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Artificial Intelligence and Technology in Contract Drafting

I. Introduction

This overview and materials on artificial intelligence (AI) and technology in contract drafting have been prepared as an initial introduction to the area for faculty, students, and practitioners. I hope anyone can use this overview and materials in their classes and presentations.

I plan on updating these descriptions and ideas as we move forward, so please check back for updates. More importantly, please reach out to me at m-llorente@law.northwestern.edu with any suggestions. I look forward to hearing from you.

In Section II that follows, you will find a list of some of the most important terms you should know, along with their definitions, and a list of resources where you can learn more about AI and technology, as it relates to the law, law school, and contract drafting. This overview of AI and technology does not attempt to cover all different types of AI or a history of this field of study. Instead, it covers two concepts that particularly affect contract drafting: automation and generative AI. Section III starts by introducing automation and presenting smart contracts as examples. Then, that section goes on to focus on generative AI, including an overview, opportunities, and challenges. Section III continues by discussing different platforms in the area, best practices when using AI and technology, and what the future may bring. Section IV presents issues to consider when you are looking at possibly banning AI and other technology from the classroom and assignments or if you are thinking of ways to integrate it into your program of study.

II. Terms and Background Information

A. Terms

Before jumping into working with any AI or contract-related platforms of any kind, you should make sure that you, your students, and any other co-workers have a good grasp of the most important terminology in this area. You will have a hard time following webinars, creating and developing assignments, analyzing issues, and overcoming challenges if you do not take the time first to learn and understand the relevant vocabulary.

The table below differentiates among AI, generative AI, and Large Language Models (LLMs), as well as between machine learning and deep learning, so that you can better understand what these terms mean and how they relate to each other. Various entities and individuals continue to be actively involved in shaping the definitions of these terms. The following table shows a few of the options for each term, providing insight into the variations that currently exist.

Term	Definition
Artificial Intelligence (AI)	"(1) A branch of computer science devoted to developing data processing systems that performs functions normally associated with human intelligence, such as reasoning, learning, and self-improvement. (2) The capability of a device to perform functions that are normally associated with human intelligence such as reasoning, learning, and self-improvement."[1] "AI is a field of study in computer science that focuses on creating computer systems or programs capable of performing tasks that usually require human intelligence. These tasks might include understanding spoken or written language (e.g., Siri or Alexa or Grammarly), recognizing patterns in data (e.g., the recommendation system on Netflix), learning from experience (e.g., a self-driving car), or even making strategic decisions (e.g., game-playing computers such as AlphaGo and Deep Blue)."[2] "Artificial intelligence (AI) is technology that enables computers and digital devices to learn, read, write, talk, see, create, play, analyze, make recommendations, and do other things humans do."[3]
Machine Learning and Deep Learning	"[M]achine learning is a subset of AI that provides systems the ability to learn from data and to improve their performance without being *explicitly* programmed (like rule-based models). *Deep learning* is a subset of machine learning. Deep learning works much like our brain does when we learn new things. At the heart of deep learning are structures called *artificial neural networks,* which are inspired by the network of neurons in the human brain. Like our brains, these networks take in a lot of data, learn to recognize patterns in this data, and gradually build a deep understanding of it. Deep learning is at the core of *large language models* (LLMs), such as OpenAI's GPT and Google's PaLM…"[4]
Generative AI	"*Generative AI* is a subclass of artificial intelligence that focuses on generating new content, whether text, images, music, or computer code. Generative AI differs from traditional AI in that instead of just analyzing and making predictions about data, this model *creates new data* similar to the data on which it was trained."[5]

[1] ANSI INCITS 172-220 (R2007) Information Technology — American National Standard Dictionary of Information Technology (ANSDIT), and cited in National Institute of Standards and Technology's (NIST) U.S. Leadership in AI: A Plan for Federal Engagement in Developing Technical Standards and Related Tools (August 9, 2019). https://csrc.nist.gov/Topics/technologies/artificial-intelligence

[2] April G. Dawson, *Artificial Intelligence and Academic Integrity*, 2 (Aspen 2023).

[3] IBM, *What is artificial intelligence (AI)?*, https://www.ibm.com/topics/artificial-intelligence.

[4] Dawson, *supra* n. 2, at 12.

[5] *Id*. at 13.

	"Generative AI refers to deep-learning models that can generate high-quality text, images, and other content based on the data they were trained on. . . . Generative AI refers to deep-learning models that can take raw data — say, all of Wikipedia or the collected works of Rembrandt — and 'learn' to generate statistically probable outputs when prompted. At a high level, generative models encode a simplified representation of their training data and draw from it to create a new work that's similar, but not identical, to the original data."[6]
Large Language Models (LLMs)	"Large language models are a type of generative AI. . . . Large language models are trained on large amounts of textbooks, articles, websites, and so on. As a result of the training, these models 'learn' how language typically works, such as how sentences are structured and which words tend to follow others . . . it's important to note that while these models can generate impressive results, they don't *understand* the text in the way humans do. The model is simply *predicting* what word comes next based on patterns it learned from the data."[7]

Here are some additional terms that may be helpful to enhance your understanding of the subsequent discussion:

Term	Definition
Automation	"[A]utomatically controlled operation of an apparatus, process, or system by mechanical or electronic devices that take the place of human labor"[8] "Automation is the use of technology to perform tasks with minimal human input."[9]
Hallucinations	"AI hallucination is a phenomenon wherein a large language model (LLM)—often a generative AI chatbot or computer vision tool—perceives patterns or objects that are nonexistent or imperceptible to human observers, creating outputs that are nonsensical or altogether inaccurate."[10]

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[6] IBM, *What is generative AI?,* https://research.ibm.com/blog/what-is-generative-AI?
[7] Dawson, *supra* n. 2, at 13-14.
[8] *Automation*, *Merriam-Webster Dictionary*, https://www.merriam-webster.com/dictionary/automation.
[9] IBM, *What is automation?,*
https://www.ibm.com/topics/automation?utm_content=SRCWW&p1=Search&p4=43700074488272355&p5=p&gad_source=1&gclid=Cj0KCQjw-r-vBhC-ARIsAGgUO2B1HUQGB8V8jFguK21242H1sAYQMVEcYVTAi23MQeWWxzoXIPZqQpMaArd7EALw_wcB&gclsrc=aw.ds
[10] IBM, *What are AI hallucinations?,* https://www.ibm.com/topics/ai-hallucinations.

Prompt Engineers	"AI prompt engineer" is "[a] person who creates and refines questions for AI systems. The way a question is formulated can generate an entirely different outcome. AI prompt engineers analyze the results of their prompts in order to modify them for greater accuracy. Multiple versions of a prompt are commonly used to determine the most effective one." [11]
Prompt Engineering	"[T]he process of designing prompts (= instructions given to an artificial intelligence by a human using natural language rather than computer language) that will give the best possible results or answers[.]"[12] "Generative artificial intelligence (AI) systems are designed to generate specific outputs based on the quality of provided prompts. Prompt engineering helps generative AI models better comprehend and respond to a wide range of queries, from the simple to the highly technical. The basic rule is that good prompts equal good results. Generative AI relies on the iterative refinement of different prompt engineering techniques to effectively learn from diverse input data and adapt to minimize biases, confusion and produce more accurate responses."[13]
Smart Contracts	"Smart contracts are digital contracts stored on a blockchain[14] that are automatically executed when predetermined terms and conditions are met. . . . They typically are used to automate the execution of an agreement so that all participants can be immediately certain of the outcome, without any intermediary's involvement or time loss. They can also automate a workflow, triggering the next action when conditions are met."[15]

B. Background Information

For a brief history of AI and technology, as it relates to the law, law school, and contract drafting, see the following:

- *Webinars, Videos, or Podcasts:*
    - Various from Law Insider, accessible to everyone, including:
        - Why Now Is the Time to Explore AI in Contracts.
        - Contract Audit: AI Edition with Marcia Narine Weldon.

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[11] PCMag, *AI prompt engineer*, https://www.pcmag.com/encyclopedia/term/ai-prompt-engineer.
[12] *Prompt Engineering, Cambridge Dictionary,* https://dictionary.cambridge.org/us/dictionary/english/prompt-engineering.
[13] IBM, *What is prompt engineering?*, https://www.ibm.com/topics/prompt-engineering
[14] "A blockchain is a collaborative, tamper-resistant ledger that maintains transactional records. The transactional records (data) are grouped into blocks. A block is connected to the previous one by including a unique identifier that is based on the previous block's data." NIST, *Blockchain*, https://www.nist.gov/blockchain.
[15] IBM, *What are smart contracts on blockchain?,* https://www.ibm.com/topics/smart-contracts.

- o Various from [the American Bar Association's Task Force on Law and Artificial Intelligence,](#) accessible to everyone, including:
  - ▪ [How Large Law Firms Are Incorporating AI into Practice.](#)
  - ▪ [The Implications for Generative AI on Legal Education—A Conversation with Andrew Perlman.](#)
- o Various from [the National Center for Faculty Development and Diversity,](#) accessible with a membership:
  - ▪ [AI in Academia: Teaching Challenges and Opportunities](#).
  - ▪ [AI in Academia: Discussing Opportunities and Challenges](#).
- o Various from [The Association of American Law Schools,](#) 2024 Annual Meeting, accessible with a membership:
  - ▪ AALS Discussion Group—Leveling the Playing Field of Legal Education & Law Practice.
  - ▪ Section on Associate Deans for Academic Affairs and Research: Academic Integrity and Technology: What to Do About AI.
  - ▪ Section on Legal Writing, Reasoning, and Research—The AI Era—Leveraging Large Language Models to Improve the Lawyer's Craft.
  - ▪ Section on Technology, Law and Legal Education: AI Bill of Rights: Emerging Issues in AI Regulation.
  - ▪ Sections on Technology, Law and Legal Education and Law Libraries and Legal Information Joint Program: Panel 2: AI & Jurisprudence: Challenges, Risks & Opportunities.

- *Books, Articles, and Websites:*
  - o [Artificial Intelligence and Academic Integrity](#), April G. Dawson.
  - o [Law.com—Artificial Intelligence](#) (subscription required).
  - o [ABA Law Practice Division—Artificial Intelligence.](#)

III. Automation and Generative AI

Section II explained that:

"AI is a field of study in computer science that focuses on creating computer systems or programs capable of performing tasks that usually require human intelligence. These tasks might include understanding spoken or written language (e.g., Siri or Alexa or Grammarly), recognizing patterns in data (e.g., the recommendation system on Netflix), learning from experience (e.g., a self-driving car), or even making strategic decisions (e.g., game-playing computers such as AlphaGo and Deep Blue)."[16]

OR

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[16] Dawson, *supra* n. 2, at 2.

> "Artificial intelligence (AI) is technology that enables computers and digital devices to learn, read, write, talk, see, create, play, analyze, make recommendations, and do other things humans do."[17]

Humans have been creating and developing AI for decades. This overview of AI and technology does not attempt to cover all different types of AI or give a history of this field of study. Instead, this section covers two concepts that particularly affect contract drafting. First, this section examines automation, which may involve different types of AI, and explores smart contracts as an example of automation. Then, the section takes a closer look at generative AI, which is a specific type of AI that has been more prominent lately (particularly with the release of and updates to ChatGPT).

A. Automation

1. Overview

Automation is an "automatically controlled operation of an apparatus, process, or system by mechanical or electronic devices that take the place of human labor"[18] or "the use of technology to perform tasks with where human input is minimized."[19] Automation can involve different types of AI, including machine learning and deep learning.

In relation to a transaction, there are primarily two different processes that can be automated: the creation of a contract and the management of the transaction. First, the drafting of a contract can be automated by using a model or series of models stored in a system and providing to that system the specific details relating to the parties and the transaction, so that the system can quickly create the contract. Second, the entire process, or parts of the process of the transaction between the parties, can be automated using a platform by establishing separate steps in the transaction through which you can gather information needed from the parties, provide information to each party, exchange information between parties, collect signatures, and record the final documents in the system. Managing a transaction includes handling back-and-forth negotiations with redlined revisions between the parties, as well as the final execution of agreements by all involved parties. In other words, you would use some form of technology as a project management tool to guide you and the parties through the transaction or parts of the transaction.

There are many platforms that have been used for years to automate the creation of contracts and the process of a transaction. However, almost all of these platforms are in the process of integrating generative AI into their systems, if they have not done so already. Therefore, instead

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[17] IBM, *What is artificial intelligence?,* https://www.ibm.com/topics/artificial-intelligence.

[18] *Automation, Merriam-Webster Dictionary*, https://www.merriam-webster.com/dictionary/automation.

[19] IBM, *What is automation?,*
https://www.ibm.com/topics/automation?utm_content=SRCWW&p1=Search&p4=43700074488272355&p5=p&gad_source=1&gclid=Cj0KCQjw-r-vBhC-ARIsAGgUO2B1HUQGB8V8jFguK21242H1sAYQMVEcYVTAi23MQeWWxzoXIPZqQpMaArd7EALw_wcB&gclsrc=aw.ds.

of listing platforms separately here, you will find a list of examples of platforms that automate the formation of a contract in Section III.C that follows, including ChatGPT and Lexis+ AI. This overview does not go into detail into platforms that automate the process of a transaction, such as parts of A2J Author, Contract Express, Bryter, HotDocs, and Neota Logic, since they focus more on the overall project management of a transaction and less on the specific contract drafting.

We will also discuss further in the generative AI section that follows opportunities and challenges, which can also be applied to the automation of contracts. However, before we move on to focus more fully on generative AI, we will look at an example of automation that has developed with the use of blockchain technology and may be in even greater use in the future: smart contracts.

2. Example: Smart Contracts

As explained previously: "Smart contracts are digital contracts stored on a blockchain[20] that are automatically executed when predetermined terms and conditions are met. . . . They typically are used to automate the execution of an agreement so that all participants can be immediately certain of the outcome, without any intermediary's involvement or time loss. They can also automate a workflow, triggering the next action when conditions are met."[21] Smart contracts work very similarly to how we think of conditions in a contract since they follow if / then statements in the blockchain. In many cases, smart contracts are automatically executed when the conditions are met without a person reviewing any of the events that occurred.

Let's say a transportation company is carrying cargo from point A to point B by sea. In a smart contract, the parties agree that when the ship reaches the mid-point between locations A and B, the owner of the cargo will pay the transportation company 25% of the total cost for shipping. In this case, the parties make arrangements in advance within the smart contract so that when certain conditions are met the payment is automatically made to the transportation company. Conditions here can include the ship reaching a particular location or other conditions that the system can track or verify. The entire process of tracking, verifying, and paying is automated, with no need for oversight or review by any person.

Some of the benefits of smart contracts, similar to those discussed below relating to generative AI, include: lowering the risk of errors and delays; enhancing trust, security, and transparency by leveraging blockchain technology; increasing efficiency; reducing overhead costs; and increasing accuracy and consistency in outcomes to strengthen the contractual relationship between the parties. Smart contracts could be especially useful in the following industries: financial services (loan agreements and insurance claims), intellectual property and licensing (facilitate and enforce copyright, trademark, or patent agreements), real estate (property transfers, verifying titles, escrows), and supply chain (inventory management and payments).

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[20] "A blockchain is a collaborative, tamper-resistant ledger that maintains transactional records. The transactional records (data) are grouped into blocks. A block is connected to the previous one by including a unique identifier that is based on the previous block's data." NIST, *Blockchain,* https://www.nist.gov/blockchain.

[21] IBM, *What are smart contracts on blockchain?,* https://www.ibm.com/topics/smart-contracts.

March 22, 2024

In the past, smart contracts simply provided more automation of the formation and execution of contracts. However, now, and as we move forward, smart contracts are incorporating generative AI to better adjust contracts to parties and circumstances.

B. Generative AI

1. Overview

As explained above:

> "*Generative AI* is a subclass of artificial intelligence that focuses on generating new content, whether text, images, music, or computer code. Generative AI differs from traditional AI in that instead of just analyzing and making predictions about data, this model *creates new data* similar to the data on which it was trained."[22]

Generative AI, although already in development, has experienced exponential growth in the last two years and promises even faster expansion in the future. According to a UBS research note, ChatGPT became "the fastest-growing consumer application in history" by reaching 100 million monthly active users within two months of being launched, including about 13 million unique visitors in January 2023 alone.[23] It took TikTok nine months and Instagram two-and-a-half years to reach 100 million monthly active users, (based on data from Sensor Tower).[24] In addition, according to a new report by Bloomberg Intelligence, "the generative AI market is poised to explode, growing to $1.3 trillion over the next 10 years from a market size of just $40 billion in 2022."[25]

At the time of this writing, generative AI platforms are primarily used by lawyers and laypersons to:

- *Create contracts from scratch.*
    - For example, you can input specific instructions and facts into a platform, which can then quickly generate a contract based on the information provided.

- *Review and evaluate contracts to see if provisions are accurate or missing.*
    - For example, you can upload or paste a draft of a contract into a platform, which analyzes the information and provides any missing key provisions or identifies ambiguities in the contract.

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[22] Dawson, *supra* n. 2, at 13.

[23] Reuters, *ChatGPT sets record for fastest-growing user base — analyst note,* https://www.reuters.com/technology/chatgpt-sets-record-fastest-growing-user-base-analyst-note-2023-02-01/.

[24] *Id.*

[25] Bloomberg, *Generative AI to become a $1.3 trillion market by 2032, research finds,* https://www.bloomberg.com/company/press/generative-ai-to-become-a-1-3-trillion-market-by-2032-research-finds/.

- *Determine whether the terms in a contract are market relevant.*
  - For example, you can upload a draft of a contract or the primary terms of a contract to a platform, which analyzes that information and compares it to data it has on the relevant markets to provide you with an answer on how those terms compare to what is market.

The sections that follow examine the opportunities and challenges presented by generative AI platforms, as far as we know now, and you will find a list of relevant platforms that use generative AI for contract drafting. Finally, the last sections outline the following: best practices for evaluating and integrating generative AI into your contract drafting, and emerging issues that may impact the future of AI and other technologies in the context of contract drafting.

2. Opportunities

In the table below, the left column lists the potential benefits of using generative AI in contract drafting. The column on the right describes how generative AI may be an asset.

Opportunity	Description
Increases Efficiency	- Generative AI platforms automate the formation of the contract and the transaction process, especially routine aspects of contract work. This automation enables you to get through certain tasks much faster, wastes fewer resources, optimizes the process, and maximizes outputs. - In addition, generative AI platforms may affect parts of a transaction that are not related to the drafting of the contract. For example, they may analyze information and create reports faster, thereby speeding up the due diligence process. "Large language models [LLMs] reviewed contracts quicker and cost less than human lawyers," according to a research report called *Better Call GPT, Comparing Large Language Models Against Lawyers*.[26] "The report compared the time spent, cost, and accuracy of lawyers reviewing contracts against LLMs."[27] "40% fewer hours are needed to process routine paperwork when even the most rudimentary AI-based extraction techniques are implemented."[28]
Handles a Greater Volume of Work	- Some transactional practices have increased work at particular times of the year (e.g., at the end of the calendar year) or during particular years or time periods. - Generative AI may allow lawyers and others to handle more work during these periods or throughout the rest of the year and better manage client expectations.

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[26] Law360, *AI quicker at contract review than attys but less accurate,* https://www.law360.com/pulse/legal-tech/articles/1783910/ai-quicker-at-contract-review-than-attys-but-less-accurate.
[27] *Id.*
[28] PWC, *It's time to get excited about boring AI,* https://www.pwc.com/gx/en/issues/reinventing-the-future/take-on-tomorrow/download/Get-Excited-Boring-AI.pdf.

Opportunity	Description
Provides Consistent and Better Service to Clients	• Generative AI can help create a more consistent, successful product, eliminating certain human errors that may occur in the process. • Generative AI algorithms can interpret and apply complex contractual provisions consistently, reducing the risk of subjective interpretation or errors. This promotes accuracy and consistency in contract execution, enhancing contractual relationships between parties. For example, generative AI can make sure all vendor contracts are uniform or, alternatively, it can monitor and record any deviations and the reasons for them. • "In a landmark study, US lawyers with decades of experience in corporate law and contract review were pitted against the LawGeex AI algorithm to spot issues in five Non-Disclosure Agreements (NDAs), which are a contractual basis for most business deals. . . . Following extensive testing, the LawGeex Artificial Intelligence achieved an average 94% accuracy rate, ahead of the lawyers who achieved an average rate of 85%."[29] • "School research study of tasks completed by knowledge workers at the Boston Consulting Group found that AI significantly increased performance and quality for every model specification, increasing speed by more than 25%, performance as rated by humans by more than 40%, and task completion by more than 12%. Further, it operated in a way that benefited non-knowledge workers the most, though all users benefitted from AI."[30]
Expands Access to Justice and Better-Quality Legal Services	• We can help expand access to justice for those who cannot otherwise afford legal services by making legal service platforms accessible and affordable. These platforms can provide effective, consistent, and adaptable tools that can evolve with changing practices and populations served.
Allows Attorneys to Focus on More Complex, Nuanced Issues	• Using generative AI to automate the more routine tasks of contract drafting and streamlining the transaction, frees up time to focus on more complex and nuanced issues. • We can also use generative AI to analyze and evaluate contracts and continue to innovate, as described in the points that follow.
Serves as Process to Evaluate Contract	• Using specific standards and processes, generative AI can evaluate contracts to identify strengths and weaknesses and propose changes. • Generative AI platforms can provide instant feedback to new (or even seasoned) lawyers and other contract drafters so they can learn how to draft better.

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[29] Lawgeex, *Comparing the Performance of Artificial Intelligence to Human Lawyers in the Review of Standard Business Contracts,* https://images.law.com/contrib/content/uploads/documents/397/5408/lawgeex.pdf.
[30] NetDocuments, *24 Voices for 2024,* netdocuments.com/24-voices.

Opportunity	Description
Predicts Contract Outcomes	• Generative AI can analyze past contracts and their outcomes to provide the parties with ideas on how the contract as drafted will do and make suggestions on how to improve outcomes for the parties.
Innovates and Creates Better Contracts	• Generative AI develops and learns from engaging with contracts, provisions, and other information. As generative AI continues to learn, it will be able to make better suggestions.
Improves Negotiations	• Generative AI can also allow attorneys to role play various scenarios, so that they can be better prepared for negotiations.

3. Challenges

By using generative AI in contract drafting, we may have to address challenges relating to the following:

Challenge	Description
Does the Dataset Exist?	• In order for you to have relevant results that can be used, the dataset that provides the underlying information for the generative AI platform needs to exist with sufficient, meaningful numbers and be included in the platform that you are using. ○ For example, if there is a platform to create and check vendor contracts from any U.S. jurisdiction and you want to use the platform to create a particular type of vendor contract for use in California with the governing law of California, etc., you would want to make sure that the platform has a sufficient, meaningful, and relevant number of such vendor contracts so that you can get the most accurate information. • If the dataset does not exist in the platform, you will need to consider how to get to the dataset you need or how to create it. This relates to the points of *Accessibility and Pricing* below, as well.
Is the Technology Accessible and Affordable to Everyone?	• One of the overall challenges about generative AI going forward will be what will be accessible to whom and when. • Many datasets or platforms will not be accessible or open to everyone. If they are open in some way, the question will become at what price and through what process.

Challenge	Description
Is the Technology Accurate?	• The dataset, the algorithms, the process, and each part of the platform need to be accurate. This requires constant management and updates.
Are Hallucinations Possible?	• Hallucinations[31] are still possible because the platform that you are using may not have a full understanding of the real world. • Therefore, human review and other forms of verification are important in your process to identify and resolve any possible hallucinations. • However, many platforms are aware of these issues and are actively working toward preventing hallucinations. For example, Lexis+ AI uses Retrieval Augmented Generation techniques to guard against hallucinations.[32]
Is There Transparency?	• It is important to know and understand how platforms work in general, such as how they process information, how they make decisions, and what information (datasets, discussed more above) they use.
Are There Biases?	• Platforms may still have biases in the information they present and how they analyze it, such as under- or overrepresentation of particular issues. • It is hard to know what biases a platform or a process may contain and how to resolve or account for them. • In the future, there will have to be steps taken to identify and eliminate biases. Laws are already being proposed and passed in different jurisdictions, such as in New York City, California, and Washington, DC, that encourage companies to identify and eliminate biases in automated employment decision tools, which may screen and assess candidates and employees by using machine learning, statistical modeling, data analytics, and artificial intelligence. For example, in 2023, New York City passed and implemented NYC 144, which requires that the tools receive a bias audit within a year of their use, that information about the bias audit is publicly available, and that the employees or job candidates receive notices.
Is There a Need to Refine Algorithms and Processes?	• Platforms are still in the process of developing or finessing the algorithms and processes they use, especially when it comes to analyzing and responding to more specific or complex data. • At the moment, AI platforms can be sensitive to the phrasing and frequency of user questions. Furthermore, at times they may try to guess user intent rather than getting clarification, which can sometimes lead to mistakes.

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[31] "AI hallucination is a phenomenon wherein a large language model (LLM)—often a generative AI chatbot or computer vision tool—perceives patterns or objects that are nonexistent or imperceptible to human observers, creating outputs that are nonsensical or altogether inaccurate." IBM, *What are AI hallucinations?*, https://www.ibm.com/topics/ai-hallucinations.

[32] Lexis+ AI, *Frequently asked questions,* https://www.lexisnexis.com/pdf/lexis-plus-ai-top-20-faq-sheet.pdf.

Challenge	Description

Are There Potential Intellectual Property Issues?	• There are a number of problems related to intellectual property that have already emerged, including: [33]
	   ○ "Some generative AI tools have been trained using materials scraped from the internet, including copyright works, personal information, biometric data, and harmful and illegal content. There is ongoing litigation over whether the scraping, downloading, and processing of materials, the trained AI models, and their outputs involve breaches of IP, privacy, and contract. Debates are ongoing about the balance of interests between IP owners and AI developers."[34]
	   ○ "If users include confidential information in prompts, confidentiality may be lost because the AI supplier has a copy of the information and, further, the information may become part of the model and the output shared publicly with other users." [35] This includes trade secrets. There have already been some examples of fiduciaries sharing information on an open or not well protected platform and, thus, disclosing confidential and/or proprietary information — as was the case with the Samsung software engineers in 2023, who uploaded confidential, proprietary code to ChatGPT and, thus, leaked the information.
	• Many claims have been filed against different individuals and entities based on intellectual property and AI issues and the landscape is still somewhat uncertain.[36] Many commentators believe that this is an important issue to watch closely that will determine better the future of generative AI.

Data Privacy	• Generative AI tools rely on the collection and processing of data. • Ensuring compliance with privacy and data protection regulations is crucial to protecting the interests and rights of individuals involved in the contract. • Platforms will have to create more secure environments that meet the requirements of data privacy regulations and related rules and issues (like *Intellectual Property,* discussed above) in different jurisdictions.

[33] World Economic Forum, *Will copyright law enable or inhibit generative AI?,* https://www.weforum.org/agenda/2024/01/cracking-the-code-generative-ai-and-intellectual-property/; Harvard Business Review, *Generative AI has an intellectual property problem,* https://hbr.org/2023/04/generative-ai-has-an-intellectual-property-problem; Mayer Brown, *Generative artificial intelligence and intellectual property,* https://www.mayerbrown.com/en/insights/publications/2023/11/generative-artificial-intelligence-and-intellectual-property; University of Virginia, *Generative AI at UVA,* https://guides.lib.virginia.edu/c.php?g=1340987&p=9887094.

[34] WIPO, *Generative AI: Navigating intellectual property,* https://www.wipo.int/about-ip/en/frontier_technologies/news/2024/news_0002.html.

[35] *Id.*

[36] Copyright Alliance, *Current AI copyright cases — Part 1,* https://copyrightalliance.org/current-ai-copyright-cases-part-1/; Perkins Coie, *Recent rulings in AI copyright lawsuits shed some light, but leave many questions,* https://www.perkinscoie.com/en/news-insights/recent-rulings-in-ai-copyright-lawsuits-shed-some-light-but-leave-many-questions.html; Copyright Alliance, *AI and copyright in 2023: In the courts,* https://copyrightalliance.org/ai-copyright-courts/; *Paul Tremblay v. OpenAI Inc., et al.,* No. 23-3223, *Sarah Silverman et al. v. OpenAI Inc., et al.,* No. 23-3416, N.D. Calif., 2024 U.S. Dist. LEXIS 24618.

Challenge	Description
Professional Responsibility	• [This Practical Law article](#) provides a great overview of the professional responsibility issues that arise with AI. We are just at the beginning of examining and determining all such issues, and states are just starting to have cases come before them. o For example, the Florida Bar just recently issued an ethics opinion determining, "In sum, a lawyer may ethically utilize generative AI technologies but only to the extent that the lawyer can reasonably guarantee compliance with the lawyer's ethical obligations. These obligations include the duties of confidentiality, avoidance of frivolous claims and contentions, candor to the tribunal, truthfulness in statements to others, avoidance of clearly excessive fees and costs, and compliance with restrictions on advertising for legal services. Lawyers should be cognizant that generative AI is still in its infancy and that these ethical concerns should not be treated as an exhaustive list. Rather, lawyers should continue to develop competency in their use of new technologies and the risks and benefits inherent in those technologies."[37] The Florida Bar made clear that lawyers have "the duty to maintain technological competence and educate themselves regarding the risks and benefits of new technology."[38] • See also Chapter 35 on Professional Responsibility in the Third Edition of *Drafting Contracts: How and Why Lawyers Do What They Do* for more information on these issues.

C. AI Platforms for Drafting Contracts

This section lists some of the platforms currently being used in contract drafting that incorporate different types of AI and technology. Note that the number of platforms has increased and changed significantly in the last few years, and even in the last few months. More importantly, these and new platforms are constantly developing. Most if not all of these platforms now incorporate generative AI.

You may have access to some of these platforms through your school or work or they may be free. For others, there may be a charge for use by institutions or individuals. Access and cost structures for some of these platforms are also still developing.

Here are some of the contract-drafting platforms that incorporate AI and other technologies:

- Bloomberg Law
  - [Contract Solutions](#)
  - [Draft Analyzer](#)
- [ChatGPT](#)

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[37] The Florida Bar, *Rules, ethics & professionalism,* [https://www.floridabar.org/etopinions/opinion-24-1/.](https://www.floridabar.org/etopinions/opinion-24-1/)
[38] *Id.*

- [Claude](#) from Anthropic
- [CoCounsel from casetext](#)
    - Part of Thomson Reuters
- [Evisort](#)
- [Gemini](#) from Google
- [Law Insider](#) and [TermScout](#)
    - Law Insider (tools to draft better contracts) with TermScout (AI contract review)
- [Lexis+ AI](#)
    - See Faculty Resources
- [Litera](#)
- [Microsoft Copilot with Thomson Reuters](#)
    - See video of how Copilot in Word works with Practical Law, etc.
- [PandaDoc](#)
- [Spellbook](#)
    - Uses OpenAI's GPT-4

See also the [LawNext Legal Tech Directory—Contract Automation and Drafting (Through Signature)](#) and [Observatory from Orrick](#) for databases of platforms, where you can search for the tools that have the combination of services of factors for which you are looking.

In addition, note that many corporations, law firms, etc. are building their own internal platforms to overcome some of the challenges discussed earlier, including to better control datasets and maintain data privacy and client confidentiality.

D. Best Practices

Whether in the classroom or in practice, here is what you should do when working with generative AI and other technology in contract drafting:

- *Use Clear Definitions for AI and Other Terms and Guidelines.*
    - Your team and/or students should be familiar with the terms involved and have a clear understanding of how to approach the work at hand. See Section II for *Terms and Other Background Information* that may be helpful to share with them.
    - See Section III.B.3 on *Challenges* for some of the issues that you may want to consider when putting together your guidelines. You may also want to search for guidelines from different companies, localities, nations, and other governing bodies.

- *Understand How What You Are Using Works.*
    - If you are unable to solve a problem on your own, it is essential that you reach out to relevant resources and experts who can provide assistance.

- o It is okay to let your students and/or your team know that you are also learning about all of this alongside them, so it is normal not to have all the answers immediately. Generative AI is a relatively new and rapidly evolving field.
- o For some of the issues that you should understand, see especially Section II.B.3 on *Challenges*. For example, you will want to know the dataset that the platform is drawing from when drafting or analyzing your contracts.

- *Know and Control the Information Provided.*
  - o Think about what information is needed at each step and how you are going to provide it. For example, what kind of prompt engineering (definition in Section II.A), if any, is needed?
  - o When you are providing information, it is important to keep in mind data privacy, professional responsibility (such as client confidentiality), intellectual property, and other concerns outlined in Section III.B.3.

- *Try Out Different Options in Different Ways.*
  - o Play with the platforms you have access to or are interested in using before you finalize anything.
  - o For example, use different prompts, various processes, and compare results across platforms.
  - o This may take some extra time at first, as you learn how to best create prompts and find the ideal process to use. Plus, you will have to continuously adapt and change your approach, since these platforms are quickly developing.

- *Have a Human Expert Review the Work.*
  - o We are not at the point where you can or should rely only on the platform you are using or anything related to it.
  - o You are most likely going to be held responsible for what the platform or anything related to it provides.
  - o For example, according to a Canadian tribunal in February of 2024, Air Canada had to partially refund a man's flight ticket because of a promise made by the Air Canada chatbot.[39]

- *Continue to Consider the Ethical, Legal, Social, and Other Challenges Relating to AI.*
  - o Setting up your platform and outlining clear definitions, processes, and guidelines is not enough. You must continue to discuss and adapt to the ethical, legal, social, and other challenges related to AI, including some of the current ones outlined in Section III.B.3.

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[39] *Moffatt v. Air Canada,* 2024 BCCRT 149 (*CanLII*),
https://www.canlii.org/en/bc/bccrt/doc/2024/2024bccrt149/2024bccrt149.html.

E. Emerging Issues

As AI and other technology advance, we anticipate new challenges, as well as new opportunities. As faculty, law students, practitioners, and laypersons, we hope to participate in addressing these emerging issues and helping shape the future of AI and other technologies:

- *Increased Integration of AI.*
  - According to a 2023 Wolters Kluwer report, "73% of lawyers expect to integrate generative AI into their legal work in the next 12 months."[40]
  - A Thomson Reuters Institute Report found that: 82% of legal professionals surveyed said ChatGPT and generative AI *can* be readily applied to legal work; 51% said that ChatGPT and generative AI *should* be applied to legal work. This report also found that: attitudes are evolving, legal professionals are taking a cautious, proactive approach (some even banning it), and they are becoming aware and analyzing risks (for example, relating to accuracy and security, including privacy and client confidentiality).[41]
  - Legal professionals and legal employers can be slow to change. In fact, many are waiting to see what happens first, especially with regard to some of the challenges outlined above. In addition, some professionals do not mind letting others take the lead in developing better systems, which they can later adopt or adapt for their own purposes.[42]

- *More Clarity as to How to Use AI and Other Technology.*
  - As platforms continue to develop, and challenges are presented and resolved, we will gain more clarity as to how to better use AI and other technologies.

- *Further Regulation*
  - With more clarity will come more regulation, and, with more regulation will come more clarity.
  - Countries, states, localities, entities, developers, etc. are in the process of developing AI-governing guidelines and policies.
  - For example, on March 13, 2024, the European Parliament approved the AI Act, the world's first comprehensive set of rules to govern artificial intelligence. European policymakers are now in the process of determining the most effective way to implement these new rules.[43]
  - Also, the State Bar Board of Trustees of the State Bar of California approved the Practical Guidance for the Use of Generative Artificial Intelligence in the Practice of Law.[44]

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[40] Wolters Kluwer, *The Wolters Kluwer future ready lawyer report: Embracing innovation, adapting to change,* https://www.wolterskluwer.com/en/know/future-ready-lawyer-2023.

[41] Thomson Reuters, *New report on ChatGPT & generative AI in law firms shows opportunities abound, even as concerns persist,* https://www.thomsonreuters.com/en-us/posts/technology/chatgpt-generative-ai-law-firms-2023/.

[42] Thomson Reuters, *Forum: Practice makes perfect for generative AI — An interview with Northwestern's Daniel Linna,* https://www.thomsonreuters.com/en-us/posts/technology/forum-linna-generative-ai/.

[43] EU Artificial Intelligence Act, https://artificialintelligenceact.eu/the-act/.

[44] The State Bar of California, *Ethics & technology resources,* https://www.calbar.ca.gov/Attorneys/Conduct-Discipline/Ethics/Ethics-Technology-Resources.

- o In addition, the American Bar Association adopted Resolution 604 in 2023, which includes guidelines for how to design, develop, and use AI, particularly by organizations that focus on technology.[45]
  - o Different professional responsibility and other types of bodies have also issued similar guidance or opinions, like the Florida Bar ethics opinion discussed above.[46]
  - o The legal validity and enforceability of AI tools may vary across jurisdictions.
  - o Furthermore, legal frameworks need to adapt to accommodate the use of AI in contract formation and execution, ensuring that traditional contract law principles are applicable in the digital realm.

- *Litigation and Dispute Resolution.*
  - o In the event of contractual breaches or disputes arising from AI tools, legal frameworks must address the allocation of liability and provide mechanisms for resolution. This includes defining responsibilities for coding errors, algorithm biases, or unforeseen circumstances.
  - o Areas of law outside of contract law may play a part in litigation and dispute resolution. For example, if the AI tool is considered a product, there is a question of the applicability of products liability law.

- *Specialization.*
  - o As we are able to automate simple tasks, we will be able to specialize in some more complex or nuanced aspects of contracts and transactions.
  - o We have already started to see some specialization of software, as well. For example, there is the American Arbitration Association's Clause Builder, which is focused on alternative dispute resolution agreements.
  - o Further specialization may require collaboration with people from diverse backgrounds, skill sets, and/or certifications. This adjustment may not necessarily mean a reduction in workforce but rather a change in the required skills and tasks. For example, the development of electronic data rooms and e-discovery did not eliminate the need for junior associates. Instead, it changed the specific skills and requirements that were needed for these processes.
  - o We will likely need to integrate a wider range of skills and professions. "Both law firm and corporate respondents plan on hiring more technologists in 2024 with 38% of Am Law 200 leaders expecting to hire more data scientists and engineers to support generative AI initiatives at their firms this year. Significantly fewer respondents in non–Am Law firms with 50+ attorneys anticipate hiring additional technologists in 2024 (14%)."[47]

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[45] American Bar Association, *Policy Initiatives, Report and Resolution 610,* https://www.americanbar.org/groups/cybersecurity/aba-policy-initiatives/.
[46] The Florida Bar, *Rules, ethics & professionalism,* https://www.floridabar.org/etopinions/opinion-24-1/.
[47] Lexis+ AI, *The Future of Legal GenAI,* 2024 Investing in Legal Innovation Survey: The Rise of GenAI at Top Firms & Corporations.

- *Revisiting Business Models.*
  - Law firms and other legal employers may have to revisit business models and be less dependent on the billable hour.
  - The 2023 Legaltech News Law Firm Tech Survey found that almost 45% of those surveyed thought generative AI would decrease reliance on the billable hour.[48]
  - "47% of law firm respondents (including 54% of Am Law 200 respondents) are exploring new lines of business and new billable opportunities only possible because of generative AI."[49]

- *A Possible Impact on Number and Types of Jobs in the Legal Industry.*
  - Law students and junior lawyers want to know where the legal industry is going and where they may be able to add the most value and have a better career, so you should try to discuss with them the possible impact of generative AI and other technologies on the number and types of jobs in the legal industry.
  - There is a great amount of fear and uncertainty relating to how AI will impact the legal industry and how there may end up being less jobs for lawyers due to further automation and generative AI. However, knowledge is currently still required, and AI is not yet good enough.
  - Also, while "[t]he list of white-collar layoffs is growing," ". . . business leaders across the economy say they expect the new technology will augment and elevate some white-collar roles, giving employees and managers the means to do more meaningful work—both for their companies and in their careers."[50]

- *Revisiting Training and Other Practices.*
  - Along with possible changes in jobs in the legal industry, we will have to examine possible changes in training and other practices.
  - How will we train new and existing employees given the new technologies? In relation to junior transactional lawyers, will they continue to get the drafting training they need at the beginning of their career and what will that training look like so that they have the skills and experience they need later?

- *Other Developments.*
  - We will see developments in data privacy, intellectual property, professional responsibility, and many of the other areas already outlined in this overview.

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[48] ALM Law.Com, *Is Generative AI Coming For Your Billable Hours?*, https://www.law.com/legaltechnews/2023/09/26/is-generative-ai-coming-for-your-billable-hours/.
[49] Lexis+ AI, *The Future of Legal GenAI*, 2024 Investing in Legal Innovation Survey: The Rise of GenAI at Top Firms & Corporations.
[50] The Wall Street Journal, *AI is starting to threaten white-collar jobs. Few industries are immune*, https://www.wsj.com/lifestyle/careers/ai-is-starting-to-threaten-white-collar-jobs-few-industries-are-immune-9cdbcb90.

- o In addition, we will see developments in different types of contracts and processes. For example, the certification of contracts or use of certified contracts by different entities and processes is an issue that is already developing.

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