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Lawyers

Artificial intelligence at the lawyer's service: is the dawn of the robot lawyer upon us?

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Over the past few months, our Legal Lab on Artificial Intelligence (L^3AI) team has tested a number of legal solutions that incorporate AI to a greater or lesser extent. According to the authors Remus and Levy[1], most of these tools will have a moderate potential impact on the legal practice.

Among the solutions tested by the members of our laboratory, certain functionalities in particular drew our attention.

Historic context

At the start of the 1950s, when Grace Murray Hopper, a pioneer of computer science, attempted to convince her colleagues to create a computer language using English words, she was told that it was impossible for a computer to be able to understand English. However, contrary to the engineers and mathematicians of the time, the business world was more receptive to the idea. Thus was born "Business Language version 0", or B-0, the forerunner of a number of more modern computer languages and a first (small) step towards the processing of natural language.

The fact remains that the use of IT for legal solutions was a challenge, specifically because of the nature of the information to be processed, which was often presented in text format and was not very organized. In 1986, author Richard Susskind was already addressing the use of artificial intelligence to process legal information[2]. It was not until recently, however, with advances in the natural language processing field, that we have seen the creation of software applications with the potential to substantially modify the practice of law.

A number of lawyers and notaries are now concerned about the future of their profession.

Are we witnessing the creation of the robot lawyer?

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Currently, the technological solutions available to legal practitioners make it possible to automate certain specific aspects related to the multitude of tasks they fulfill when they are doing their work. The tools for automating and analyzing documents are relevant examples in that they make it possible, on the one hand, to create legal documents from an existing model and, on the other, to identify certain elements that may be potentially problematic in the submitted documents. However, no solution can claim to completely replace the legal practitioner.

Recently, the above-mentioned authors Remus and Levy have analyzed and measured the impact of automation on the work of lawyers[3]. Generally speaking, they predict that only the document research process will be disrupted significantly by automation and that the tasks of managing files, drafting documents, conducting due diligence reviews and research and legal analysis will be slightly impacted. Moreover, they feel that the tasks of document management, legal drafting, consulting, negotiating, collating facts, preparation and representation before the court will only be slightly impacted by solutions integrating artificial intelligence[4].

Documentary analysis tools
Kira, Diligen, Luminance, Contract Companion, LegalSifter, LawGeex, etc.

First, among the tools making it possible to conduct documentary analysis, there are two types of solutions offered on the market.

On the one hand, several use supervised and unsupervised learning techniques to sort and analyze a vast number of documents in order to draw certain specific information from them.

This type of tool is particularly interesting in the context of a due diligence review. It makes it possible in particular to identify the object of a given contract as well as certain clauses, the applicable laws and other set items in order to detect certain elements of risk determined beforehand by the user. In this case, we could for example cite the existence of due diligence tools such as Kira, Diligen and Luminance[5].

On the other hand, certain solutions are designed to analyze and review contracts to facilitate negotiations with a third party.

This type of tool uses natural language processing (NLP) in order to identify the specific terms and clauses of a contract. It also identifies the missing elements in a specific type of contract. For example, in a confidentiality agreement, the tool will notify the user if the concept of confidential information is not defined. Moreover, it provides comments regarding the various elements identified in order to provide guidance on negotiating the terms of the contract. These comments and guidelines can be modified based on the attorney's preferred practices. These solutions are particularly useful when a legal professional is called on to advise a client on whether or not to comply with the terms of a contract tabled by a third party.

The Contract Companion[6] tool drew our attention because of the ease of use it provides, even if it is a tool that merely serves to assist a human drafting a contract without identifying problematic clauses and their content. Instead, it detects inconsistencies such as a missing definition for a capitalized term, among other examples. LegalSifter and LawGeex[7] are presented as assistants to the negotiation process by proposing solutions that identify discrepancies between a submitted contract and the best practices favoured by the firm or company, thereby helping to outline and resolve any missing or problematic clauses.

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Legal research tools
InnovationQ, NLPatent, etc.

Recently, certain solutions that made it possible to conduct legal research and predict the outcome of court decisions have appeared on the market. Some companies propose simulating a ruling based on factual elements outlined in the context of a given legal system to help with the decision-making process. Accordingly, they make use of NLP to understand the questions asked by attorneys and to research the legislation, case law and doctrinal sources. Some of the solutions even make proposals to lawyers to determine their chances of winning or losing based on the given elements, such as the opposing party's lawyer, the judge and the administrative level of the court. To do so, the tool uses machine learning. It asks questions about the client's situation and then goes on to analyze thousands of similar cases upon which the courts have already passed judgment. Lastly, the artificial intelligence system formulates a prediction based on all of the cases analyzed, a personalized explanation and a list of relevant case law.

With the advent of these tools, authors are anticipating significant changes in the types of lawsuits that will be brought before the courts. They predict that technology will enable the settlement of disputes and that judges will only have to rule on matters that give rise to the most complex of legal questions and that require concrete legal developments.[8]

In patent law, the search for existing inventions ("prior art" in the intellectual property lexicon) is facilitated by tools that call on NLP. Patent application drafting usually comprises a specialized vocabulary. The solutions make it possible to identify the target technology, determine the relevant prior art and analyze the related documents so as to identify the disclosed elements. In this regard, the InnovationQ and NLPatent[9] tools seem to demonstrate interesting potential.

Legal drafting tools
Specif.io, etc.

Some of the solutions available on the market call on the "creative" potential of artificial intelligence applied to the legal field. Among these, we are interested in a solution that is capable of drafting a specification in the context of a patent application. The Specif.io[10] tool makes it possible to draft a description of the invention using vocabulary suited to the form required to draft patent applications, which is based on claims that briefly outline the scope of the invention. For the time being, this solution is restricted to the field of software developments. Even if, most of the time and given the current stage of the product, the lawyer is called on to rework the text significantly, he or she can save a considerable amount of time when composing a first draft.

Recommendations

In conclusion, artificial intelligence tools are not all progressing in the same manner in every area of the law. A number of tools can already assist attorneys with various repetitive tasks or help them identify errors or potential risks in different documents. However, it is important to consider that such tools are still far off from having the human faculty of being able to contextualize their operations.

In those cases where the information is organized and structured, such as in matters pertaining to patent applications, a domain in which databases are organized and accessible online for most Western nations, the automated tools make it possible to not only assist users in completing their tasks, but even to provide a first draft of a specification based on simple draft claims. However, research and development are still needed in this regard before we can truly rely on such solutions.

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Therefore, we feel it relevant to issue certain key recommendations to those attorneys seeking to integrate such AI tools into their everyday practice:

Be aware of the possibilities and limits of an AI tool: when selecting an AI tool, it is important to run tests on it so as to assess its operational aspects and results. One must set a specific objective and ensure that the tool being tested can help achieve this objective.

Human supervisions: to date, it is important for any AI tool to still be used with human supervision. This is not only an ethical obligation to ensure the quality of the services rendered, but also a simple rule of caution when using tools that do not have the capacity to contextualize the information submitted to them.

Processing of ambiguities: several AI tools make it possible to vary their operational settings. Such setting variations make it so that the processing of any ambiguous situation is entrusted to the humans operating the AI tools.

Data confidentiality: Remember that we are bound to uphold the confidentiality of the data being processed! The processing of confidential information by solutions providers is a critical challenge to consider. We should not be afraid to ask questions on this subject.

Informed employees: Too often, artificial intelligence tends to frighten employees. Moreover, just as with any technological change, internal training is needed to ensure that the use of such tools complies with the company's requirements. Thus, not only must the proper AI tools be selected, but the proper training must be provided in order to benefit from them.

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1. Remus, D., & Levy, F. (2017). Can Robots Be Lawyers: Computers, Lawyers, and the Practice of Law. *Geo. J. Legal Ethics,30*, 501.
2. Susskind, R.E. (1986) Expert Systems in Law: A Jurisprudential Approach to Artificial Intelligence and Legal Reasoning. *The Modern Law Review, 49(2)*, 168-194.
3. *Supra*, note 1.
4. *Id*.
5. kirasystems.com; diligen.com; luminance.com.
6. https://www.litera.com/products/legal/contract-companion.
7. legalsifter.com;lawgeex.com.
8. Luis Millan, Artificial Intelligence, *Canadian Lawyer* (April 7, 2017), online: http://www.canadianlawyermag.com/author/sandra-shutt/artificial-intelligence-3585.
9. http://ip.com/solutions/innovationq/; nlpatent.com.
10. specif.io/index.

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