ARTIFICIAL INTELLIGENCE LAW: APPLICATIONS, RISKS & OPPORTUNITIES

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INTRODUCTION

It seems that with every rising sun, new technology emerges that changes the way we conduct and live our lives. For almost a decade now, applications and solutions involving the use of *artificial intelligence* (henceforth, A.I.) are more commonplace in our everyday routines. The countless possible applications of A.I. technology can be quite intriguing. One application of A.I., *autonomous vehicles* (henceforth, A.V.s) are already on the market today, with companies such as Tesla, Volvo, and Mercedes Benz invest-

1   Bridie Schmidt, *Volvo Seeks to Close Gap on Tesla with Robotaxis Using Waymo Technology*, TheDriven (June 26, 2020), https://thedriven.io/2020/06/26/volvo-seeks-to-close-gap-on-tesla-with-robotaxis-using-waymo-technology/.

ing heavily in this technology.[1] Programs such as Apple's Siri and Amazon's Alexa employ voice recognition technology called *natural language interphases* which is also a subset of A.I.[2] In the Medical Services field, doctors are using A.I. to assist them in diagnosing and developing treatment plans for patients.[3] This technology is currently assisting people in the analysis and compilation of enormous amounts of data, allowing us to come up with solutions that were previously impossible to develop. A.I. applications have already reached the legal profession as well, with companies like Thompson Routers employing this technology to conduct searches in their legal databases.[4]

This paper explores the legal aspects, conflicts, and ethical concerns that can emerge with commercial applications of A.I. Have we carefully considered the different costs and risks possibly associated with using this new and sophisticated commercial technology? What are the basic social concepts that vendors should adhere to when developing their platforms? What are the current A.I. policies in the United States and other countries like China and Russia? Are there any laws or regulation that protects citizens from the possible risks that might emerge from this modern and mostly unexplored technology?

The study consists of four sections. We will first present contextual background to some key terms and concepts. Then, we discuss the current legal landscape in the United Stated and other leading A.I. jurisdictions, both domestic and abroad. The third section addresses the duties, legal aspects, and ethical concerns for lawyers employing A.I. technology on the workplace. We conclude with an opinion on the future of A.I. in legal and commercial settings and provides some basic steps or recommendations for those involved or interested in managing this technology and its associated risks.

I. Background and Practical Context

A. Key Terms and Concepts

The meaning of the term *artificial intelligence* might not be perfectly clear to most people. If you perform a web search for artificial intelligence you will find a wide range of sources providing different definitions. It is especially challenging to keep track of its meaning given how fast and rapidly technology is emerging. One of the most expansive explanations of what the term means can be found on *FUTURE of Artificial Intelligence Act*,[5] a bipartisan bill presented by the House of Representatives in December 2017. Under Section 3(a)(1), the Bill lists the following as examples of A.I. technology:

> (A) Any artificial systems that perform tasks under varying and unpredictable circumstances, without significant human oversight, or that can learn

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2   Tim Bajarin, *This Is the Biggest Battle in Tech Right Now*, Time (June 6, 2016), https://time.com/4358920/artifical-intelligence-apple-google-amazon-microsoft-siri/.

3   Thomas Davenport & Ravi Kalakota, *The Potential for Artificial Intelligence in Health Care*, 6 Future Healthcare Journal 94 (2019).

4   David Lat, *How Artificial Intelligence Is Transforming Legal Research*, AbovetheLaw, https://abovethelaw.com/law2020/how-artificial-intelligence-is-transforming-legal-research/ (last visited Jan. 25, 2021).

5   FUTURE of Artificial Intelligence Act, H.R. 4625, 115th Cong. (2017).

from their experience and improve their performance. Such systems may be developed in computer software, physical hardware, or other contexts not yet contemplated. They may solve tasks requiring human-like perception, cognition, planning, learning, communication, or physical action. In general, the more human-like the system within the context of its tasks, the more it can be said to use artificial intelligence.

(B) Systems that think like humans, such as cognitive architectures and neural networks.

(C) Systems that act like humans, such as systems that can pass the Turing test or other comparable test via natural language processing, knowledge representation, automated reasoning, and learning.

(D) A set of techniques, including machine learning, that seek to approximate some cognitive task.

(E) Systems that act rationally, such as intelligent software agents and embodied robots that achieve goals via perception, planning, reasoning, learning, communicating, decision making, and acting.[6]

Artificial intelligence, sometimes also referred to as *machine intelligence* (M.I.), refers to a system's ability to perform tasks that are usually associated with human reasoning, such as identifying patterns in data sets.[7] A report published by the Center for Strategic and International Studies Technology Policy Program titled *A National Machine Intelligence Strategy for the United States* provides an optimistic perspective for the future use of A.I. in the workplace:

> MI's ability to automate pattern-matching tasks, like recognizing objects in images and transcribing speech, will eliminate many tedious aspects of our jobs. MI-enabled transcription, for example, can help doctors save time recording patients' medical files. Machine precision at these forms of repetitive work complements human capabilities.[8]

Artificial intelligence has existed for decades now, but advances in modern computing have recently allowed it to become part of various aspects of our daily lives. Legal research databases like LexisNexis and Westlaw are examples of today's applications of this technology.[9] Author David E. Chamberlain gives us some insight into today's usage of A.I.:

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6   *Id.* § 3(a)(1).

7   William A. Carter et al., *A National Machine Intelligence Strategy for the United States*, CSIS Technology-Policy Program, at 1 (March, 2018), https://www.csis.org/events/national-machine-intelligence-strategy-united-states.

8   *Id.* at 7.

9   *See,* David E. Chamberlain & Timothy B. Poteet, *Artificial Intelligence and the Practice of Law Or Can a Computer Think Like a Lawyer?,* State Bar of Texas 8th Annual Business Disputes Course, Chapter 25 (September 22-23, 2016).

> Computer programs are developed by software engineers, but those that are "artificially intelligent" are represented to have the capacity to process information, then create new programs independently based on the information processed.
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> . . . .
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> It is suggested that these programs would "learn" as they are used, such that their capabilities and presumably their value would increase over time and be able to recognize not just words but concepts.[10]

Artificial intelligence is developed through the use of *algorithms* designed to iteratively learn from data and improve the program's performance through continued usage. According to Chamberlain:

> An algorithm may be considered as a step-by-step set of operations to be performed, or a type of formula. Algorithms are increasingly prevalent if not omnipresent in the daily lives of people in countries with developed economies, being used in the military, business, finance, manufacturing, science, communications, media, transportation, medicine, entertainment, and virtually every other facet of economic and social life.[11]

Chamberlain further explains that A.I. "allows computers to find hidden insights without being explicitly programmed where to look. . . . [producing] reliable, repeatable results."[12]

B. *A.I. is Here*

Artificial Intelligence is already providing commercial solutions across different practice areas such as medicine, transportation, and climate change. For example, in the health sciences field, doctors are using IBM's Watson as a tool to "create a more accurate diagnosis and treatment plan for patients because of the system's ability to sift through and evaluate extensive amounts of data."[13] Watson uses information from patient notes, medical journals, and other sources to assist doctor in various ways.[14] Although autonomous vehicles are primary designed to assist the driver and prevent accident, the used of shared vehicle, fleets and parking lots will make travel more energy efficient reducing greenhouse gas emissions. "[S]hared fleets of autonomous vehicles could reduce the number of cars on the road, limiting congestion and air pollution and creating the opportunity to turn parking lots into green spaces."[15]

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10   *Id.* at 1.

11   *Id.* at 3.

12   *Id.*

13   Bridget Watson, *A Mind of Its Own - Direct Infringement by Users of Artificial Intelligence,* 58 IDEA: THE JOURNAL OF THE FRANKLIN PIERCE CENTER FOR INTELLECTUAL PROPERTY 64, 73 (2017).

14   *Id.* at 72-73.

15   Carter, *supra* note 7, at 13.

The U.S. Government is also making big investments in A.I., as evidenced by the *smart grid* technology currently being developed at the Department of Energy.[16] According to the website *smartgrid.gov*, the grid's main goal is to increase efficiency and help reduce energy consumption at a Federal level:

> "The grid," refers to the electric grid, a network of transmission lines, sub-stations, transformers and more that deliver electricity from the power plant to your home or business. . . . [It] was built in the 1890's and improved upon as technology advanced through each decade. . . . Although the electric grid is considered an engineering marvel, we are stretching its patchwork nature to its capacity. To move forward, we need a new kind of electric grid, one that is built from the bottom up to handle the groundswell of digital and computerized equipment and technology dependent on it—and one that can automate and manage the increasing complexity and needs of electricity in the 21st Century.
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> . . . .
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> The Smart Grid represents an unprecedented opportunity to move the energy industry into a new era of reliability, availability, and efficiency that will contribute to our economic and environmental health.[17]

The benefits to society of some of today's A.I. applications can be oddly intuitive as well. For example, tech giant Facebook is developing A.I. technology aimed at reducing a victim's exposure to online predatory abuse.[18] It is being designed to quickly detect and automatically remove revenge porn from its site even before anyone reports them. According to Facebook's Global Head of Safety, Antigone Davis: "we can now proactively detect near nude images or videos that are shared without permission on Facebook and Instagram. . . . Often victims are afraid of retribution so they are reluctant to report the content themselves or are unaware the content has been shared."[19] Davis further clarified that the process is not entirely left to the A.I. and that "specially-trained member[s] of the company's Community Operations will review the content found by our technology."[20] The program will be expanded after receiving positive feedback from victims and support organizations.[21]

C. *A.I. in the Legal Profession*

There are many applications of A.I. in the legal profession today. In a similar way to how A.I. works on other fields, legal concepts can be tackled by and expressed through

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16 U.S. Department of Energy, *What is the Smart Grid?*, SMARTGRID, https://www.smartgrid.gov/the_smart_grid/smart_grid.html (last visited Jan. 25, 2021).

17 *Id.*

18 James Rogers, *Facebook Battles Revenge Porn with Artificial Intelligence*, FOXNEWS (March 15, 2019), https://www.foxnews.com/tech/facebook-battles-revenge-porn-with-ai.

19 *Id.*

20 *Id.*

21 *Id.*

algorithms. The American Bar Association has previously stated that "AI is the next great hope that will revolutionize the legal profession."[22] Over time, the costs of developing A.I. can become much cheaper than hiring and training entry level lawyers. However, while many expect this technology will improve their ability to better serve clients, some are not as optimistic, fearing computers might end up replacing much of the work currently being performed by legal professionals.

Today's A.I. applications offer legal solutions such as helping with investigative tasks, performing document review, drafting memorandums, and helping lawyers prepare for specific cases. For example, document review software BEAGLE, claims to reduce the time dedicated to legal review to under twenty minutes and increase review accuracy by twenty per cent.[23] According to their site, they "sniff out the fine print so you don't have to."[24] Another vendor, Ravel Law, is developing software which helps attorneys prepare for their cases by providing data on "how judges have ruled on motions in the past and . . . analytics on law firms; as well providing [e]xclusive intel to compare forums, predict outcomes, and craft winning arguments."[25] Armed with these creative applications, lawyers can gain an edge when representing their clients, especially when the other party's legal representation is not as technologically equipped.

ROSS Intelligence has developed sophisticated programs than can perform legal tasks such as searching through legal databases and coming up with answers to legal questions. It claims on its website to "[s]upercharge lawyers with artificial intelligence."[26] Its *parent* software, IBM's Watson, currently has a feature that creates arguments which could soon be available for ROSS. "When asked a question, *Watson* will scan its databases and propose not only research, but arguments to be advanced in a debate."[27] Back in 2011, Watson won a competition against the two best players in Jeopardy! history, answering questions related to pop culture, sports, and literature by using its extensive data bank and complex algorithms.[28] Almost a decade later, commercial A.I. technology capable of proposing legal arguments is closer to becoming a reality than some might perceive. A particular legal memo service which ROSS has been developing has impressed even veteran lawyers.[29] Pose any legal question and it replies a day later with a summary of the answer and a two-page explanatory memo.[30] According to Luis Salazar, one of five lawyers at a small

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22   Chamberlain & Poteet, *supra* nota 9, at 2 (*quoting* Bob Ambrogi, *How Artificial Intelligence is Transforming the Legal Profession*, ABA Journal (May 3, 2016), http://www.abajournal.com.legaltalknetwork.com/podcasts/law-technology-now/2016/05/artificial-intelligence-will-influence-future-legal).

23   William, J. Connell, *Artificial Intelligence in the Legal Profession: What You Might Want to Know,* 66 R.I. B.J. 5, 7 (2018).

24   *Id.*

25   *Id.*

26   *Id.* at 6.

27   *Id.* at 7.

28   Watson, *supra* note 13, at 72.

29   Steve Lohr, *A.I. Is Doing Legal Work. But It Won't Replace Lawyers, Yet,* N. Y.Times (March 19, 2017), https://www.nytimes.com/2017/03/19/technology/lawyers-artificial-intelligence.html.

30   *Id.*

bankruptcy firm in Miami, the results can be indistinguishable from a document written by an actual lawyer.[31] ROSS's A.I. "reads through thousands of cases and delivers a ranked list of the most relevant ones. . . . It's kind of scary. If it gets better, a lot of people could lose their jobs."[32]

Researchers at the Massachusetts Institute of Technology and the University of North Carolina School of Law estimated that at large law firms only four per cent of the lawyers' time is used for document review.[33] The rest is outsourced or done by artificial intelligence. Their investigation concluded that putting all new legal technology in place immediately could result in an estimated thirteen percent decline in lawyers' billable hours.[34] "A more realistic adoption rate would cut hours worked by lawyers by 2.5 percent annually over five years", [35] the paper concludes. "Even smaller law firms and solo operations can use basic word searches, or so-called 'search and find' type tasks, to review documents and find items that might have taken hours and days of research in the past."[36] On a separate study, the McKinsey Global Institute found that nearly fifty per cent of all tasks could be automated with technology that is "widely available or at least being tested in a lab."[37] The study also found out that currently only one out of every twenty jobs can be entirely automated.[38]

Commercial technology intended for non-lawyers may also unintendedly end up affecting the legal profession as well. One such example is *OneDayDecisions.com*'s claim adjudication application. They claim that "[w]here a small claims case might cost about $50 to adjudicate with several weeks or more of waiting, [their software] can adjudicate a claim with a form of [A.I.] for $19 in a day with payment to the prevailing party within 7-10 days."[39] This would represent a significant sixty per cent cost reduction as well as a significant reduction in wait time.[40] Similarly, websites such as eBay and PayPal, which generate tons of disputes about mistaken charges and misrepresented items, have developed resolution tools to automatically resolve over sixty million cases per year.[41] The software will evaluate each party's arguments, weigh them according to its algorithm, and come up with a solution on its own. These disputes, however minor, may be simple, "but they take time and money to resolve and can leave a bad taste in consumers' mouths if handled carelessly."[42] M.I. agents can "adjudicate these cases in minutes with a fairness that has actually boosted customer satisfaction."[43] This A.I. is not much different from that used

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31   *Id.*

32   *Id.*

33   *Id.*

34   *Id.*

35   *Id.*

36   Connell, *supra* note 23, at 5.

37   Lohr, *supra* note 29.

38   *Id.*

39   Larry N. Zimmerman, *Artificial Intelligence in the Judiciary,* 85 J. Kan. B.A. 20 (2016).

40   *Id.*

41   *Id.*

42   *Id.*

43   *Id.*

by Katie Atkinson of the University of Liverpool's Department of Computer Science, who saw in *Popov v. Hayashi* the opportunity to explore modeling legal arguments as computer code.[44] Her software accurately predicted the decision of human judges in ninety six per cent of the cases.[45] Atkinson explained her approach:

> You represent arguments as a graph . . . and then you do a calculation on which arguments attack one another, which are counterarguments, and then you have to have a method of deciding which are the winning arguments. This argument beats this argument because of this particular reason.[46]

A final example which offers a more controversial illustration of the use of A.I. within the legal spectrum, is software such as Legal Robot, which has been developed to "help people 'understand complex legal language and spot problems before you sign, without the time and cost of hiring an attorney.'"[47] Their technology uses legal algorithms in order to provide fairness and risk analysis to their non-lawyer customers.[48] However impactful this technology may be, providing legal guidance to non-lawyers through A.I., without the assistance of an actual lawyer, raises serious ethical concerns within the legal profession.

D. *Possible Risks Behind the Use of A.I.*

The benefits to society of these platforms will clearly not come without social and commercial risks. Mr. Ali Nouri, president of the Federation of American Scientists, warns us that while A.I., machine learning, and automation all bring tremendous benefits, they also pose some serious risks including "erosion of personal privacy, increased social media disinformation, and the potential for an autonomous weapons arms race."[49] It will be crucial for A.I. developers, consumers, and legal professionals to understand and proactively manage these risks.

The most commonly mentioned risk arising with the use of A.I. pertains to individual data privacy. Our personal information can be used by big tech corporations to develop insight and new products in ways that can be intrusive and upsetting. For example, Google's DeepMind Machine Intelligence Unit and the United Kingdom's National Health System were recently cited for using health records with sensitive information of over a million patients without having notified the affected patients.[50]

Another risk that worries policymakers relates to encoded biases that can become ingrained within audit-resistant models. When biased data is used to train machines to

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44 *Id.*

45 *Id.*

46 *Id.*

47 Connell, *supra* note 23, at 7.

48 *Id.*

49 Milton Hoening, *Artificial Intelligence: a Detailed Explainer, with a Human Point of View,* THE BULLETIN (Dec. 7, 2018), https://thebulletin.org/2018/12/artificial-intelligence-a-detailed-explainer-with-a-human-point-of-view/.

50 Carter, *supra* note 7, at 15.

make decisions, these biases can cause an application to act discriminatively and help per-petuate inequities on a massive scale. For example, experts worry about the increasing use of M.I. to make hiring decisions which could replicate and reproduce patterns of discriminatory hiring based on data that is inherently biased.[51] "The use of algorithms by [government] agencies [to assign children to public schools, rate teachers, target buildings for fire inspections, and make policing decisions] have been challenged in court."[52] On *In the Matter of Lederman v. King*, New York's Supreme Court found that use of the *Value Added Modeling* algorithm to evaluate a fourth grade teacher without an additional review by an actual person was "impermissible because it was arbitrary and capricious."[53]

There also exists the possibility that the A.I. can develop updates that may unknowingly and involuntarily infringe on already patented programs or inventions. One real life example is John Koza's *Invention Machine* which "created a system that enables factories to operate more efficiently." [54] Interestingly, Koza was able to obtain patent protection for the system created by his A.I..[55] In this particular case, since Koza did not disclose the A.I.'s role in creating the invention, the United States Patent and Trademark Office did not have the opportunity to expand on whether or not an invention created by a system of machine intelligence was patentable.[56]

Artificial Intelligence systems are naturally complex, sometimes not even completely understood by their developers. This lack of transparency will pose some serious legal and social challenges as well as privacy and security concerns. It will also complicate our ability to assign responsibility in many cases and to receive transparency into how decisions are being made. Who will be held responsible when sensible private data becomes lost, stolen, or used for non-intended purposes, causing harm to individuals, corporations, or even governments? What about the case of an autonomous vehicle crash where the driver claims to have been using the software while driving? Actually, any type of commercial A.I. application that causes loss of property or personal data to their users could end up representing costly legal liabilities to A.I. vendors. As we can see, venturing into the A.I. marketplace can be a risky proposition for companies that are not familiar with the risks, commercial environment, and regulation.

II. ARTIFICIAL INTELLIGENCE LAW

A. *Perspective*

Artificial Intelligence Law is the field of law that studies and deals "with the rights and liability that arises from the use of AI" and the technology itself.[57] It can be regarded

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51 *Id.*

52 Huu Nguyen, *Artificial Intelligence Law is Here, Part Two*, ABOVETHELAW (Aug. 23, 2018), https://abovethelaw.com/legal-innovation-center/2018/08/23/artificial-intelligence-law-is-here-part-two/.

53 *Id.*

54 Watson, *supra* note 13, at 75.

55 *Id.*

56 *Id.*

57 Huu Nguyen, *Artificial Intelligence Law is Here, Part One*, ABOVETHELAW (July 26, 2018), https://abovethelaw.com/legal-innovation-center/2018/07/26/artificial-intelligence-law-is-here-part-one/.

as a specific discipline of the law.[58] Regulation is being developed worldwide by leading nations to set the rules for the future of A.I. The National Highway and Transportation Safety Administration's updated guidance on autonomous vehicles recognizes six levels of A.V.s, with increasing autonomy from levels one through six.[59] "While knowing about the technical intricacies of AI is not necessary for an AI lawyer, one should know the potential impact AI can have on businesses, consumers and society."[60] One of the biggest concerns to policymakers is that each day A.I. is becoming more autonomous and, consequently, riskier:

> One aspect of modern AI, especially the use of deep neural networks, is the black box nature of the technology. For example, a neural network may be stored as large matrices of numbers. Input is fed into an algorithm, and the AI is trained to provide certain output. What rules or correlations the AI makes are often times a mystery. The correlations discovered by the AI may be based on impermissible categories, such as race or gender, or may be based on relations that have disparate impacts. [61]

B. *International Arms Race for A.I. Technology*

In recent years, there have been multiple instances of meddling and international disputes regarding the use of Artificial Intelligence. One prime example of these is the use of political twitter bots that has been recently used by foreign powers to influence the outcome of elections around the world, including in Turkey, Mexico, India, and the United States.[62] Back in September 2017, Russian president Vladimir Putin notoriously stated that "whoever becomes the leader in AI will become the ruler of the world."[63]

The French have also been leaders in the development of A.I. policy, as they look to create their own A.I. ecosystem and make sure that their workforce is prepared for an automated future.[64] To guide their process, they have developed their own A.I. policy, titled *For a Meaningful Artificial Intelligence,* outlined in a comprehensive document written by Cédric Villani, a "world-renowned mathematician and a member of French Parliament."[65] The report anticipates A.I.'s impact on the job market and urges the French Government to get ahead of change so that their citizens can benefit.[66] President Macron recently expressed: "I think artificial intelligence will disrupt all the different business models and it's

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58 *Id.*
59 *Id.*
60 *Id.*
61 *Id.*
62 Carter, *supra* note 7, at 3.
63 *Id.* at 16.
64 John Delaney, *France, China, and the EU All Have an AI Strategy. Shouldn't the US?*, WIRED (May 20, 2018), https://www.wired.com/story/the-us-needs-an-ai-strategy/?mbid=social_twitter.
65 *Id.*
66 *Id.*

the next disruption to come. So I want to be part of it. Otherwise I will just be subjected to this disruption without creating jobs in this country."[67]

In 2017, China laid out its plan "to lead the world in AI technology by 2030."[68] The plan highlights "how it could apply the technology to track people on closed-circuit cameras, censor the internet, and predict crimes."[69] China's A.I. plan, appropriately titled *Next Generation of Artificial Intelligence Development,* refers to A.I. as "the strategic technology that will lead in the future."[70] In their plan, the Chinese explicitly urges local A.I. vendors to attend policy meetings abroad and "help take the lead in formulating new international [A.I.] standards."[71] Organizations such as the International Telecommunication Union (I.T.U.), the International Organization for Standardization (I.S.O.) and the Institute of Electrical and Electronics Engineers (I.E.E.E.) have been actively meeting to discuss initiatives to develop international A.I. standards.[72] Some analysts believe that while China has been working actively to shape the future of global A.I., the United States should increase their participation in these organizations in order to strengthen their influence on A.I. policy.[73]

Another international development which will influence the way multinational A.I. vendors conduct their business is the EU's General Data Protection Regulation (G.D.P.R.).[74] Article 22 states that "'the data subject shall have the right not to be subject to a decision based solely on automated processing, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her' unless certain conditions are present."[75] A simple strategy to satisfy the legal requirements when relying on algorithms to make decisions is to obtain the subject's explicit consent beforehand. "As the EU regulators begin to enforce the GDPR, U.S. companies may treat these requirements and the regulators' interpretation as de-facto U.S. practice with respect to AI transparency and algorithmic bias."[76]

C. *USA Introducing Federal A.I. Policy and Regulation*

A bipartisan group of lawmakers in the House and Senate introduced the *Artificial Intelligence in Government Act* in December 2017.[77] The first bill of its kind, this modern piece of legislation was aimed at improving the use of A.I. across the federal government.[78] According to Senator Kamala Harris:

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67   *Id.*

68   *Id.*

69   Carter, *supra* note 7, at 2.

70   *Id.* at 16.

71   *Id.*

72   *Id.* at 45.

73   *Id.*

74   Nguyen, *supra* note 52.

75   *Id.*

76   *Id.*

77   U.S. Senate, *Schatz, Gardner Introduce Legislation to Improve Federal Government's Use of Artificial Intelligence* (Sept. 26, 2018), https://www.schatz.senate.gov/press-releases/schatz-gardner-introduce-legislation-to-improve-federal-governments-use-of-artificial-intelligence (Press release).

78   *Id.*

> The AI in Government Act gives the federal government the tools and re-
> sources it needs to build its expertise and in partnership with industry
> and academia. The bill will help develop the policies to ensure that society
> reaps the benefits of these emerging technologies, while protecting people
> from potential risks, such as biases in AI.[79]

Senator Brian Schatz, the ranking member of the Senate Subcommittee on Commu-
nications, Technology, Innovation, and the Internet, stated that it would provide govern-
ment with "the resources it needs to hire experts, do research, and work across feder-
al agencies to use AI technologies in smart and effective ways."[80] Introduced by the 115th
Congress, the bill did not receive President Trump's approval to become law, but a similar
piece of legislation has been introduced by the 116th Congress under H.R. 2575 as *Artificial
Intelligence in Government Act* of 2020.[81] This bill would create the *AI Center of Excellence*
with the purpose to help the US implement, cohesively manage, and adopt A.I. technolo-
gies for the benefit of "the public and enhancing the productivity and efficiency of Federal
Government operations."[82]

H.R. 4625 or *The FUTURE of AI Act*, another bill introduced by the 115th Congress,
would have created an Advisory Committee at the Department of Commerce composed
of scientists, engineers, ethicists, and civil liberties experts, as well as representatives from
labor groups, technology companies, and federal officials.[83] According to its text, the bill
aimed to:

> (A) promote a climate of investment and innovation to ensure the global
> competitiveness of the United States;
> (B) optimize the development of artificial intelligence to address the po-
> tential growth, restructuring, or other changes in the United States work-
> force that results from the development of artificial intelligence;
> (C) promote and support the unbiased development and application of ar-
> tificial intelligence; and
> (D) protect the privacy rights of individuals.[84]

Some of the rules for legal professionals, such as current and future regulation, ethics
and consumer rights, will certainly be defined by the results produced by this Committee. Ac-
cording to the bill, the Committee shall study and assess, among other issues, the following:

> (D) How bias can be identified and eliminated in the development of arti-
> ficial intelligence and in the algorithms that support them, including with
> respect to the following:

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79   *Id.*

80   *Id.*

81   Artificial Intelligence in Government Act of 2020, H.R. 2575, 116th Cong. (2020).

82   *Id.*

83   FUTURE of Artificial Intelligence Act, H.R. 4625, 115th Cong. (2017).

84   *Id.* § 2.

(i) The selection and processing of data used to train artificial intelligence.

(ii) Diversity in the development of artificial intelligence.

(iii) The ways and places the systems are deployed and the potential harmful outcomes.

(E) Whether and how to incorporate ethical standards in the development and mentation of artificial intelligence.

. . . .

(G) How the privacy rights of individuals are or will be affected by technological innovation relating to artificial intelligence.

(H) Whether technological advancements in artificial intelligence have or will outpace the legal and regulatory regimes implemented to protect consumers.

(I) How existing laws, including those concerning data access and privacy, should be modernized to enable the potential of artificial intelligence.[85]

The stated purposes and objectives within these different pieces of legislation clearly indicate that the United Stated is facing similar risks and opportunities as countries like France, China, and Russia are facing overseas. However, it seems to the author that the U.S. has not acted quickly enough to implement their A.I. policy at a Federal level. While the recent efforts of Congress are clearly a step in the right direction, the US must continue to strengthen its efforts to provide a safe and positive future environment for its workforce while also increasing their role and influence in international A.I. policy.

D. *A.I. Policy and Regulation in the States*

There are at least nine bills that relate to autonomous driving, including The SELF DRIVE Act, which passed the House in September 2017 but hasn't become a law yet.[86] This particular bill requires the Department of Transportation to study and research "the best ways to inform consumers about the capabilities and the limitations of autonomous vehicles."[87] There is also existing A.V. state legislation that allows for testing under established safety standards.[88] Additionally, there are legislative measures that limits certain liabilities for vendors such as, damages from modifications of the A.V. by a third party, and laws that modify insurance requirements.[89] Some Governors have also issued executive orders covering similar topics on A.V.s.[90] "In essence, these laws and actions seek to find the right

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85 *Id. § 4(1).*

86 *AI Policy: United States,* FUTUREOFLIFEINSTITUE, https://futureoflife.org/ai-policy-united-states/?cn-reloaded=1 (last visited Jan. 25, 2021).

87 *Id.*

88 Nguyen, *supra* note 52.

89 *Id.*

90 *Id.*

balance of liability for more autonomous A.I. and promoting innovation, while adopting some of the concepts of the common law of torts."[91]

Bills have already been introduced in Congress that either focus or mention the use of A.I. The Innovation Corps Act of 2017, introduced in the House on March 2017, relates to the economic impacts of such technology.[92] It is aimed at helping retrain workers stating, "[t]he acceleration of artificial intelligence is enabling the automation of jobs that have traditionally required human labor."[93] Senator Dianne Feinstein has introduced Bot Disclosure and Accountability Act of 2018 that would amend the Federal Election Campaign Act of 1971 and prohibit certain automated software programs, commonly referred to as twitter bots, designed to impersonate people and replicate human activity for the purposes of online political propaganda.[94] The proposed legislation will also permit the Federal Trade Commission to "promulgate regulations to require certain public disclosure of software programs intended to impersonate or replicate human activity."[95]

Some progressive states are also taking a proactive stance on A.I. legislation. The California State Senate, for example "passed a resolution in support of the Asilomar AI Principles, a set of 23 guidelines for safe and beneficial development and use of AI."[96] Similarly, the New York City Council passed the *Algorithmic Accountability Bill*, which established the NY Algorithm Monitoring Task Force.[97] The main purpose of said task force is to "stud[y] how city agencies use algorithms to make decisions that affect New Yorkers' lives."[98] Also, in San Mateo County, California, Supervisor David Canepa introduced a resolution that calls on Congress and the United Nations to restrict the development and use of lethal autonomous weapons.[99]

E.   *Jurisprudence on A.I.*

There are still only a few court cases that might offer some context or guidance on controversies relating to the use of A.I.. In *Cruz v. Talmadge*, the manufacturers of a G.P.S. system, an arguably semi-autonomous A.I. system, were sued after being injured while riding a bus that struck an overpass.[100] The plaintiffs argue that the bus driver was following directions provided by the A.I. and sought to impose liability under traditional negligence theory, breach of warranty, and strict liability, and asserted facts to prove

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91   *Id.*

92   *AI Policy: United States, supra* note 86.

93   *Id.*

94   Huu Nguyen, *Artificial Intelligence Law is Here, Part Three,* Above the Law (Octo 4, 2018), https://abovethelaw.com/legal-innovation-center/2018/10/04/artificial-intelligence-law-is-here-part-three/.

95   *Id.*

96   *AI Policy: United States, supra* note 86.

97   *Id.*

98   *Id.*

99   David J. Canepa, *Stop Killer Robots by San Mateo County Supervisor,* County of San Mateo Board of Supervisors (Dec. 15, 2017), https://bos.smcgov.org/blog/2017-12-19/stop-killer-robots-san-mateo-county-supervisor-david-j-canepa (*See* Nilsson v General Motors, Case No. 3:18-cv-00471 (N.D.Cal. filed Jan. 22, 2018).

100   Cruz v. Talmadge, 244 F. Supp. 3d 231 (D. Mass. 2017).

foreseeability and a feasible alternative design.[101]

In *Nilsson v. General Motors,* the plaintiff claims that an autonomous vehicle, with its back-up driver, drove into his lane and knocked him and his motorcycle to the ground.[102] According to the plaintiff, the self-driving car "suddenly veered back" into his lane causing him injuries that required "lengthy treatment" and forcing him to take a disability leave.[103] G.M. settled the lawsuit with the plaintiff off court, although, according to their defense, a police report found Nilsson at fault for attempting to overtake the lane.[104] Cases like this have risen serious concerns about what is the standard of care that a reasonable person in this and future cases should adhere to.[105]

The final example illustrates some key issues regarding commercial A.I. speech. During a murder investigation in Arkansas, *State of Arkansas v. Bates, the* police wanted to investigate "certain records of interactions with [a homeowner's Alexa] which were stored on Amazon's servers."[106] Amazon moved to suppress the search warrant, arguing it sought "to protect the privacy rights of its customers when the government is seeking their data from Amazon, especially when that data may include expressive content protected by the First Amendment."[107] The case was dropped by the state prosecutor, "but it may be a prelude to future arguments for the protection of AI speech."[108]

F. *Legal Risks and Liabilities*

What type of arguments will Judges be inclined to support when faced in controversies involving A.I. software issues? According to a Texas Law Review article authored by Weston Kowert, "interactions between a third party and [A.I.] software that have resulted in harm to another will not be a definite shield against liability for the software developer."[109] The determining negligence analysis will depend on the issue of foreseeability.[110] There are countless possible interactions between A.I. applications and its users, many which could be deemed foreseeable by courts. This means vendors, such as A.V. manufacturers, can be held liable on many cases when the A.V. are driving by themselves *properly*, and thus should be mindful of these risks when developing their products. According to Kowert:

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101 *Id.* at 235.

102 Grossman, M. *GM Settles First-Known Suit Over Self-Driving Car Crash*, MEDIUM (Jul. 12, 2018), https://medium.com/@marcdgrossman/gm-settles-first-known-suit-over-self-driving-car-crash-b749db81d32d.

103 David Shepardson, *GM settles lawsuit with motorcyclist hit by self-driving car*, REUTERS (June 1, 2018), https://www.reuters.com/article/us-gm-selfdriving-idUSKCN1IX604.

104 *Id.*

105 *Id.*

106 Nguyen, *supra* note 94.

107 *Id.*

108 *Id.*

109 Weston Kowert, *The Foreseeability of Human-Artificial Intelligence Interactions*, 96 TEXAS L. REV. 181, 202-03 (1992).

110 *Id.* at 203.

> The tort system requires a balance between protecting individuals from the potential harms of artificial intelligence and the free development of such technology. Companies must carefully evaluate the foreseeable risks of the technology they are entering into the market and take steps to minimize those risks.[111]

There are some key steps that all A.I. developers should take before releasing their products in order to protect themselves from commercial liability. Besides drafting product manuals, vendors should also require users to sign contracts obligating them to use A.I. responsibly and according to the instructions specified in the manual. Elon Musk's A.V. manufacturer, Tesla, for example, "requires its buyers to sign a contract that mandates they agree to keep their hands on the wheel at all times, even when the autopilot is engaged."[112] For some products, such as A.V.s, access and security should be tightly enforced, and system updates should be mandatory before each use. According to Kowert, companies should "exercise tight control over their software post-sale and perform routine patches and updates, which would prevent the software from growing too customized in unforeseen ways."[113]

One illustrative example, provided by Solum, is an application that would act as a trustee of a simple to manage trust fund.[114] The A.I. will be given a set of parameters to apply when making investment decisions, then use the proceeds to deliver an income stream to the trust beneficiaries.[115] It could also modify the payment structure, if its required, after the death of a beneficiary as well.[116] Certainly, such an application can prove to be quite beneficial to some, saving some of the time and costs involved in managing trusts. But who would be responsible if the product fails to exercise reasonable skill and care when investing and distributing the funds?[117]

Solum proposes, as a possible solution for managing A.I. liability risk, to insure the software for commercial use under some type of product liability coverage.[118] Despite a lack of its own assets, the A.I. might be able to obtain insurance "against the risk that it would be found liable for breaching the duty to exercise reasonable care."[119] Such coverage would allow A.I. software developers to focus more on creativity and innovation and less on worrying about the risks associated with the unintended uses of their software.

Vehicle companies seem confident that they can manage their product liability costs and risks, that they might even benefit from accepting the liability.[120] Elon Musk believes

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111   *Id.* at 204.

112   *Id.* at 198.

113   *Id.*

114   Lawrence B. Solum, *Legal Personhood for Artificial Intelligences*, 70 N.C. L. Rev. 1231, 1240 (1992).

115   *Id.* at 1241.

116   *Id.* at 1244.

117   *Id.* at 1245.

118   *Id.*

119   *Id.*

120   Kowert, *supra* note 109, at 198.

that "[partial driving autonomy] is already significantly safer than a person driving by themselves and it would therefore be morally reprehensible to delay release simply for fear of. . . . legal liability."[121] If such a statement holds true and more accidents are avoided through the use of A.V. technology, then liability costs would be reduced compared to the current vehicles manufacturers that are selling non-A.I. assisted units.[122] Volvo, Google, and Mercedes-Benz have also committed to accepting liability.[123]

U.S. car manufacturers are also competing in a global playfield where foreign companies, such as Chinese tech giant Baidu, are also applying huge pressure to the market.[124] Baidu owns a grocery delivery service for Walmart in partnership with the courier service Udelv, and was recently appointed by China to develop the country's driverless cars.[125] On a corporate level, Baidu views the "ABC", A.I., big data, and cloud, as the three markets that will expand the business beyond their online advertising services.[126]

A final argument in favor of finding liability for A.I. software developers is that doing the contrary would actually hurt the industry's incentive to innovate. This is the case in the vaccine industry, in which manufacturers enjoy almost complete immunity and have few incentives to update vaccines as new technology arises or concerns with current products emerge. U.S. Supreme Court Justice Sonia Sotomayor recently warned us that offering immunity to corporations "leaves a regulatory vacuum in which no one ensures that vaccine manufacturers adequately take account of scientific and technological advancements."[127] She also extends her statements to the A.V. industry, claiming "by immunizing the internalization of accident costs from vehicle manufacturers, they may reduce the pressure on manufacturers to make incremental improvements in the safety of their autonomous systems."[128]

III. Ethical Concerns

A. *Competence*

Lawyers wanting to use or already using artificial intelligence applications at work, should take some steps to make sure their use of A.I. is adequate and responsible for legal purposes. Author Wendy Wen Yun Chang explains that "lawyers must understand the technology that they are using to assure themselves they are doing so in a way that complies with their ethical obligations — and that the advice the client receives is the result

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121 *Id.* at 197 (*quoting* Elon Musk, *Master Plan, Part Deux*, TeslaBlog (July 20, 2016), https://www.tesla.com/blog/master-plan-part-deux).

122 *Id.* at 198.

123 *Id.*

124 *See,* Sun, L. et al., *3 Top Artificial Intelligence Stocks to Watch in March,* Fool (Mar. 15, 2019), https://www.fool.com/investing/2019/03/15/3-top-artificial-intelligence-stocks-to-watch-in-m.aspx.

125 *Id.*

126 *Id.*

127 Kowert, *supra* note 109, at 199 (quoting Bruesewitz v. Wyeth, 562 U.S. 223, 250 (2011) (Sotomayor, J., dissenting)).

128 *Id.* at 199 (*quoting* Gary E. Marchant and Rachel A. Lindor, *The Coming Collision Between Autonomous Vehicles and the Liability System*, 52 Santa Clara L. Rev. 1321, 1340 (2012)).

of the lawyer's independent judgment."[129] Not only should lawyers understand the pros and cons of using their A.I. technology, but they should also review and double-check the output and work produced by the A.I. product.[130] Chang argues that "AI legal services should not be permitted to hold themselves out as providing legal services to lay persons without an actual lawyer's involvement and supervision," and calls for "further regulation of artificial intelligence technology."[131]

In his recent article titled *Artificial Intelligence, Real Ethics*, Professor Roy D. Simon provides a good set of rules for lawyers using A.I. at work.[132] The first principle he addresses is competence. [133] For those that are going to be using A.I. at work, Simon has three practical suggestions: (1) Hire an expert to check out the AI product; (2) Learn what the AI product can do – and what it can't, and (3) Double-check the AI product's output.[134]

When a legal intern submits a draft brief, a lawyer would not review their work by starting the research from scratch. Similarly, it is not necessary to duplicate the entire task that the A.I. product performs.[135] But, a responsible lawyer would certainly want to review the work and make sure it's "relevant, organized, clear, and not contrary to common sense."[136] Lawyers could also spot-check the case citations and quotations, while they develop confidence in the results of their A.I. product.[137]

B. *Protecting Confidential Information*

The majority of legal A.I. products will require access to the client's confidential and most sensitive information. A lawyer must be able to account for the correct and safe use of such information. Amongst some A.I. related questions that a lawyer might have to answer to his or her clients when using these programs are:

1. What happens to your client's personal, sensitive, and confidential data once the program gains access to it?

2. What happens to his or her data if the AI company is sold, merges, retires, or goes bankrupt?

3. If the AI vendor is subpoenaed, is it contractually obligated to give the lawyer or his client notice, in a timely manner, so that they could intervene and challenge the subpoena?[138]

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129 Chamberlain & Poteet, *supra* note 9, at 4 (quoting Wendy Wen Yu Chang, *Time to Regulate AI in the Legal Profession? (Perspective)*, Bloomberg Law (Jul. 12, 2016), https://news.bloomberglaw.com/business-and-practice/time-to-regulate-ai-in-the-legal-profession-perspective).
130 *Id.*
131 *Id.*
132 Roy D. Simon, *Artificial Intelligence, Real Ethics,* 90 N.Y. St. B.J. 34 (2018).
133 *Id.* at 34.
134 *Id.* at 35-36.
135 *Id.* at 36.
136 *Id.*
137 *Id.*
138 *Id.*

Safeguarding clients' personal data is not a new responsibility for lawyers. However, confidential information stored on computer servers is highly sensible to modern security risks that lawyers need to manage responsibly. A 2014 opinion on data privacy for cloud storage issued by the N.Y. State Justice Department, New York State Ethics Opinion 1020, proposes that:

> [W]hether a lawyer may post or share documents using a cloud data storage tool depends on whether the technology employed "provides reasonable protection to confidential client information and, if not, whether the lawyer obtains informed consent from the client after advising the client of the relevant risks."[139]

An analogous set of principles should be applied by lawyers when giving an A.I. vendor access to their client's confidential data. Legal professionals should always place their client's best interests first, thus when using legal applications, they should carefully assess whether or not the client's data is adequately safeguarded against privacy violations and misuse.

Conclusion

There are contradictory opinions regarding the future of A.I. technology. While many are embracing its applications, some fear that the systems are becoming too autonomous, others are wary of a possible loss of jobs. On this subject, philosopher and historian Yuval Noah Harari recently expressed:

> AI frightens many people because they don't trust it to remain obedient . . . But there is no particular reason to believe that AI will develop consciousness as it becomes more intelligent. We should instead fear AI because it will probably always obey its human masters, and never rebel. AI is a tool and a weapon unlike any other that human beings have developed; it will almost certainly allow the already powerful to consolidate their power further.[140]

Regarding the fear of the possible loss of jobs, Dennis Garcia, an Assistant General Counsel for Microsoft, is optimistic about A.I. applications in the legal workplace.[141] During a recent LexisNexis sponsored webinar the expressed his opinion that "artificial intelligence is an asset to lawyers and will not supplant or replace attorneys."[142]

Taking this in consideration, it's important to accept that technological advances will continue to dictate the way we live and conduct our daily routines. The prudent way to manage and confront the emerging landscapes is to keep current with the applications

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139 *Id.*
140 Hoening, *supra* note 49.
141 Connell, *supra* note 23.
142 *Id.*

that are available and become knowledgeable, or at least be familiar with them. Certainly, Lawyers can already benefit from the new technological landscape by providing guidance, by representing corporate clients on A.I. related matters, and by also employing A.I. solutions at the workplace.

Lawyers and other legal professionals stand to gain a lot of value and exclusive access to new tech clients in need legal guidance and assistance. It is recommended to those interested in understanding, advising, servicing, or merely striving within the A.I. marketplace to:

1. *Study* and stay current on commercial A.I. uses and applications,
2. *Understand* the risks, liabilities, and concerns of commercial A.I. applications, and
3. *Become familiar* with local and international regulation, conflicts, and disputes which can later help you gain an edge when engaging and advising clients.

We would like to highlight that this study and its recommendations are based on information available up to May of 2019 and might be in need of an update by the time you are reading it. Such is the speed of innovation that can be expected from A.I. Still, however gradual it may come, artificial intelligence technology has arrived, it's here to stay, and will most certainly play an ever-increasing role in the life of lawyers and legal professionals.