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Role of Artificial Intelligence in Transforming the Justice Delivery System in COVID 19 Pandemic

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ABSTRACT: Artificial intelligence is programmed on computers to depict human intelligence. It has created a huge hype and has evolved to revolutionize almost every profession including legal sector. New lawful simulated AI programming software like Ross intelligence and Catalyst along with Machine Learning and Natural Language Processing give viable fight goals, better legitimate clearness, and better permission to justice and new difficulties to ordinary law firms offering legal assistance utilizing leveraged cohort correlate model. Also, AI enabled lawyer bots are performing tasks that normally requires human intellect and needs to be performed by lawyers. In such a situation, a question strikes- Will these lawyer bots replace human lawyers? This question becomes all the more important in the present scenario when the whole globe is facing challenges imposed by global pandemic "Covid 19". How is COVID-19 going to change the justice delivery system, and what does it look like? Therefore, this study is conducted to evaluate the role of artificial intelligence in transforming the justice delivery system post Covid-19. The study tries to examine the various areas in which AI is affecting the legal profession, evaluate the extent of its impact on the legal employment, assess the tasks in legal sector which cannot be undertaken by AI, and discuss the legal issues in the implementation of AI. The study also suggests the way forward with regards to the future of legal sector to help practitioners and researchers.

Keywords: Artificial Intelligence, COVID-19, Lawyers, Legal Sector, Machine Learning, Natural language Processing, Justice system & dispensation.

Abbreviations: AI, artificial intelligence.

I. INTRODUCTION

At whatever point another innovation is acquainted with the World, each part and industry are offered the likelihood to receive that to upgrade their tasks. One model is of PCs and how they immediately developed being used, taking over a large number of the manual desk work, and how they have become basic today in pretty much every office and calling. Law firms are no exemption to that, where innovation has consistently been bleeding edge and discovers its way into supporting the lawyers, paralegals, specialists and customers the same which are related with the calling [2-5].

Artificial Intelligence or AI is headed to changing the legitimate calling in different manners, helping Law firms deal with their activities just as enlarging and decreasing a large number of the errands that were recently depended upon people to do, sparing valuable time and labor that can be in any case utilized for increasingly beneficial undertakings [6, 8, 10, 12].

However, many predicted during the industrial revolution that automation would lead to mass unemployment in industries dependent on manual labor. Developing more advanced robots and artificial intelligence leads to a similar debate and only now are intelligent jobs at risk. This also includes justice delivery system occupations, such as lawyers and judges [13, 15].

Furthermore, the current global pandemic COVID-19 has brought transformation in all spheres of life and have totally reshaped the way we used to work earlier. Law has tirelessly clung to conventional methods for getting things done. Significantly after the worldwide money related emergency, the law firms balanced at the edges—vacations, diminished rack rates, and interior cost-cutting measures. This time thing will be unique; the progressions will be wide, profound, and persevering. The coronavirus has turbocharged law's transition to a virtual workforce so as to keep up social distancing. The all-round strengthened dividers of opposition have been penetrated with stunning velocity. Justice delivery system has not, obviously, had the opportunity to process this, however it has exhibited that it can, when pushed, adjust dug in strategies for teaching and conveying administrations [19, 17, 28].

A judicial system powered by artificial intelligence (AI) will ensure that nothing hangs during the COVID 19 pandemic. That could be a major obstacle in the justice delivery system for victims' access to justice and in protecting the interests of the convicted. In light of the COVID 19 pandemic, the Chief Justices of various legal systems have provided instructions to the trial courts requiring immediate orders to modify or cancel court operations. In addition to these steps, the modern Artificial Intelligence technology may be beneficial during these days, and can be used to ensure access to justice such as social media, where possible. Telephonic arguments or lawyers may appear remotely through video [38].

Basically, law is based on two important aspects: predictability and precedence. Artificial Intelligence can greatly help align these processes and provide high quality analytical data, while also assisting the legal sector in a number of other areas, particularly in reducing the amount of time spent over monotonous process of reviewing and managing legal documents. AI enables lawyers to invest time in more critical activities like advising clients, preparing to appear in court and negotiating deals. The impact of technology on the legal sector is not new, the evolution of the internet, emails and legal databases online have been there for quite a time now [22, 25, 27]. What is interesting is the extent to which Artificial Intelligence is thought to be a threat to displacing the lawyers. Therefore, the objectives of this paper are:

– To examine the various areas in which AI is affecting the legal profession
– To evaluate the extent of its impact on the legal employment
– To assess the tasks in legal sector which cannot be undertaken by AI
– To discuss the legal issues in the implementation of AI
– To suggest the way forward with regards to the future of legal sector post COVID-19.

II. LITERATURE REVIEW

"The science and engineering of making intelligent machines, especially intelligent computer programs." John McCarthy

Defining AI: The term "Artificial Intelligence", or AI, has been coined since 1950s by the father of AI, John McCarthy. During the era, there was a period of declining funding and research interest around artificial intelligence, called the "AI winter" [27]. Ever since then, AI has created a huge hype and has evolved to revolutionize almost every aspect of our life. Simply put, artificial intelligence is programmed on computers to depict human intelligence. The software is programmed over mathematical operations using vector graphs. These algorithms enable computers to learn and train itself from data and experiences, called Machine Learning. Through neural networks, AI is able to produce predictive models used for image and sound recognition, autonomous cars and virtual agents [21, 29, 30]. AI is widely classified into two: weak and strong.

– **Weak & Deep AI:** It is also referred to as rules engines, knowledge graphs, expert systems, or symbolic AI. This AI was usually referred to as Weak AI, which was required only to perform a certain set of tasks.

– **Strong AI:** It is a self-improving AI which understands itself well enough. Artificial General Intelligence (AGI), which has cross-domain capabilities (like humans), can benefit from a range of (like humans) experiences [7].

"Weak" AI as a rule alludes to that it has no mindfulness. "Strong" or "Deep" as a rule alludes to what is commonly called 'Artificial General Intelligence' which would imply that the AI made would coordinate or surpass that human knowledge which incorporates the aptitudes to join the capacity to reason, plan, learn, convey and incorporate these towards a shared objective for the accomplishment of a specific assignment [31].

AI contains propelled calculations that follow a scientific capacity, which can deal with higher procedures like people. Examples include:

– Machine learning, - deep learning, predictive analytics
– NLP – translation, classification, info extraction
– Expert systems, robotics, neural networks, algorithm, data mining, big data, pattern & image recognition, automation, problem solving.

Judiciary System: Every single human choice is vulnerable to partiality and every judicial system experience the ill effects of oblivious inclination, in spite of good motives. Algorithms that can disregard factors that don't legitimately bear on singular cases, for example, sexual orientation and race, could evacuate a portion of those failings. One of the most significant contemplations for judges is whether to give bail and to what extent jail sentences ought to be. These choices are generally directed by the probability of reoffending. Algorithms are currently ready to settle on such choices by giving a proof based examination of the dangers, as opposed to depending on the abstract dynamic of individual appointed authorities. In spite of these conspicuous points of interest, it is a long way from clear who might give oversight of the AI and check their choices are not defective. Also, increasingly wary eyewitnesses caution that AIs may take in and emulate inclination from their human creators or the information they have been trained with [23, 39, 35].

Legal Dimension of COVID: COVID-19 influenced all three State bodies, the Senate, the Executive and the Judiciary. It has disrupted supply chains, leading to the closure of several manufacturing facilities worldwide; serious disruption of air and sea traffic and the closure of vital air routes, such as the one between the United States and Europe. This turn has led to the collapse of worldwide stock markets leading to the loss of billions of dollars, which was wiped out in a matter of days. A convergence of all these causes has led to a fall in the total level of global economic activity and has pushed the world economy into a potential recession [36, 39].

Torchbearers of AI in Law: A polymath, distributed 'Dissertatio de arte combinatoria' (On the Combinatorial Craftsmanship) in 1666 in which he imagined his trademark universalis, i.e. a universal language that would be beer to lessen enlargement to computations. This thought should be the main driver of the improvement of Artificial Intelligence throughout the hundreds of years. Leibniz is viewed as one of the granddads of AI and in his different speculations of Philosophy of Mind he claimed that delivered the possibility of AI by method for consolidating science with thinking. He said, "The best way to address our thinking is to cause them as unmistakable as the mathematicians' with the goal that we to can discover our blunder initially, and when there are differences between individuals, how about we figure and see who is correct!"

The application of legal informatics to AI has been the fundamental reason behind the possibility of using AI in law. Lee Loevinger, Layman E. Allen, L. Mehl after Bruce G. Buchanan and Thomas E. Headrick were torchbearers of various ideas that led to the application of AI in law [31, 32, 33].

III. HOW AI IS TRANSFORMING LAW FIRMS AND THE LEGAL SECTOR

As per Meng Jianzhu, former Head of Legal and Political affairs at the Chinese Communist Party, Artificial Intelligence have a high capability to improve accuracy, predictability and efficiency of the legal sector with precision and speed unmatchable by humans [35].
Law is based on two important aspects: predictability and precedence. Artificial Intelligence can greatly help align these processes and provide high quality analytical data, while also assisting the legal sector in a number of other areas, particularly in reducing the amount of time spent over monotonous process of reviewing and managing legal documents. AI enables lawyers to invest time in more critical activities like advising clients, preparing to appear in court and negotiating deals [9]. The effect of technology on the legal sector is not recent, the advancement of the internet, emails and electronic legal databases has been around for quite some time now. What is interesting is the extent to which Machine learning is thought to be a threat to displacing the lawyers. In this section, we examine the various areas in which AI is affecting the legal profession, and the extent of its impact on the legal employment [14, 21].
It started out as a way to understand natural intelligence through the construction of artificial agents and this has by now generated a wealth of methods and techniques for adding intelligence to information systems. Some of these techniques are associated with knowledge-oriented intelligence: reasoning, knowledge representation, (precision) language processing, symbolic machine learning, whereas others are related to behavior-based or data-oriented processing such as adaptive control, neural networks, data-oriented machine learning, statistical NLP. Knowledge-oriented intelligence is associated with conscious human intelligence whereas data-oriented intelligence is associated with subconscious mental activity [35].
– **Precedent:** Precedent, in law, a judgment or choice of a court that is referred to in a resulting contest for instance or relationship to legitimize choosing a comparable case or purpose of law in the equivalent manner. A significant hidden incentive in the Dutch legitimate system is lawful certainty. It holds that the activities of the government ought to be unsurprising. In any case, this doesn't imply that judges consistently need to stick to the specific stated purpose of the law. In some cases, lawmakers purposefully leave space for understanding or even permit judges to ignore the stated aim of the law so as to guarantee a sensible and fair result [23].
– **Prediction:** Specialists from the UK have attempted to foresee choices by the ECHR (European Court of Human Rights) by utilizing common language handling and AI. The forecasts accomplished a 79 percent exactness rate in anticipating whether there would be a human rights infringement. The technique for examining content to make expectations appears to be successful, however the scientists didn't plan to structure a system that can completely assume control over the appointed authority's activity [4, 23].
AI used in the justice delivery system is yet considered to be the “weak” (or “shallow”) (or narrow) AI on grounds that it has no self-awareness. Several examples of the application of AI are given:

Table 1: Application and Examples of AI in Legal Sector.

Legal application	Description	Example
Document Drafting	Drafting contracts, form filling using *chatbots*	LegalZoom LISA
Contract Review & Management	Identify issues/risks Provide standard clauses when drafting	COIN Kira Systems LawGeeks Leverton KM Standards
Document Management	Storing & easy retrieval, auto template creation & scanning docs using *OCR*	Docubot by 1 Law
E-Discovery/ Document Review	Search for necessary (other) facts from internet for analysis & decision. Use *keywords*. Predictive coding	EVA
Due Diligence	Review background information and prior cases Highlight and classify essential clauses	Kira Systems
Legal Research	Find arguments and reasoning reported in the past for assessing similar arguments	Ross Intelligence FastCase Thomson Reuters- Westlaw
Smart Contract	provides an easy way to reference and trigger an Ethereum-based smart contract to manage contractual promises.	OpenLaw

IV. TASKS IN LEGAL SECTOR WHICH CANNOT BE UNDERTAKEN BY AI

As indicated by Yuen Thio, AI can't yet recreate support, exchange, or organizing of complex arrangements. The New York Times proposed that undertakings like prompting customers, composing briefs, arranging arrangements, and showing up in court were past the scope of computerization, in any event for some time. AI likewise isn't yet generally excellent at the sort of experimental writing in an Incomparable Court brief or then again a film content [11, 13]. Some of the tasks which cannot be undertaken by AI and needs lawyers are given:
– In the event that, after some time, the appointed authority settles on various choices when confronted with a similar case attributes, the AI model won't fit the information and it will have constrained prescient force (as befits an unusual adjudicator). What's more, the model's prescient capacity is limited to cases that are

commonly like the judges' past cases on which the model was assessed. On the off chance that the past cases all included female plaintiffs, the model may not effectively foresee the appointed authority's choice on the off chance that with a male plaintiff.

– All the more by and large, AI models—evaluated factual models—experience issues preparing possibilities that lie outside the information on which they were trained.

– There are, at long last, a noteworthy number of lawful undertakings that are too perplexing to be in any way demonstrated by any arrangement of directions (at any rate right now). Unscripted human cooperation falls into this class since it frequently relies upon planning reactions to unforeseen inquiries and proclamations. This requires perceiving the more extensive setting where words are being utilized—the encompassing words yet the character and inspiration of the speaker and the reason for the correspondence.

– Understanding setting as often as possible requires perceiving the effect of the individual creation the announcement. Certainly, progress has been made in the field of "emotional figuring," empowering PCs to perceive a client's effect by estimating physiological states and outward appearances. Yet, as a pioneer of the field explains, it is one thing to separate between "client is disappointed" and "client isn't baffled," or even to separate between fundamental passionate states, for example, outrage, dread, misery, and love. It is very another, and substantially more troublesome, for a PC to perceive and mark the unending exhibit of progressively complex passionate states that we ourselves can once in a while name, yet that we all things considered explore utilizing the implicit abilities of enthusiastic knowledge. Such assignments need adequate structure to be demonstrated as a lot of deductive or information driven guidelines and can't be robotized as of now.

V. LEGAL ISSUES IN THE IMPLEMENTATION OF AI

– **Pace**: Innovation has been creating at the fastest rate since the Industrial Revolution; snappier than the law can pace. Along these lines, when legitimate issues emerge, usually, they are an instance of initial introduction. Lawyers who have an AI case fall into their lap will step into a strange area, without a guide, and attempting cases before judges who may not understand the innovation.

– **Liability:** If a mishap includes AI, attempting to locate the obligated party resembles playing a sci-fi rendition of Sign. A shrewd vehicle hits a passerby, who is the blameworthy party? The developer in the workplace with the source code? The proprietor out and about with the vehicle? The maker in the lab with the testing conventions? For instance, the issue of liability hasn't been settled at this point for Google's driverless vehicles, however specialists, for example, UCLA teacher John Villasenor and others contend that item liability could cover any driverless auto crashes [16, 20].

– **Liability (civil):** As AI is sorted out to legitimately influence the world, even truly, liability for hurts brought about by AI will increment in remarkable quality. The possibility that AI will carry on in manners fashioners don't expect difficulties the prevailing supposition inside tort law that courts just make up for predictable wounds. Courts may self-assertively appoint liability to a human on-screen character in any event, when liability is better found somewhere else for reasons of fairness or proficiency. On the other hand, courts could decline to discover liability in light of the fact that the litigant under the steady gaze of the court didn't, and proved unable, anticipate the damage that the AI caused. Liability would then fall as a matter of course on the exemplary casualty. The job of item liability—and the duty that tumbles to organizations fabricating these items—will probably develop when human on-screen characters become less liable for the activities of a machine.

– **Liability (criminal):** If tort law anticipates that damages should be predictable, criminal law goes further to expect that damages be proposed. US law specifically appends incredible significance to the idea of mensrea—the proposing mind. As AI applications take part in conduct that, were it done by human, would establish a wrongdoing, courts and other lawful entertainers should bewilder through whom to consider responsible and on what hypothesis [1].

Variations/bias: AI frequently needs to distinguish items, for example, vehicles, or individuals. Be that as it may, on the grounds that AI depends on cameras and coding, things like complexity, shading, and picture thickness influence AI's "thinking" considerably more significantly than people'. An individual would not probably miss a white semi-trailer "against a brilliantly lit sky." A human would not botch an example of spots or lines for a starfish. AI additionally can reflect inclinations of the engineer; as observed in numerous product projects' propensities to create racial predispositions.

Recognizing and moderating predisposition in AI systems is basic to building trust among people and machines that learn. As AI systems discover, comprehend, and call attention to human irregularities in dynamic, they could likewise uncover manners by which we are incomplete, parochial, and psychologically one-sided, driving us to embrace progressively unbiased or populist sees. During the time spent perceiving our inclination and showing machines our normal qualities, we may improve more than AI. We may very well develop ourselves [19, 23].

(a) **Employment Law for AI:** The driver behind the advancement of AI is the interest and requirement for robotization. With the target of expanding effectiveness, organizations over the world have endorsed to the act of using AI as a substitution of the human workforce. This rush of computerization is making a hole between the current business laws and the developing utilization of AI in the work environment.

For example, can an AI claim advantages, for example, fortunate reserve installments or tip under existing business enactment or sue an organization for illegitimate end of work? Such inquiries likewise hold pertinence for the human workforce, as in many cases, AI expects people to work and the failure of business laws to have clearness as to the above may antagonistically effect such people, too [34].

(b) **Contractual relationship/ Smart Contracts:** Another worry is the capacity of an AI to execute and be limited by contracts. While worldwide laws have perceived self-upholding contracts, there is a requirement for an extensive enactment regarding the matter. Under Indian law just a "legitimate individual" can be skillful to enter a substantial agreement.

The general standard up to this point has been that an AI may not qualify as a lawful individual. Subsequently, an agreement went into independently may not be viewed as a substantial agreement in India. Resultantly, steps should be taken to guarantee that innovation norms are created to satisfactorily direct agreements went into by AI [12, 13].

(c) **Privacy:** AI as of now tracks and predicts people's shopping inclinations, political inclinations, and areas. The information collected and shared between these innovations has just made numerous discussions inside the legitimate field. In any case, AI is beginning to handle progressively disputable subjects, [9] for example, anticipating sexuality and penchant to carry out a wrongdoing. Will these forecasts have the option to be utilized in preliminary? Or then again will the AI fill in as specialists, to be interrogated to decide the legitimacy of their conclusions?

With regards to AI, there are as of now more lawful inquiries than answers. In any case, don't stress; robots may have legitimate responses for us soon enough. When they do, will we be prepared to tune in? Law, including AI lawyers, is nevertheless one territory to be disturbed by AI.

VI. INJUSTICE IN COVID PANDEMIC ON LABOUR MIGRATION & ECONOMIC SLOW DOWN

Covid 19 Pandemic effects all over the world in each and every sector but the two major categories have major injustice during pandemic situation."Coronavirus has taught workers that distance matters, "Professor S Irudaya Rajan at the Centre for Development Studies, Thiruvananthapuram. IrudayaRajan, one of India's leading population studies experts and pioneer of the annual Kerala Migration Survey, says the lesson learned from the 2008 global economic crisis was that "employment matters." The virus has given a new distance lesson and could lead to a considerable reduction in long-distance migration, he says.

Lacking jobs and money, and shutting down public transportation, hundreds of thousands of migrants were forced to walk hundreds of miles back to their hometowns – with some dying along the way.

On May 2020, Moody's Investors Service said the steps announced by the government for financial institutions as part of the Rs 20 lakh crore-economic package would help ease their asset risk, but will not entirely account for the negative effect of the COVID-19 outbreak. The government declared aRs 3.70 lakh crore funding package for the micro, small and medium-sized enterprises (MSME) industry, Rs 75,000 for non-bank companies. Moreover, the MSME sector was still under financial pressure before the coronavirus outbreak due to the steady downturn in India's economic growth over the past 18 months. As a result, it has limited ability to survive another economic shock, according to Moody's. "The deeper and broader economic downturn in India's economy, the more liquidity stress the MSMEs will face, leading to asset-quality problems.

VII. DISCUSSION AND CONCLUSION

The J Turner (2018) believes will thrive as what he terms the “zero-sum” or “distributive” activities. That is, they not so much create as distribute resources throughout the economy. Among these, for example, are lawyers “who protect intellectual property rights”; tax accountants and lawyers who minimize tax payments; and “financial regulators and the increasing army of compliance officers and auditors” [23]. The effects of relentless automation are growth in personal service jobs, e.g. nurses, chefs, care aides, some of which might be able to command higher salaries, others not, as people leave the jobs which are being automated. There will also be an increase in returns to monopoly capital, of all kinds, and rent seeking skills like creative industries and exploiting intellectual property [23]. These shifts and outcomes raise the demand for professionals, the zero-sum specialists, who will be managing the distribution of rights and property. Lawyers are essential to these activities and so will not fade away. A key question will be: what is the optimum number of lawyers and other professionals in an automating economy? Turner argued that zero-sum activities will increase, but over time the tasks being done by such specialists will themselves become subject to automation through developments in AI, blockchain and the like. Thus, an increase in professionals could be followed by an eventual decrease in numbers [15, 12].

The legal practice requires strong problem-solving skills and emotional intelligence — skill sets that cannot be directly replaced by machines. In addition, we are operating in a complex and ever-evolving global environment. A single wave of tech solutions is unlikely to replace the legal landscape. After all, AI tools are based on human intelligence and are only as smart as we make them [18].

VIII. WAY FORWARD – FUTURE FOR JUSTICE DELIVERY SYSTEM POST COVID-19

Eventually, obviously, undue weight ought not be put on Legitimate AI alone. Lawyers keep on assuming an imperative job in key lawful work for a long time to come. Innovation isn't intended to be (nor without a doubt is it presently fit for being) utilized as an independent instrument.

The objective is to utilize AI in addition to people (as airplane pilots use autopilot). Together, they can guarantee that agreements are inspected significantly more precisely — and more reliably — than a human alone. This will keep on bringing more selection of the bunch lawful innovation arrangements, that empower lawyers to carry out their responsibilities all the more successfully.

Justin Earthy colored, Accomplice at Earthy Colored Siblings Law, another member in the analysis in the examination, put it along these lines: "As a chess player and lawyer I will take from Grandmaster VishyAnand and state the eventual fate of law is 'human and PC' versus (another) 'human and PC.' Either working alone is substandard compared to the mix of both. I see AI and innovation as energizing new devices that would take into account such day laborer work to be done quicker and all the more effectively”.

Existing technology already allows us to use ML tools to predict judicial outcomes based on previous cases. A “robot clerk” based on these technologies has the potential for alleviating the overwhelming caseloads of routine decisions in many jurisdictions. Moreover, by providing some input and analysis of an individual

judge's decisions, the robot clerk might help human decision makers identify their weak spots and learn to understand and mitigate their prejudices. ~But these promises do not lead to a robot serving as final legal decision-taker. The choices of current calculations are a black box and can't be explained to legitimate members or general society. There is no guaranteed approach to cleanse previous inclination from the machine-anticipated choices. What's more, there are major mechanical and political difficulties to creating and actualizing system that would peruse the laws and attempt to execute socially ideal strategies. ~Nevertheless, the state-of-the-art existence of legitimate computerization has arrived [24, 26].

It is up 'til now uncertain which of these advances may get across the board and how various governments and legal authorities will decide to screen their utilization. The day when innovation will turn into the appointed authority of good and awful human conduct and dole out suitable disciplines despite everything lies some path later on. Be that as it may, lawful systems frequently give perfect instances of administrations that could be improved, while preliminaries are probably going to profit by better information examination.

The law frequently requires a preliminary to start a trend – so keep an eye out for the experiment of AI as judge [37].

IX. FUTURE SCOPE

The next step of this study is to evaluate various Artificial intelligence tools and techniques to understand their applicability in the Judicial Delivery System. The use cases from different countries around the globe also to be considered.

Conflict of Interest. There is no Conflict of Interest in this work.

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