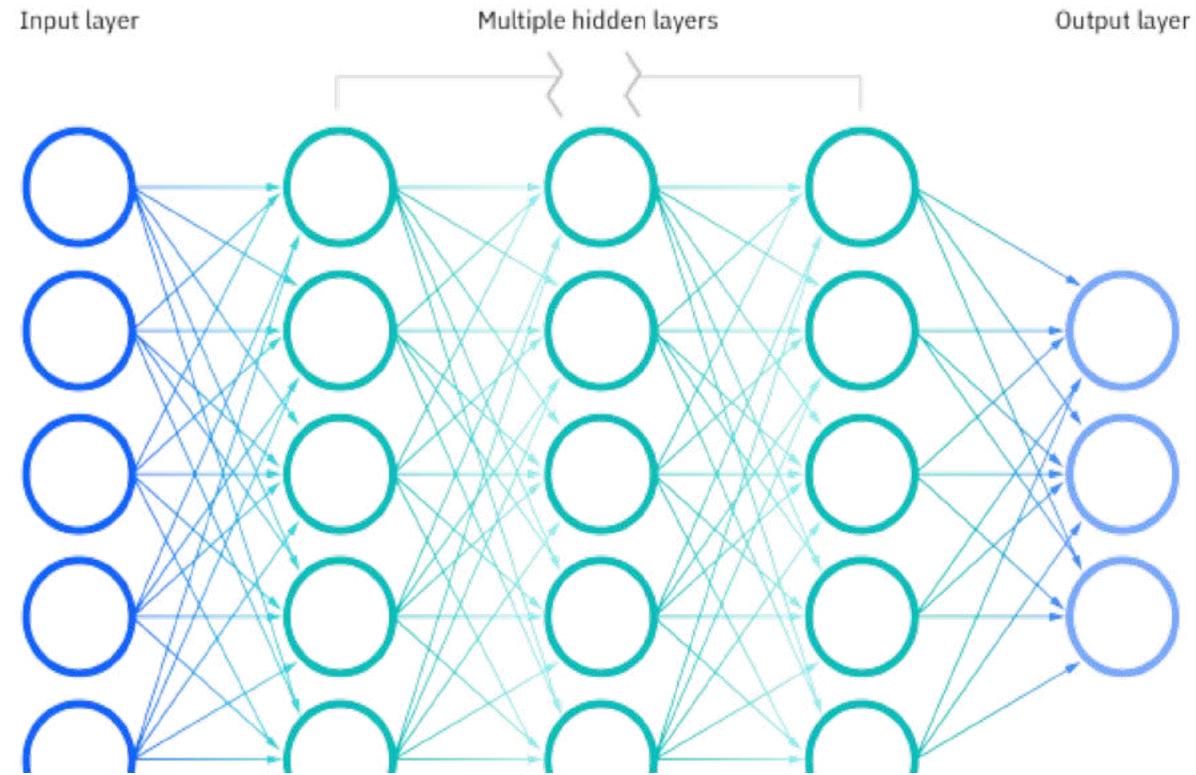
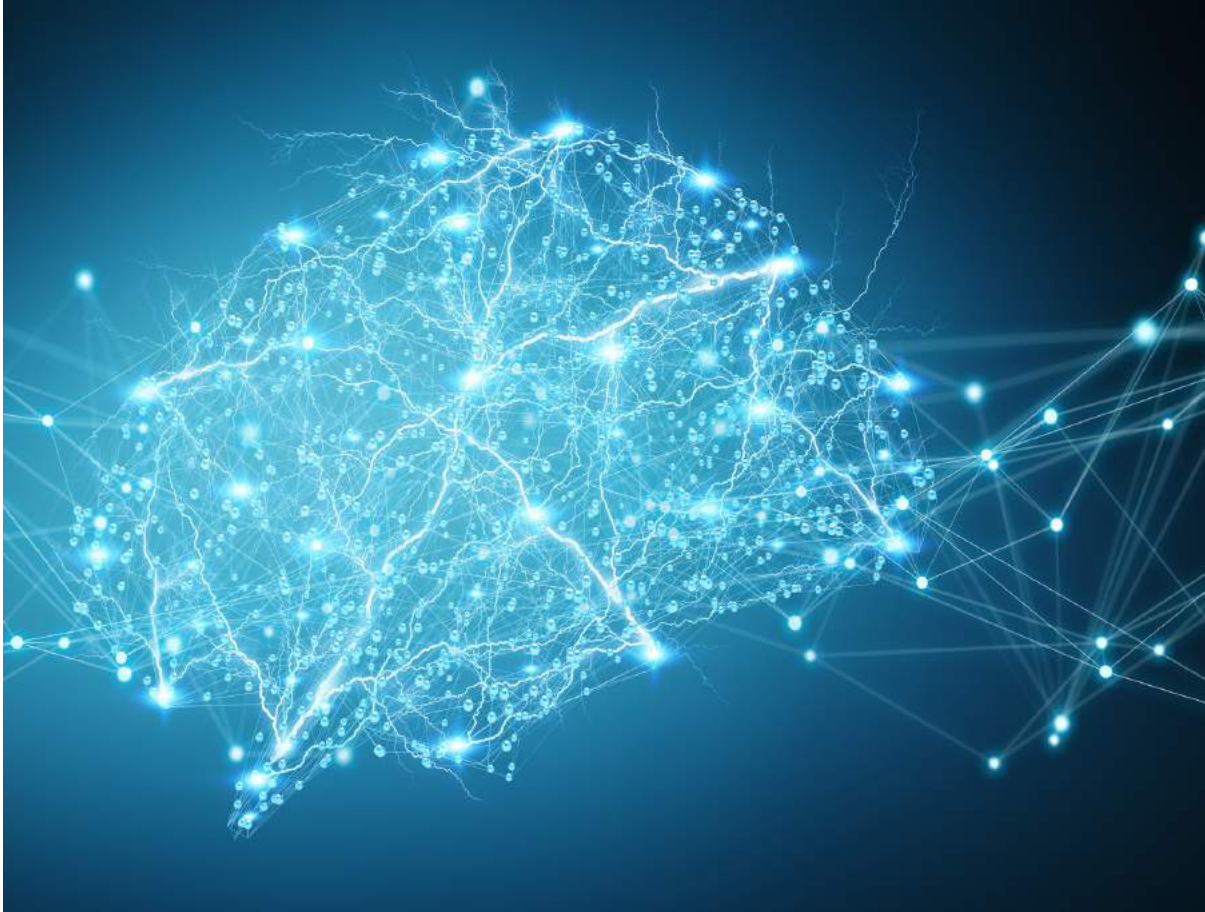
Generative AI uses machine learning to learn patterns from inputs and then generates new output.

Examples of generated output include:

- narrative text (e.g., ChatGPT by OpenAI)
- visual art (e.g., DALL-E by OpenAI, Midjourney, Stability AI, and DeviantArt)
- programming code (e.g., GitHub Copilot)
- music, video (e.g., Boomy, Magenta, MuseNet)

An Overview of Generative AI

- Generative AI uses a model/system (e.g., neural networks and learning algorithms) to learn patterns.
- Initially, the model/system is “trained” using training data including input training data and output training data
 - Training input is fed into the model and the model is adjusted (e.g., weights in neural network) based on how well the model output (e.g., prediction) matches training output.
 - The quality and performance of trained model/system is dependent on volume and quality of the training data.
 - Often fine-tuned using human AI trainers.
- The trained model/system is used to create new output based on human prompts.

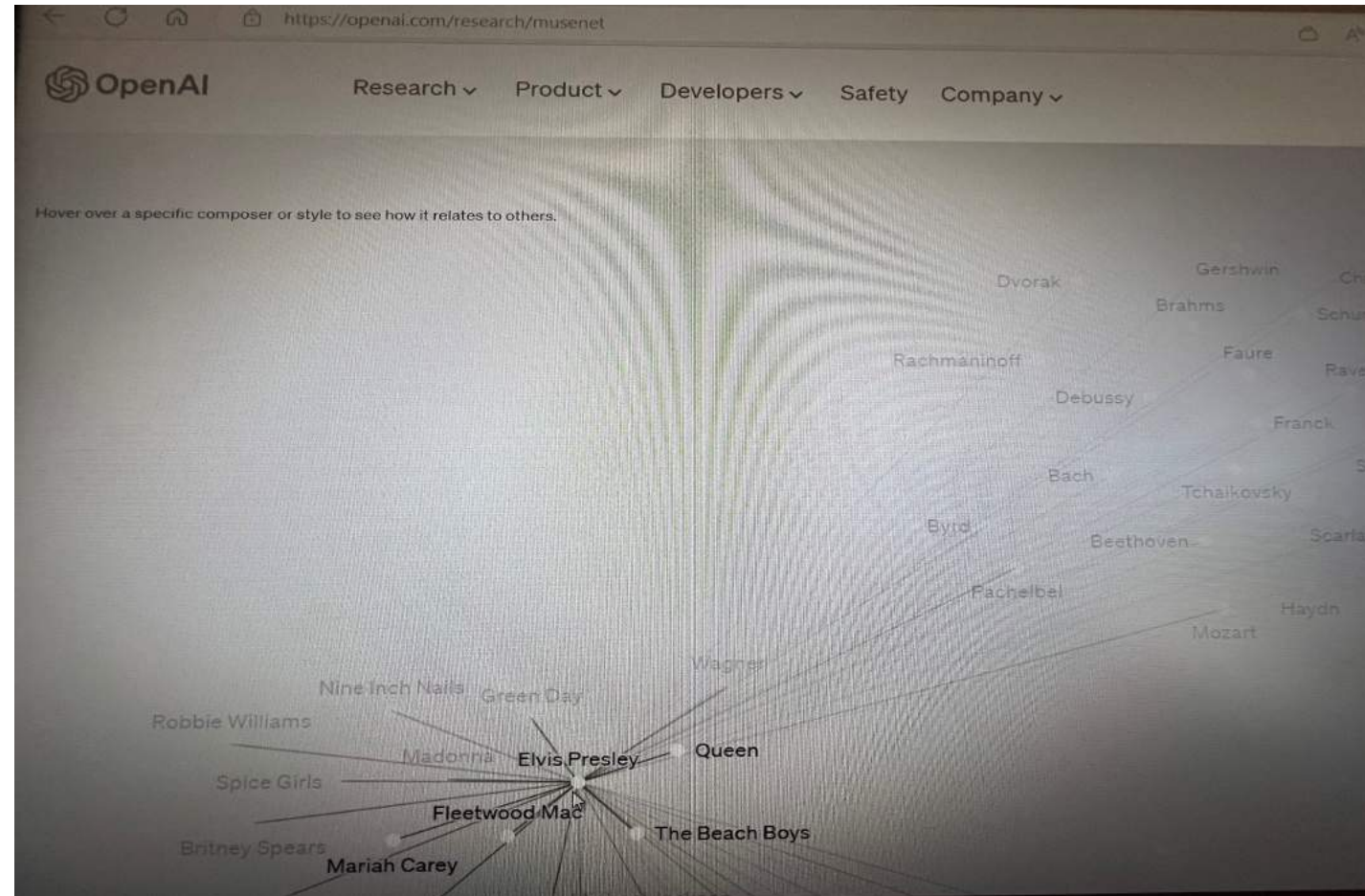


Artificial Neural Networks

- Artificial neural networks are modeled on the human brain, in which thousands or millions of processing nodes are interconnected and organized into layers.
- In an artificial neural network, cells, or nodes, are connected, with each cell processing inputs and producing an output that is sent to other neurons. Labeled data moves through the nodes, or cells, with each cell performing a different function. In a neural network trained to identify whether a picture contains a cat or not, the different nodes would assess the information and arrive at an output that indicates whether a picture features a cat.

MuseNet (an OpenAI project)

Created a deep neural network that can generate 4-minute musical compositions with 10 different instruments, and can combine styles from country to Mozart to the Beatles. MuseNet was not explicitly programmed with human understanding of music, but instead discovered patterns of harmony, rhythm, and style by learning to predict the next token in hundreds of thousands of MIDI files



Are Works Created by Generative AI Copyrightable?

February 2022

The Review Board of the US Copyright Office rejected an application for copyright registration that identified a “Creativity Machine” as the author and the work as “autonomously created by a computer algorithm running on a machine”.



Are Works Created by Generative AI Copyrightable?

February 2023

The US Copyright Office determined that illustrations in a comic book entitled *Zarya of the Dawn*, which were created with the AI program Midjourney, are not copyrightable because they **lack sufficient human authorship.**



Zarya of the Dawn

Detail before Photoshop



Detail after Photoshop



U.S. Copyright Office Guidance

- Human Authorship
- Assisting v. Conceived/Executed
- Duty to Disclose & Previous Submissions



Heart on My Sleeve



Heart on My Sleeve



Heart on My Sleeve



Eminem



Eminem – Cat Rap

Eminem raps about cats #ai #cat #shorts #eminem



Writ

ChatGPT is optimized for dialogue. Our goal is to make AI



0:00 / 1:07

Scroll for details



AI Soundalikes

- Copyright Infringement?
 - Input: Training
 - Output: Composition
 - Output: Sound Recording

- Other Avenues of Relief?
 - Trademarks
 - Right of Publicity

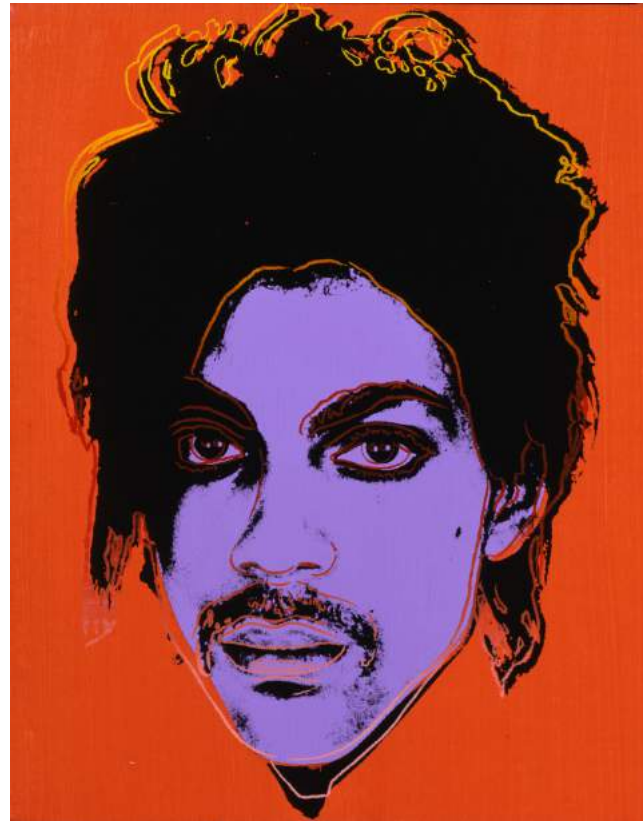
Stability AI

- AI systems scrape web & image databases to train systems
 - > 5,000,000,000 images
- AI systems create outputs “based on” the training inputs and user prompts
- Two core concerns:
 - 1) Using images for training
 - 2) Producing images as outputs



Impact of *Goldsmith*?

- Purpose and character of the use, including commercial v. non-commercial
- Nature of copyrighted work
- Amount and substantiality of portion used
- Market effects



Impact of *Goldsmith*?

“We hope those who have relied on distorted – and now discredited – claims of ‘transformative use,’ such as those who use copyrighted works to train artificial intelligence systems without authorization, will revisit their practices in light of this important ruling.”

-Recording Industry Association of America (RIAA)

U.S. Copyright Office Listening Sessions

- Literary Works, Including Software (April 19, 2023)
- Visual Arts (May 2, 2023)
- Audiovisual Works (May 17, 2023)
- Music and Sound Recordings (May 31, 2023)



U.S. Copyright Office Listening Sessions

Some Themes

- Ubiquity
- Training
 - Compensation v. fair use
 - Attribution
 - Opting out
 - Collective licensing
 - Access to data
- Competition
- Regulation
 - Use of current © tools
 - Stymying technological growth
 - Technical solutions
- Ethics & Disinformation
- Other Laws
- Position-focused





Patent Law

- South Africa
- United States
- EPO
- UK
- Germany
- Australia
- Israel
- New Zealand
- Korea
- Japan



Questions & Comments



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