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The “Trillion” Dollar Dream

Will advent of AI into the legal services market mark a new revolution?

BY CHANDU V. GRANDHI

Remember the tv series “Suits”? The title is quite apt given the fact that the cast appears in suits for most of the screen time. With the sassy remarks and witty dialogues, it was quite impactful, enough to make me think of jumping ships to such a career. Keeping aside my interests and the show, lets dig deeper into our legal system. Before we delve any further, let me ask – “Did you read the Indian Penal Code?” Most readers would say no. It’s not easy to read a book which is full of rules and regulations without any fictional characters or stories, not to mention the subtle differences in interpretation caused by a mere change of few words/tenses. Yet such is its

power that it helps people abide and steers the society towards a more mature and positive direction.

The scenario of real-life professionals is often quite different from those depicted in popular tv shows/series. Most of them work long hours, pouring over documents, researching similar cases, phrasing suitable arguments, prepping the clients, checking for revisions etc. to fulfill a case successfully. While such exhaustive routines are a part of their daily life, not all of them belong to the same profile. Few practitioners also work on business cases such as mergers and acquisitions, partnerships, con-

tract preparations, litigations etc. The advent of technology has undoubtedly helped them in easing the hardships, yet many tasks still consume lots of effort and time. In the field where most of the issues take years to see their verdict, the entry of AI and data analytics is expected to set newer standards.

The sheer logic-based nature of the legal framework attracts the idea of machine learning deployment, which largely are credited at deciphering such rule-based mechanism with perfection. Also, automation of manual efforts would provide space for many important discussions, especially those which cannot afford the luxury of time. We now discuss few applications of AI in the legal practice, many of which are gaining importance whilst under constant improvement.

Content Research

This includes assessment/audit of the given situation whilst keeping a keen eye for inconsistencies (both positive and negative) within the legal framework of interpretation. With the help of Natural Language Processing and Knowledge Graphs, this tiring procedure can be made more efficient. Activities like searching, highlighting, extraction of relevant information, managing documents and compiling reports can all be automated. Such automation reduces manual errors and simultaneously saves several human-hours of effort. In fact, Levetron has developed a tool which is capable of high-speed processing of contracts in 20 different languages. The financial giant JP Morgan itself has made a grand entry into this domain through the tool "COIN" (Contract Intelligence), which extracts information from contracts and agreements requiring 36k human-hours of processing within few seconds.

Despite exhaustive information availability over the internet today, its utilization to search for relevant articles and answer queries is not possible in all cases. Processing such abundant sources and extracting relevant information manually, not only overwhelms the user, but also leads to missing out on relevant and important articles. A recommendation engine tuned to the legal databases would be of great use, as one can then obtain necessary info and answers within a

short span and within few clicks. A recommendation engine developed by Ross Intelligence does the same by asking necessary questions and provides selected readings and relevant articles to the users. Ideally, one would be needing to go through all the case details, develop a summary, identify the keywords and map these to the relevant articles to develop a recommendation system. While such a gargantuan data annotation task would seem severely taxing, its utility far exceeds the magnitude of initial efforts. In fact, unsupervised topic modelling and sentiment discovery mechanisms can be leveraged to

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assist in such system's development efforts. Several other Information Retrieval methodologies can be adopted to smoothen the process of building such useful recommendation engines.

Case Verdicts

While usage of text analytics helps us in predicting the relevancy of the information we are providing, it's also possible to develop models that can predict the verdict of a case, based on pre-trained algorithms. This is similar to the prediction models we use in our daily lives, but it can be used to evaluate possible outcomes for a specific case and thereby help in taking relevant measures. AI firms like Intraspexion, Ravel Law ventured into the same to help predict the rulings and check for threats of litigations. Another firm Premonition, asserts that it can predict the case outcome by analyzing the lawyer's win rate, case duration and nature and also judge the event of a possible delay in the case with sufficient accuracy.

Models have been developed to identify which cases are more likely to settle, thereby reducing the load on the legal system. Casetext developed a program, CARA, which can help in forecasting the arguments



of the opposing counsel, useful in training new associates or expecting the unexpected. Infact, there are studies that show how recidivism can be predicted. Nevertheless, these algorithms and models need to be thoroughly evaluated on the grounds of fairness notions to mitigate any undue algorithmic bias owing to historical data used for their development. With the growing concerns about ethical AI, these applications will definitely be under the scanner soon.

Intellectual Property Registration

For any company worth its salt, IPR is essential, especially in terms of differentiating itself from the competition. The application process involves a whole deal of manual search and verification, often working against the applicant's favor due to the time sensitive nature of patent approvals. In addition, any errors from the applicant's side can result in a loss. Hence the presence of all essentials are of utmost importance during submission. Smart shell, ANAQUA studio and few other companies are working on the automation of drafting and reviewing of applications. TrademarkNow has developed an al-

gorithm for shortening the search time for clearance. With such improvement we may soon see automated approval too in the near future.

Contracts Automation & Policy Drafting

Many clients approach lawyers for drafting contracts (like NDA, Employment, MoU etc). Also other seek advocates' guidance for developing policies (Sexual Harassment, Terms of Service, Privacy policy etc) as these require serious attention to terminology involved. Yet, automation remains a possibility here, wherein, usage of a specific set of templates and identification of suitable terms from past agreements can considerably reduce the time needed for manual drafting to a matter of few minutes, with only a further review.

Crime/Criminal Detection

The financial sector, especially the banking and trading domains employ several complex algorithms used to detect fraud or chance of a criminal activity. This usage is not limited to private firms, but extends to several government organizations which use them in identify companies engaging in such activi-

ties. It is a common fact that several machine learning algorithms are in deployment towards these efforts of fraud detection. Apart from the cyber crime surveillance, physically recognizing convicts through computer vision and video analytics by using deep learning can be quite resourceful. They can help in identifying a person or even a group of individuals from a captured picture or footage. Many nations have deployed this technology to identify perpetrators to speed up the legal procedure. Skylark Labs has signed deals with the US and Indian government in deployment of drones in order to enforce social distancing norms. China is quite famous for its deployment of social surveillance measures across several parts of the nation. During the pandemic, it has been utilizing these in identifying and shaming people who weren't using masks in public. Several companies have come up with trained models which can identify people even with the presence of masks.

Digital Advocacy

With the current NLP and audio analytic techniques, several voice activated softwares have been created. At the current pace of growth in AI technology and automated programming, the prospect of a digital lawyer to interview users about legal issues, submit paperwork and take up litigations seems a reality not so far in the near future. Nevertheless, such a possibility would mean overcoming several technical and legal challenges. Yet, once developed these may be deployed to set the legal charges free of cost. This will reduce the burden on the current system while truly democratizing the access to justice for every citizen.

Critique

While all the above points suggest great changes in the legal system with the entry of AI, there are still a few factors which need to be considered for evaluating its benefits.

- Although these automation models are much efficient, they still rely on humans for generating, curating and cataloging, modelling the data.
- Computational resources required would put a dent in the finances with only little

or delayed returns as current AI systems require highly skilled workforce to implement effectively.

- Classifying cases whose verdicts involve additional factors such as mutual settlements, political complications, emotional pleas etc. are difficult.
- Bias is one issue whose presence may result in severe ethical issues.
- Current advancements in NLP are yet to satisfactorily detect sarcasm, deploy emotions, humanitarian thought process, mimicking human behavior, making it difficult to extract important features involved in the case.
- Digital/Robot lawyers need a deep understanding of society's working, great deal of language processing and quick responses, not to mention the most essential human interaction ability, making it difficult to eliminate the human factor from the equation
- For complicated cases, the complexity in giving out verdict due to the nature of the crimes, behavior of the defendants, losses to the victims, severity of occurrence, past records of similar verdicts need to be accounted for, something which most models are not usually trained to handle.
- The rule of law mandates to not punish any innocent person. This needs the absence of any false positives and false negative (foregoing the guilty thereby punishing an innocent in their place) outcomes in order to maintain the societal trust in the system.
- Most AI models are black boxes which results in accountability issues as they cannot be evaluated without in depth statistical acumen to get reasonable/satisfactory answers.
- Blind trust in the output of the AI model without knowledge of the basic framework of underlying assumptions and operating conditions can often lead to unpleasant results.

Despite the advances in legal informatics and computational law, an economically viable solution addressing the current complexity is yet to be realized. Still, the trillion-dollar legal services market might soon witness its next big revolution in the decade ahead.