# Role of AI in legal practice

**January 23, 2020 By Vishal Duggal**

Artificial intelligence (AI) has been making inroads into nearly all walks of life today. It has led to a paradigm shift in various fields, necessitating the reinvention of their operating and business models. Defined as “the science and engineering of making intelligent machines” that employ “cognitive computing” (enabling computers to learn, reason, perceive, infer, communicate, and make decisions like humans do), AI encompasses many branches such as machine learning (ML) including deep learning and predictive analytics, and natural language processing (NLP).

While AI has made a transformative impact on every industry and profession, its potential for use in the legal profession has not been tapped adequately. The legal services market remains profoundly under digitized, tradition-bound, and slow to embrace novel technologies and tools. But the future holds extensive use for the application of AI in the realm of judiciary thanks to the rapid technological progress and computational power growing at exponential speed.

Law relies on a system of formal logic based on truisms culled from precedent, applying this learning to the case in question, and drawing an inference accordingly. This logic-oriented approach renders law inherently favorable for the application of machine intelligence.

Moore’s Law predicts that growth in computer power will double roughly every two years, while the cost of computing power will fall considerably. This provides the basis for the rapid rise in AI capabilities and availability. AI processes greatly help lawyers find smart and unique ways to work. They can effectively be applied to many problems that seem difficult for lawyers to handle, either by virtue of the complexity or because of the volumes involved in legal practice.

**AI within legal informatics**

AI is frequently employed in modeling legal ontology. It occupies an important place within legal informatics, which applies information technologies within the context of the legal environment. AI tools and techniques developed in the context of legal problems cater to the need to store and retrieve massive amounts of textual data, resulting in conceptual information retrieval and intelligent databases.

Application of technology tools such as ML (including deep learning and predictive analysis) and NLP to law encompasses a wide range of areas including –

- Formal models of legal reasoning
- Computational models of argumentation, decision-making and evidential reasoning

- Legal reasoning in multi-agent systems
- Executable models of legislation
- Automatic legal text classification and summarization;
- Automated information extraction from legal databases and texts
- ML and data mining for e-discovery and other legal applications
- Conceptual or model-based legal information retrieval
- Lawbots to automate minor and repetitive legal tasks
- Risk assessment, pricing, and timeline predictions of litigation using ML and AI.

**Due Diligence**

Thanks to AI and ML applications, law firms can bring out due-diligence reports near-automatically, resulting in considerable savings in time and money.

Due diligence can be effectively handled by tech as most of it is a very mechanical job that can be accomplished by feeding in a set of parameters and documents, after which a reasonably good NLP is able to figure and dissect the data. AI replaces ‘menial’ legal tasks, like reviewing contracts for favorable or unfavorable clauses that can be more easily accomplished by a system. Also, it can review documents, particularly when a high level of completeness and confidence in the quality of document analysis is sought as part of due diligence.

**Legal Research**

Legal research is another area where AI is useful. Today a judge’s considerable time is spent in analyzing the case and similar cases that have happened, calculating the exact amount of damages and the judgments that have been pronounced in the past. However, with AI tools, he can quickly find a precedent, have comprehensive analysis and comparison done with an option of a likely judgment that makes his job a lot easier. AI applications can also help him in handing down consistent sentences that reduce human biases, for instance, in ruling out different jail terms to two defendants in similar situations. He can find the most appropriate cases or statutes that can be applied in a particular legal situation.  Attempts are also underway to create algorithmic models to predict case outcomes.

ML can lead to a kind of big pattern recognition where lots of hard data and numbers are potentially available. The objective is to reduce the research time of the user and make it more exhaustive and smarter.

Thanks to the advent of AI tools, no longer is legal research a manual process as law students and legal associates need not scan through physical case law volumes to find a relevant precedent.

**Document Review**

Smarter document management solutions can automatically classify, categorize, connect, and help you find the documents sitting on a law firm’s or company’s servers. After lawyers review and categorize a one percent sample of documents by hand, the computer, based on this learning, identifies the relevance of the remaining 99 percent of documents to the case. AI comes armed with the capability to automate this lengthy process as it can spontaneously ingest the entire contract, analyze it using NLP technology, and determine acceptable as well as problematic portions.

AI-powered contract review services greatly help legal teams offload the routine aspects of reviewing and redlining documents so that they can concentrate on more high-value work. AI can make contract review more accurate, enable lawyers to take a more data-driven approach to the practice of law, and make the legal space overall more efficient.

In cases where discovery or pre-litigation disclosure is crucial, “predictive coding” is a great help. This coding is beginning to be used in transactional law space, where it is being used to improve document review in mergers and acquisitions (M&A). It leverages small samples to cross-reference similar items, weed out less relevant documents, enabling attorneys to focus on the highly critical vital documents. The coding produces statistically validated results, equal to or surpassing the accuracy and, prominently, the rate of human review.

So, there is no need for lawyers to manually review, edit, and proofread documents of contracts running into hundreds of pages. XML coding is also used in transaction contracts, and increasingly advanced document preparation systems.

**Benefits of using AI in legal arena**

AI is a significant step forward in enabling even a layperson to use the right keywords for a good search of technical legal issues. This search gives direct answers to complex legal questions. Though, of course, going beyond search based on the ML model, interpreting the observations of a judge is the job of a legal professional.

A good lawyer can find out if a paragraph in a judgment constitutes good law or binding precedent, or whether another judgment has overruled it. Based on this, ML could conceivably help to identify similar paragraphs and parameters in other judgments.

The legal profession comes across a variety of notable problems that AI can fix. The legal practice requires immense time commitment with tight deadlines. Long working hours are scientifically one of the most significant contributors to poor mental health amongst lawyers. AI uses a much broader knowledge base, can review millions of documents that a keen human eye may miss.

The technology developed by companies in the legal-tech domain assists lawyers in quickly identifying clauses in contracts, rendering the repetitive and more monotonous work much more efficient and much faster. AI automates several high-volume, recurring tasks such as finding terms in a set of documents or filling out certain forms that otherwise take lawyers' focus away from more meaningful work.

AI generates more work in less time, allowing firms to increase their productivity. When AI finishes its processing, the lawyer can quickly review the work and present it to the client in an accessible manner. AI nuances the work of a lawyer who can focus on argumentation, presentation, and client negotiations instead of drudgeries and banal work. AI calculates the probability of the success of the argument as well. This allows the lawyer to present the most relevant information in court.

**Can technology make legal interns or associates redundant?**

If the fear of losing relevance drives the legal professionals away from embracing technology, they will only miss being part of the revolution in the legal arena happening worldwide. They need not be threatened by technology as it is not going to cause job displacement. AI can never be a replacement for lawyers, and the legal profession will never stop requiring human capital. What AI technology does is free up time for legal professionals so that they can devote more of their expertise and brainpower to do more difficult challenging parts of their jobs. It broadens lawyers' task from a limited role on risk mitigation to greater engagement on strategic initiatives, freeing up their bandwidth to focus on different and more complex or valuable types of work

AI acts as a facilitator to create smarter lawyers and effectively deal with problems like legal costs and pendency. What is crucial is human-machine interaction: lawyers can pitch in the first place by identifying, for instance, clauses in pre-existing agreements so that AI can spot similar ones in future, and cases can be first manually categorized under various heads, with algorithms then derived from those databases.

**India yet to fully embrace AI in legal field**

Though globally, companies are increasingly going for the adoption of AI in legal departments, currently, legal firms in India use limited analytics and artificial intelligence. The implementation of AI in the Indian judicial system is both a human and a technological challenge.

Not too many of the judges are tech-savvy though most of them profess to have an interest in reducing the overall pendency levels. That's why there has not been a lot of innovation yet in India in legal tech and AI, compared to abroad. Companies need to make sufficient R&D investments in developing AI in the Indian legal space. In the US, there are many big companies on the software side, targeting legal as a potential market. Unfortunately, the corporate legal market is still quite small in India, with not too many corporate lawyers worth their name. Corporate

legal departments, in general, are yet to optimize legal informatics to manage patent portfolios and for preparation, customization, and management of documents.

There is a crying need to solve the problem of India's vast quantity of non-digital commercial documentation so that a legally binding contract can be signed and stamp duty is paid electronically on digital contracts. AI can accelerate the process of the majority of a company's documentation becoming digital. But before that, companies have to embark upon the process of digitization of documents.

More and more IITians need to start taking a serious interest in law and begin to apply their software know-how to the legal domain. The judiciary, too, needs to make the whole process of court records, written submissions, pleadings, court judgments, and orders available online across the court establishments in India.

**Going forward**

Technology is all set to transform the legal industry in the future. It is estimated that in a few years, we may see a better implementation of e-learning software and databases and automation of legal services, from compliance down to automatic contract and term sheet creation. These tools can automatically generate large parts of term sheets for potential investments that get automatically turned into checklists to generate standard subscription agreements at the click of a button.

AI can also make legal assistance more affordable. Smaller companies can save high costs of legal advisor fees in terms of compliance advice, thanks to ML. Some start-ups in the legal space have begun to offer automatic compliance technologies where a series of simple questions answered by a company are utilized to produce compliance checklists and more concerning all aspects of Indian law, whether Companies Act or GST Act. Their ML products can further predict and guide small and medium-sized businesses towards the kinds of compliance requirements that would crop up in the future if they are in a specific line of business.

AI can potentially make sense of documents and records trapped in bad PDFs in vernacular languages, via optical character recognition (OCR). Thanks to sophisticated OCR and advanced language services under development by companies like Google, digitization of old documents will soon be a reality.

We can expect substantial progress in the coming years with computers empowered to mimic intelligent legal reasoning. Lawyers, on their part, require to possess an increasing number of skills to make use of technology to remain competitive in the market.

Increasing the use of AI in legal space will also lead to the requirement of more data analysts who can tap into legal and business datasets and generate actionable insights to improve the legal practice. Law firms will set up their engineering departments and product teams.

AI would continue to widen its cope over the next couple of decades, impacting and expanding the practice of law. It could acquire the ability to generate agreements, to mark-up and negotiate a document and to administer and make appropriate filings automatically.

In coming years, we will find ourselves on the cusp of a revolution in the practice of law led by the adoption of AI that will become ubiquitous – an indispensable assistant to practically every lawyer who would extract pertinent information by either typing a query directly or by asking the machine to perform a task.

AI is poised to empower machines beyond simple keyword search tools, and lawyers can team up with machines to deliver better, faster, and cheaper legal services to their clients.

**The downside of AI**

AI does not have 100% accuracy; this is partly due to hindsight bias and partly because of limited emotional and social awareness. The algorithmic information processing method of AI bot cannot take into account political, moral, or social ramifications of the issue at stake. It can, for instance, ill-afford to give any insight into emotive matters like child custody in a divorce case.

The other impediment is that legal work is less numerical and more linguistic. So, ML applications, though they can find patterns even in random data, are quite unlikely to understand the *de facto* meaning of words and nuances of language, a task which is better left to legal eagles.

AI cannot creatively think about all angles of a problem. But an AI-human interaction can accomplish more than either humans or machines can do on their own.

**Summing up**

AI tools help in improving efficiency as legal algorithms speed up document processing while detecting errors and other issues. But AI's role is not confined to eliminating manual (or boring) tasks. The tech-driven legal firm can automate a huge majority of their services with NLP and AI-drivel tools. They can scale their services with automation, charge low rates, whereas firms lacking automatic processes may find themselves relatively overpriced for legal services.

However, AI can be better employed as a research rather than an adjudicatory tool as it cannot grasp questions of serious social dynamics. It cannot dispense with the need for lawyers. It is beyond imagination that AI will ever make obsolete the legal acumen and expertise. Still, it may very well assist lawyers both quantitatively and qualitatively – catching patterns and correlations between case studies that human eyes may not notice.

So, the question is not whether AI can replace lawyers, but how much it impacts the way a lawyer works. At the end of the day, lawyers' role remains vital to handling complexities of legal work with their unique expertise. But enabled by technology, lawyers are more productive, allowing them to represent more legal matters with greater efficiency and a higher degree of accuracy.