
USES AND LIMITATIONS OF ARTIFICIAL INTELLIGENCE IN THE CONTEXT OF PREDICTIVE JUSTICE

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ABSTRACT:

With the advent of technology, Artificial Intelligence or AI has come to play a significant role in various domains of public life. One such domain is the legal field, and judicial decision-making, in particular. Judicial decision-making can be affected by predictive justice systems that may be set up to ease the burden on manual ambiguity, and make the process more efficient. This, however, is based on conjecture. What will be the implications if at all such a reality befalls – can it unconsciously pave the way for bias? In this piece, the authors will try to understand Artificial Intelligence’s role in predictive justice systems and its implications. An attempt will be made to find a way forward on the face of such a novel challenge.

Keywords: Artificial Intelligence, Predictive Justice, Judicial Decision-making, Legal System.

Introduction

Artificial Intelligence ('AI') has come to play a significant role in various domains of public life. In many fields, it 'promises' to assist, alter, or supplant human decision making.¹ One such domain is the legal field, in general, and judicial decision-making, in particular.

Outcome prediction in a legal case has long been a pivotal aspect of legal practice. A question that has arisen in recent times pertains to – whether AI can be deployed in aiding decision-making process? Do intelligent machines possess capabilities to yield a better, expedited, just and more equitable legal outcomes than their human counterparts?

Judicial systems worldwide are increasingly harnessing the capabilities of AI for analysis of extensive legal datasets. This statistical analysis of large amounts of case law data (which are primarily comprising of previously adjudicated harcourt decisions), studied with the aim of predicting future court outcomes, is known as *Predictive Justice*.² This analysis identifies correlations between input data (criteria set out in legislation, the facts of the case and the reasoning) and output data (formal judgment such as the compensation amount)³. These correlations and patterns are then used to predict future case results through inductive analysis.⁴

The main purpose of this approach is to help judges focus their time and expertise on cases which yields 'higher added value', while automating straight-forward and repetitive cases.⁵ Over a long term, it is argued that this approach has the potential to strengthen justice stability worldwide as it provides economic entities more 'harmonised' court decisions, thereby facilitating better anticipation over certain types of judicial cases.⁶ Thus, AI bears potential to instigate significant transformative innovations both within institutions and society.

However, this advent of legal analytics and predictive justice carry certain significant challenges with them. These include incomprehensibility of judicial decisions, disillusionment and alienation from legal system, discrimination, lack of critical thinking etc. It is important

¹ Richard M. Re & Alicia Solow-Niederman, "Developing Artificially Intelligent Justice", 22 STAN. TECH. L. REV. 242 (2019).

² Cinara Rocha and João Carvalho, "Artificial Intelligence in the Judiciary: Uses and Threats", Ceur Workshop Proceedings, Volume 3399, Paper 17, <https://ceur-ws.org/Vol-3399/paper17.pdf>

³ Asma Idder and Stephane Coulaux, "Artificial Intelligence in Criminal Justice: Invasion or Revolution?" (2021) <<https://www.ibanet.org/dec-21-ai-criminal-justice>>.

⁴ Ibid.

⁵ Supra at 2

⁶ Ibid.

that the existing challenges are pre-emptively addressed before these AI-driven tools are adopted in the realm of judicial decision-making.

Artificial Intelligence in Legal Justice and Legal Adjudication

Artificial Intelligence (AI) can be defined as “a set of scientific methods, theories and techniques whose aim is to reproduce, by a machine, the cognitive abilities of human beings.”⁷ It seeks to have machines perform complex tasks, which were traditionally carried out by human beings. It adopts sophisticated approach in the form of tools such as natural language processing (NLP) and machine learning for its analysis.

The application of AI in the realm of legal field has gained significant traction in the recent years. Legal justice is expensive, the time spent solving litigation disputes is considerably high, and the workload of judges is also increasing. However, many of these lawsuits are simple, similar (if not identical), repetitive and has a predictable outcome. The main purpose of predictive justice is, thus, to automate human manual processes in handling such cases.

Predictive justice involves the analysis of large amounts of judicial decisions by AI technologies in order to make outcome predictions for specific types of specialised disputes⁸. The term “predictive”, employed by legal tech companies, originates from branch of science, principally statistics. The analysis identifies correlations between input data (which includes, criteria set out in legislation, the facts of the case, the reasoning etc) and output data (which is formal judgment such as the compensation amount etc)⁹. The aim is not to replace legal reasoning but to identify these correlations. Such correlations would facilitate the creations of models that, when applied to new input data (that is new facts specified as parameters, such as the duration of the contractual relationship), can predict the outcomes of similar types of cases in the future.¹⁰

Some of the categories of cases, where predictive justice can be applied to are, similar cases

⁷ Supra at 2

⁸ Supra at 3

⁹ Ibid.

¹⁰ Ibid.

push systems¹¹, litigation risk assessment systems¹², risk prediction systems¹³ and filtering systems¹⁴. Regarding legal subjects, the main ones that AI applications deal with are small claims, domain-name disputes, ecommerce disputes, copyright disputes, property and income tax disputes, driving misdemeanours and parking fines, and so on¹⁵.

Proponents of AI argue that some of the advantages that it offers over human decisions are impartiality, objectivity, uncertainty reduction, and human error elimination.¹⁶ Predictive justice, in particular, is expected to streamline decision-making process, reduce litigation volume (to a certain extent), and also lower costs.¹⁷

AI and Justice Delivery – Future and Challenges

AI adjudication is likely to affect both public and profession perceptions of law, particularly in domains of criminal justice, appellate decision-making etc, where “**equitable justice**,” that is discretionary moral judgment, is often considered to be paramount.¹⁸ The efficiency and impartiality offered by AI adjudication will gradually encourage a shift toward “**codified justice**,” that is, ‘a paradigm of adjudication that favours standardization above discretion’.¹⁹ In the past, the legal decision making had placed value in explicit moral reasoning and other forms of discretionary judgment, as expressed in written judicial opinions. But AI introduces (in essence) a new form of adjudication, wherein machines generate correlations across extensive amounts of data without constructing an explanatory or causal model.²⁰ And such kind of adjudication holds appeal in the context of market capitalism, that tends to prioritise efficiency over non-quantifiable values, like mercy.²¹ Consequently, it will tend to promote

¹¹ The system is designed to automatically push similar judicial cases in order to help judges and staff reflect on specific cases. Generally, this system works by inserting keywords, and then similar cases (or related to the subject) are pushed for human review.

¹² The systems are based on judicial statistics and analysis of similar cases, which then provide fundamental information that could help evaluate the potential judgement outcomes in advance. This aids parties in deciding whether to engage in litigation process.

¹³ The application can be used in the penal system to predict risks for violent crime, sexual offender, and recidivism risks, thus helping judges decide about depriving people of their rights.

¹⁴ This system organises information according to a defined criterion and takes action, such as grouping cases and returning or allocating the cases to judges.

¹⁵ Supra at 2

¹⁶ Ibid.

¹⁷ Ibid.

¹⁸ Supra at 1

¹⁹ Ibid.

²⁰ Ibid.

²¹ Ibid.

codified justice at the expense of equitable justice, thus causing a change in values underlying the legal system.

According to Richard et. al,²² there are four kinds of concern: incomprehensibility by untrained human being to understand how AI has come to a decision; datafication where AI adjudication's emphasis on observable data could insulate the legal system from legitimate criticism and thereby allowing bias to flourish; disillusionment that can erode confidence in the legal system's legitimacy, and alienation arising from decreased human participation. Each concern relates to a distinctive aspect of human adjudication—namely, understanding, adaptation, trust, and participation.²³

Independent research²⁴ have shown that the use of AI can lead to certain groups of people being more frequently stopped and searched by law enforcement than others, for instance, depriving citizen of fairness and equality and equity principles.²⁵ In the same article²⁶, it has been argued that contrary to the popular perception that artificial intelligence reduces human error, it actually reproduces human errors like **bias, discrimination, and lack of sound reasoning as well as perception**. If we look at artificial intelligence on the parameter of efficiency and objectivity, it is not only inheriting the same human errors but at the same time, it is also lacking human values and critical thinking. Thus, if the errors and weaknesses inherent in AI are not corrected, it may come off as a lose-lose situation.

Conclusion

Artificial Intelligence has been a **double-edged sword** in its applications, and the rate at which it has been developing is more rapid than anticipated. Such developments have been disproportionate in the sense that it has not been uniform throughout the globe. There are disproportionate developments even within a country - no two regions are the same in terms of development.

²² Richard M. Re & Alicia Solow-Niederman, "Developing Artificially Intelligent Justice", 22 STAN. TECH. L. REV. 242 (2019).

²³ Ibid.

²⁴ Alexander Babuta and Marion Oswald, 'Data Analytics and Algorithmic Bias in Policing' (Royal United Services Institute for Defence and Security Studies (RUSI), 2009).

²⁵ Asma Idder & Stephanie Coufax, "Artificial intelligence in Criminal Justice: Invasion or Revolution?" International Bar Association (2021)

<https://www.ibanet.org/dec-21-ai-criminal-justice>

²⁶ Ibid.

The impact of AI is felt everywhere, be it while using search engines to ordering food or shopping online. More recently, AI has tried to venture into another important aspect of society – law and justice. Law and justice have always had human touch to it as it is so intricately linked to the day-to-day life experiences of people. From filing petitions in the courts to the judges deciding on the cases, every aspect of it has always been with the help of self and other humans. Needless to say, there has been an increasing move towards digitization which is the virtual documentation of information.

But as we have seen, there are numerous problems associated with using artificial intelligence in a justice delivery system. Proponents of AI adjudication, particularly the profit-motivated firms that develop the technology—will have an incentive to criticize traditional modes of human judging, including its association with equitable justice, and to celebrate the mechanized alternatives linked to codified justice.²⁷ Thus, subjective markers, especially of data interpretation has to be left to humans. A crime has many components, be it elements prior to *mens rea* to the circumstantial factors leading to the *actus reus*. Adjudication is more nuanced a profession than one can possibly assert as no two crimes are the same even if the harm caused may be typical. Human elements like trust (which has also been mentioned by the study of Richard et.al), respect, autonomy, and nuanced understanding are required in a legal process. Hence, a complete AI takeover, although seem ‘efficient’ immediately, may be a dicey decision in the long run.

However, instead of avoiding such a tool altogether, it can be used judiciously to handle large amount of data without making inferences on its own. AI can also predict recidivism by analysing hundreds of thousands of criminal justice-related data to predict new offences of absconding offenders, and as such AI application can be very useful for practitioners in warrants services, increasing fines recovery and allowing a more optimised resources allocation which, in the long term, helps the aim for swifter wheels of justice.²⁸ Therefore, judicious use of AI with a robust regulatory framework can be helpful. But what we have to remember is that artificial intelligence can only mimic human intelligence but cannot replace it.

²⁷ Richard M. Re & Alicia Solow-Niederman, “Developing Artificially Intelligent Justice”, 22 STAN. TECH. L. REV. 242 (2019).

²⁸ Asma Idder & Stephanie Coulox, “Artificial Intelligence in Criminal justice: Invasion or Revolution?”, International Bar Association (2021)
<https://www.ibanet.org/dec-21-ai-criminal-justice>