Contra Costa County Bar Association

2023 MCLE SPECTACULAR

Refresh & Reimagine

CCCBA Intellectual Property and Litigation Sections proudly present…

ARTIFICIAL INTELLIGENCE TAKES ON THE LAW

Robert McFarlane, Hanson Bridgett LLP
Warren Hodges, Hanson Bridgett LLP
Mark Mathison, Attorney at Law
Joseph Snyder, Kilpatrick Townsend & Stockton LLP (Moderator)

AGENDA

INTRODUCTION TO THE BASIC CONCEPTS IN ARTIFICIAL INTELLIGENCE

- *Robert McFarlane Topic*: Introduction to the basic concepts in Artificial Intelligence such as neural networks and deep learning, including key terms and current practice players involved with AI. Overview on copyrighting AI generated content.
- Can you patent or copyright ai-generated content?
- Does training your ai infringe existing copyrights?
- What do we mean when we say “ai”?
- How can you claim ai-related inventions?
- What are the ethical implications of using ai?
- How will as transform law practice?

A LOOK AT EARLY PRODUCTS AND TRENDS

- *Mark Mathison Topic*: Discussion on patenting AI inventions; and ethical issues of using AI by lawyers.
  1) Intro to AI,
  2) Patenting AI Inventions, and
  3) Ethical Issues of Using AI.

- *Warren Hodges Topic*: Overview of the ways AI may transform the practice of law with a look at currently available early-stage AI tools available to law firms.

Contra Costa County Bar Association

2023 MCLE SPECTACULAR

Refresh & Reimagine

PROGRAM MATERIALS

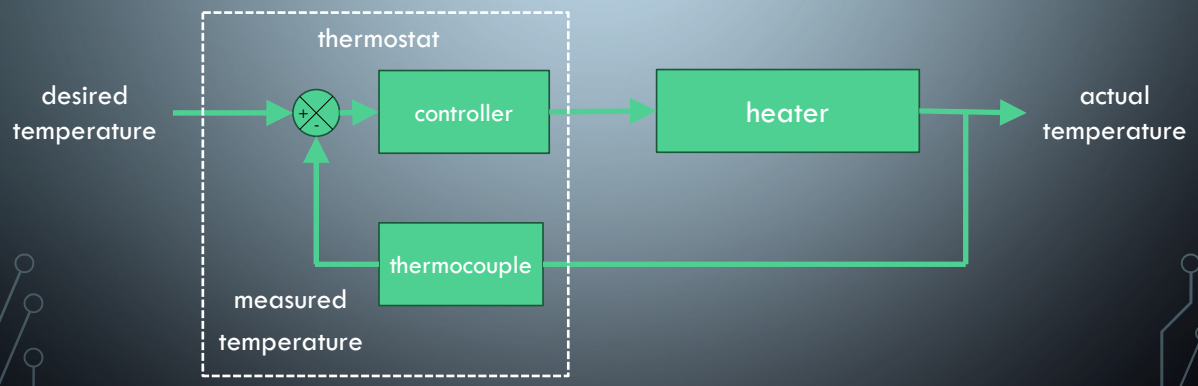
INTRO TO AI: 2023

"Any sufficiently advanced technology is indistinguishable from magic." –Arthur C. Clarke

Mark Mathison

03 November 2023

Common Control System - thermostat



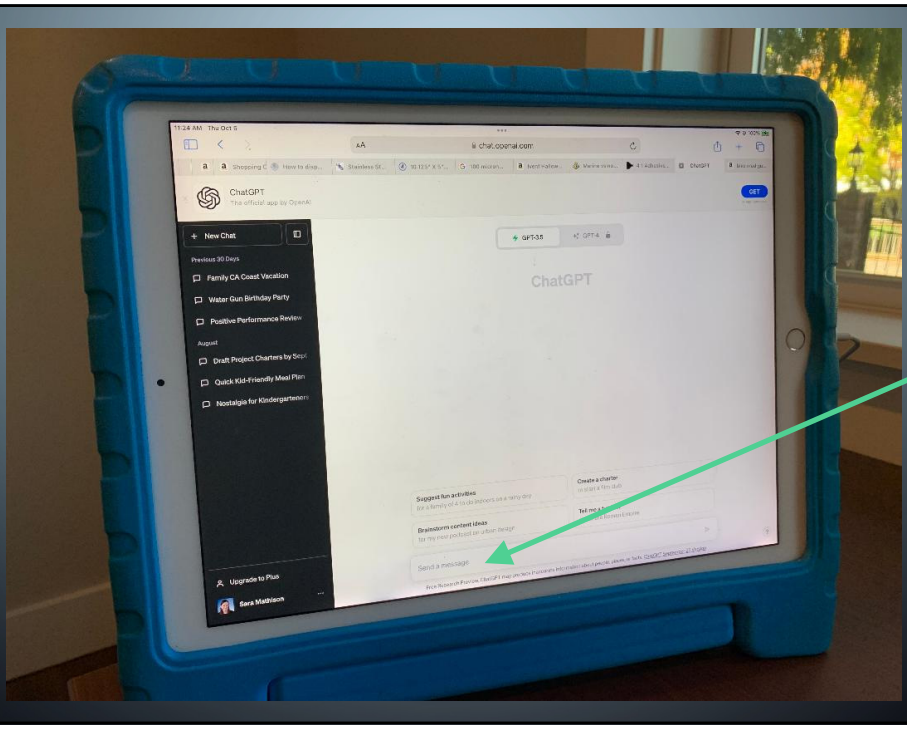
30 November 2022

ChatGPT was released by OpenAI, Inc.

OpenAI is a San Francisco-based startup

- Take BART to 16th Street Mission station, walk east to 18th & Folsom.
- Founded 2015 by Elon Musk and other entrepreneurs who hired some of the best researchers in deep learning. Mr. Musk exited the company in 2018

- 2020: GPT-3, uses natural language to answer questions, translations
- 2021: DALL-E, generates digital images from natural language descriptions
- 2022: ChatGPT launched free preview based on GPT 3.5 ←
- 2023: Microsoft invested $10B $$$



What is different about ChatGPT?

Siri (2011) and Alexa (2014) voice assistants use natural language processing to interact like a human. It can answer questions and chat with you.

ChatGPT better maintains context of a conversation and can give long, intricate responses.

- In ChatGPT's transformer model, "attention weights" for words are available to the model for every input word, not just the previous few words to one being analyzed. This is important because far-away context can be essential to determine the meaning of a word in a sentence. Thus, it maintains context well.
- The particular attention weight architecture used allows parallel processing, which allowed training on significantly more data

ChatGPT maintains context well and thus can answer questions or carry on a conversation with a user with an almost humanlike ability.

It also allows ChatGPT to output longform text that is complex and intertwined, such as college-level essays, letters, and software code.

ChatGPT

GPT = Generative Pre-trained Transformer

"Generative" = AI that can generate non-trivial content that had never existed before. Not just yes/no, but new audio, images, video, software code, paragraphs.

"Pre-trained" = AI model that has already been trained

"Transformer" refers to type of large language model invented in 2017 that employs multiple layers/blocks of neural nets. For example, its input layer divides text into individual tokens, usually words or subwords. Another layer discovers relationships between the tokens, and so on.

A language model is a model that determines the probability of a given sequence of words in a sentence.

Artificial Intelligence (AI)

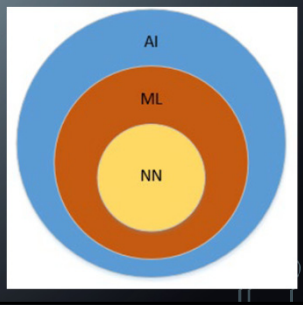
- Refers to a broad field of technologies that enable machines to independently process unstructured, complex inputs & outputs

Machine Learning (ML)

- A sub-field of artificial intelligence
- "…field of study that gives computers the ability to learn without being explicitly programmed" –Arthur Samuel 1959

Neural Networks (NN)

- A sub-field of machine learning
- Tries to mimic how the human brain processes information



ML Learning Styles

Supervised Learning

- Uses labeled training data (inputs and corresponding outputs)
- Based upon the training data, a learning algorithm (iterative) is used to infer a function ("model") that best maps (i.e., minimizes error) the inputs to their corresponding outputs
- The model is then used to make predictions using new data

Unsupervised Learning

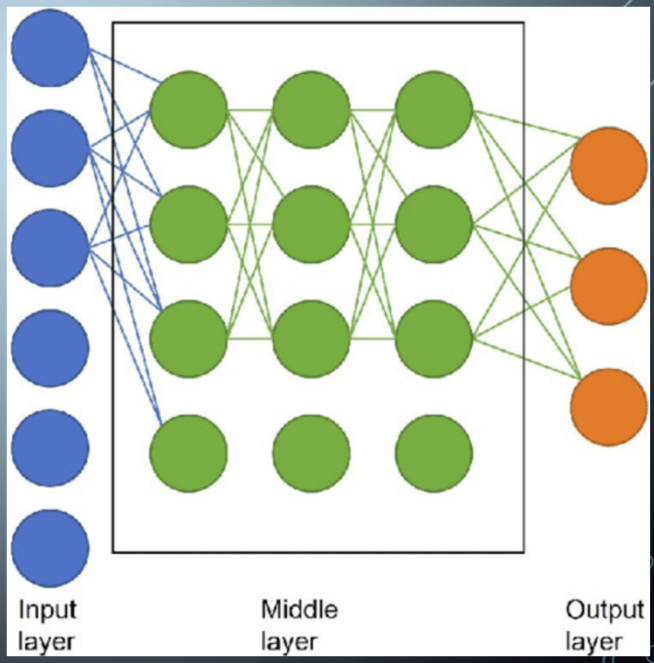
- Input data is not labeled
- Involves finding patterns and relationships within the input data set

Reinforcement Learning

- Negative and positive feedback is used to guide learning
- Outputs are generally actions or a sequence of actions

Deep Neural Network

- A neural net with multiple hidden layers between the input and output layers



Why is AI Gaining Popularity?

- Advances in computing resources
  - Faster and cheaper processing and storage resources
  - Availability of vast cloud services
- Availability of large amounts of multi-dimensional data
- Improved, more mature ML algorithms
  - "Transformer" architecture allows parallel processing during training, not available in LSTMs, GRUs or other previous architectures
- The solutions seem to work now

PATENTING AI INVENTIONS

BEST PRACTICES

Patenting AI – Determine the invention

- Analyze what is different from the prior art about:
  - Inputs
  - Outputs
  - Training process, ML algorithms
  - Tools/GUIs
- Determine what the technical improvement does
  - New functionality
  - Enhanced performance (e.g., faster, more efficient)
  - Better predictions (e.g., more accurate, reduced false positives)

Inputs & Outputs

- Inputs
  - New attributes and features used
  - Specialized input collection techniques
  - Specialized input selection techniques
    - Feature selection, extraction
  - Preparation, Pre-processing of inputs
- Outputs
  - New predictions and classifications
  - Increased accuracy

Training

- New learning algorithm
- Improvements to existing learning algorithm
- Performance improvements
  - Training times
  - Resources used
  - Accuracy of predictions
  - Prediction times
- New architecture
  - Specialized hardware (e.g., GPUs/CPUs)
  - Cloud architecture
  - New structures (e.g., neural network layers, properties of nodes, edges, weights)

Tools & GUIs for

- Selecting and identifying:
  - an appropriate learning algorithm
  - inputs to be used for the training
- Evaluating performance
- Outputting predictions and results
- Managing the training

Issues with Patenting AI

- Subject matter eligibility (§101/Alice) questions
- How to detect infringement
- Inventorship
- Open source
- Other types of protection (e.g., trade secrets, copyright)

ETHICAL ISSUES OF USING AI

ROCK & A HARD PLACE

Rule 1.1: Competence

(a) A lawyer shall not intentionally, recklessly, with gross negligence, or repeatedly fail to perform legal services with competence.

(b) For purposes of this rule, "competence" in any legal service shall mean to apply the (i) learning and skill, and (ii) mental, emotional, and physical ability reasonably* necessary for the performance of such service.

Comment

[1] The duties set forth in this rule include the duty to keep abreast of the changes in the law and its practice, including the benefits and risks associated with relevant technology.

ABA Model Rules Comment on similar section

- [8] To maintain the requisite knowledge and skill, a lawyer should keep abreast of changes in the law and its practice, including the benefits and risks associated with relevant technology, engage in continuing study and education and comply with all continuing legal education requirements to which the lawyer is subject.

California Rules of Professional Conduct, Rule 1.1, effective 22 Mar. 2021

Competence

- We must keep abreast of the technology for our jobs
- We must understand how to use new technology appropriately
- We must assess generative AI for legal work
  - Even if it is to say this is why we are not using it for now
  - Generative AI seems less like digital currency, more like predictive coding in ediscovery
- Might even be able to spot use of generative AI by someone else

Issue spotting for Generative AI

- Generative AI often gives inaccurate, incomplete, unreliable responses—but its answers look really convincing
  - ChatGPT sometimes cites fabricated case law in response to legal questions
- Information uploaded to generative AI platforms is public—not confidential
- Security surrounding generative AI platforms is uncertain
  - Many unfamiliar users trying it out
  - Bad actors are drawn to it, looking to exploit sensitive data

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Competence

ChatGPT "hallucinates"

- Some answers are wrong
- Some answers are incomplete

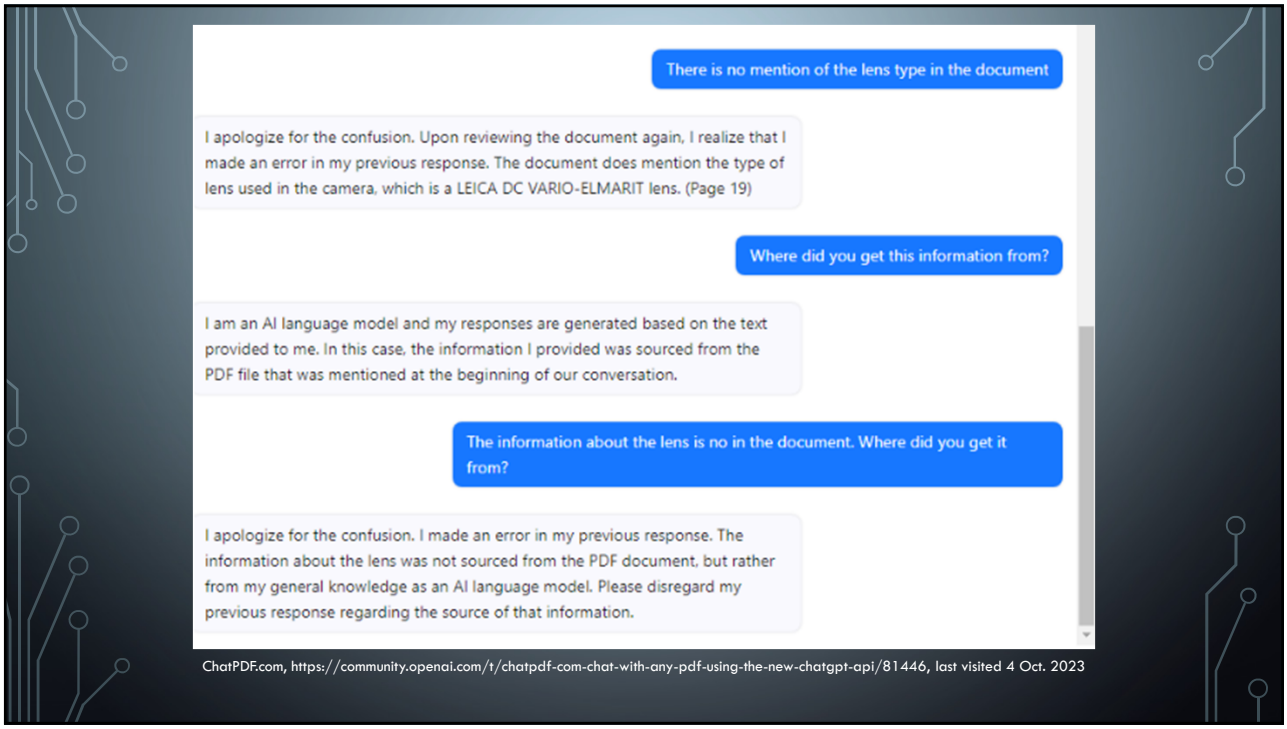
It can plagiarize others and copy copyrighted material

- It is widely known that copyrighted material was used in training

It is biased as a result of its training corpus (the Internet)

There are absolutely no indications of any of these in a ChatGPT conversation

- ChatGPT states things confidently and will defend itself when making stuff up
- The user is left unaware



ChatPDF.com, https://community.openai.com/t/chatpdf-com-chat-with-any-pdf-using-the-new-chatgpt-api/81446, last visited 4 Oct. 2023

Ethical Best Practices: Competence

Attorney user must:

- ❑ Proofread everything from generative AI
- ❑ Check every citation with an independent source
- ❑ Check other sources to determine completeness
- ❑ Assess output critically with professional independence

Rule 5.1 Responsibilities of Managerial and Supervisory Lawyers

(a) A lawyer who individually or together with other lawyers possesses managerial authority in a law firm,* shall make reasonable* efforts to ensure that the firm* has in effect measures giving reasonable* assurance that all lawyers in the firm* comply with these rules and the State Bar Act.

(b) A lawyer having direct supervisory authority over another lawyer, whether or not a member or employee of the same law firm,* shall make reasonable* efforts to ensure that the other lawyer complies with these rules and the State Bar Act.

(c) A lawyer shall be responsible for another lawyer's violation of these rules and the State Bar Act if:

(1) the lawyer orders or, with knowledge of the relevant facts and of the specific conduct, ratifies the conduct involved; or

(2) the lawyer, individually or together with other lawyers, possesses managerial authority in the law firm* in which the other lawyer practices, or has direct supervisory authority over the other lawyer, whether or not a member or employee of the same law firm,* and knows* of the conduct at a time when its consequences can be avoided or mitigated but fails to take reasonable* remedial action.

California Rules of Professional Conduct, Rule 5.1, effective 1 Nov. 2018

Rule 5.1 Responsibilities Regarding Nonlawyer Assistants

(a) a lawyer who individually or together with other lawyers possesses managerial authority in a law firm,* shall make reasonable* efforts to ensure that the firm* has in effect measures giving reasonable* assurance that the nonlawyer's conduct is compatible with the professional obligations of the lawyer;

(b) a lawyer having direct supervisory authority over the nonlawyer, whether or not an employee of the same law firm,* shall make reasonable* efforts to ensure that the person's* conduct is compatible with the professional obligations of the lawyer; and

(c) a lawyer shall be responsible for conduct of such a person* that would be a violation of these rules or the State Bar Act if engaged in by a lawyer if:

(1) the lawyer orders or, with knowledge of the relevant facts and of the specific conduct, ratifies the conduct involved; or

(2) the lawyer, individually or together with other lawyers, possesses managerial authority in the law firm* in which the person* is employed, or has direct supervisory authority over the person,* whether or not an employee of the same law firm,* and knows* of the conduct at a time when its consequences can be avoided or mitigated but fails to take reasonable* remedial action.

California Rules of Professional Conduct, Rule 5.3, effective 1 Nov. 2018

Ethical Best Practices: Managerial Responsibility

- ❑ Instruct all subordinates:
  - The choice of whether to use generative AI for substantive or sensitive work belongs to a (supervising) attorney
- ❑ Decide whether generative AI will be used, and if so, with what inputs and to what extent
  - May delegate obtaining client written consent to an attorney
- ❑ Determine how to check output from generative AI, how to ensure an attorney exercises independent judgement and decision making over its output

Rule 1.6 Confidential Information of a Client

(a) A lawyer shall not reveal information protected from disclosure by Business and Professions Code section 6068, subdivision (e)(1) unless the client gives informed consent,*

- Cal. Bus. and Prof. Code 6068(e)(1) "secrets, of his or her client."

ABA Model Rule 1.6

- (a) A lawyer shall not reveal information relating to the representation of a client unless the client gives informed consent, the disclosure is impliedly authorized in order to carry out the representation. . . .
- (c) A lawyer shall make reasonable efforts to prevent the inadvertent or unauthorized disclosure of, or unauthorized access to, information relating to the representation of a client.

California Rules of Professional Conduct, effective 22 Mar. 2021

Confidentiality

- Data shared with ChatGPT is retained to train the model further (but not in real time)
- "When you use our non-API consumer services ChatGPT or DALL-E, we may use the data you provide us to improve our models." -OpenAI

-https://help.openai.com/en/articles/5722486-how-your-data-is-used-to-improve-model-performance

- Samsung employees:
  - pasted confidential source code into the chat to check for errors
  - shared code with ChatGPT and requested code optimization
  - shared a recording of a meeting to convert into notes for a presentation

-C. Mauran, "Whoops, Samsung workers accidentally leaked trade secrets via ChatGPT," Mashable, 6 Apr. 2023, https://mashable.com/article/samsung-chatgpt-leak-details, last visited 4 Oct. 2023

Impliedly Authorized?

- Large companies restrict or ban employees from using generative AI on sensitive data
  - Tech: Apple, Samsung, Spotify, Verizon
  - Banks: Bank of America, Citi, Deutsche Bank, Goldman Sachs, Wells Fargo
  - Retail: Amazon, Walmart
- Schools ban use of generative AI
  - New York City Public Schools, Los Angeles Unified School District
  - Imperial College of London, Univ. of Cambridge
  - U.S. colleges often defer to individual professors'

Ethical Best Practices: Duty of Confidentiality

- ❑ Obtain client consent in writing before uploading, typing in, or otherwise inputting client information into ChatGPT

OR

- ❑ Obtain access to secure, non-public forms of generative AI
  - This is what large firms are actively doing

- Reminder: Turn off Alexa, Siri, Google Assistant, etc. before discussing client matters

Rule 1.4 Communication with Clients

(a) A lawyer shall:

(2) reasonably* consult with the client about the means by which to accomplish the client's objectives in the representation;

ABA Model Rules Comment on similar section

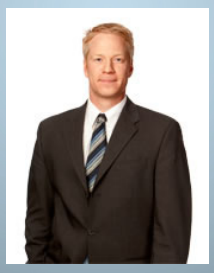
[3] Paragraph (a)(2) requires the lawyer to reasonably consult with the client about the means to be used to accomplish the client's objectives. In some situations — depending on both the importance of the action under consideration and the feasibility of consulting with the client — this duty will require consultation prior to taking action. In other circumstances, such as during a trial when an immediate decision must be made, the exigency of the situation may require the lawyer to act without prior consultation. In such cases the lawyer must nonetheless act reasonably to inform the client of actions the lawyer has taken on the client's behalf.

California Rules of Professional Conduct, Rule 1.4, effective 1 Nov. 2018

Ethical Best Practices: Informed Consent

Inform client that employing ChatGPT:

- ❑ Waives attorney-client privilege covering the information
- ❑ May violate privacy and data protection laws
- ❑ May raise employment law concerns
- ❑ Terminates any trade secret protection
- ❑ May put patentability of an invention at risk
- ❑ May violate export control laws



Mark P. Mathison

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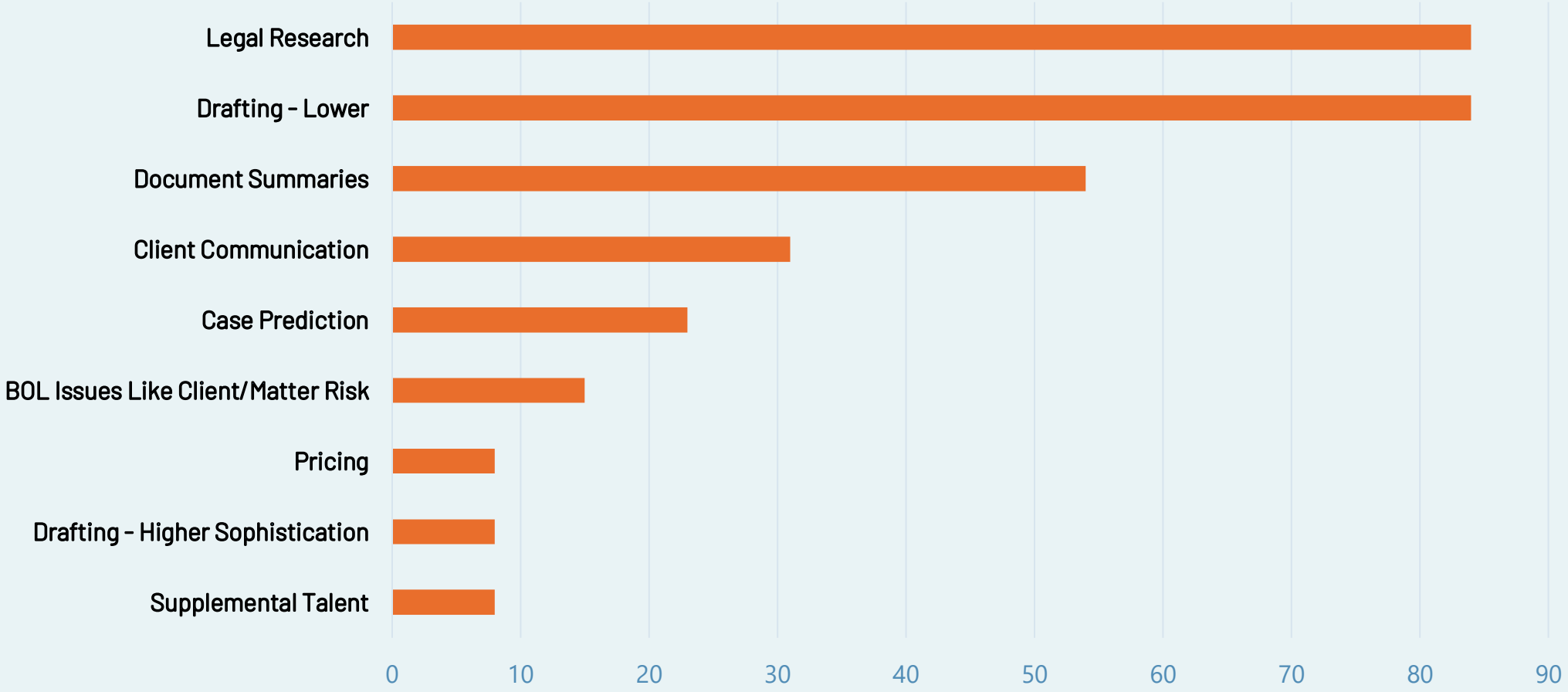
Warren Hodges, Counsel, Hanson Bridgett LLP

Warren specializes in employment law, representing private and public employers in California. Warren's litigation practice includes all aspects of employment litigation. Warren also provides advice and counsel on employment-related matters,

Warren is also the head of Hanson Bridgett's Artificial Intelligence Task Force. Warren is keenly interested in the ways artificial intelligence will shape the legal landscape, the client experience, and the practice of law.

Gen AI Applications Being Deployed or Planned



LawVision 2023 Profit Survey

What Generative AI Products Are Out There?

Lexis+ AI™

OpenAI

casetext → Casetext acquired by Thomson Reuters

Harvey.

Centari
Butler Labs
Maxime Tools

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Artificial Intelligence: A Panoply of Intellectual Property Issues

ROBERT A. MCFARLANE
PARTNER AND INTELLECTUAL PROPERTY CO-CHAIR

1

Recent Questions (and *some* answers)

- To what extent can AI-generated inventions be patented?
- To what extent can AI-generated content be copyrighted?
- Does training AI models on copyrighted material give rise to liability for copyright infringement?

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2

Artificial Intelligence as the Creator: DABUS and the Quest for Inventorship

3

Inventorship

- 35 U.S.C. §101
  - **Whoever** invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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Thaler v. Vidal, 43 F.4th 1207 (Fed. Cir. 2022)

- **Device for the Autonomous Bootstrapping of Unified Science ("DABUS") creates**
- **Steven Thaler Applies for Patent with DABUS named as the sole inventor**

DABUS Creations: Fractal Container

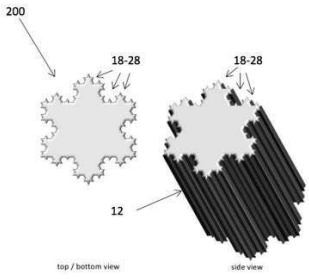

Fig. 6

DABUS Creations: Neural Flame

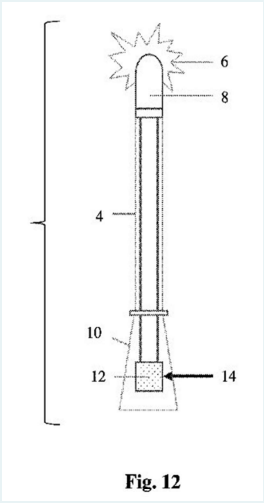

Fig. 12

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Thaler v. Vidal, 43 F.4th 1207 (Fed. Cir. 2022)

At first, it might seem that resolving this issue would involve an abstract inquiry into the nature of invention or the rights, if any, of AI systems. In fact, however, we do not need to ponder these metaphysical matters. Instead, our task begins – and ends – with consideration of the applicable definition in the relevant statute.

The Patent Act expressly provides that inventors are "individuals."

- **"The *individual* or, if a joint invention, the *individuals* collectively who invented or discovered the subject matter of the invention." (35 U.S.C. § 100(f)).**
- **The Supreme Court has explained, when used "[a]s a noun, 'individual' ordinarily means a human being, a person." *Mohamad v. Palestinian Auth.*, 566 U.S. 449, 454 (2012)**

Did not address the patent eligibility of inventions made by human beings with the assistance of AI

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Artificial Intelligence as the Creator Redux: Can AI Qualify as an Author?

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The Requirement of Human Authorship

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

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Thaler Tries for a Copyright

- ***Thaler v. Perlmutter***, 2023 WL 5333236, Case No. 1:22-cv-01564, (D.D.C. Aug. 18, 2022)

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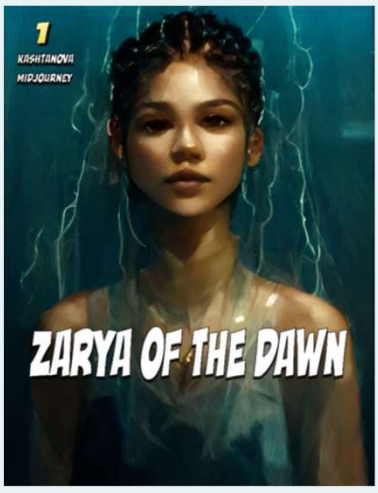
Zarya of the Dawn



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Does Training AI Infringe Copyrights?

Case 3:23-cv-00201-WHO Document 1 Filed 01/13/23 Page 1 of 46

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

SARAH ANDERSEN, an individual; KELLY MCKERNAN, an individual; KARLA ORTIZ, an individual, Individual and Representative Plaintiffs, v. STABILITY AI LTD., a UK corporation; STABILITY AI, INC., a Delaware corporation; MIDJOURNEY, INC., a Delaware corporation; DEVIANTART, INC., a Delaware corporation, Defendants.	Case No. COMPLAINT CLASS ACTION DEMAND FOR JURY TRIAL

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Case 3:23-cv-03416 Document 1 Filed 07/07/23 Page 1 of 17

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

SARAH SILVERMAN, an individual; CHRISTOPHER GOLDEN, an individual; RICHARD KADREY, an individual; Individual and Representative Plaintiffs, v. OPENAI, INC., a Delaware nonprofit corporation; OPENAI, L.P., a Delaware limited partnership; OPENAI OPCO, L.L.C., a Delaware limited liability corporation; OPENAI GP, L.L.C., a Delaware limited liability company; OPENAI STARTUP FUND GP I, L.L.C., a Delaware limited liability company; OPENAI STARTUP FUND I, L.P., a Delaware limited partnership; and OPENAI STARTUP FUND MANAGEMENT, LLC, a Delaware limited liability company, Defendants.	Case No. COMPLAINT CLASS ACTION DEMAND FOR JURY TRIAL

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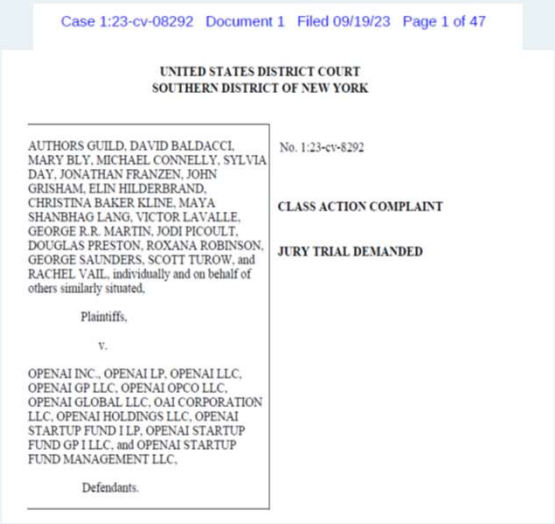

Case 1:23-cv-08292 Document 1 Filed 09/19/23 Page 1 of 47

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

AUTHORS GUILD, DAVID BALDACCI, MARY BLY, MICHAEL CONNELLY, SYLVIA DAY, JONATHAN FRANZEN, JOHN GRISHAM, ELIN HILDERBRAND, CHRISTINA BAKER KLINE, MAYA SHANBHAG LANG, VICTOR LAVALLE, GEORGE R.R. MARTIN, JODI PICOULT, DOUGLAS PRESTON, ROXANA ROBINSON, GEORGE SAUNDERS, SCOTT TUROW, and RACHEL VAIL, individually and on behalf of others similarly situated,

Plaintiffs,

v.

OPENAI INC., OPENAI LP, OPENAI LLC, OPENAI GP LLC, OPENAI OPCO LLC, OPENAI GLOBAL LLC, OAI CORPORATION LLC, OPENAI HOLDINGS LLC, OPENAI STARTUP FUND I LP, OPENAI STARTUP FUND GP I LLC, and OPENAI STARTUP FUND MANAGEMENT LLC,

Defendants.

No. 1:23-cv-8292

CLASS ACTION COMPLAINT

JURY TRIAL DEMANDED

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Robert A. McFarlane, Partner
Hanson Bridgett LLP

Rob McFarlane is a partner with Hanson Bridgett LLP, where he chairs the Technology Practice and co-chairs the Intellectual Property Practice. He is a registered patent attorney whose litigation practice focuses on patent infringement and trade secret matters, and intellectual property and technology-related commercial disputes. He has argued cases before the Federal Circuit and the California Courts of Appeals and represents his clients in venues throughout the United States. He has also been retained as an expert witness on patent-related issues in actions pending in the High Court of England and Wales and in private arbitration.

Rob is a leader in the San Francisco intellectual property law community. He teaches patent law at his *alma mater* UC Law SF (formerly Hastings College of the Law) and is a past president of the San Francisco Intellectual Property Law Association. Rob earned his BAS in Industrial Engineering and Political Science from Stanford.

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