

## ARTIFICIAL INTELLIGENCE AND PREDICTIVE JUSTICE: IMPLICATIONS OF THE RULE OF LAW

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### **Abstract**

The Judicial bodies across the world started exploring the use of Artificial Intelligence. AI is used in providing investigative assistance and in automated decision making process. Today more attention is given in the task of making AI to deliver judgements, irrespective of the risks that AI enabled systems poses to the constitutionally preserved substantive and procedural dimensions of justice. AI enabled systems in adjudication raises questions on accountability, fairness, and transparency in decision making. Thus legal AI must be measured in course of deployment with reference to a framework that possibly safeguards those values enshrined in the constitution and the rule of law. This paper focuses on recent developments in disruptive legal technologies. Further explores how AI systems have attempted to represent law, judicial interpretation and reasoning. More specifically analyses the challenges and opportunities in harnessing AI into Judicial systems and their implications for human rights and Rule of Law. Though potential rules of legal AI acts as a mechanism for governing future development, however it should ensure that AI positioned in a way that strengthens rule of law, promotes adherence to constitutional values and proportionately distributes risks and benefits of AI technologies.

**Key words:** *Artificial intelligence, automated dispute resolution, disruptive legal technologies, human rights, rule of law*

### **Introduction:**

The time has come for the legal profession to modernize and transform itself. Big changes in the legal market, a trend towards automation of legal services; a movement toward ‘decomposing’ legal work into its constituent tasks and sourcing each in the most efficient way. This emerging trend creates fundamental challenges to conventional legal service and practice. Technology transforms the practice of law and may for example reshape the process of judging, by exchanging, supporting or substituting the judicial role. For the internet generation; automated dispute resolution will become a main stream technique for resolving disputes. Artificial intelligence will shape and characterize twenty –first century legal service. For the internet generation, automated dispute resolution will become a main stream for resolving disputes .As AI technology within law is relatively new, ethical issues raised need close scrutiny.

AI works by detecting patterns in data using rules, information and knowledge encoded and processed by computers. Group of research on AI in the judicial domain, generally repel these emerging changes, on" technological due process “in spite of its objective and subjective advantages they offer. Vested power with man or machine must be accorded by a

commensurate degree of accountability. Richard E. Susskind states “AI need to be closely monitored of the potential consequences that arise when such technologies are given free rein to "weave themselves into the fabric of everyday life until they are indistinguishable from it.”<sup>1</sup> Moreover such systems cannot be evaluated purely by design, disregard to the unforeseen consequences that may arise in implementation.

Little research has been carried out in the area of how artificial intelligence technology applied in dispute resolution ensures transparency, responsibility, and fairness. The values of the justice system that humans strive to uphold are the same values against which AI technology must also be measured. Against this background, the purpose of this research is to understand the implications of AI technologies and access to justice. More specifically, this research has two objectives: how to ensure the rule of law and constitutional values in use of these systems, and how to assess the issues of bias and discrimination.

### **Development of Disruptive Legal Technologies:**

In an increasingly interconnected world, disruptive legal technologies have the power to transform dispute resolution in all walks of life. The prospect of technology, the conventional assumptions about courts was questioned. For more than five decades, researchers have attempted to apply technology in legal decision making. There are two different ways in which IT and the Internet can impact on the resolution of disputes. The first is where elements of conventional dispute resolution processes are replaced by technology. Examples of this include the use of telephone conferencing rather than physical meetings or pre-trial reviews with a judge or where witness or parties appear before a judge via video conferencing; or where judges use a sentencing system to help them to work out what prison term a convicted criminal should serve<sup>2</sup>. These are the illustrations of the use of IT to substitute or support an inconvenient or inefficient part of traditional proceedings. Today document classification are automated using machine learning application software<sup>3</sup>. The natural language legal questions are precisely answered by the Ross Intelligence legal application software developed by IBM’s Watson<sup>4</sup>. The online legal service providers produce basic wills, divorce agreements and contracts without a lawyer involvement<sup>5</sup>. Thus these technologies minimized the traditionalist lawyering and force us to realize that computers are changing the way that law is practiced. AI systems have sought to represent law and interpret it in the form of predictive coding, predictive analytics and machine learning. US have already adopted predictive coding in interpretation and judicial decision making, to decide recidivism and to assist in decision about sentencing.<sup>6</sup>

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<sup>1</sup> Richard E. Susskind, *Expert Systems in Law: Out of the Research Laboratory and into the Marketplace*, in *Proceedings of the 1st International Conference on Artificial Intelligence and Law 4* (1987) [hereinafter Susskind, *Out of the Research Laboratory*]; Philip Leith, *The Rise and Fall of the Legal Expert System*, 30 *Int’l Rev. L., Computers, & Tech.* 94, 99 (2016); Anja Oskamp & Marc Lauritsen, *AI in Law Practice? So Far, Not Much*, 10 *Artificial Intelligence & L.* 227, 227 (2002)

<sup>2</sup> A special issue of the *International Journal of Laws and Information Technology* (1998)6(2) was devoted entirely to judicial sentencing support systems.

<sup>3</sup> John Markoff, *Armies of Expensive Lawyers, Replaced by Cheaper Software*, *N.Y. TIMES*, arch, 5, 2011 at A1

<sup>4</sup> RossIntelligence.com is developing one such application, which it describes as your “brand new Super Intelligent Attorney.” See ROSS, <http://www.rossintelligence.com/> (last visited Oct. 20, 2015) (“You ask your questions in plain English, as you would a colleague, and ROSS then reads through the entire body of law and returns a cited answer and topical readings from legislation, case law and secondary sources to get you up-to-speed quickly.”).

<sup>5</sup> Benjamin Barton, *Glass Half Full: The Decline and Rebirth Of The Legal Profession* (Oxford Univ. Press 2015); Benjamin Barton, *The Lawyer’s Monopoly: What Goes and What Stays*, 82 *Fordham L. Rev.* 3068 (2014); Benjamin Barton, *Lessons From the Rise of LegalZoom*, *BLOOMBERG BNA* (June 18, 2015), <https://bol.bna.com/lessons-from-the-rise-of-legalzoom>

<sup>6</sup> Kevin D Ashley, *Artificial Intelligence and Legal Analytics* (Cambridge University Press, 2017)

### **Automated Decision Making and Predictive Justice:**

It has long been predicted that technological advances in areas like communication, business and entertainment would bring similar modernizations to our justice systems. A contributing factor to the slow pace of technological change in the justice sector<sup>7</sup> is the historical preference for top-down, court and lawyer-centric approaches.<sup>8</sup> Emerging 'disruptive technologies' hold the potential to challenge and replace traditional legal processes rather than simply complement them.<sup>9</sup> Further innovations are also reaching the justice domain through emerging ODR technologies<sup>10</sup>. A computer-based system that relies on relatively simple AI can begin to serve this majority of citizens in an efficient and timely way.

'AI' focuses on the creation of intelligent machines which think like a human.<sup>11</sup> It imitates some of the cognitive functions of the human mind<sup>12</sup>. The potential for AI-based systems to enhance access to justice has already been recognized in the justice and ODR contexts. AI creates synthetic intelligence through technology.<sup>13</sup> While some work in this area has attempted to create machines that replicate patterns of human thought, many systems seek only to provide outputs or perform tasks drawing on human intelligence.<sup>14</sup> In the latter format, outcomes may reflect human intelligence, even if the reasoning process does not resemble human thought. These AI systems ultimately represent tools that can have a profound impact on our thinking or reasoning processes. The development of automated dispute resolution operates at three different stages in decision making. The stages are interpretation, application and enforcement of law. The role of the judge is not to make law, but to analyze the rules based on logical deductions and interpret the appropriate rules. Application of fixed rules to the source materials and with the detached reasoning process the judge makes decision.

Machine learning algorithms are used to detect patterns in data in order to automate complex tasks or make predictions<sup>15</sup>. Machine learning is thus often considered a branch of artificial intelligence, since a well performing algorithm may produce automated results that appear "intelligent"<sup>16</sup>. The most interesting possibility here is technology based on Computational Law. Computational law is the branch of legal informatics, concerned with the mechanization of legal analysis either done by humans or machines. Legal profession can be potentially changed by the development of computational law. It enables legal understanding and provides legal tools even to common men in the society by which access to justice and improvement in the legal system is easily done.

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<sup>7</sup> R. Susskind, 'Expert Systems in Law: A Jurisprudential Approach to Artificial Intelligence and Legal Reasoning', *Modern Law Review*, Vol. 49, No. 2, 1986, pp. 168, 184-194

<sup>8</sup> C.B. Robertson, 'The Facebook Disruption: How Social Media May Transform Civil Litigation and Facilitate Access to Justice', *Arkansas Law Review*, Vol. 65, 2012, p. 75.

<sup>9</sup> R. Susskind, *The End of Lawyers?: Rethinking the Nature of Legal Services*, Oxford University Press, New York, 2008, p. 275.

<sup>10</sup> A.R. Lodder & J. Zeleznikow, 'Developing an Online Dispute Resolution Environment: Dialogue Tools and Negotiation Support Systems in a Three-Step Model', *Harvard Negotiation Law Review*, Vol. 10, 2005, pp. 287, 296. Retrieved on 2 June 2019 from

<sup>11</sup> Michael Mills, *Artificial Intelligence in Law: The State of Play 2016 (Part 1)* (23 February 2016) Legal Executive Institute. <http://legalexecutiveinstitute.com/artificial-intelligence-in-law-the-state-of-play-2016-part-1>

<sup>12</sup> R.E. Mueller, 'The Leonardo Paradox: Imagining the Ultimately Creative Computer', *Leonardo*, Vol. 23, No. 4, 1990, p. 427

<sup>13</sup> D. Poole, A. Mackworth & R. Goebel, *Computational Intelligence: A Logical Approach*, 1st edn, Oxford University Press, New York, 1998, pp. 1-2, 9-10.

<sup>14</sup> Lodder & Zeleznikow, *Developing an Online Dispute Resolution Environment: Dialogue Tools and Negotiation Support systems in a three step model*, *Harvard Negotiation Law Review*, Vol 10, 2005, pp. 288-289

<sup>15</sup> David E. Sorkin, *Technical and Legal Approaches to Unsolicited Electronic Mail*, 35 U.S.F. L. REV. 325, 326 (2001)

<sup>16</sup> Stuart Russell & Peter Norvig, *Artificial Intelligence: A Modern Approach* 693 (3d ed. 2010)

Surden notes that “machine learning may run into some limitations in the development of effective AI that can predict legal outcomes. Machine learning techniques are only useful where analyzed information is similar to new information presented to the AI. Should an AI program be presented with a novel case where no similar precedent exists, it may not be well-suited in making a prediction or coming to an outcome. These issues may also arise where the sample size of previous cases is not large enough for the computer program to discover patterns and create effective generalizations”<sup>17</sup>. Further if the decisions questions the personal freedom, liberty, or exercise of rights and responsibilities in the case in relation to civil and criminal law, the stake is higher. The values of justice system that humans strive to uphold are the same values against which AI must also be measured.

Good governance is subject to the "rule of law," which demands that "the enacting laws should be guided by open and relatively stable general rules"<sup>2</sup> that support equality, fairness, predictability, transparency, and accessibility. A key structural dimension of the rule of the law is the way in which legal outcomes balance procedural versus substantive justice. Procedural justice govern how the law is made and applied, while substantive justice bound by the consequences that derive from this process of making or applying. An interesting question was raised by Justice Perry, when an administrative decision delivered by the automated systems. He raises questions such as who makes the decision, and who possesses the legal authority to make such a decision. Is it the computer programmer, the Policymaker, the human decision-maker or the computer or automated system itself?<sup>18</sup> For example, a decision made under the Therapeutic Goods Act by a computer program is deemed to have been made by the Secretary.<sup>19</sup> Automated decision-making systems implemented with the intent of facilitating access to justice raises concerns regarding the explain ability and robustness of the decisions made<sup>20</sup>.

AI particularly machine learning uses predictive coding may in practice operate as a barrier to the obtainment of fair outcomes. This risk can arise as a function of design or of implementation, with the latter risk magnified where the process by which automated decisions are reached are procedurally and substantively different from those processes adhered to by human decision-makers. As a tool to assist legal decision makers, AI works on predictions derived from data-driven systems offer insight into factors that influence an outcome. Data can encode biases due to the human decisions that this data represents, and ML reliant on this data can operate to institutionalize this bias. Whilst claims of "biased" computer programs suggest an ethical failure on behalf of designers, such problems may more commonly reflect methodological and technical issues with data.

Thus AI system on legal decision making should operate to emphasize the scientific character of the law in which key dimensions of the rule of law, namely adherence to reason, uniformity and certitude are prioritized above all else.

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<sup>17</sup> Harry Surden, 'Machine Learning and Law' (2014) 89 Washington Law Review 87, 105.

Ibid 89; David Silver et al, 'Mastering the Game of Go with Deep Neural Networks and Tree Search' (2016) 529 Nature 484, 489. Surden.

<sup>18</sup> Perry, 'Administrative Decision-Making in the Digital World', Oxford University Press 2016 33, 31

<sup>19</sup> Therapeutic Goods Act 1989 (Cth) s 7C(2)

<sup>20</sup> Zalnieriute, Monika and Bennett Moses, Lyria and Williams, George, Automating Government Decision making: Implications for the Rule of Law (2021). In S. de Souza, M. Spohr (eds) Technology, Innovation and Access to Justice: Dialogues on the Future of Law (Edinburgh University Press, 2021), UNSW Law Research Paper No. 21-35, Available at SSRN: <https://ssrn.com/abstract=3805496>

### **Future Implications of Automated Decision Making:**

R.Susskind, in his book *Expert systems in law* had theorized about the possibility of computers replacing judges<sup>21</sup>, where he concluded then that the impossibility of computers fully to assume the judicial function. Will judges be replaced by technology? Not initially, but at least in the future. In decision making, judge use the factors that includes induction and intuition and assess the capacity of the social impact of the decisions .But the missing point in AI is the contribution of the judge to society which extend beyond adjudication and includes often unexamined issues adhering to rule of law<sup>22</sup>.

Administration of justice requires an impartial, equal, transparent and principled system that gives effect to the rule of law. Caution is required to ensure that this AI fourth wave reform does not overshadow the complexities required to properly administer justice. Algorithm need to be created in a socially responsible fashion and do not serve to entrench already existing prejudices and assumptions in the legal system<sup>23</sup>.However, a commitment of using AI in an ethical and informed manner guided by a series of values would protect the rule of law and the values enshrined in the constitution

### **Conclusion:**

AI and automated decision-making systems represent a new frontier for access to justice. These technologies present significant challenges – and opportunities – to traditional models of human rights, legal regulation, dispute resolution, and due process. It is incumbent on policy-makers, advocates, and justice system leaders to understand the impact of this technology and to act thoughtfully. The disruptive legal technologies aim to support the legal arena by means of description and prediction. The legal profession potentially moves toward “legal singularity” producing a new type of artificial legal meaning, enabling self-driving laws.

Thus it is essential to understand the implications of technologies and assess the constitutional and rule of law challenges posed by AI. Discussions and creation of guidelines for “Ethical AI” and “AI Policy” are not sufficient. New legislation and regulations are needed. The area’s most urgently in need of new law include: clarity regarding liability for AI systems; rules about government procurement; regulations around transparency and disclosure. Following the rules in instalment of AI in justice delivery system shall better position us in a way that ensures Constitutional values, promotes adherence to the rule of law and more fairly distributes the associated risks and benefits of new technologies.

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<sup>21</sup> R.Susskind,*Expert Systems in Law* (Oxford: Oxford University Press),1987,paperback edition,1989 249-51.

<sup>22</sup> Australian Law Reform Commission, *Technology: What It Means for Federal Dispute Resolution*, Issues Paper No 23 (1998) 101.

<sup>23</sup>Riikka Koulu, Lila Kaillo and Jenni Hakkarainen, *Law and Digitalization: An Agenda for the Future* (Report No 1, May 2017) 7