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Research paper

The future scope of leadership artificial intelligence smart electronics device based legal robotics industries

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Abstract

The world's rapid technological breakthroughs, computers are beginning to replace people in various areas, including manufacturing, healthcare, energy, and agriculture. Robotic applications of artificial intelligence (AI) intensify this phenomenon. Artificial intelligence is thought to be the cornerstone of contemporary technology. It is also essential to the development of numerous other goods and services, as well as to contemporary industries. Its uses have expanded to include everything from banking to recreation to health care. The extensive adoption of AI techniques has made it necessary to think about the possible ethical and legal ramifications. Artificial intelligence raises issues that need explicit legal guidance, such as accountability, privacy, and intellectual property rights. Artificial intelligence poses unprecedented legal challenges that call for a thorough understanding and new regulatory measures, even though it can also be a driving force for innovation and progress. By streamlining legal work processes, artificial intelligence applications have also been crucial in the legal sector, benefiting both attorneys and clients. It is anticipated that the fields of law and technology will continue to intersect in the years to come with even greater outcomes. One could argue that artificial intelligence applications in the legal field are still in their infancy and continue to encounter numerous obstacles.

Keywords: *Artificial Intelligence; Applications; Electronics Legal Sector; Robotics; Security.*

1. Introduction

According to Contract review, contract analysis, predictive coding, and lawyer negotiation robots are a few of the most significant uses of artificial intelligence in the legal industry. As a result, artificial intelligence presents several new legal challenges [1]. This refers to the degree to which current regulations can be applied to all legal concerns that artificial intelligence may bring up, including those involving intellectual property, contractual liability, data protection, and other matters where human law has been addressed by the rule of law. This study's significance stems from the depth of the discussion surrounding the topic by emphasizing the issues raised by artificial intelligence methods. By invading smart machines, e-education algorithms, and neural networks, the digital revolution aims to replace the human brain with artificial intelligence and change the world in which they live [2]. The implications of this digital revolution on legal foundations must be considered, as is the necessity of developing legal foundations that address the harm that artificial intelligence is causing. There are worries about how artificial intelligence will affect traditional legal practices and the role of legal professionals as it becomes more important in the legal industry as a tool for improving legal work and guiding litigation strategies. Finding the right balance between human expertise and automated systems while understanding the advantages and disadvantages of using artificial intelligence in the legal field is the root of the current issue [3]. The legal concerns surrounding the application of AI to robotics and India's current regulations are relevant to robots and AI. Most people think of robots as machines that can carry out complex action sequences. According to the "sense-think-act paradigm," these robots can make decisions on their own based on data and information from their sensors and other sources. They can also adjust to changing circumstances and learn from past mistakes.

2. Literature review

Robotic platforms are susceptible to a wide range of assaults and have numerous weaknesses. You cannot completely prevent attacks and fix weaknesses with protection methods. A portion of the feature, intended for user convenience, violates security regulations. The majority

of businesses that create robotic platforms do not take enough precautions to keep them safe, even though robotics has advanced and been used in many other fields of endeavor

2.1. AI robots

Liability in civil court concerns over civil liability is growing as AI systems become more autonomous and can make judgments on their own using knowledge they have learnt [4]. The widely held belief is that robots and other machines cannot be considered legal persons or natural persons, and as a result, they cannot be held accountable in their capacities. Therefore, it presents difficult legal questions as to whether artificially intelligent and self-learning robots should be treated like corporations or as machines. Giving robots legal personhood may also raise concerns about their obligations, rights, and goals. It takes careful consideration to come up with reasonable answers to these problems.

2.2. A. legal

The researchers have claimed that because robots differ from other machines due to their complex decision-making algorithm and their ability to change their programming in unexpected situations, they require a new legal framework and a new method of accident modelling.

2.3. B. applications

Currently, it is safe to state that digital technologies have entered the healthcare industry and are driving a revolution in innovation. Healthcare is actively utilizing technologies like augmented reality robots,3D bioprinting, artificial intelligence, etc.

3. Service robots

The usage of service robots may be subject to strict liability laws that discourage private sector investment and impede innovation and deployment. But it's critical to strike a balance between a liability framework that respects moral principles and doesn't deter investment [5]. The new realities involving robots cannot be adequately addressed by traditional legal norms that are based on concepts like intention, integrating ability, the responsibility of honest performance, and the principle of good faith. India does not currently have any laws that recognize artificially intelligent beings as legitimate legal persons. Consequently, the question of whether such acknowledgement is now required has been brought up. The research aims to accomplish its goals and offer suggestions for creating a harmonious coexistence between human and robotic elements in legal practice by looking at the available data and pertinent literature. By tackling this research issue, the study aims to provide a thorough framework for comprehending its ramifications and illuminating important facets of AI applications in the legal domain [6]. In the end, this will make it easier to use artificial intelligence responsibly and sensibly, improving the standard of court cases and guaranteeing that justice is served.

3.1. Security

Examining definitions of artificial intelligence was the goal of the study. The significance of artificial intelligence in the legal domain was discovered by the study. The goal of the study was to determine the most crucial elements used in cyber-protection, including artificial intelligence and law, their role in cybersecurity, data protection, and cybersecurity awareness; users and employees in businesses are made aware of cyber-risks and how to mitigate and avoid them[7]. Deep learning has several uses, such as identifying users on social media, tracking the flow of illegal funds via the dark web, and identifying child pornography [9]. As AI's capacity to identify questionable activity grows, smart law enforcement has become more prevalent.[10] Artificial intelligence (AI) technology can detect some types of criminal activity better than human officers. Law enforcement organizations and lawmakers should think about implementing such technologies in fields where they can be useful, like border patrol.

AI in law enforcement, despite the technological advancements in the field, numerous high court rulings have not yet issued clear guidelines on how to use these technologies [11]. First and foremost, lawmakers ought to enact laws that guarantee officers' safety when utilizing these technologies. Additionally, in some jurisdictions, AI ought to be applied to discrimination cases. Smart law enforcement technology is making the law enforcement sector more effective and efficient, but it also raises concerns about dissent and freedom of speech. This article has nothing to do with the studies you mentioned. They look at the many facets of AI and how it affects various domains, including law enforcement and cybersecurity [12]. These studies offer insightful information about the potential impact of AI on these industries, but they don't specifically address the legal applications.

4. Technical application

The comparative descriptive method serves as the foundation for accomplishing the goals of this study. The legal uses of artificial intelligence, both for good and bad, are evaluated and descriptively analyzed in this method. The study also aims to comprehend the legal foundation and standards used in handling those applications by comparing various legal systems, particularly Indian law. The study will most likely concentrate on examining the harm brought about by artificial intelligence applications and emphasizing how these harms are oriented legally [13]. The examination issues related to compensation liability for harm caused by artificial intelligence to individuals. To comprehend the advantages of those applications, the most significant beneficial uses of artificial intelligence in the legal domain will also be discussed [14]. By employing this methodology, the study aims to identify legal concerns related to the application of artificial intelligence in the legal domain and to highlight various facets of this use. The focus will be on outlining the advantages and disadvantages of using AI in the legal domain, as well as offering a legal framework for comprehending possible effects and directing further advancements in this field.

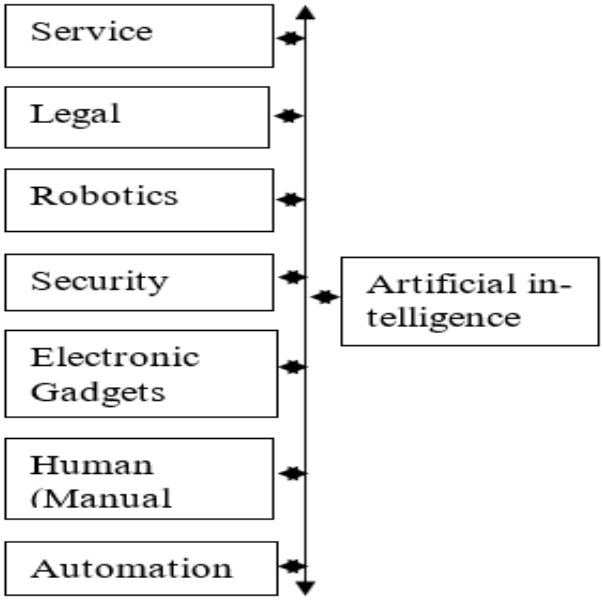

Fig. 1: Block Diagram.

5. Artificial intelligence and legality

Since artificial intelligence is merely a computer-based and software-based technological tool, its use is legal in and of itself and can be applied to a variety of situations. The question is how to use it in any given situation [15]. However, laws and regulations may apply to some applications, particularly in delicate industries like finance, transportation, and health care. Moreover, national or international laws may impose limitations on the application of AI for specific military or security objectives. Therefore, even though using AI is generally acceptable, the legality of its applications varies depending on the state's legal system and the circumstances.

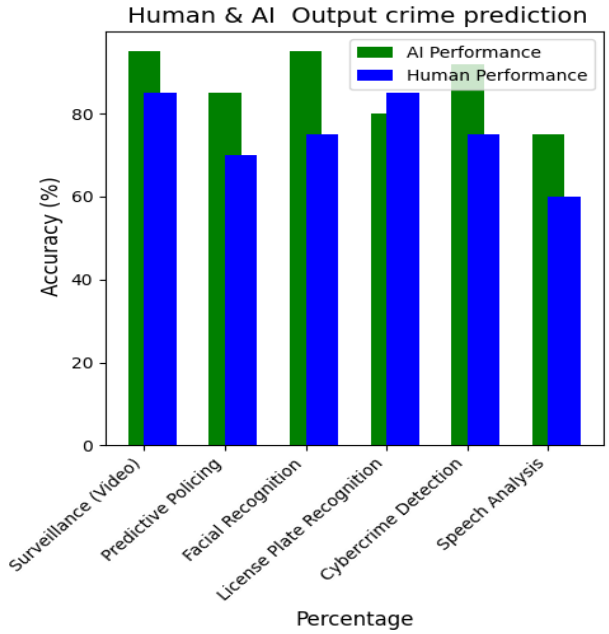

Fig. 2: Human & AI Output Crime Prediction.

6. Artificial intelligence

Artificial intelligence in place of man in the job. Numerous jobs could be replaced by artificial intelligence, but before this is a viable option, several social, legal, and economic considerations must be made [16]. Some businesses have the right to use strategies that can boost their profitability, even though using such technology to increase efficiency is typically not against the law. For reasons like safety, some industries may have legal limitations that prohibit the use of AI. For example, stringent guidelines have been established for the application of AI in the aviation sector. When it comes to the application of AI, trade unions' and employees' rights are also significant considerations. Opposition to the possible loss of jobs brought on using the technology may exist in states with robust trade unions. Legal changes may still result from AI's detrimental effects on society and the economy, even though its use is generally permitted. For example, new laws may be passed to address social unrest or a downturn in the local economy brought on by the loss of jobs due to technology. Future legal developments may be impacted by the effects of social upheavals and rapid technological change, even if the technology is already widely used in the workplace.

7. Artificial intelligence on lawyers

Although artificial intelligence has a lot of potential to change the law, it won't necessarily replace legislators or attorneys. Artificial intelligence can be useful in this situation in the following ways: legal data analysis, large legal texts can be analyzed by artificial intelligence, which can also be used to find related laws or cases. These tools can aid attorneys in more rapidly and precisely comprehending laws or the background of legal proceedings. Automation of repetitive tasks: Artificial intelligence is capable of handling basic tasks like processing legal documents or checking contracts for specific terms. Legal forecast using historical data, artificial intelligence might be able to forecast case outcomes by looking at case histories. Assistance with law drafting: Using historical data, artificial intelligence can be utilized to analyze the possible effects of proposed legislation or to assist in the creation of clear and understandable legal texts. The artificial intelligence and law difficulties and issues are complex, and the interpretation of the law depends on context, interpretation, and actual application; it is not merely a collection of rules. It is challenging for artificial intelligence to match the experience and legal intuition of legislators and attorneys.

8. Results and discussion

Human dimensions, human and ethical considerations, frequently have a significant impact. The Fig. 3 law encompasses justice and values in addition to facts and regulations. Privacy and safety concerns using artificial intelligence in the legal industry can lead to privacy concerns, particularly when processing sensitive data.

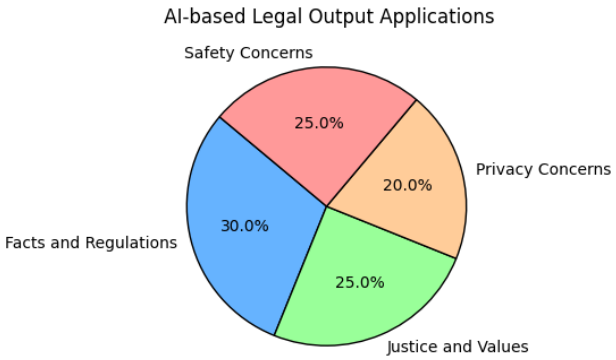

Fig. 3: AI-based Legal Output Applications.

Therefore, while AI can be a useful tool in the legal field, it won't replace attorneys or legislators just yet; rather, it can be a useful assistant to help increase accuracy and efficiency. The Legal responsibility for his mistakes and artificial intelligence of legal responsibility for mistakes made by artificial intelligence and the nation where the law is implemented, is complicated and contentious in general; the legal liability of AI mistakes varies depending on the nation and the context in which the law is implemented. Because artificial intelligence-based systems are ultimately tools that are controlled or used by humans, the person or entity using the technology is frequently held legally liable for mistakes or omissions. However, the developer or manufacturer might be held legally liable if there was a mistake in the system's initial programming or design. This fig 4 presents a legal challenge because, given the speed at which artificial intelligence is developing, it is necessary to distinguish between programming errors and errors resulting from decisions made by the system based on automatic learning. Many people anticipate that laws and regulations will change to address these issues and make clear the legal liability paths. The fundamental question still stands in our fast-paced world, where artificial intelligence is permeating every aspect of our existence: do we encourage people to rely more on artificial intelligence or their own brains?

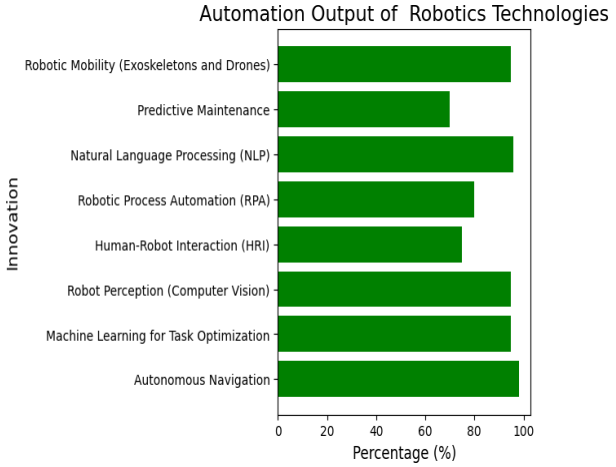

Fig. 4: Automation Output of Robotics Technologies.

The balance of adoption holds the key to the solution. Critical thinking, creativity, intuition, and the capacity to comprehend situations, feelings, and relationships are all found in the human mind.

9. Automation

The fig 4 ultimate benefit of automating robots is increased productivity. It helps to maximize productivity while making production more efficient. Errors decrease with improved quality, which lowers rejects, rework, and repairs.

9.1. GDPR

It examines the rights of data subjects, including the rights to object, portability, erasure, and access. The study conducts a comprehensive analysis of automated decision making, considering the degree of admissibility of automated decisions, the necessary safeguards, and whether or not data subjects are entitled to personalized explanations. After that, it discusses how much of a preventive risk-based approach the GDPR offers, emphasizing data security by default and by design. Additionally taken into consideration is the potential for using AI for statistical analysis in a manner compliant with the GDPR.

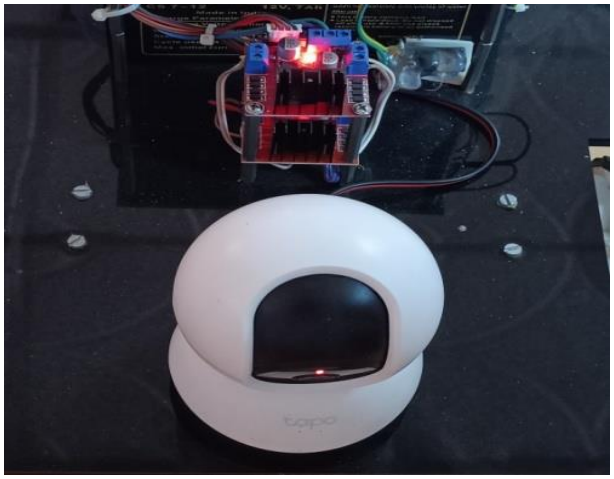

Fig. 5: Automatic Output Legal Security Electronic Gadgets.

While artificial intelligence offers tremendous advantages Fig. 5 in terms of quick analysis of large data, effective execution of repetitive tasks, and solutions based on its learning models, it also possesses a special capacity to adjust to novel situations and analyze intricate situations that robotic systems are unable to fully comprehend. Artificial intelligence can supplement and enhance human capabilities, particularly when it comes to assisting us in making decisions based on objective data. However, relying too much on AI without considering the true value of human intuition and thought processes can be detrimental, leading to inappropriate decisions in the context or the disregard of crucial human factors. For this reason, the best course of action is to consider how AI can be used to expand and enhance human mental capabilities while also working in harmony with them. With Fig. 6 an understanding of the assistance and complementarity that technology can offer, man must always be at the center of the process.

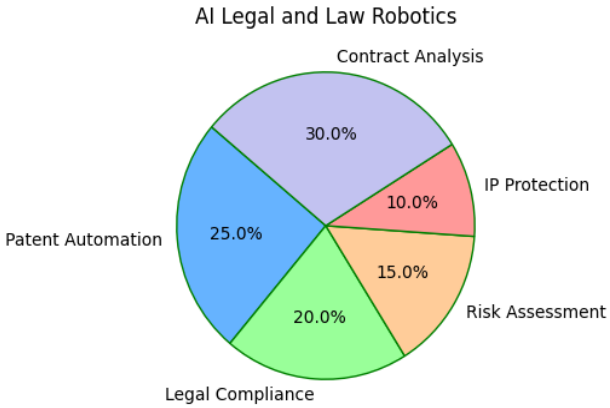

Fig. 6: AI Legal and Law Robotics.

9.2. Deepen analysis

The legal difficulty of robotic help, the legal ramifications of robotic aid are covered in this chapter. Artificial intelligence, which can make judgments on its own or act independently when interacting with humans, is linked to a significant risk of conflict, which will also be particularly apparent from a legal perspective. The more artificial intelligence permeates people's daily lives, the more the conflicts it causes will become a central issue for lawmakers and the courts.

9.3. AI in the Indian legal system

Since artificial intelligence (AI) is permeating every aspect of life, there are important concerns over how it might be incorporated into the legal system, which is a field that has historically been dominated by human judgment, equity principles, and the pursuit of solid jurisprudence. Throughout its history, the Indian Supreme Court has upheld "demosprudence," which emphasizes a humanistic approach to the administration of justice. However, given the speed at which scientific methodologies and technologies are developing, the use of AI in

the judicial system must be taken into account. These days, courts are using AI in several ways, including data retrieval and storage, online dispute resolution platforms, multi-body litigation service systems, and even judgment prediction.However, because of the inherent limitations of AI's application in this context, experts and researchers continue to question the authenticity and integrity of AI-driven solutions. This study carefully examines the possible advantages and disadvantages of artificial intelligence as it relates to the Indian judicial system. The effects of AI on the judiciary are closely examined, ranging from digitalizing dispute resolution platforms to AI-driven case management. The study highlights how important it is to implement AI responsibly, supporting policies that can help integrate it successfully while resolving related issues and guaranteeing that AI and human judgment can coexist peacefully in the legal system.

9.4. AI has on legal services

AI-powered solutions may create highly customized next-best actions for every customer relationship by analyzing historical client interactions, preferences, and behavioral trends. Legal practitioners can use AI in this way to: Automate repetitive legal work, freeing up time for more valuable client engagements

9.5. Future work

Artificial intelligence-powered advocate support system. A few years ago, India went through the Digital Revolution, but other aspects of life have never been significantly impacted by technology. This study is important because, if legal research is lacking, advocates may benefit directly from the deployment of AI and edge devices in legal rights. The judiciary may be able to get over some of the significant challenges posed by arrears, caseloads, delays, client engagement, etc., by automating lower courts. Even though there are numerous aspects to these issues, the potential benefits of upcoming Industry 4.0 breakthroughs in terms of improved performance, coherence, transparency, and speed could significantly improve and alleviate these issues. The advocate can benefit from the edge device. This AI-powered gadget is a cutting-edge one that is linked to the database. When a client visits the advocate's office, a system speaks with them and hears all of the case's facts and circumstances. The device then provides a printed copy of the appropriate Act that would apply in the case at hand. This study shows how the gadget works within the judicial system, its impact, and the effective results it produces.
While it has created new opportunities for the social integration of robots, it has also sparked questions about how well-suited the current rules and regulations are to deal with AI and robotics. India has embraced artificial intelligence as a global technical trend. AI has entered the healthcare and medical fields, personalized chatbots have gained traction in the Indian market, and it is also being used to protect cyberspace. Robot technology usage has increased more quickly than expected because of the COVID-19 pandemic.

10. Conclusion

Mobility, self-learning, variable responsiveness, and the capacity to generate, create, and adjust to their environment are characteristics of artificial intelligence programs. It appears that not all these programs have the same level of intelligence or autonomy. A limited level of intelligence and the inability to make decisions outside of the conventional framework of user instructions are features of the first generation of these programs, whereas advanced generations have a high degree of development and independent decision-making capacity. There are currently no laws specifically governing artificially intelligent machines, nor are there any laws in place to track the advancement of AI technology. We believe that the system of liability for the most defective products is still in place to prevent such harm. The following factors led to this choice: responding to claims for damages to intelligent systems brought about by the art due to a lack of security in the product's composition, or an intelligent system is, in your opinion, more appropriate. Given the challenge of identifying the true culpability for harm caused by intelligent systems and safeguarding the victims of such harm, the liability regime implemented in the event of product defects approaches the cascade liability system. Additionally, the study recommends that some exceptions be made by modifying some of the principles that underpin this system, such as the product's defect, wherein it ought to be more adaptable to artificial intelligence. All parties involved in this industry, from the design and manufacturing firms and vendors that support this activity to the expert users of these systems, must have access to special insurance funds to cover the harm caused by artificial intelligence incidents.

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