

Chat AIs and the 21st Century Law Firm: Competitive advantage through technology



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Recently, there have been a lot of hypes about ChatGPT, a natural language artificial intelligence chatbot AI (Artificial Intelligence) that can allegedly pass law exams and do a host of other things. ChatGPT and other similar large language model bots can generate meaningful and engaging response to seemingly limitless number of topics, including legal questions.

So, what are these Chat AIs? What are the strengths and limitations of current versions of these AIs? How can a modern law firm harness their immense database and vocabulary for legal research, content generation and ultimately obtain competitive advantage over its competitors?

The technology behind Chat AIs and natural language processing

Chat AIs are computer programmes that are designed to communicate with humans through natural language. The technology behind these chatbots is called Natural Language Processing (NLP), which is a subfield of artificial intelligence and computer science that focuses on enabling computers to understand, interpret, and generate human languages.



NLP involves a combination of techniques, including machine learning, statistical modelling, and linguistics, to analyse and understand human languages. These techniques enable chatbots to recognise patterns in languages, identify the meaning behind words and phrases, and generate seemingly intelligent responses.

There are currently many different Chat AIs in the market (some paid and some free), although by far the highest profile is ChatGPT. All the Chat AIs are based on the third generation of language models (GPT-3). This is currently the most advanced and sophisticated AI language model available.

GPT-3 based AIs can perform a wide range of natural human responses including text generation, text completion, question answering, sentiment analysis and translations.

NLP technology is moving very fast and all large tech companies are pouring resources into developing NLP chatbots. As NLP technology continues to advance, the capabilities of Chat AIs will only become more sophisticated, allowing for even more natural and human-like interactions between humans and machines.

The time is ripe for the modern law firm to embrace this technology.

Using Chat AIs in the practice of law

Chat AIs can provide lawyers with quick and easy access to information such as case law, precedents, and other legal materials. Using NLP and machine learning algorithms, they can interpret complex questions asked in natural language and generate responses which are easily understandable in normal human language.

Before Chat AI, legal research using search engines usually involves a lawyer manually sifting through vast amounts of results generated by the search engines and reading those materials; a process that can be time-consuming. Chat AIs analyse all these materials and deliver their answers in a matter of seconds. By analysing the language and context of legal documents, Chat AIs can identify relevant legal concepts and match them to similar cases or precedents. This process allows lawyers to quickly find information, case laws and precedents.

These are some examples how Chat AIs can help lawyers in their legal practices:

- **Finding case law:** Chat AIs can quickly search and summarise relevant case law based on specific queries or legal issues. It helps by identifying relevant cases and highlighting key legal principles and arguments.

For example (see Figure 1), we enlisted Youchat's help to find two recent Hong Kong cases and it did so easily!

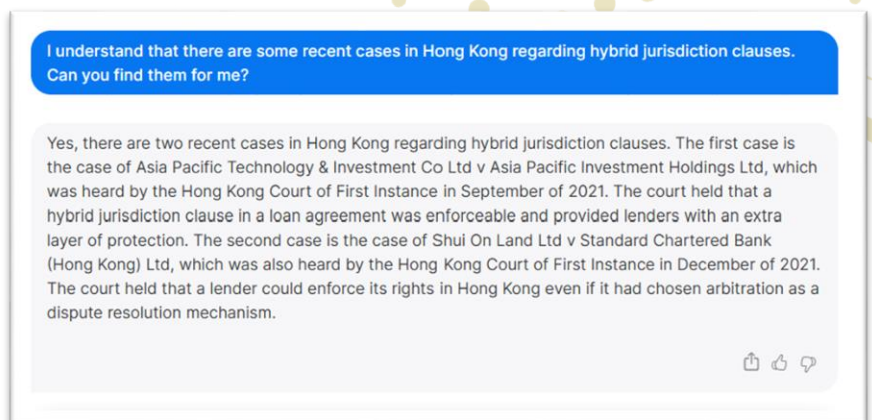


Figure 1: Youchat

▪ **Finding relevant statutory provisions:**

Chat AIs can analyse and extract information from complex legal statutes and regulations, making it easier for lawyers to interpret and apply the law. It can also help identify relevant statutes based on specific legal issues or queries.

For example (see Figure 2), we enlisted ChatGPT's help to find relevant provisions in Hong Kong's Securities and Future Ordinance regarding collective investment schemes.

▪ **Document analysis:**

Chat AIs can analyse documents such as contracts and extract information from them, including key clauses, obligations, and provisions. It can help to identify potential issues or risks in contracts and provide insights into drafting better agreements.

For example (see Figure 3), we enlisted ChatGPT's help identify key provisions in a distributorship agreement.

▪ **Optimising search engines searches:**

By first using a Chat AI, lawyers can quickly narrow the parameters of their searches to find relevant articles and authorities they need and then zoom in using appropriate search engines. It is especially important not to rely totally on Chat AIs as many Chat AIs (such as ChatGPT) do not disclose the sources of their information, and therefore lack of transparency and audit trails.

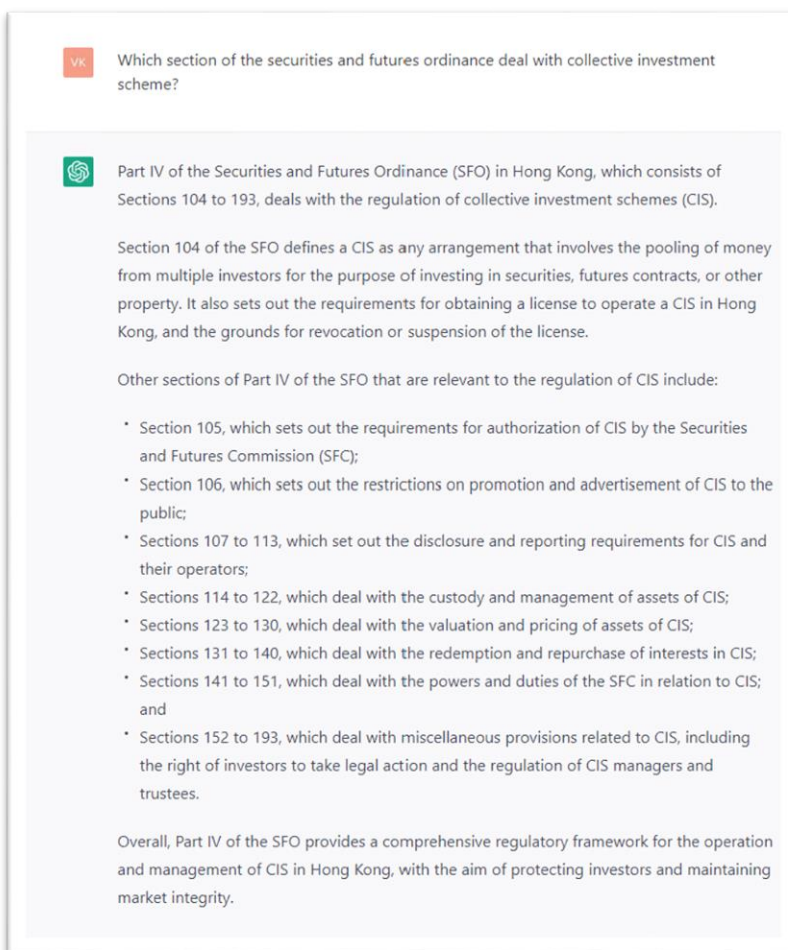


Figure 2: ChatGPT

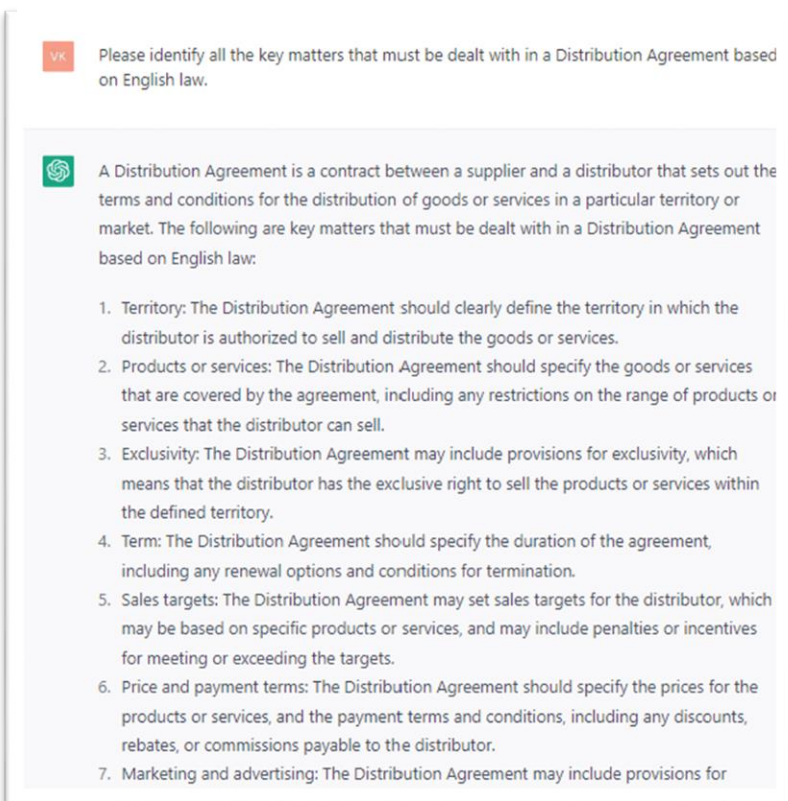


Figure 3: ChatGPT

- **Legal drafting:** Chat AIs can help draft all sorts of legal documents in the language of the user's choice. The current versions of the documents generated tend to be short, concise and often lacking in substance and may not be entirely accurate. While this is so, these documents nonetheless provide a very good foundation from which legal documents can be generated and improved.

For example (see Figure 4), we enlisted ChatSonic's help to draft an enduring power of attorney governed by Hong Kong law.

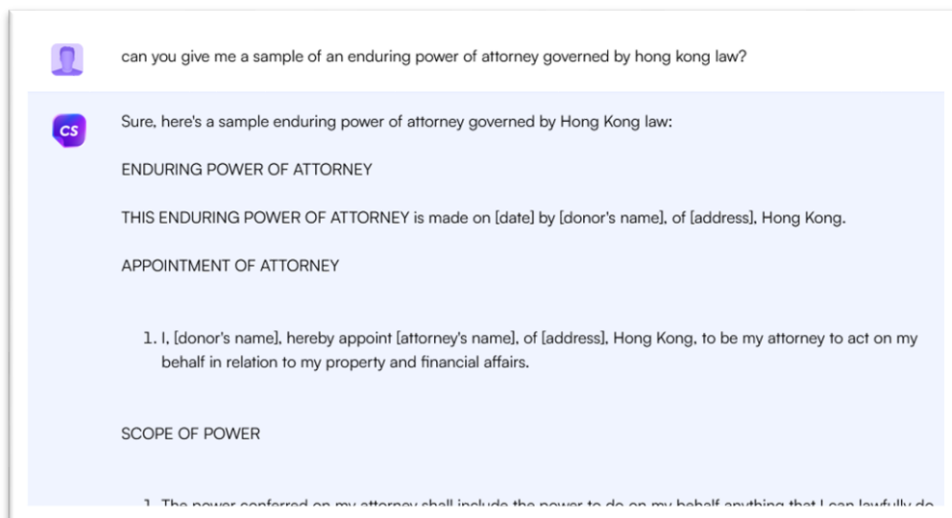


Figure 4: ChatSonic

Limitations of current AIs

Despite the power of this generation of Chat AIs and the many benefits things they can do, there are some significant limitations which must be addressed if NLP AIs were to prevail. These include:

- **Lack of contextual understanding:** While current Chat AIs can understand the meaning of words and phrases, they may not always be able to interpret the nuance or context of legal concepts. They may not be able to pick up on subtle cues that humans use to convey meaning, which can lead to inaccurate or non-sensical content.
- **Limited access to data sources:** Chat AIs require access to large volumes of data to effectively analyse and generate content. As set out earlier, specialised Chat AIs are still at their infancies. We do not currently know any Chat AI specifically targeting the legal profession generally (paid or otherwise). Without better and more specific content and the ability to pool proprietary data of the best of law firms, the quality of the legal information which current Chat AIs can generate is severely hampered. Worse, if the data source is incomplete or biased, Chat AIs can give inaccurate results and flawed recommendations.
- **Lack of creativity:** Chat AIs rely on predefined rules and algorithms to generate content, which limits their abilities to be creative or original. Frequent users of Chat AIs will find that a particular Chat AI will frequently write in a particular manner, although a number of Chat AIs claim that their chatbots can be trained to write in a particular human's style.
- **Lack of emotional quotient:** Current Chat AIs are not programmed to interpret human emotions, tones and social cues. This can limit their ability to connect with users on a personal level and respond appropriately to their needs.
- **Limited ability to Interpret visuals:** Chat AIs are typically text-based, which means that they may struggle to interpret visual content such as images, charts, and graphs.

As the technology continues to evolve, it is likely that many of these limitations will be addressed in future, and Chat AIs will become an even more effective tools for the legal profession.

Chat AIs as legal marketing tools

One of the main most intriguing use of Chat AIs is their ability to create engaging content quickly and in a manner which we (human) are accustomed to.

Specialised Chat AIs (such as those dedicated to a particular industry) are still in their infancies. However, all Chat AIs are now capable of generating informative short articles, blogs, marketing emails, short answers, and other types of content in a flash. While their content will be too general to be substituted for true legal advice, they are excellent generating marketing content which can be targeted to a particular audience. Some Chat AIs can even generate video clips and pictures for marketing content.

Ultimately, a law firm is a business, and every business needs publicity. Writing legal updates and articles have been the mainstay of legal marketing for aeon. However, in the current days, many lawyers already find themselves over-worked and have precious little time for marketing content creation and delivery.

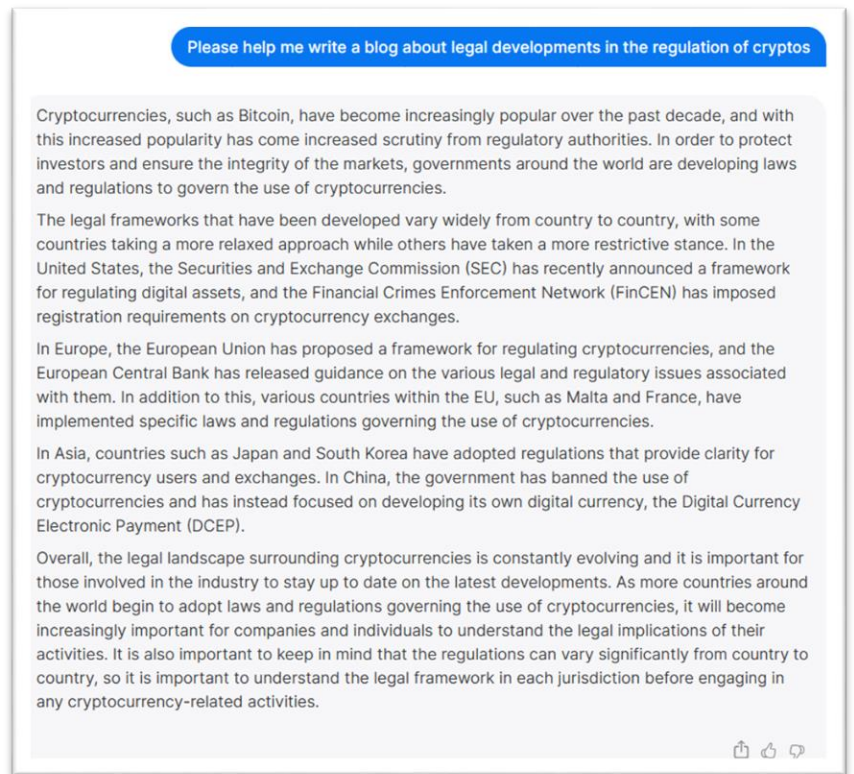


Figure 5: YouChat

Chat AIs can help lawyers to reduce the time needed to generate engaging marketing content.

Potential risks in being overly reliant on Chat AIs

While Chat AIs offer many benefits for legal research and content creation, the current generation of Chat AIs are still at their infancies and should not be blindly relied upon.

The current generation of Chat AIs frequently provides inaccurate information. Their levels of analyses are also often shallow and wanting. In addition, even though the content they generate reads well, the content is often bland or generic, lacks originality and of relatively mediocre quality.

There is a lack of transparency and accountability in the information generated by Chat AIs. For example, ChatGPT does not reveal the source from which it derived its responses and hence it is impossible to determine *per se* whether a particular response is accurate or reasonable. If decision-making is delegated to such Chat AIs, who should be accountable for an ill-judged decision?

Chat AIs are ultimately machines designed to analyse data within a specific set of parameters. If the data used to train the relevant Chat AI is biased, incomplete, or outdated, the output will not be accurate. For example, at the time of writing the data used to train ChatGPT was updated to

September 2021. Anything occurring after September 2021 would not have been captured by it¹. As more Chat AIs are developed, we need to be more mindful about how and where the training data of these models are collective before relying on them, or we may unconsciously perpetrate further biasness and discrimination.

The current generation of Chat AIs do not yet have the human creativity, judgment and 'lateral thinking' to know when they are wrong. Blindly relying on them can easily damage a law firm's credibility and reputation.

Other issues with using Chat AIs

Chat AIs can't be bias. Can it?

According to the creators of the various Chat AIs we have reviewed, their algorithms are designed to be unbiased. Nonetheless, they can still exhibit bias due to the data they are trained on. If that data contains bias or reflects society's prejudices, the chatbot may well generate biased results.

So, a Chat AI that is trained using data from China will exhibit a different perspective to a Chat AI that uses US based data, even if they use identical algorithms.

Given that we have no control over the training data, we must be vigilant to a Chat AI's unconscious biasness resulting from the information it is fed.

For example (see Figure 6), we asked YouChat to write about the National Security Law of Hong Kong. While the information provided may be factually correct, it presents only a single side of the argument, and nothing about the views from China and Hong Kong themselves. This is an example how the data used to train an AI model can skew the way it responds.

Are we at risk of infringing intellectual property of others?

Much have been discussed in the public arena about potential theft of intellectual property by chatbots.

Chat AIs require a large amount of training data. Most of these will come from the web and other online contents. Some Chat AIs specifically say that they use data from Google searches. OpenAI (the creator of ChatGPT) has not specifically disclosed whether ChatGPT uses data from Google

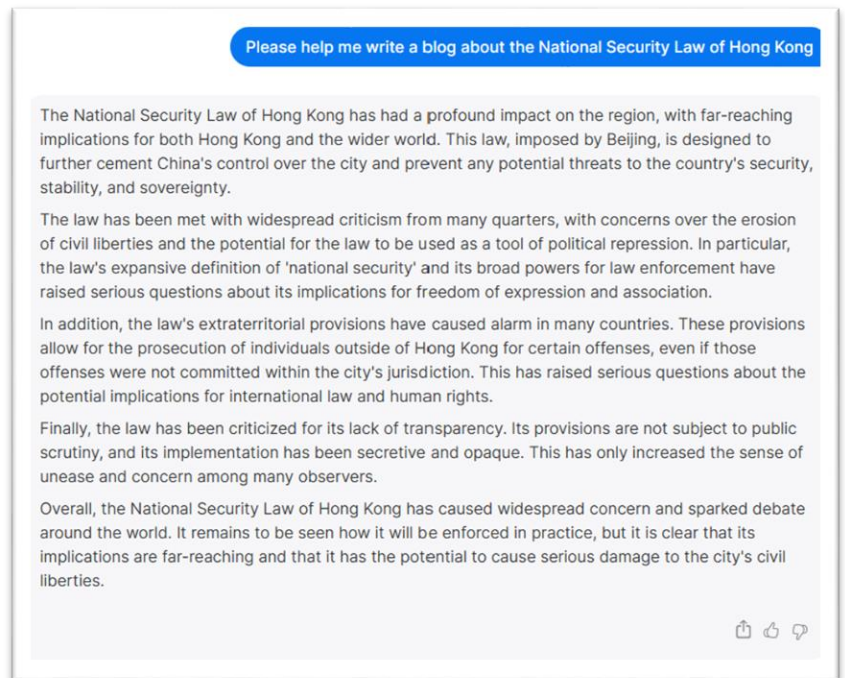


Figure 6: YouChat

¹ It should be noted that some Chat AIs now also refer to Google data for their content, thus allowing these Chat AIs to 'update' themselves using the latest information in the web.

searches. However, it is believed that some of the training data used by ChatGPT includes content from the web, which may include pages from Google search results.

While information from the web may be publicly available, such information may also be protected by copyright.

According to ChatSonic, it reduces the risk of theft of intellectual property through several measures by:

- Training its AI model on a diverse and representative dataset that does not contain copyrighted or trademarked material.
- Using NLP techniques and algorithms to generate content that is unique and original so that the generated content is not based on any specific existing piece of intellectual property, but rather on the input prompt and the AI's analysis of it.
- Using a plagiarism checker feature that can detect any potential similarity between the generated content and existing intellectual property.

One might expect the creators of other Chat AIs to have similar protective mechanisms.

It is comforting that the creators of Chat AIs are alive to the risk of intellectual property infringements. Nonetheless, based on the current generation of Chat AIs, it is impossible for users themselves to know if the intellectual property of a creator has been infringed. When using content generated by Chat AIs in highly specific or unique circumstances, extra care should be exercised to ensure that the content is manually reviewed and checked for any similarity to existing intellectual property.

The legal lacuna – who owns the output?

So far, we are not aware of any serious discussion as to the ownership of content generated by Chat AIs. Does it belong to the user asking the question, the chatbot generating the response or the provider of the training data?

For example, if a user asks a Chat AI to write a poem, and the poem wins a literary award, who should have copyright to this poem?

At this moment, there is no clear answer. As lawyers, we must be mindful of possible development in this field.

Are there cybersecurity risks in using Chat AIs?

According to the materials from the chatbots which we have reviewed, they do not store any users' data input. Hence, some of these discussions around data security and protection of client data appears over-blown. However, it is important to note that such AIs are very quickly being deployed in conjunction with other sites and applications. Users should always be wary whether user data is collected from these third-party sites and applications before divulging confidential information and client data to them.



Conclusions - the future of legal profession in the era of NLP AIs

The future of the legal profession in the era of NLP AIs is both exciting and challenging. NLP technologies have the potential to significantly improve the speed and accuracy of legal research, drafting of legal documents, and legal marketing and content creation. However, the use of these technologies also raises important social, ethical and legal considerations.

A very large part of legal training is learning on-the-job. However, relying on Chat AIs, the amount of time spent doing legal research may well be materially reduced. There could be a pull and a push factor leading to this. As far as the pull factor is concerned, younger and generally technologically more savvy lawyers may rely more on these technologies in their research and drafting and therefore do not develop their skills in obtaining information from primary sources or drafting good documents themselves. On the other hands, clients may no longer wish to pay for good research and preparing documents. Hence, law firm are pushed to rely on these technologies to remain competitive.



Over time, reliance on Chat AIs can create a dependency on technology that can be difficult to break for law firms. This may have an adverse impact on our next generation of lawyers by limiting their abilities to draft or to think creatively and independently.

Risks nonetheless, it is impossible for law firms to resist the march of technology. To survive and be competitive, the 21st century law firms must be experts with deploying the technological tools at their disposals. Lawyers from the young to old must learn to embrace technology quickly and in a smart manner. In the world of NLP AIs, those that can master them will find a whole new world of resources, but blindly following these AIs will certainly give rise to unintended consequences and grief.

As technology evolves, the 21st century law firms will have to remain vigilant and proactive keeping abreast of these technologies. Chat AIs will become even more powerful and may displace lawyers in many areas. We will certainly need to adapt and develop new skills to remain relevant.

NLP artificial intelligence is a disruptive technology, and its evolution will have potential social and ethical implications for law firms beyond our current imagination.

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