

AI in Legal Profession

by [Sergii Shcherbak](#), Developer Digital Services at [Synch](#), IT lawyer and software developer

I. Introduction

Artificial Intelligence is a buzzword nowadays. Our analytics tool shows that AI is in top 3 online trending words in the LegalTech domain, giving way only to “gdpr” and “blockchain”. The AI fever does not come as a surprise. Started back in 1950s, the field of AI research had been experiencing cyclical ups and downs until recently, with the advance of Moore’s Law and the increase in compute power, it has blossomed into a mainstream practice, a “hammer” solving problems in every industry. The idea that a machine can “reason” like a human and do routine (read “boring”) things faster and better than we possibly can is very exciting. Practice, however, shows that such a general-purpose AI is not yet possible, and current applications of the technology are limited to instances of applied AI, i.e. very specific use cases. Still, research by Morar HPI shows that such applications of AI have provided increases in employees’ productivity, focus, creativity and satisfaction¹, while Gartner predicts that by 2022 one in five workers will rely on AI to do their jobs².

LegalTech has been experiencing AI advancements, too: contract analysis, case outcome prediction, chatbot-based legal advice – you name it. To date, AI has been used to augment lawyers rather than replace them. Tomorrow, things may change. Recent research by Gartner claims that AI will eliminate 1.8 million jobs by 2020 while creating 2.3 million; although this would overcome the deficit, job creation/elimination will vary greatly by industry.³

To better understand how AI is used in the legal profession today and how lawyers should be prepared to and what they should expect from AI tomorrow, we at Synch had been experimenting with third party AI providers for almost three years. We also recently had a chat with leading LegalTech experts – AI company founders and innovators, as well as senior lawyers at top law firms and largest companies, from different countries – about practical use cases of AI in the legal profession. This article therefore is an attempt to deliver objective insights into the current and future utility of legal AI through the prism of business stories and subjective views. We start with the supplier side, i.e. LegalTech companies, and then match it with current views and expectations, as conveyed by senior lawyers. We then conclude with Synch’s own perspective on legal AI.

¹ <https://www.cisco.com/c/dam/en/us/solutions/collateral/collaboration/morar-advanc-techn-white-paper.pdf>

² <https://blogs.gartner.com/craig-roth/2017/12/05/489/>

³ <https://www.gartner.com/newsroom/id/3811367>

II. LegalTech companies

[AILIRA \(Australia\): Legal research system](#)

Doing legal research online is time-consuming, since relevant materials are scattered across tons of “search results”; it is one of those dull repetitive tasks that neither lawyers want to do nor clients want to pay for. Created by a tax lawyer [Adrian Cartland](#) three years ago, Ailira is a chatbot-like machine learning-based legal information research system that addresses this challenge. Ask her a question, and Ailira will provide a condensed byte-sized answer. Ailira is currently available in two versions: *professional*, with fully unlocked functionality, and *consumer*, which has been taught to assist in more consumer-oriented areas such as business structuring, estate planning and domestic violence. The consumer version has been used at Adrian’s law firm’s office, interacting with clients directly by answering basic legal questions, generating simple legal documents, e.g. wills, and acting as a channel to lawyers with relevant legal expertise. One appreciates the power of Ailira when learns that she managed to score 73% on a tax exam, more than Adrian did.

Ailira’s machine learning algorithm is agnostic, i.e. it is not restricted to a set of languages or categories of content and “does not require ontologies or taxonomies”. The software can train on any set of documents, in any language, and will eventually understand semantics, i.e. words’ meaning.

Taking care of time-consuming legal research tasks, Ailira allows lawyers to deliver legal services at a much lower rate (around 25% of the ordinary cost), which is a clear win for customers. The software does not replace lawyers but rather makes them more efficient. For example, Ailira creates a generic will for a consumer while referring the case to a human lawyer if accompanying legal advice or document review is required.

As regards Ailira’s clients, its professional version is used mostly by law and accounting firms, while the consumer version is used by people who can’t afford legal services at usual rates.

Ailira is self-funded.

To the question whether AI software like Ailira will eventually replace lawyers, Adrian replies with a perfect analogy: “AI is like R2D2. It does really cool things, but always plays second to Luke Skywalker.”

[SecurePrivacy.Ai \(Denmark\): User consent management tool](#)

AI-powered SecurePrivacy helps companies make their websites GDPR-compliant by providing an easy-to-use solution for user consent management. A client just needs to enter their website name. SecurePrivacy will then scan the website and help to set up intelligent “I agree” notifications for different categories of personal data processing: from using Google Analytics cookies to a transfer of personal data to third parties. Scanning the website also allows to provide the user with a set of possible triggers for a notification: e.g. click on a button or link. In addition, SecurePrivacy documents a timestamped record of user action expressing consent in each case.

SecurePrivacy is self-funded.

According to [Dan Storbaek](#), the founder, competition is scarce. "SecurePrivacy is one of the only solutions on the market with a product focused on GDPR compliance for websites. Those that exists are based on legacy technologies, which focus on cookies only. GDPR doesn't care about cookies, but



about your data. Where is it stored, who do you share it with etc.. SecurePrivacy is the only solution to date which takes a holistic solution to data, and not only looks at cookies."

Robot Lawyer LISA (UK): Contract drafting and intermediation

As the CEO and co-founder [Chrissie Lightfoot](#) puts it, Robot Lawyer LISA is "the world's first impartial AI lawyer". It brings lay-party contracting parties together by providing an easy-to-use platform for collaborative contract drafting with the help of an AI-powered system.

LISA speaks English, not legalese, which simplifies the drafting process. Currently, LISA can draft an NDA and property-related legal documents such as a business lease, residential lease, and lodger agreement, all based on the English law. Apart from the documents, the software provides legal and commercial knowledge support and advice in the form of Q-A.

What makes LISA stand out from the competition is its bilateral service model for two non-lawyer parties, which serves both lay person/business contracting parties at the same time, produces a final document which is non-legalese, helps the parties achieve the agreement in a very time efficient and cost-effective manner, provides non-legalese and commercial advice which is transparent to both parties throughout the entire process, and thus makes the whole approach impartial.

LISA is available for direct use through the company website by consumers and any type of business, without the need for integration. In addition, the intention is to start bundling LISA with major clients' offerings distributed via their channels. So far, the geography of clients is diverse, including even emerging economies such as Uganda and South Africa.

Interestingly, LISA operates as a 'collaborative net', with the twelve-person team spread in different countries – the UK, Ireland, US, Greece, and Brazil. "The current work structure has proven highly efficient. We may not ever have a head office," says Chrissie.

The company has been funded by five individual shareholders including Chrissie who is also a private investor with a main interest in legal AI ventures.

As with the other interviewed startups, we asked Chrissie what she thinks about the future of AI: "Within the next 15-20 years many of us will be replaced. Machines will become more advanced not only on the cognitive side but also the emotional. I have no doubt machines will be able to strategize. Already now, legal tasks are being replaced at an exponential rate. LISA, for example, replaces a human lawyer entirely (100%) whose job is to draft a legal document – currently a NDA and a handful of other complex property contracts. However, for users of LISA who are not used to (or comfortable with) vesting 100% trust in a machine we provide a network of human lawyers for them to reach out to directly from LISA and the portal for them to engage a human lawyer to confirm that all the information is correct."

LEVERTON (Germany, US, UK): AI based contract review and data analytics

LEVERTON automates contract review and supports risk analysis. "We transform unstructured documents into structured data, thus providing more transparency for the end user," – says [Tom Braegelmann](#), General Counsel. "One big problem today is that lawyers use MS Word. We simply extend a traditional paper format to the screen. Only humans can understand what is written there,



since all this data is unstructured. The whole culture of how we create and manage e-documents is wrong, since it leads to huge amounts of unstructured data and, hence, less transparency.”

LEVERTON’s AI currently works primarily with real estate documents such as lease files. Having received a document, the AI extracts relevant data points from it: e.g. tenant’s name, rental area, termination rights, renewal date, etc. This extracted data is then stored in a structured data repository and can be exported into a CVS sheet or fed into other target systems, e.g. SAP ERP.

Deep learning is at the core of LEVERTON’s AI. The software currently supports various languages such as English, German, Spanish, French, Polish, and many others.

LEVERTON can be used by different stakeholders in the real estate industry: from lawyers dealing with real estate due diligence to real estate service providers, investment firms or corporate real estate managers.

Being asked what the future holds for AI in legal profession, Tom replies: “It’s a very political question. If AI moves on to providing legal advice, this would require constant tweaking and human control. Depending on a legal system, new regulations may appear, which would often cause lots of confusion at the beginning.”

LawGeex (Israel): Contract review and approval

Founded in 2014, LawGeex is trying to answer the question “Can I sign this?” The software uses machine learning to automate review and approval of high-volume low-value contracts, such as NDAs, procurement contracts, software license agreements – work that usually takes much of lawyers’ time. LawGeex instantly processes a submitted contract and flags potential issues. The software was trained on tens of thousands of documents.

Targeting the US, UK and other English-speaking markets, LawGeex’s software can process documents only in English. As the Communications Director [Jonathan Marciano](#) puts it, “We do one very complex legal task, and do it well”.

Interestingly, LawGeex utilises a new type of AI whose “mother tongue” is the formal language of legalese, which is technically not a natural language.

Clientele comprises mostly in-house counsels.

So far the company has raised 9.5 million dollars from American, Japanese and Israeli investors.

As regards their plans for the future, LawGeex will try to diversify their service portfolio. Jonathan says: “We want to go into more complex agreements, different languages, make things more efficient and speed them up.”

rfrnz (Germany): Contract review and risk analysis

Rfrnz uses machine learning and natural language processing to analyse different types of contracts and highlight contractual risks and deviations from market standards.

Both German and English languages are supported, “but we are flexible,” says the CEO and co-founder [Sven Alemann](#). “Depending on how much data we have, we can train the software in other languages.”



While most of its competitors are focusing on specific markets, Rfrnz claims that it is not bound to any specific languages or contract types.

Rfrnz is funded primarily with a government grant. Seed round is expected to be completed in Q1 2018.

To the question how AI will play out in the long run, Sven answers that AI will most likely augment lawyers and make them more efficient. AI may replace some of the boring work like contract analysis so that lawyers can concentrate on solving complex problems that require creative thinking. “Everyone will benefit from it.” With the advent of AI come new challenges, however: “Law firms will need to come up with new ways to educate junior lawyers who are now trained by doing the work that will soon be done by AI. Universities will also need to teach law students how to use new technologies, so that legal professionals start their practice equipped with all the relevant knowledge,” says Sven.

Rfrnz is at a pilot stage, working on pilot projects with some major corporates in Germany (the names to be announced soon).



III. Legal industry perspective

Having interviewed the startups, it's time to ask senior lawyers and legal technologists about their current standing on LegalTech.

[Magnus Steen \(Sweden\), CEO and founder of Contract Business Intelligence \(now transforming into SKYE Contracts\), contract lawyer with 20+ years of experience](#)

SKYE Contracts is a contract management consulting firm. AI for contract review is part of CBI's offering through partnerships with legal AI service providers. As Magnus explains, "AI is helpful when dealing with large amounts of contracts. In some organizations, the corpus of legal documents reaches thousands. When one has a base of documents this large, one needs to move away from reviewing each and every agreement and instead have an analytics view on these contracts. What AI does is that it takes text to data points and allows to use a contract for analytics."

Magnus identifies the following main challenges for a Nordic LegalTech startup operating in the contracts space: "Technology is far enough developed to be exploited. The only thing is slow user adoption, which is caused by insufficient UX, the lack of clarity of what a solution is about and what it should be used for, and that most of the available tools are not single-user-based but are for corporate solutions where the creation of a contracts dataset for AI is a decision that needs some time for the management to take."

We asked Magnus about the common confusion between AI and automation. "These are two sides of the same coin. Automation is a tool for automating something. AI, in turn, can read from a large dataset and understand something. To be considered AI, a machine must start thinking instead of simply automating."

The best way about legal AI for contracts, according to Magnus, is taking away a lot of boring work. "First, it will drive standardization in the marketplace. All contracts have at least 80% degree of commonality. Second, efficiency in the market will be achieved by eliminating unwanted and unnecessary work in this field." There are downsides too, however: "Currently junior contract lawyers receive legal training by doing contract review that will eventually be handled by AI. The question is how we will need to educate these young professionals after AI takes over."

Magnus also gives advice to early stage LegalTech entrepreneurs in the contracts field: "Try to understand how your offering can help a customer. Remember that you work with risk-averse people. If your solution targets B2B customers, it is hard to get sales unless you offer a niche product. In general, be focused on a specific problem and don't go too broad, for example by trying to combine a full suite of contract management and signing tools. There are plenty of tools in the market place already."

We conclude with Magnus' thoughts about AI in the long run: "AI will offer complementary tools and will not replace lawyers. The legal profession will not go away. The question is rather what impact AI will have on certain groups within legal and semi-legal areas. A highly valued trusted advisor will be there always, but what will AI do to partners, senior lawyers, newly employed? Contract review work, which is a large part of junior contract lawyers' legal training, will be done by machines. In this regard, the challenge is how we should train these lawyers in the future. Mid-level lawyers will be affected too, and most of them will become trusted advisors. Partners will have to adapt to using new tools. In-



house lawyers will have the possibility to do more strategic high-value work, since the boring work will be outsourced to machines. All this is not a matter of 'If' but rather a matter of 'When?'"

Charlotte Gerrish (France), Founding Lawyer at Gerrish Legal (IT, IP, privacy, contract Law, dispute resolution, European, common and civil law, UK-certified)

In her previous role, Charlotte was a Senior Legal Counsel at [SThree](#), a publicly listed international staffing and recruiting company, and was part of the innovation committee. The committee was a recent initiative, aiming to provide expert evaluation of the latest technologies.

These expert insights have led to SThree's current work on the implementation of an AI-based system for contract drafting and management. The system is partially developed in-house. The key challenge is designing a seamless workflow across all jurisdictions, since there are different statutory obligations to be met with regard to process and discovery. Charlotte has taken this insight with her back into private practice.

Now Charlotte has founded [her own commercial law firm](#), and we ask what AI tool would Charlotte prefer to use in her practice: "Having a digital secretary that helps you manage client meetings, emails and correspondence, draft basic documents and letters would be fantastic. Another area where AI could find itself useful is arbitration, e.g. when an AI system is used for gathering electronic evidence. To illustrate, there is a recent case where a French court relied on a website's source code to check the limitation date for bringing a claim; this is what AI could do in terms of evidence gathering."

As regards the biggest challenges for LegalTech startups in France, Charlotte identifies such as "the very protective employment regime and traditionally non-adaptive regulatory environment, although recently and particularly under the presidency of Macron, things are changing and tech-friendly, start-up and entrepreneur-focused initiatives and legislation are being introduced".

Charlotte also gives advice to LegalTech startups that plan to approach corporates and law firms with their offering: "Have a good understanding of what it is like to be a lawyer in practice. Know the practice area you design your solution for."

Traditionally, we are curious what our interviewees think about AI in the long run. "A mixture of augmentation and complete replacement. Basic tasks, such as work usually performed by secretaries and paralegals, will probably be replaced by AI. At the same time, there are such issues as political, commercial, social-economic, etc., that machine might not be able to take into account in the process of decision-making. In this aspect, when a holistic picture is required to make a correct decision, human involvement will still be required," Charlotte says. "In addition, the evolution of AI will completely change the way law firms operate. They could transform into tech firms that provide legal services. As an analogy, Pizza Hut is now calling itself a tech firm, since everything is done through their app."

Ricardo Normand (Brazil), venture capital lawyer, MBA, LegalTech advisor, former manager of a VC fund focusing on technology startups

According to Ricardo, the key challenges for LegalTech AI companies operating in Brazil are the heavy regulation and the resulting lack of technology awareness: "The legal services market is heavily regulated by OAB (our bar association), and law firms are very restricted in their approach to service



delivery. They are getting outdated from my perspective. 99% of Brazilian law firms know nothing about AI or legal automation processes.”

As regards the current LegalTech landscape in Brazil, “the vast majority of the available LegalTech solutions are not AI- but rather automation-based”. Ricardo names a couple of such companies: [Linte](#) (invested in by [500 Startups](#)), a SaaS platform that helps businesses with document preparation for class action lawsuits, and [Luva](#), which is basically an “Uber for law firms” where lawyers are involved as contractors, not employees.

Ricardo sees the biggest potential for legal AI in Brazil in the field of alternative dispute resolution for small claims. “This sphere is not heavily regulated, therefore non-lawyers can more actively participate. For example, having an AI-powered ADR platform for small claims, which also works from mobile, would be so useful.”

Heavy regulation also appears to be the main reason why Brazilian investors are so reluctant to invest in local LegalTech startups. Ricardo sees a potential solution to the regulatory hurdle in a more active dialogue with the bar association: “Let’s be closer to them, so that they can learn more about new technologies before they try to ban it.”

[Raymond Blijd \(Netherlands\), LegalTech innovator, lawyer and software developer, the founder of Legalcomplex and cofounder of Legalpioneer](#)

“The key to faster adoption of AI by law firms is thinking what AI will help us accomplish and what problems it will solve,” Raymond comments on the current pace of legal AI adoption.

Raymond predicts that AI will eventually replace many lawyers: “We still loved music even after music file formats and electronic sampling were invented. So we don’t need live performances with real music instruments to enjoy it anymore. AI will handle many routine and complex tasks and will transform the legal profession, where legal services will be provided in new and different ways by AI.”

Raymond’s advice to early-stage LegalTech entrepreneurs: “Focus on any industry outside the legal industry. Support business and individuals in solving their problems, not those of legal professionals. When LegalTech only supports legal professionals, we are just reinforcing the status quo. That is why we have LegalTech startups emerge that are created by non-lawyers, such as former customers who claim that ‘lawyers do not understand’. So we should engage a wider audience and remember that the ultimate goal of a legal pioneer is to fight for a fair society not just increasing margins and managing risks.”

Disclaimer: Views expressed by Raymond Blijd are his own and unique to him and do not reflect the views of his employer or any of its subsidiaries or partners. Legalcomplex, and its products like Legalpioneer are independent initiatives owned by Raymond Blijd.

[Edward Andrew \(Australia\), lawyer, LegalTech consultant, legal career coach, podcaster, entrepreneur](#)

According to Edward, one does not need to be a lawyer to found a LegalTech startup: “First, you need to be curious about a particular problem. Then you design how to fix it. Then you see what skillsets you need for the solution.”



Talking about the current interest from investors in LegalTech companies, Andrew notes that the fact that law firms have started to incubate themselves, like [Allen & Overy](#) is doing with its [Fuse](#), a recently launched LegalTech incubator, is a clear sign that the investors' interest is growing. "Legal is a trillion-dollar-a-year industry. Just Fuse alone took 8 startups, including [RAVN](#) [recently acquired by [iManage](#)], into their program."

Andrew identifies the following biggest challenges for LegalTech companies: "The biggest challenge is understanding who is going to use your services. The nature of legal practice and selling to legal clients is different: they are very slow in adapting to change, except for when they feel pressure on their revenue streams. One needs to understand that an enterprise sale can take 6-18 months to close a deal because of the way procurement works in law firms. You are selling to slow adapters who don't necessarily have people who understand the services you are offering or have the immediate budget. Even if you are selling to tech corporates, they engage faster but corporate sales still take a long time. Another way to succeed in sales is to develop a service for consumers, in which case you can sell it tomorrow, but you still need to make sure that your marketing and sales strategy works and you are not over-focusing on the product like so many startups do."

Finally, Andrew concludes with his advice to early stage LegalTech startup founders: "Think about who is going to consume your service and how they will use it. Don't focus too much on the product, think also about how you will market it and whom you will sell it to. You can create the most beautiful app that doesn't sell and is not commercially viable. As regards the product adoption, there are no universal rules: for example, from my own business experience, everything that worked in the UK didn't work in Australia, and the other way around. That's why you should know your market and study your demographics."



IV. Synch's perspective

[Jim Runsten, CEO and founder of Synch](#): “AI definitely have the potential of revolutionizing the legal profession. We see more areas of legal practice being disrupted by smart applications of machine learning-based systems that are capable of ‘connecting the dots’ across vast amounts of data and continuously learn and self-improve. Although most of legal AI solutions are now focused on contract processing, this will probably change with the evolution of technology and the exponential increase in computing power. Traditionally, the legal profession has been conservative and resistant to change, but this is slowly changing with the common realization that technology is here to stay and that AI will give more than it will take. At Synch we have always been curious and pragmatic about the utility of new technology, as reflected by having the SynchLab as well in the recent expansion of our Digital Services business unit with two developers – Andres Holm-Jensen and Sergii Shcherbak – both having a strong legal background. This collaboration helps us to diversify and increase the value of our offering, have more insights into service models of technology-oriented clients, evaluate new technologies available in the market, such as blockchain, graphical databases, and machine learning, and innovate by building our own tools for making the work process more transparent and efficient.”

[Magnus Sundqvist, Director Digital Services at Synch](#): “Synch has always valued digital. We are one of the few law firms in the Nordics with its own on-demand digital platform that enables easy access to high-quality legal tools. [WeSynch](#), since its market inception in 2015, has been embraced by our clients as an affordable, flexible and secure portal for legal advice, contract template selection and signing, and managing corporate matters. With the recent expansion of our Digital Services business unit, we are even more confident that we can provide high service quality that our technology-focused clients expect from a modern law firm. Having software development expertise in-house also allows us to aim a bit higher than being excellent at understanding digital businesses: it allows us to test the newest technology and build our own solutions on it, thus being among the first who recognizes and extracts value from it. AI is definitely something we are looking into. Its well-demonstrated ability to handle complex legal tasks such as contract review and risk analysis makes it clear that disruption by AI is already happening, and to stay relevant, law firms should take part in it.”

[Sergii Shcherbak, Developer Digital Services](#) at Synch with both legal and software development backgrounds, says that key breakthroughs in the legal services delivery will be achieved with the help of machine learning. “Deep learning, a subset of machine learning, holds great promise. Its main value is that, in theory, it can be applied to virtually any task that a lawyer can do. In practice, although very efficient open-source deep learning algorithms exist already, the main challenges are (a) gathering enough valid data and reducing the amount of ‘noise’ in those data, because ‘garbage in – garbage out’, and (b) the available computing power, required to train very deep neural networks on very large datasets, and/or the amount of time required for such training. Although the technology powering deep learning applications will be provided mostly by external vendors, some breakthroughs will come out of internal expertise. Law firms’ approach to AI is evolving from (i) ‘wait and see what happens’ to (ii) ‘we should give it a try’ and straight to (iii) ‘we should do something ourselves’. Some forward-thinking and adaptive law firms, such as Synch, have reached that latter stage when hiring AI developers, such as myself, is a priority.”



V. Conclusions

Today, AI's utility is in augmenting lawyers, automating some aspects of routine work and thus saving time. Most of current AI applications focus on document processing, be it contract review or drafting. Probably, this is due to the following reasons. First, a legal document's text data is well-structured and can be collected and organized more efficiently than other types of data in the first place. Second, 'tangible' forms of legal advice such as document drafting and analysis provide for more transparency and accountability, which results in more market trust in contract-focused AI solutions. Third, contract work is one of those 'boring' tasks for both sides of the spectrum – lawyers and their customers – and AI solutions that handle this task, thus allowing to focus on more high-value work such as business strategy, have continuous market demand. Another observation is that most legal AI vendors disclaim liability for their services by including boilerplate 'as-is' and 'not-legal-advice' clauses in their terms. Probably, the main reason is that commercialized Legal AI is still in its early days and the technology is not advanced enough to meet high standards of legal advice provided by human lawyers. More data and time are required for AI solutions, especially those incorporating machine learning, to reduce the probability of error and thus mitigate the chances of output being incorrect. Only then will legal AI vendors be able to take a calculated risk of accepting liability for their services' content and quality, which will increase consumer trust and foster market adoption. Overall, technological limitations seem to be the main cause of today's "AI as a tool" approach.

What role AI will play tomorrow is another question. Opinions have diverged: some experts think that AI will always play second to a lawyer, while others are confident that expertise augmentation is only the first step and eventually AI will replace if not all but some categories of lawyers completely. Probably, the latter view is correct. Given the recent developments in technology, faster forms of computing⁴, ever-evolving power and storage capabilities, and the continuously growing corpus of data collected by the constantly increasing variety of IoT connected devices, it is only a matter of time when AI will take over most of the tasks that lawyers currently do. Intelligent systems have come a long way from hardcoded rule-based automation to artificial intelligence which can autonomously derive patterns and determine probabilities from a presented set of data. The AI of tomorrow will amplify its skill of self-learning with the help of new technologies, which will allow the machine to function better, faster and at a much larger scale and combine multiple cross-domain use cases into one application, enabling a 'full picture' that today can be seen only by human lawyers.

⁴ <https://www.technologyreview.com/s/609804/a-startup-uses-quantum-computing-to-boost-machine-learning/>

