INTERNATIONAL JOURNAL OF SOCIAL SCIENCES BULLETIN
ISSN: (E) 3007-1917 (P) 3007-1909
Volume 2, Issue 4, 2024

ADVANCING LEGAL PRACTICE: A DETAILED ANALYSIS OF INTEGRATING AI IN LEGAL RESEARCH, REASONING, AND WRITING

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DOI: https://doi.org/10.5281/zenodo.15348421

Received	Revised	Accepted	Published
09 November, 2024	09 December, 2024	24 December, 2024	31 December, 2024

ABSTRACT

This article explores how Artificial Intelligence (AI) can be integrated into the fundamental components of legal practice–legal research, argumentation, and writing. At the outset, it demonstrates how supervised learning techniques of AI assist lawyers in finding precedents and identifying factually similar cases, thereby rendering the use of AI for legal research more efficient and focused. Secondly, it emphasizes the usefulness of AI's unsupervised learning methodologies, which help lawyers comprehend legal theories and public policy concerns and develop persuasive legal arguments. Lastly, it thoroughly examines and appreciates the potential of generative AI models to refine legal writing, such as drafting legal memoranda and briefs. Exploring remedies for current deficiencies in these models, the article argues that advancing AI models can enhance the use of AI in legal practice by reducing errors and improving the quality and productivity of legal work, ultimately paving the way for the integration of AI in legal practice while preserving human creativity.

Keywords: *AI Technologies, Legal practice, Legal research, Legal writing, Large Language Models (LLMs).*

INTRODUCTION

There are three main parts to the practice of law: legal research, making legal arguments, and legal writing. Each of these steps can be significantly improved using Artificial Intelligence (AI), which is revolutionizing the way lawyers do their work. The first indispensable step, legal research, involves determining what the existing body of law is and how the facts of the case apply to that body of law, including legal precedents. Legal research assists a lawyer in finding cases that are factually similar to the case at hand. If a previous case closely aligns with the facts and jurisdiction, little further analysis may be needed. Machine-learning techniques, especially supervised learning, could potentially facilitate the rapid identification of such similar cases, improving both the speed and accuracy of legal research. This is a clear example of the use of AI for legal research and how AI is transforming legal research.

The next step in legal practice is making effective legal arguments. A lawyer needs to understand not just the facts but also the public policy considerations and legal theories that form the foundation of the law. When facts depart from

previous rulings, the ability to distinguish those facts or to make analogies to favorable precedents becomes crucial. Through unsupervised and self-supervised learning, AI is increasingly coming to the rescue of lawyers seeking to build persuasive and legally sound arguments around such deeper considerations. This highlights the benefits of AI in legal reasoning and demonstrates the role of AI in modern legal practices.

Legal writing is the final stage of the process, in which the lawyer must compile all the legal research and argumentation into a coherent and persuasive memo or brief. AI, and generative models in particular, are increasingly being leveraged to assist with drafting legal documents. However, overreliance on such tools may stifle a lawyer's creativity and the unique perspectives they offer to their work. This illustrates the utilization of AI in legal writing and shows how AI tools are adopted for efficiency in legal writing.

This article is divided into four parts. Part I introduces Large Language Models (LLMs), describing the technology on which these models are based and their current applications in the legal profession. Part II examines how AI is important to legal research, improving efficiency by finding cases that have similar facts. Part III describes how the unsupervised learning capabilities of AI can be leveraged to make legal arguments based on theory and public policy. Part IV (Legal Prose: Memos and Briefs) describes the legal writing process and explains how generative AI can assist lawyers in crafting effective memos and briefs.

Finally, this article concludes that although AI tools are extremely useful in legal practice, attorneys should rely on their own experience to ensure that the ultimate product is correct, free from errors, and truly demonstrates their creativity and understanding of the law. Finally, lawyers should maintain a balance by not overly relying on AI at the expense of their creativity and legal knowledge. The integration of these tools highlights Legal AI Integration and emphasizes both the challenges and the opportunities of AI in legal practice.

I. The development of Large Language Models of Artificial Intelligence; the rapid advancement of AI tools

For decades, researchers have worked on language-generating tools, with notable progress including Joseph Weizenbaum's 1966 program enabling basic conversations between humans and machines (Weizenbaum, 1983). Over time, advancements in Natural Language Processing (NLP) led to the development of Large Language Models (LLMs) like OpenAI's GPT-3, which uses deep learning to predict words in a sentence (Toews, 2020). OpenAI refined these models using vast internet data and introduced features like post-training alignment to improve user interaction (OpenAI, 2022). The popularity of these models, exemplified by ChatGPT surpassing 100 million users within two months of launch (Hu, 2023), prompted further improvements, including the release of GPT-4 with enhanced capabilities like handling various input types, such as images and sounds.

II. The prospects of the AI tools in legal practice

The present age marks a new era of AI tools for lawyers. AI-powered information retrieval and analysis techniques, including supervised and unsupervised learning, are already being used for legal tasks, and generative AI based on pre-trained language models represents new potential. The Pre-Trained Language Models (PTLMs) now have representations of distinct human concepts learned from their vast expertise sets (Manning, 2022). They are also remarkably effective at predicting words that make sense and are grammatically appropriate in specific contexts. While they come with limitations, including hallucinations (AI-generated false or misleading information), bias, copyright, and client confidentiality issues, the potential for generating usable legal documents at reduced costs remains attractive. Recent years have also seen improvements in AI alignment, which seeks to ensure that AI systems account for users' intended goals, preferences, ethical standards, and safety (Lambert et al., 2022). As more generative AI models are released, the alignment of generative AI will improve faster as the models are refined based on users' preferences. This implies the creation of AI tools for lawyers that leverage a model that already understands human language, has learned from large amounts of text, providing a vast source of knowledge, and is partially aligned with human user feedback in generating its output. Groups are already collaborating with lawyers to customize models even more precisely to fit their needs and circumstances. This

continued evolution confirms the transformative role of AI in legal practice.

III. A complete analysis of Supervised Learning, Unsupervised Learning, and Self-Supervised Learning Models

- **Supervised Learning Model**

Supervised learning aims to predict outcomes. This is done by directing the algorithm with labeled input and mapping those known inputs to known outputs. In this process, the algorithm is trained on data that has labels, with known outcomes, where both the input and output are specified. The training data, therefore, acts as a teacher for the algorithm.

Supervised learning follows a simple teaching process. Firstly, it ensures that the training data contains a wide array of examples of the subjects being taught. Secondly, it involves selecting the architecture of the model (three common choices are transformer architecture, convolutional neural networks, or recurrent neural networks). Thirdly, a penalty (or loss function) is introduced, which the algorithm uses to determine the extent of damage caused by incorrect decisions, enabling further learning for better accuracy in the next attempt. The model learns and updates the algorithm to minimize the loss function by accounting for prediction errors and increasing the accuracy of the prediction. For this purpose, techniques like Stochastic Gradient Descent (SGD) and the backpropagation algorithm are used.

This process is called supervised learning because the training data comes equipped with labels that serve both as the target for predictions and as a way to assess whether the model's predictions were correct. This supervision guides the model, providing correct versus incorrect answers. The relevance of this model in Legal AI Integration continues to shape legal technology.

- **Unsupervised Learning Model**

While the goal of supervised learning is generally to make predictions, the goal of unsupervised learning is typically to identify natural patterns and gain insights. This is known as an unsupervised way of training an algorithm. If unsupervised learning algorithms are correctly trained, they will naturally find patterns and trends in the unlabeled inputs that may not be immediately apparent, revealing latent relationships. Unlike supervised learning, unsupervised learning does not use labeled data to guide the algorithm; it must determine the output on its own. In simpler terms, it clusters items with similar traits and observes patterns and trends in the data. This method can be applied to solving association and clustering problems. In the context of AI legal reasoning, unsupervised learning enables more sophisticated interpretations of legal data and abstract relationships.

Unsupervised learning methods can uncover features that are not readily apparent through human perception. Heuristic methods of unsupervised learning have been implemented to form groups, such as customer segmentation (Shen, 2021), rank web pages (PageRank), classify patients with similar disease characteristics, and even measure the similarities of court cases across different texts (Mandal et al., 2021).

- **Self-Supervised Learning Models**

Pre-Trained Language Models, including LLMs (Large Language Models) or Language Model Transfer, typically use a mixture of supervised and unsupervised training methods and are often referred to as self-supervised learning. Self-supervised learning aims to train models that can learn representations from a dataset that does not have labels (i.e., unsupervised). The types of data required by self-supervised learning are large amounts of high-quality, usually human-generated data. This method has been successfully applied in various areas, such as computer vision and natural language processing (Radford et al., 2021).

Most generative AI models are trained using self-supervised learning methods, followed by a post-training alignment phase, during which tuning and preferences, such as RL with Human Feedback, Constitutional AI, Direct Policy Optimization, and others, are applied (Ouyang et al., 2022). Researchers are also working on techniques to address alignment and safety issues, such as reducing hallucinations for certain tasks, incorporating the ability to cite sources, summarizing texts more concisely, and enabling users to request longer answers (Lightman et al., 2023). Generative AI could become a promising technology in law if its users carefully check and edit its responses and properly cite any sources it provides.

IV. Obstacles in the Way of Integrating AI Tools in Legal Writing and Research

Researchers have identified multiple issues with the use of AI tools like LLMs, including these tools' tendencies to hallucinate or otherwise fabricate data, including court cases. Although it is a critical problem considering the significance of legal research, numerous AI developers have endorsed that these LLMs have a propensity for hallucination and therefore should not be used for tasks like legal research (Munir, Ansari, & Arafat, 2024).

AI researchers have a domain-specific term for that: alignment refers to an AI system doing what the user wants to do or being aligned with that user. It is also used more generally to refer to AI that is aligned with the best interests of society. Such performance misalignment between some AI systems and the work of lawyers has led to a gap between the two. Aside from Al hallucinations, the operation of generative Al is often too broad, resulting in incorrect citations of legal authority and misjudgment between the precedential value of a decision, which ultimately misleads lawyers (Irfan, Saleem, & Munir, 2024).

- **The Use of AI Tools in Legal Research: Problems and Possibilities**

Legal research is the primary step in the practice of law. It involves finding judicial precedents, statutes, case law, regulations, and secondary materials that may be relevant to the case. Legal research generally refers to the process of effectively retrieving relevant legal documents and precedents from legal tools and databases (e.g., LexisNexis, Westlaw). Every domain has specialized tools that assist in this purpose.

Legal analysis provides the foundation for legal research. It is "impossible to do legal research without analyzing, synthesizing, and applying the information found, both to the original issue and the research plan developed to address the issue" (Valentine, 2010). At the core of legal research is locating cases that are analogous to the instant factual scenario so a lawyer can make precedential or analogical arguments and distinguish any cases that may converge to be binding on the court but do not support the client. In this context, legal research is an interactive process of problem-solving requiring the use of legal reasoning and analysis.

To facilitate understanding of how legal research corresponds with legal reasoning, legal research has been categorized into two elements: the same field and the same problem. A common keyword search is the same-field search, which is supervised-learning-based and could return results largely based on factual classification or data that has been pre-organized. Such a search would be of utmost relevance for reasoning by precedent. A similar search for the type of problem would be unsupervised learning and can yield results grounded in legal precepts. Such a search would be particularly pertinent to analogical reasoning.

- **The assistance of AI in the Process of Finding Legal Precedents: A Hypothetical Illustration**

To explain how AI can be used in each of the legal processes below (i.e., legal search, legal reasoning, and legal writing), I will provide an example of a hypothetical scenario that will help illustrate these concepts. We will set up a hypothetical situation and apply a simplified version of the search and seizure rule. We will then sequentially alter the fact scenarios to demonstrate where and how AI could be used as a legal tool — highlighting its potential uses, benefits, and limitations. The illustration is as follows: (1) an officer may not search a home without a search warrant, and (2) an officer may search an automobile without a search warrant.

As an initial matter, for cases that clearly involve a defendant's home or automobile, it is possible that the only necessary legal analysis is simply finding a case with identical facts. Let us further assume that the public policy justification for these rules derives from an individual's right to privacy. A defendant enjoys an absolute right to privacy in his dwelling, whereas he has no such right in his automobile.

Yet, the facts can be manipulated to make the application of the legal rule more complex. Is a warrant required to search a recreational vehicle (RV)? What if the owner of the camper van lives in it because he does not have a home? What if that RV is on public land? What if the RV is parked in a Walmart lot? What happens if the RV is parked on the private lot of the owner? What if the RV is without wheels and is sitting on concrete blocks? Making an argument in these cases, where the distinction is less clear, will require not only an understanding of the factual

differences between the instant case and earlier precedents but also an understanding of the underlying legal theory behind the rule.

For example, AI can be used to search within the same field by finding cases that discuss search and seizure in relation to similar facts (i.e., "automobile," "recreational vehicle," or "home"). AI would likely return legal precedents with factual similarities to prior cases and the facts of the current case. This type of search can be guided by supervised learning models.

Similarly, AI can be used for "same problem" searching by identifying cases that share the same legal theories, thus forming a legal rule. In this scenario, even without specific labels around the policy concerns underlying the search and seizure rules, AI may be able to identify applicable case law based on the legal precedents surrounding those policy concerns. This means AI could detect differences between cases that may not be obvious to lawyers. For instance, one query might return results where the cases address privacy and privacy-adjacent rights in different contexts, such as medical and/or internet privacy rights. Such searches could be guided by unsupervised learning models.

- **Navigating Legal Research with the Use of a Supervised Learning Model**

Supervised learning can be used to analyze legal data, such as recent case decisions. For instance, cases related to illegal search and seizure can be used as inputs, with the judge or jury's response to whether an illegal search occurred being labeled as the output. The supervised learning model recognizes data, such as "geographic location" or "objects found in the case," and uses these features to make predictions. The model can then identify future cases with similar or identical facts and assess their similarity to prior cases, helping lawyers more efficiently identify the most relevant cases to their own.

In a legal context, supervised learning can also help discover and analyze important legal precedents. These models can clarify how cited cases share similarities or differences with the current case, and they may produce a score indicating how similar the case is to the facts at hand. AI engages in precedential reasoning by ranking arguments based on the number of relevant factual similarities between the current case and previous precedents.

Another application involves labeling a small subset of legal documents and having AI extend this style to the remaining documents. For example, the U.S. Patent and Trademark Office (USPTO) used an LLM to analyze patents and patent applications, training it on several hundred patents across multiple AI technologies (Giczy et al., 2022). This approach could be applied to classify legal opinions, statutes, and secondary materials such as legislative history and law review articles.

Returning to the example of search and seizure, legal research could involve searching for keywords like "homes," "automobiles," and "search and seizure." AI could identify similar cases based on supervised learning, helping lawyers find relevant cases efficiently. This AI-driven search would help filter out irrelevant information, making the process more efficient by focusing on fact-specific issues, such as houses, cars, or searches and seizures (LexisNexis, 2023). While this may seem like a modest improvement, it is particularly useful when making precedential arguments and may be decisive if a case with identical facts exists.

Therefore, AI can function as a more sophisticated search tool, retrieving the most relevant cases and secondary sources from the appropriate jurisdictions. If AI identifies multiple cases with the same facts and outcomes, the legal analysis step becomes more straightforward. Previous studies have suggested that AI tools may excel in this area; for example, Choi and Schwarcz found that students using GPT-4 saw a 29% improvement in performance on a simple multiple-choice law exam (Choi & Schwarcz, forthcoming 2024).

V. Exploring the utilization of AI in legal reasoning and argumentation; limitations and options

The use of LLMs for legal search may face several challenges. First, utilizing a generative AI tool could compromise confidential client information that is used to prompt the AI tool. Second, the AI tool might not understand the individual client circumstances needed to form a profile when generating search results.

Firstly, there are significant concerns about client confidentiality with the use of AI tools. Lawyers must maintain the confidentiality of their clients, and uploading a client's data in a prompt form to a third-party platform could violate that duty.

LLMs explicitly warn their users against uploading sensitive data. Companies like OpenAI have privacy policies that go into effect on January 31, 2024, which clearly state what type of data they collect from users and how the data will be used. Under its policy, OpenAI may share this data with third parties without notifying the user. OpenAI also clarifies in its terms of use for its products that it can use users' content, including their inputs and prompts, "to provide, maintain, develop, and improve" the company's services (OpenAI, 2024). Additionally, OpenAI has a different privacy policy for those who purchase "ChatGPT Enterprise," an AI tool tailored for corporations. Under the Enterprise license, OpenAI clarifies that it "does not train on your business data," that "you own your inputs (where allowed by law)," and that "you control how long your data is retained."

Secondly, AI will limit its search to cases and legal materials based on the given prompts. However, it may prove challenging to incorporate the unique circumstances surrounding each client. For instance, in the example, a client might not want to disclose that she is living in her car, which could influence some outputs or complicate the AI tool's efforts in providing the most relevant case law or legal data.

- **AI's Inability to Synthesize Public Policy Considerations in Legal Reasoning and Argumentation**

Legal reasoning refers to the type of thinking and argumentation by which lawyers and judges apply legal rules to particular facts (Levi, 2013). Legal reasoning not only applies legal rules, precedents, legal principles, public policy, and community values to a certain problem but also synthesizes them to analyze and solve a legal issue. It is essential that legal reasoning involves logical thought and the systematic application of law to the facts of the case to reach a conclusion or to make legal arguments. Legal reasoning, one of the most challenging forms of reasoning for both students and practitioners, forms the foundation for decision-making within the legal system.

Legal reasoning practices rely on precedent and analogy. Similarities of fact involve applying a previous legal decision because the two cases are the same (Lamond, 2006). Analogical reasoning, however, involves applying a previous legal decision even though the facts of the two cases are not identical. With analogical reasoning, lawyers must emphasize the similarities and downplay the differences between the earlier decision and the facts of the case at hand (Levi, 2013). After conducting this research, lawyers synthesize the information into a legal opinion and strategies for the current case. Legal reasoning may be based on legal principles that have no bearing on the facts of the case, which complicates the matter further. Privacy cases, for example, related to internet privacy, may inform the inquiry on both sides of the rules governing search and seizure, but bear no relation to the facts of the automobile or the home.

A particular difficulty lawyers encounter when engaging in legal reasoning is determining whether two cases are sufficiently alike to warrant precedent (precedential reasoning) or whether the precedent should be extended by analogy (analogical reasoning). Through unsupervised learning algorithms, a search tool may also retrieve analogous cases not only based on factual similarities but also on similarities in legal theory.

Legal reasoning itself carries a bias in favor of the current rules. This default by courts to preserve the legal status quo is known as stare decisis, the Latin phrase for "to stand by things decided" (American Bar Association, 2022). However, even with this bias, the law is not fixed but evolves as social values change.

- **The Effectiveness of Unsupervised Learning Models in Legal Reasoning**

Analogy as a method essentially explains that it is evaluative and value-driven. Analogical reasoning is challenging because it depends on societal principles, which are at least somewhat based on societal values and can change over time. Moreover, analogical reasoning becomes difficult if the law is too vague or if the rules are disconnected, unclear, or incomplete in how they describe the circumstances of the case. Thus, simply grouping factually similar cases may not be helpful for analogical reasoning. Considering the above hypothesis, analogical reasoning asks the lawyer to consider the principle underlying the determination of the case. In the hypothetical, the concept of the expectation of privacy is limited to the home only and not extended to automobiles. Therefore, to draw an analogy, the necessary step is to understand how both the officer and the inhabitant view the vehicle and whether there was

an expectation of privacy. However, the reasonable expectation of privacy is often based on values and not simply confined within the factual boundaries of home and automobile.

One factor that complicates this further is perspective. In this hypothetical, the vehicle operator might claim that she had an expectation of privacy in her RV because she doesn't own a house and instead resides in her RV. But the officer may not realize that she lives in her vehicle. Thus, the perspective of the person applying the rule may shape the outcome in an all-or-nothing manner.

In this hypothetical, it's not as helpful (and probably impossible) to have a case for every single possible combination of facts. For instance, a factual pattern with just five different variables will produce 120 distinct cases. So, it is simply improbable that all factual scenarios would be covered by a precedential opinion that depends on identical facts. Moreover, the simple phenomenon of comparison and contrast alone does not account for the values of the society that established the rule. By understanding the principle that the rule is based on, it will help to understand how the specific facts of a case result in a particular outcome. Understanding the pertinent similarities and differences is what matters.

- **The role of algorithmic reasoning in legal reasoning**

If supervised learning techniques do not yield relevant results when the factual situation is nuanced, AI may still help by searching using unsupervised learning techniques. This would be the same search, based on the same problem. In the hypothetical example of search and seizure, this might generate information that does not address the same fact pattern but instead focuses on information drawn from the underlying tenets of search and seizure analysis, such as privacy rights. This is the type of search that belongs to unsupervised learning, so you might encounter results like law review articles that discuss societal values in information privacy, how privacy rights are handled in medical records, legal cases concerning information privacy in criminal matters, or cases about internet privacy. None of the results from these searches would directly affect the facts of the instant case, but they would provide context for the privacy principles underlying the search and seizure privilege. This kind of search may be useful in formulating arguments by analogy, which could help lawyers argue for changes in the common law based on evolving notions of fact or social change.

AI tools that employ unsupervised learning techniques could assist attorneys in identifying underlying principles across cases, enabling them to engage in analogical reasoning. However, previous research shows that AI may still not be the best tool for this application (Choi & Schwarcz, 2024). For instance, Choi and Schwarcz show that AI assistance adds less value for difficult issue-spotter questions.

- **The hazards of machine learning algorithms in legal reasoning**

Machine learning algorithms, by definition, are limited to their data training sets. If practitioners use AI to draft legal arguments too heavily, it will choke legal change. In this way, Al cannot be creative, for it must inherently lean on the information that was input into its algorithm. If the legal setting is dictated solely by Al, there remains the risk of a legal system that becomes outdated as society's perspectives shift over time. As a result, the law may end up codifying a vision of society frozen in the moment when the algorithm was designed. In this way, Al will neglect to recognize emergent legal problems because its corpus of information and algorithm will not have the direct connection go there in these unprecedented legal matters.

- **Evaluation of the Utilization of AI Devices in Legal Writing**

The legal research, legal reasoning, and legal arguments of a lawyer are carried out through the means of legal writing. It is a particular form of communication used to convey legal analysis, arguments, opinions, and information. Legal writing documents serve different purposes, such as persuading a factfinder, providing legal advice to a client, and memorializing a transaction. Good and effective legal writing is precise, concise, and adheres to legal conventions. There are various types of legal writing, including legal memos, briefs, contracts, legal opinions, articles, journals, and judicial opinions. To write effectively, one must understand the law and be able to analyse its logic.

- **An assessment of composition and revision of legal drafts**

Practitioners will likely use AI as a significant tool for legal writing. LexisNexis has already developed an AI tool known as Lexis+ AI, which assists lawyers in drafting and analyzing legal documents. This means that, given the appropriate prompts (including a prompt for the relevant jurisdiction), this tool can generate documents like contracts, leases, and more. Interestingly, Lexis also offers a two-button option that allows the user to "make this more aggressive" or "make this less aggressive," depending on their needs.

As AI has become a popular tool for writing, it is set to significantly transform how lawyers write (Tomlinson et al., forthcoming 2024). Indeed, scholars have long been fascinated by how changes in technology affect writers (Desnoyer, 2021). The shift from typewriters to computer word processing improved the ease of moving from one draft to another, and it has been argued that "the distinction between revision and composition began to erode altogether" (Kirschenbaum, 2016). The deployment of generative AI in lawyers' writing toolkits will similarly transform how lawyers conceive and structure arguments. Some of these changes may be negative, including making legal work cheaper. Apart from that, the use of AI will have practical impacts on the skill of legal writing.

- **Analyzing the question of creativity in the context of the use of AI**

Legal writing is a process that involves the revelation of fresh arguments or new perspectives that a lawyer may not have considered at the outset. A lawyer who leans too heavily on generative AI could undermine their creativity and weaken their legal arguments because the iterative process of putting pen to paper is often central to the development of legal arguments in a brief. One of the authors, who taught appellate advocacy, including writing an appellate brief, for more than ten years, observed that by the time students finish a first draft, they realize they need to conduct more research because their argument has several gaps. As one lawyer put it:

"When we write, we start identifying gaps in our logic, where we need to research the topic more, or areas in which we need to draw on exact language from authorities to support our claims. Even if we have the law clerk or associate who can produce the required written document for the case, we will not be able to do our job well without the writing" (Renzo, 2015).

A lawyer who bypasses the first drafting phase of their writing and instead goes straight to a generative AI tool may end up underestimating their creativity and produce a written product that compromises its ability to deliver a strong legal argument—something the lawyer could have achieved by doing the painstaking work themselves (Tomlinson et al., 2024). As law and AI expert Professor Harry Surden observed in a recent interview:

"I believe that for some simple, straightforward legal matters, we are not so far away from the time when a system akin to GPT-4 can produce an excellent first draft of a motion that, with double-checking and additional analysis, can be good enough to file. I suspect that for the more complex matters that are the lifeblood of many law firms, these technologies ought to be regarded as 'first-draft' machines rather than fully formed motion-generating products" (Sandgrund, 2023).

VI. Improving AI Models and Integrating them into Legal Practice; Key Recommendations

To optimize the application of AI in legal work, it is essential to develop highly advanced AI models that can overcome the shortcomings of the current AI tools. To promote more effective, reliable, and generalized development of AI in the legal domain, the AI models should be modified on the following lines:

- **Enhancing Accuracy and Precision:**

Existing AI models, though helpful, still often struggle with guaranteeing the accuracy of legal reasoning and analysis. Legal practice requires precision in interpreting case law, statutes, and regulatory texts. AI models must be educated on the intricacies of legal language and the contextual variances between different legal jurisdictions. This refinement will allow machine learning algorithms to analyze the relevant facts and specific circumstances of a given case in a much more accurate way, enabling lawyers to gain more reliable insights (Raza et al., 2023). This would assist legal professionals in decision-making, mitigating the chances of reaching erroneous conclusions and thereby improving the quality of legal services.

- **Improving Interpretative Abilities:**

There is a need to develop AI models that can do more than interpret express legal rules or statutory language. Legal practice is frequently a matter of subtle interpretations based on principles behind principles, like public policy, ethics, and judicial pragmatism (Raza et al., 2023). For example, although laws might seem well defined, they often require an understanding of broader social, moral, and political contexts that shape judicial decisions. In this scenario, AI needs to interpret legal rules in a way that considers the values of society, moral dilemmas, and the spirit of the law, rather than the wording of the statute only. Encouraging AI to interpret such principles could result in more in-depth perspectives for lawyers, which would account for the wider legal landscape in which arguments take place.

AI systems could assist legal practitioners by being trained to evaluate past rulings and identify the rationale behind them so that legal practitioners can more easily predict how a particular court would rule in future cases when precedent is unclear or evolving. Such understanding would allow lawyers to make stronger, more contextualized legal arguments, built on the foundations of what legal expert systems are all about.

- **Incorporating AI as a Significant Legal Practice Tool through legal education**

With the growing use of AI in legal practice, legal education needs to reform the curriculum to cover AI literacy and train incoming lawyers for the effective use of AI. It involves equipping students and practitioners not just with the technical understanding of how AI tools work but also with the critical thinking skills needed to use these tools properly and ethically.

Legal minds need to recognize when and how to use AI for specific functions of the practice, like legal research, document review, analysis, and predictive capabilities with a case, and when AI might fall short or be incompatible with the way humans think. AI is a tool that is meant to support, not replace human reasoning and expertise Raza et al., 2023). Law Schools should therefore teach how to make AI work for lawyers, without sacrificing the critical thinking and nuanced judgment that is the stock-in-trade of good lawyering.

By incorporating AI education and training into legal curricula, the next generation of legal professionals will be able to use AI effectively while understanding the limitations and ethical implications associated with it. By doing so, lawyers will be able to leverage AI to amplify their work while not compromising the critical thinking, judgment, and human insight that are indispensable in the practice of law.

CONCLUSION

AI applications in legal research, reasoning, and writing have the potential to significantly transform the legal profession. With the rapid advancement of AI capabilities, the integration of AI tools can greatly enhance the efficiency and accuracy of legal professionals in accessing relevant information, analyzing precedents, and drafting legal documents. AI in legal research simplifies a traditionally lengthy and costly process, making it faster and more affordable for lawyers to find pertinent cases, statutes, and regulations.

Moreover, AI-based legal research holds the promise of offering deeper insights into complex legal issues, allowing practitioners to navigate the legal landscape with greater precision. By understanding context, detecting patterns, and adapting to evolving legal developments, AI can significantly enhance a lawyer's ability to conduct thorough research. In legal writing, AI has already proven effective in automating many low- to medium-complexity tasks, enabling lawyers to focus on higher-level, more strategic work.

However, the full potential of AI must be approached with caution. Challenges such as alignment issues, privacy concerns, ethical dilemmas, and inherent biases must be addressed to ensure AI's responsible use in legal practice. As legal professionals continue to adapt, collaboration between AI technologies and legal experts will be essential in reshaping legal research, argumentation, and writing standards. Ultimately, AI tools should be harnessed to create a more efficient, equitable, and responsive legal system, while safeguarding human creativity and judgment.

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