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Artificial Intelligence

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This is the second article in a series from lawyers at Jones Day that looks at emerging technologies that have the potential to disrupt industries in Texas. The prior article covered blockchain and smart contracts.

(Oct. 17, 2017) – Companies in Texas and beyond are increasingly adopting artificial intelligence to drive innovation and production. A recent study estimated that the value of the AI market will top $46 billion by 2020—a staggering amount for a once nascent idea.

As the use of AI grows, corporate legal and compliance teams should understand the opportunity and the attendant legal and compliance risks.

Overview of AI technology

AI refers broadly to the use of advanced computer science, cognitive science, psychology and other social and scientific disciplines to develop machines that can learn, reason, communicate and make human-like decisions. AI is now or soon will be able to perform complex tasks traditionally performed by humans—for example, driving, diagnosing disease and executing financial transactions—all while lowering costs and improving productivity and performance.

But AI is not without risk. Potential challenges include the high costs of development and adoption, roadblocks in replicating the human mind, and legal liability and compliance risks.

Despite these hurdles, investment and advancements in AI are on the rise. In 2016 alone, over 550 AI startups, including several in Texas, raised $5 billion in funding, and higher numbers for both startups and funding are anticipated when finally tallied for 2017.

In the past couple of years, researchers have improved the performance of software that recognizes facial and other biometric features, analyzes vast amounts of data and translates languages. Some of the best-known applications of AI now on the market include smart home devices and speakers, smartphone voice assistants and semiautonomous cars.

Industry applications of AI

AI is already transforming a number of Texas industries, including transportation, health care and financial services.

Transportation industry

Autonomous vehicles use a combination of radar, GPS, cameras, light detection and distance-measuring technologies, coupled with advanced control systems, to drive with little or no human assistance. Technology companies and car manufacturers alike are now testing these vehicles on public roads in Texas, California, Colorado, Michigan and Nevada. Experts estimate they will be widely available for consumers within three to five years.

Companies are also looking to apply self-driving technology commercially to taxis, delivery services, public transportation and even maritime shipping. For example, in August, an auto manufacturer was reportedly close to testing self-driving electric trucks in California and Nevada, and several e-commerce and delivery companies are testing semiautonomous and autonomous delivery vehicles in warehouse operations, last-mile deliveries and logistics operations.

Companies are expecting reduced labor costs and increased efficiency, and a recent estimate places the worth of the self-driving transport industry at $7 trillion annually by 2050.

Though media reports focus on the involvement of autonomous vehicles in high-profile accidents, human error causes over 90 percent of all traffic ›

accidents. AI can potentially decrease accident rates while also reducing congestion, pollution and other transportation-related inefficiencies and nuisances.

Health care

Researchers are developing AI applications to perform administrative and clinical health care activities, which promise to drive down the cost of certain tasks while improving both the efficacy and quality of care.

On the administrative side, startup companies are developing virtual assistants to help clinicians streamline workflows by scheduling appointments and analyzing and communicating lab results.

On the clinical side, researchers are developing robots—so-called "robo-nurses"—for analyzing symptoms to suggest diagnoses and for administering standard medical procedures. Another startup is looking to use AI to analyze aggregate patient data to identify early signs of cancer.

Financial services

Financial services firms are harnessing AI's ability to decrease transaction times, reduce costs and improve accuracy. Using AI, firms are developing tools to detect fraudulent transactions, meet regulatory requirements and make trading decisions.

And for customer-facing applications, "robo-advisers" may provide financial advice and investment portfolio balancing to clients, while AI-powered chatbots can provide more direct customer service.

Potential legal issues regarding AI

As AI becomes more ubiquitous, companies and their lawyers will face new legal issues, including a labyrinth of federal and state laws and regulations. Using self-driving cars as the primary example and others as secondary examples, this section highlights some of these regulatory and legal issues.

Government regulation

While governments in the United States and around the globe are encouraging the research and development of AI, they also are passing AI-related laws and regulations regarding liability, safety, privacy, cybersecurity, and labor and employment. At least 21 states have passed laws governing the testing and development of autonomous vehicles.

Last month, the U.S. Transportation Secretary announced a new federal policy for automated driving systems that provides voluntary guidance and best practices for state legislatures and highway safety officials regarding the vehicles. In the same month, the first federal bill on autonomous vehicle technology—the SELF DRIVE Act—unanimously passed the U.S. House of Representatives and addresses important privacy, preemption, exemptions, testing and safety standards.

Liability risks

Current liability laws generally hold individuals responsible for their own actions, raising an important question: Who will be deemed responsible when a malfunctioning self-driving car, robo-nurse or financial algorithm causes injury or loss? Possibilities include software developers and product manufacturers, owners and users.

The question became something less than theoretical in 2016, when the driver of a semiautonomous vehicle was killed in a car crash. After a yearlong investigation, the National Transportation Safety Board concluded that the automatic system's lack of safeguards to prevent improper use, as well as human error, played key roles in the crash. In the end, apportioning liability may depend on the degree to which users maintain autonomy and system control.

Intellectual property

AI has spurred a race to protect intellectual property. Indeed, the number of AI patents issued in the U.S. increased threefold from 2012 to 2016. Some observers are surprised, given the ›

U.S. Supreme Court's decision in *Alice v. CLS Bank,* which established standards for patent-eligible subject matter that some believe may be difficult for software-based innovations to meet.

And later this year, two high-profile technology companies are scheduled to go to trial over allegations that a former executive misappropriated trade secrets related to self-driving car technology.

Billions of dollars in damages are at stake, and intellectual property eligibility and ownership, both of the intellectual property created by AI platforms and AI-generated data, will feature prominently in future intellectual property disputes.

Data privacy and protection

AI technology may be utilized to collect and analyze vast amounts of personal information for a variety of purposes, from analyzing consumer purchasing patterns to monitoring shop-floor efficiency.

In the U.S., a company's possession and use of personal information, including information associated with AI applications like autonomous vehicles, is regulated by a patchwork of industry-specific federal laws and generally applicable state data protection and breach notification laws.

Existing data privacy and protection norms—sufficient disclosures to and consent from data subjects; administrative, technical and physical data protection measures—will likely remain important for businesses looking to manage and minimize data privacy and protection risk in the AI space.

Labor and employment

AI will impact millions of workers through automation of labor and administrative tasks, raising numerous labor and employment concerns.

Will collective bargaining agreements require re-negotiating in the event AI performs tasks previously designated for employees? Will the use of AI to make hiring decisions have a discriminatory impact? Will workers' compensation laws evolve to preempt tort lawsuits brought by employees against AI developers?

In short, AI will likely impact collective bargaining and organized labor, force new health and safety standards, and require increased attention to workers' compensation compliance.

Conclusion

AI holds great promise to deliver efficiencies, save money and increase the speed of a wide range of human activities. Companies looking to develop or adopt AI should carefully evaluate the legal and compliance risks associated with this rapidly advancing technology and should develop risk mitigation plans in advance of adoption.

The views and opinions set forth herein are the personal views or opinions of the authors; they do not necessarily reflect views or opinions of the law firm with which they are associated.

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