From Tradition to Innovation: How AI is Redefining the Legal Field

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ABSTRACT

This paper examines the impact of Artificial Intelligence (AI) in the legal sector, discussing both its advantages and disadvantages as well as the future of the legal profession in relation to AI. This document discusses the development of AI, its applications in crime investigations, legal research and the possibility of robots replacing lawyers and judges. The study analyses how AI's application is used in crime analysis, while focusing more on criminal mapping, predictive policing and facial recognition, simultaneously addressing the inherent risks of misidentification, privacy infringement and algorithmic bias. It also discusses whether there is a possibility of robots replacing lawyers and judges and what would be its effect on the judicial system. It explores the use of AI tools like ChatGPT in judicial processes, emphasizing the need for cautious integration to avoid replacing human intellect. The study comes to a conclusion where it highlights how important it is to solve moral issues, protect data and uphold justice in the AI era. Additionally, AI would collaborate with humans and aid in the nation's progress rather than replacing it.

KEYWORDS

INTRODUCTION

Artificial Intelligence (AI) is a set of technologies that enable computers to perform tasks that normally require human intelligence. AI was first coined in 1956 but became popular in the 21st century. The era of AI can be divided into 4 stages namely:

1) Neutral Network [1950-1970]

2) Machine Learning [1980-2010]
3) Deep learning [2011-2020]
4) Generative AI [Present Day]

To understand the working of Generative AI we first need to understand how the last two AI generations before generative AI worked.

1. ***Machine Learning***: Machine learning is the second generation of AI which predicts and makes decisions by creating a model and training its algorithm. It has a wide range of techniques that enables the computers to learn without being specifically trained for particular tasks.
2. ***Deep Learning***: A type of machine learning which uses a multi-layered neural network or deep neural network that nearly mimics the complex decisions of the human brain. It minimizes human intervention and also enables unsupervised learning.
3. ***Generative AI:*** The present day generation of AI, namely the generative AI is a technoloy that creates images, videos and many other things as good as the original. Many researchers and practitioners have given their time and efforts to make such breakthroughs in the field.

AI has been rapidly growing in today's world. It has made significant changes in all the fields and legal field is not far behind in the list, it automates the recurring tasks and it also helps lawyers analyse large amounts of legal data for all purposes like research and analysis that helps to make their contentions stronger. It just not only helps a lawyer but also improves the efficiency and also allows the worker to focus on the other significant things but there could be some drawbacks as well, such as it could be proved biased while giving answers.

OBJECTIVES

1. To understand the usage of AI in Criminal Investigation.

2. To find and examine multiple uses of AI in legal research.

3. To investigate the legal professions prospects in the era of Artificial Intelligence.

STATEMENT OF PROBLEM

Cybercrime poses a great challenge in the field of investigation especially when it comes to manipulation of information and evidence. Sometimes due to the complexity of the cases the person feels indignant, making investigation and legal research a tough job. Although robots can grasp information at the speed of light but it

cannot understand emotions and the depth of the case which clearly states that it doesn't have a wider domain as well as it can grasp negative information which can lead to injustice in society. Robots can interpret law but it doesn't have the ability to understand emotions like humor, sarcasm, etc. and hence they do not have a different or wider perspective.

RESEARCH METHODOLOGY

This is a quantitative research approach that involves both primary surveys and an examination of secondary research data which is then critically analysed. In the primary method, a Google form survey was used wherein the hypothesis is verified in the end and stated if it is right or not. In the secondary method various articles and research papers were examined.

HYPOTHESIS

1. AI can help in the investigation of crime but it can also misguide it.
2. AI can make the research process faster but it can provide biased information.
3. Although robots can do all the work, still it cannot replace human beings.

ARTIFICIAL INTELLIGENCE AND THE FUTURE OF THE LEGAL PROFESSION

The fostering of AI in law has been frequently increasing, determined by the need for efficiency, accuracy and cost-effectiveness. Many legal professionals have already started or have shifted to AI - powered tools for countless tasks, including contract review, legal research, predictive analytics and document automation. Even though AI in Law has a wider scope, this research paper will look after the following topics.

A BEGINNER'S ROADMAP TO EXPLORING AI APPLICATIONS IN CRIME ANALYSIS

A crime or criminal offense is an act that is detrimental not just to an individual but also to a community, society or state, known as "A Public Wrong", which is prohibited and subject to legal penalties. Artificial intelligence has emerged and established its role in the area of criminal investigations. It has simplified the process of investigating a crime and enhanced the efficiency of the officials which also resulted in faster outcomes. There are various applications of AI which has been used in investigation, some of them would be:

1. ***Criminal mapping*** - Criminal Mapping is a tool used by the investigation department to analyse crime data and identify patterns and trends; it also uses geographic information systems (GIS) to visualise crime data and help identify crime hotspots. Earlier, the officials used paperback maps and a large number of documents but with the rise of AI there are many software that do their work.

2. ***Facial Recognition technology*** – It is a method to identify the perpetrator of a crime through surveillance photographs or videos from the crime scene. It analyses facial images of the culprit from the surveillance media and matches it with the faces of a database of known people, such as criminals maintained by law enforcement. It compares the perpetrator's facial images to those in the database using a software algorithm. By exposing the system to a huge number of diverse photos in a data set, the algorithm utilises AI to "learn" how to make better comparisons. In the current scenario, the prime example for facial recognition is the Mahakumbh[1] festival also known as world's largest human gathering where AI powered facial recognition and surveillance systems are utilized for public safety. This helps in crowd monitoring, identifying potential threats and also locating the missing individual at the largest human gathering on earth.

3. ***Predictive Policing*** - It is one of the crime prevention approaches that analyses data to predict the times and locations where crimes are expected to happen. It is a technology used by the police departments to manage the resources and prevent crime. This approach uses previous data, geographical information and weather pattern, the modus operandi of the criminal and other factors to find the trends and hotspot for crime. There are many AI Powered predictive policing applications available in the market which gives many useful insights. The main objective of it is to mitigate the criminal activity and prevent the crime even before it occurs.

As we know, every coin has its two side the same way even AI application in criminal analysis has its second side and it is as follows:

1. ***Facial Recognition*** - As we know, facial recognition is a positive point in AI application but it can lead to negative outcomes like manipulation and misidentification of images which leads to wrongful arrest. There are some real life

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[1] It is an important Hindu pilgrimage which is celebrated every 6-12 years correlated with the partial or full revolution of Jupiter.

cases where AI has misidentified a person and here is an example showing the same.

A man from Houston was arrested for allegedly robbing a Sunglasses Hut with a weapon. Sunglasses Hut's parent company asked Macy's to use facial recognition technology to identify the suspect. The man was detained for two weeks, claiming he was assaulted and raped by inmates. He was later proven innocent and has filed a lawsuit against the companies involved. *Murphy v. Essilorluxottica U.S.A., Inc., No. 2024-03265*[2], in the 125th District Court of Harris County, Texas.

2. ***Right to Privacy Infringement***- the Constitution of India ensures the right to privacy as a fundamental right under Article 21 which protects the rights to life and liberty, encompassing the right to privacy. Any violation of this right constitutes a breach of the fundamental rights of individuals. AI collects data without the consent of a person which leads to infringement of their privacy rights, to back our contentions there is yet another case law that proves it. This was mentioned in the case *Justice K.S. Puttaswamy vs. Union of India (2018).*[3]

3. ***Biasness of AI algorithm*** - It occurs in law, when an AI system produces biased results due to problems in its core algorithm leading to discrimination against certain groups. This can result in unfair legal decisions as the AI learns from biased data and reinforces existing inequalities.

THE ROLE OF AI IN LEGAL RESEARCH: CHALLENGES AND OPPORTUNITIES

The process of determining and reclaiming information which is necessary to support legal decision making is known as Legal Research. Legal research is conducted by lawyers, law librarians, paralegals and all those who are involved in gathering and analysing information to support legal arguments or decision making.

1. ***Lawyers*** – Lawyers in both, private practice and within government agencies or corporate legal departments, are those who conduct legal research to understand the law, build cases, and advice clients. It also helps the lawyers to explain the law to the clients and to the judges to support decision making.

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[2] *Murphy, Jr. v. Essilorluxottica Usa Inc.*, 4:24-cv-00801, (S.D. Tex.)
[3] AIR 2017 SC 4161.

2. ***Law Librarians*** - Those are those who help lawyers in organising and providing access to legal resources for their research.
3. ***Paralegal*** - Under the direction of attorneys, paralegals frequently help with legal research, document preparation and other legal duties.
4. ***Legal Researchers*** - They are professionals who do legal research in specific areas of law and provide information to legal executives and attorneys working on cases.
5. ***Judges*** - Judges conduct legal research to understand cases and laws with a different perspective and in a broader sense.
6. ***Law Student*** – They engage in legal research as a part of their education and to develop their legal skills.

The use of artificial intelligence in legal research has both advantages and disadvantages.

As we all know, AI is constantly growing to the point where it can now undertake legal research, document preparation and outcome prediction, hence improving the speed and accuracy of legal services. Traditionally, a professional attorney would outsource legal research services but now with the help of AI, it is easier for the professional to do legal research at their fingertips because it allows them to easily access resources without relying on someone or something, making his or her research more efficient and cost-effective. AI broadens the field of study. It is so convenient that we only need to describe our task and it is completed in a second. For example, if a person does not understand a certain language, AI may help translate it. A lawyer with evil intentions will be unable to deceive their clients since AI not only assists the lawyer in research but also offers information to the client. Paralegal employment is in jeopardy as AI takes over the majority of their workload. It is extremely dependent on the acquired data, making it vulnerable to cyber assaults. Cyber assaults include piracy, phishing, unethical hacking, identity theft and the unintended production of super intelligent AI, commonly known as the "singularity problem." Because of the issues, consumers are hesitant to disclose their data.

Judges may use AI to comprehend and make decisions, which has both advantages and disadvantages because it may or may not supply accurate information and in certain situations, it may present incorrect information leading to unjust outcomes. Now comes the question: who is accountable for AI tool errors, the user or the developer? Depending on the circumstances, either the user or the developer may be to blame.

- **Situation 1**: The user enters incorrect prompts and so receives incorrect information.
- **Situation 2**: The data submitted by the developer may be incorrect or misleading, or there may be a bug in the code that causes the user to get incorrect information.

ROBOT VS THE BAR AND BENCH

When it comes to enforcing the law, the Bar and the Bench are like the two vital wheels of a chariot. They each play an important part in the legal system and are related to one another. "Bar Bench relations" refers to the cordial relationship between judges and advocates in the legal context. Today's generation is completely dependent on AI for all their work, be it a school homework or a lawyer drafting a contract with the help of AI. Compared to the prior generations, AI has developed much better and hence the current generation is more dependent on AI rather than doing it on their own. From this we can assume that in the future, there may be a time where the future generations would be fully dependent on the information provided by the AI without even cross checking it. AI-powered software is already being used by certain courts to help them make choices about bail and punishment. For example, the Correctional Offender Management Profiling for Alternative Sanctions (COMPAS)[4] program predicts a defendant's likelihood of committing another crime using an algorithm. By using years' worth of data from the criminal justice system as a source, this kind of technology may give certain judges greater confidence in their rulings, but it may also introduce implicit racial prejudice into the process. It is clear from newspaper reports that judges are utilizing AI to understand opposing viewpoints in cases or to gain a broader understanding of specific laws, which shows that even legal experts occasionally rely on AI. Here is proof that judges use AI to get a wider scope of a case.

The HC of Punjab and Haryana made a judgement using ChatGPT in the *Jaswinder Singh v. State of Punjab*[5]. They used CHAT GPT to widen their scope and to give the judgement over bail plea. They questioned about "*What is the jurisprudence on bail when the assailants are assaulted with cruelty?*" And the AI tool replied - *Bail decisions for assailants charged with cruel assaults depend on the case's circumstances and local laws. Judges may deny bail or set high bail amounts for serious violent crimes due to community risks.* However, defendants are presumed innocent and entitled to bail unless strong reasons indicate otherwise. Later, the order stated that "*They only used CHATGPT for reference and it is only*

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[4] It is software used by U.S. states of New York.
[5] 2023 PHHC 044541.

intended to present a broader picture on bail jurisprudence, where cruelty is a factor."

This is the situation with AI in the picture, what will occur when robots truly become a reality and provide assistance to humans? Can robots replace Bar and Bench in our Judicial System?

Before answering the above question let us know how humans (Bar and Bench) and Robots (Bar and Bench) would work and will it be different, if yes then how ?

A robot functioning as a Bar and Bench can only adhere to legal statements; it can enforce the law but lacks the ability to assess the specifics of cases and the ambiguity of legal provisions. However, the robot depicted can decrease corruption, resulting in organized operations and swift justice, as it offers court services around the clock. Robots employed as the Bar and bench could lead to job loss by potentially replacing human attorneys and judges. Robots can also be hacked and manipulated leading to malfunction and Injustice. Robots may not fully replace the Bar and bench but it would reduce our workload and may take over minor tasks. However, robots do not possess emotional intelligence, creativity, or a fundamental grasp of situations, traits that are uniquely inherent to humans. Answering to the questions mentioned above Robots becoming reality and assisting humans is not a threat but AI overpowering human intellect by providing information at a click and robots doing most of the work done by humans is a threat. From this, we can conclude that AI won't replace the bar and bench, instead they would work in collaboration.

CONCLUSION

"*The only lawyers with anything to fear are those who refuse to embrace change for AI has the potential to break into almost every aspect of legal practice*"[6]. In conclusion, the integration of artificial intelligence into the legal profession presents a complex landscape of opportunities and challenges. AI's applications, from crime analysis and legal research to potential roles in the Bar and Bench, offer the promise of increased efficiency, accuracy and accessibility. However, the risks associated with AI, including algorithmic bias, privacy infringement, and the potential for misidentification, can't be ignored. The reliance on AI tools raises critical questions about accountability, data security, and the preservation of fundamental rights. While AI can enhance legal processes by automating tasks and providing valuable insights, it

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[6] Staci, Z. (2017). Trendspotting? Major U.K. Client Refuses

cannot replace the nuanced judgment, emotional intelligence and ethical considerations inherent in human legal professionals. The future of law likely involves a collaborative approach, where AI serves as a powerful tool to augment human capabilities rather than a complete replacement. A balanced and thoughtful approach is necessary to ensure that AI's implementation in the legal field upholds justice, protects individual rights, and maintains the integrity of the legal system.

RECOMMENDATION

Based on this research paper, it's clear that the integration of AI into the legal field presents a promising collaboration, despite its advantages and disadvantages. Here are some suggestions for incorporating AI within the legal profession for the future:

1. The use of robots could be implemented in court procedures, such as document filing, which would facilitate a more efficient and streamlined process.
2. An enhanced and superior form of facial recognition technology needs to be created to prevent wrongful convictions.
3. Legal researchers should not rely solely on AI; they must be able to identify trustworthy sources, as humans are the ones entering the data, and errors can occur.
4. Judges might consider utilizing AI or CHATGPT to formulate their final rulings or provide insights, but it should only serve as a means to gain perspective on the law or specific circumstances.

Lastly, there should be a framework established governing the use of robots, where their application is limited to certain parameters.

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