DEMYSTIFYING THE ROLE OF ARTIFICIAL INTELLIGENCE IN LEGAL PRACTICE

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ABSTRACT

Artificial Intelligence in its literal sense means machine intelligence which is used to ease the workload of Humans. Marvin Lee Minsky and John McCarthy, two American computer scientists stated that Artificial Intelligence is when a machine uses its own intelligence to perform a task. Artificial Intelligence is designed to portray human-like qualities such as planning, reasoning, problem solving, speech recognition, thinking and many more activities; the difference being it is enabled to work at a much faster and more efficient way. The goal of this study is to find out the different complications an Artificial Intelligence can overcome in the legal field and the uses of Artificial Intelligence in the legal field. The use of Artificial Intelligence in the legal field can replace the paralegals. It can be used to overcome the difficulty of finding precedents of a case or to draft a contract for a company or between two individuals, it can also be used to scrutinize the terms of contract between two parties. The risk of error will be reduced to a bare minimum with the help of artificial intelligence. This paper also reviews the various Artificial Intelligence such as ROSS intelligence, KiraSystems, LawGeex and eBrevia which are put to use in the

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legal field. This paper focuses on exploring the various functions of Artificial Intelligence in the legal field. It is anticipated that this paper will give a brief understanding to the people about Artificial Intelligence and its application in the legal practice.

Keywords: *Artificial Intelligence, legal practice, Error, machine, Human qualities, efficient.*

I.   INTRODUCTION

Artificial intelligence in its literal sense means machine intelligence. It is the answer to the question "what if computers behaved like humans?" Humans are the most complicated beings on earth and they have brought so many advancements in the field of science and technology to solve their complicity. The use of computers has been prevailing for a very long time in legal practice for the purposes of storing, drafting and reviewing contracts. In the progression stage of law materials such as casebooks, textbooks, case reports, loose legal sheets, diaries were used for storing legal information which was an essential part of a lawyer's library. Managing and storing the data was an exhaustive and monotonous as everything was to be stored in the form of hard copy. In order to save time and human labor which is being spent on searching, storing and reviewing of cases there was a technological breakthrough in which digital libraries, digital materials and electronic instruments of storage such as Pen-drives, CD-ROMS, Cloud storage, Hard disks, were founded. This attracted the legal firms and lawyers towards computerization. There was a rapid increase of lawyers and clients with the advent of digital libraries such as Manupatra, Lexis Nexis, SCC Online, Casemine, and many more.[1] With the advent of Artificial Intelligence, the retrieving and processing of stored data has become easier than ever. Artificial Intelligence absorbs knowledge from its surroundings and learns to get better every day. It was created to ease the pressure on the people and making things easier for them. Robot and other machines which use artificial

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[1] https://www.nytimes.com/2017/03/19/technology/lawyers-artificial-intelligence.html.

intelligence were created to get the work done faster.[2] The history of artificial intelligence dates back to the year 1956 in the campus of Dartmouth college. Artificial intelligence has seen a lot of growth from the time of its inception, there had also been an AI winter which was caused due to the government withdrawing itself and its resource from the AI project.[3] Marvin lee Minsky, a cognitive American scientist who was concerned mainly with artificial intelligence and John McCarthy, an American computer scientist, stated that artificial intelligence is when a machine uses its own intelligence to perform a task4.

There are two kinds of artificial intelligence, Narrow artificial intelligence and General artificial intelligence. Narrow AI is found in all the systems around us, they are used in speech and text recognition, virtual assistants and many more. These types of artificial intelligence are taught to do a specific or a narrow work. On the other hand, General AI is more flexible and work like humans. They are not assigned to do a specific task. They are programmed to function and work like human beings5. Artificial intelligence is used in various fields such as News anchoring (Erica robot), Legal field (ROSS) and many others. Though artificial intelligence is making the lives of people easier it is also at the same time knocking down the work-life of many paralegals and labors by snatching their positions in their respective work place. Many labors have been replaced with machines and also are functioned to count and categorize things as the humans do but at a faster pace. Advanced machines are being used by many companies to get their work done efficiently.

II.   ARTIFICIAL INTELLIGENCE IN THE LEGAL FIELD

Leibniz, who was one of the grandfathers of AI and a lawyer once said: *'It is unworthy of excellent men to lose hours like slaves in the labor of calculation which could safely be relegated to anyone else if machines were*

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[2] https://www.livelaw.in/will-lawyers-judges-replaced-artificial-intelligence-ai/
[3] https://www.lawcareers.net/Information/CommercialQuestion/Olswang-LLP-Artificial-Intelligence-and-the- legal-profession.

used.[4] Accuracy and precision, the tool which is found only in an adroit lawyer, can be found in abundance in an Artificial Intelligence. With the help of predictive coding and various other tools the information can be reviewed in real- time. The accuracy and precision of AI enables the lawyers to be more confident while providing their clients with advice on a particular case. Law firms employing AI can easily evaluate the end results and safeguard their clients from possible risks arising out of the case, at the same time these firms can also shield their reputation. All the tedious and complex work of a legal firm, which requires the effort of months or sometimes even years together, can be easily assessed, categorized and completed with the help of Artificial Intelligence within a matter of few days. Time management plays a crucial role in the world of a lawyer. A lawyer needs to manage his time efficiently so that he doesn't miss out on the necessary deadlines and completes the work on or before time. Lawyers need to scrutinize large number of documents and search for errors in a contract, this requires enormous amount of time. With the use of Artificial Intelligence, the time that is spent on such tedious tasks can be saved.[5] Natural data processing helps the AI to scrutinize and edit errors in large number of documents and contracts within a short span of time, this can help the lawyers to save time and focus on other important things. The work done by an Artificial Intelligence is unerringly precise. Natural language feature of Artificial Intelligence helps in keeping the language legal throughout the contract and with the help of contract comparison tools the AI finds for missing clauses and loopholes in a contract by comparing them with similarcontracts.

III. RESTRUCTURING E-DISCOVERY WITH THE HELP OF AI

In the pre-technological period, discovery meant pre-trial procedure in a civil or criminal case where the parties to a case had to exchange evidences with the opposition side. Evidences at the time of technological deficiency meant loads and loads of papers and other tangible evidence. With the

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[4] Ibid.
[5] https://www.sydneycriminallawyers.com.au/blog/the-importance-of-time-management-in-legal-practise/

advancements in technology throughout the years, discovery has been completely transformed into Electronically Stored Information (ESI). The data is now electronically stored in the computer systems via various means. E-discovery is a mechanism which lets the parties to preserve, collect and review the information which was stored in an electronic format. Electronic format includes everything from mails to social media messages and texts which are stored in the form of tapes, PDF, networks and various other means. Electronic discovery takes data from its original source and separates the evidence which can then approve or disapprove the claims in a case. The data is first identified, then it is collected and processed after which the data is reviewed by the attorneys and lastly it is produced to the opposition side. The clients of a legal firm expect their lawyers to be faster and more efficient than ever before, along with efficiency they also expect lower cost and better budgets from the lawyers. With the rising developments in the technology, E-discovery is becoming obsolete. Processing and reviewing huge amounts of data can become difficult and time consuming. Artificial Intelligence can help E-discovery by processing and reviewing humungous amount of data and cutting down the time to a bare minimum, it does not stop with processing and reviewing, it uses the stored data to learn new concepts and put them to use in the future. Technology Assisted Review (TAR) has started taking big steps in the legal industry. Artificial Intelligence breaks down the humungous amount of data into well-organized files and it helps the lawyers to search precedents for the current cases by going through the past data which was stored as a form of E-discovery.[6]

IV. LIABILITIY OF ARTIFICIAL INTELLIGENCE.

Research advancements within the sphere of artificial intelligence are solely responsible for the creation and formation of trailblazing technology which has upgraded simple living to contemporary living of humans. The scientific community knows and accepts the fact that AI has the capability to exceed the intellectual capacity of humans and has the ability to reach potentialities

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[6] https://www.researchgate.net/publication/220539249_E- Discovery_revisited_The_need_ for_artificial_intelligence_beyond_information_retrieval.

that humans will take years to comprehend and control. AI is based on a machine learning process and is applied in different sectors of the society such as legal, banking, finance, medical diagnosis, etc. The first two questions that arise regarding Artificial Intelligence in case it goes haywire, are 'Can thinking machines be subject to criminal law?' and 'who shall be held responsible in case of damage caused by a machine due to its error, fault or negligence.' For many years there has been substantial controversy about the very existence and core of AI entity. Scientists and futurologists have asserted the birth of Machina sapiens, which will equally share the place with humans as intelligent creatures. Currently as there are no regulations on Artificial Intelligence, Article 12 of the United Nations Convention can be applied. It states that, a person on whose behalf a computer is programmed to do a certain task can be held liable for the damages caused by the computer in the process of fulfilling the given task. The liability of AI can be interpreted from a legal view point which defines AI as a tool.[7] The principle of vicarious liability plays a role of significance when questioning the liability of the artificial intelligence. As per the law, the master is liable for the acts of his servant as propounded by the principle of vicarious liability. One question of prominence is whether this applies to AI as well. The master here is the maker or creator, whichever maybe preferred. As a thinking machine on its own, it very closely resembles the master servant relationship and therefore can be argued that it is subject to the principle of vicarious liability. No matter how subtle can one point out the differences in legal systems, ultimately the responsibility which in the end renders the respondent liable according to the principle of vicarious liability arises not because of the wrongful act but because of the relationship present between the master and servant. The deep pocket theory advocates for compensation to the damaged parties due to the actions of the AI when done in good will. This 'damage' is inevitable, so the need for compensation.[8]

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[7] Liability for damages caused by artificial intelligence written by PauliusCerka, JurgitaGrigiene, GintareSirbikyt.

[8] https://www.researchgate.net/publication/220539249_E- Discovery_revisited_The_need_ for_artificial_intelligence_beyond_information_retrieval

V.   THE A-TEAM OF ARTIFICAL INTELLIGENCE USED BY LEGAL FIRMS

Artificial Intelligence has penetrated the legal field by taking over the work of compiling, filing, drafting, scrutinizing, predicting crimes, giving verdicts with ninety percent accuracy, framing arguments, giving advice to clients, negotiating deals and appearing in the courts. The automation of legal firms has already decimated the jobs of traditional lawyers. Many firms all the over world has already started the automation process and because of this automation the work of a paralegal has been taken over. Artificial intelligence is used by many of the legal firms to stay ahead in the competition. Many clients require the legal firms to stay updated with the newest technology. Janet Fuhrer, President of the Canadian Bar Association in an interview told, *'a junior lawyer will have access to a 25-year-plus archive of experience and legal knowledge, but a 25-year-experienced lawyer may not have access to the technology that the younger lawyer is using'.*[9] There are various Artificial Intelligence systems that are available in the market today and below listed are the top players of Artificial Intelligence that are available in the market of law.

VI. ROSS INTELLIGENCE

ROSS intelligence, an advanced electronic brain also called the attorney robot is used by most of the legal firms in the United States, it has been programmed to ask questions to improve the reasons and with its machine learning capabilities it also monitors the legal updates and landmark judgments apart from all these functions it also keeps learning every day. ROSS intelligently answers all the questions asked to it with hundred percent accuracy with related passages and case laws. It understands the questions asked in natural language. This system uses natural language processing to understand the human speech as it is spoken. ROSS AI can be broken down into three main categories – Understanding, Retrieval, and Ranking. When a

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[9] https://law.queensu.ca/news/how-will-artificial-intelligence-affect-the-legal-profession-in-the-next-decade.

lawyer submits his query, ROSS analyses the given words through its own Natural Language Processing algorithms and these algorithms automatically understand the time period and jurisdiction of relevance and automatically apply filters to focus on the query and on the place and dates. When it has identified the appropriate date and jurisdiction filters in the query, it will retrieve passages and case laws most similar to the query and these passages are found by a combination of industry-standard research functions and algorithms. The retrieved cases relevant to the query are ranked in order to place the best and most relevant cases first. The Director of ROSS intelligence Nancy March in an interview stated *"Before ROSS there wasn't a tool available where I could just ask a question and find what is needed".* [10]

VII. KIRA SYSTEMS

Cyril Amarchand Mangaldas had signed a deal with Canada based Artificial Intelligence called KIRA systems, making it the first legal firm in India to espouse Artificial Intelligence. KIRA is used to find and extract clauses from a contract and other legal document. KIRAs advanced machine learning techniques separate it from other artificial intelligence in the market. There is a huge demand for technologies with artificial intelligence in the field of law because with the help of artificial intelligence the number of months used for extensive research and drafting of arguments is converted to a meagre number of days. KIRA system uses real time editing tools to help the lawyers monitor the changes made by their colleagues in a contract. The search and analysis tools of KIRA allows the lawyers to find issues and developments across various documents. This system compares a contract with many other contracts to find out the hidden risks. The software has been programmed in such a way that it can be taught to find clauses in differentlanguages. [11]

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[10] https://rossintelligence.com/why-ross.html.

[11]   https://info.kirasystems.com/news/cyril-amarchand-mangaldas-is-indias-first-law-firm-to-embrace-artificial- intelligence-technology-as-part-of-legal-innovation

VIII. EBREVIA

Ebrevia is an artificial intelligence system which is based on an algorithm developed by the Columbian University. It is a company founded by attorneys to help them save the countless hours that they have been spending in the process of contract review. This system automatically extracts data from the contracts with high accuracy and precision. It helps the attorneys to find the risk sand prospect so far contract. The deals are completed much faster with the help of this system. Ebrevia can decipher the key data with in a matter of few seconds by processing a huge number of documents at once and the results are displayed at the system's interface which is user-friendly. The interface is user-friendly making it easier to use. The system encapsulates complex data in a contract which was missed by the manual review process. Ebrevia is being used by auditors, legal firms and other companies to analyze and correct a contract, unveiling the hidden cost and to increase the revenue. There are different features of this system such as the diligence accelerator and the lease abstractor. The diligence accelerates or helps the legal firms to review their target's contracts. The lease abstractor, on the other hand is used by commercial real-estate firms to extract data from the lease for various real-estate related issues. This system can also be taught to extract custom data relevant to a specific industry or project. Ebrevia is more accurate and faster than the manual reviewing process. This intelligent software is protected by a bank-grade encryptionalgorithm.[12]

IX. LAWGEEX

Noory Bechor and Ilan Admon created an Artificial Intelligence company called Lawgeex in the year 2014. Lawgeex reviews all the contracts that has been fed in the system and carefully scrutinizes them. If any problems are found then the system sends an alert to the lawyer and highlights that particular mistake and disapproves the contract. This Artificial Intelligence system has been taught legal language and its application in the business

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[12] https://ebrevia.com/#overview

contracts. Lawgeex has been trained to understand the Non-Disclosure Agreement and other contracts of low risks. The contracts which are not in sync to the company's policy are forwarded for detailed editing and approval by the senior lawyers. This system makes sure that the business policies and standards are maintained. Lawgeex was designed to help the senior and more experienced lawyers to focus on more important things, by saving them time on reviewing thecontracts.[13]

X. STUMBLING BLOCKS OF ARTIFICIAL INTELLIGENCE IN THE LEGALFIELD.

Law requires human interaction to understand the crux of the case and the emotions of the client. This is one of the biggest drawbacks of Robot Lawyers, they lack human touch on a case. Only a Human can truly understand the emotions of another Human. Though there are many robot lawyers, the requirement of human interaction in law is also necessary. In the Indian courts' lawyers spend at least a day to interact with their clients solely to extrapolate necessary facts from them. Humans have a tendency to be reluctant in the full disclosure of the facts which cannot be extracted by a robot lawyer. Client interaction and other communications such as interpreting the true position of the client are the most predominant components of a lawyer in the legal field. When a lawyer interacts with his client, there is not just a mere communication but heals on aviates the client's language, gesture and emotion even though all of it can't be coherently obtained.[14] Only a Human Lawyer can truly understand the mental condition of their client and act accordingly. The multiple states of emotions that a human being goes through cannot be interpreted by an electronic brain. Affective computing technology has enabled the Robots to understand and respond accordingly to human emotions. It senses the psychological condition of a person (through microphones, cameras and sensors) and suggests videos which uplift the mood of that person. With

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[13] https://www.lawgeex.com/aboutus/
[14] http://stlr.org/2017/10/03/artificial-intelligence-and-its-impacts-on-the-legal-profession/?cn-reloaded=1.

advancements in technology every drawback of artificial intelligence is being addressed and solved making it invincible.[15] Hacking is probably the one thing that artificial intelligence cannot overcome even with military grade security. There is always away in to the system. Hackers can disrupt the complex algorithm of Artificial Intelligence by turning all the data against them and overloading their memory. Hacking Artificial Intelligence system is elementary because it lacks actual intelligence and can be deceivedeasily.

The biggest drawback of Artificial Intelligence which cannot be solved, keeping in mind the current technological capabilities, is" Imagination". Imagination is the thin line which separates humans from robots. It is one of the unique characteristics of human beings which enables them to be creative in their respective fields. A human's creativity depends upon his level of imagination but a robot's creativity is solely based on the concept of trial and error. Robot lawyers work on the basis of information that is being fed in to them; they cannot independently contemplate the law and arrive at a solution. Being imaginative and creative is one of the features of a good lawyer. A lawyer requires to be streetwise and spontaneous while arguing before any court. Attorney robots lack conceptual creativity and hence they cannot outrun lawyers in the near future. The most common type of problem that an Artificial Intelligence faces is the problem of perverse instantiation or AI control problem. Perverse instantiation is when the Robot with Artificial Intelligence starts to think on its own and starts finding shortcuts to achieve the commands given to them. Perverse in stantiation makes the robot its own master. Attorney robots are also likely to be affected by AI controlproblem.[16]

If all the work of a legal firm is being delegated to Artificial Intelligence and attorney robots then the existing talent and efforts of budding lawyers will be wasted. There are high chances of people becoming lazy and lethargic with the incorporation of AI in their life. The attorney robots will definitely reduce

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[15] https://www.livelaw.in/will-lawyers-judges-replaced-artificial-intelligence-ai/
[16] Ibid.

the work load on the people working in the legal firm but at the same time it will also suppress the talents of incipient lawyers by restricting them to learn the process of filing, compiling documents and drafting a contract. It is very much necessary in the legal profession that a lawyer or even an intern must learn to draft a contract by himself even if there is an attorney robot present in the legal field so that the lawyers or the interns are fully equipped with the required knowledge and skill-set of drafting a contract when the attorney robot malfunctions. These are there acquired skill so far person in the legal field which makes him a better lawyer.[17]

With the advent of Artificial Intelligence and Attorney robots in India there will unquestionably be a code which would be enacted to regulate the conduct of AI in the legal field. The code would be similar to that of the Advocates Act, a code which governs the ethicalaccountability of an advocate in terms of his/her conduct. These regulations and restriction will be imposed to sub side the negative use of Artificial Intelligence and Attorney Robots. The regulations that would have been imposed on AI and Attorney robots will plausibly depreciate its wide capabilities bringing them into the radar of law-makers restricting its ambit. Hence the AI and Attorney robots will eventually lose their potency in the legal field reasons owing to the regulations and restrictions imposed onthem.[18]

XI. CONCLUSION

Artificial Intelligence is key to the future. This complex computer algorithm has converted a mere hype to reality. Artificial Intelligence has established its presence in all aspects of life by proving itself. From the logic theorist, written in 1956 to the creation of the most advanced Artificial Intelligence –based and ro-humanoid robot in the year 2016,Artificial Intelligence has developed at a much faster pace. Professions like law requires humungous number of man- hours to get the work done and the assigned work must be completed perfectly without any errors. ROSS, KIRA, Lawgeex, E-Brevia are

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[17] Ibid.
[18] Ibid.

few of the best Artificial Intelligence system present in the legal field which reduce the pressure on the lawyers by completing tedious tasks involving filing, drafting, reviewing and processing a contract with in a matter of few days. An AI understands and interprets the facts of a case while uploading a document and generates word suggestions to filter search, lists case laws mentioned and provides visual assistance of precedents. There is a general notion that junior lawyers spend most of their time and in document review and this work could be taken up by Artificial Intelligence. Document reviewing is a structural process as its objective is to establish relevance to prevailing topics and query. Being emotionless is the biggest drawback of an Artificial Intelligence system. Although there are software technologies like CATAPHORA for analyzing and monitoring personal behavior patterns through texts messages communicated over social networks, AI is not yet capable of understanding spontaneous and sporadic human interaction. The query regarding the liability of AI for its own actions has also been discussed up to a degree of satisfaction. Not relinquishing the fact that AI does not constitute a person within the legal definition, the conundrum is in deciding with whom the liability rests. This quagmire is solved when the principle of vicarious liability is applied and contrasted to the similar functions of that of a master-servant with the maker and the AI. Though Artificial Intelligence has proved to be useful in the legal field, the jobs of the judges and lawyers are not in danger. Artificial Intelligence should be viewed as a friend and not a foe.