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<u>NOTES</u>

REGULATING ARTIFICIAL INTELLIGENCE: A CALL FOR A UNITED STATES ARTIFICIAL INTELLIGENCE AGENCY

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REGULATING ARTIFICIAL INTELLIGENCE: A CALL FOR A UNITED STATES ARTIFICIAL INTELLIGENCE AGENCY

Noah John Kahekili Rosenberg*

INTRODUCTION

"Sorry, I didn't quite get that," rudely interrupts Siri any time the word "seriously" or "series" is mentioned in a conversation.¹ Many Americans have become accustomed to hearing this voice coming from their pockets, but there was a time when artificial intelligence (AI) seemed like a distant dream, an unreachable fiction, a phenomenon that only existed in movies. For developers, the rapid growth of AI technologies is exciting—for others, it's frightening.² Today, AI is everywhere: it talks to us from our phones, it navigates our roadways, and it sends you those "perfectly" targeted advertisements on social media platforms.³

Despite the involvement of AI in our daily lives, the federal government has largely left the field unregulated.⁴ AI has many advantages that include reducing human error and taking on risks that

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¹ Siri is a digital assistant built into Apple products that can be activated with the verbal command "hey Siri." *Siri*, APPLE, https://www.apple.com/siri/ (last visited May 1, 2022).

² Ron Schmelzer, *Should We Be Afraid of AI*?, FORBES (Oct. 31, 2019),

https://www.forbes.com/sites/cognitiveworld/2019/10/31/should-we-be-afraid-ofai/?sh=4e1799944331 ("One of the most widespread fears of AI is just general anxiety about it and what it's potentially capable of. A recurring theme in movies and science fiction is AI systems that go rogue ").

³ Mike Kaput, *AI in Advertising: Everything You Need to Know*, MARKETING AI INSTITUTE (Mar. 10, 2022), https://www.marketingaiinstitute.com/blog/ai-in-advertising.

⁴ Heather Sussman et al., *U.S. Artificial Intelligence Regulation Takes Shape*, ORRICK (Nov. 18, 2021), https://www.orrick.com/en/Insights/2021/11/US-Artificial-Intelligence-Regulation-Takes-

Shape#:~:text=Next%20Steps,regulation%20is%20on%20the%20horizon (addressing generally that there is no artificial intelligence regulation in the U.S.).

would ordinarily burden humans.⁵ Additionally, AI systems are available at all times of the day, every day of the week, compared to the eight hours most humans work.⁶ They can help expedite the process of tedious and repetitive jobs, and they can make decisions much quicker than humans.⁷ Notwithstanding these benefits, there are many concerns about AI, including human unemployment, its potential to make humans lazy, high costs of innovation, its inability to feel emotions, and a lack of creative thinking.⁸ More significantly, AI has the potential—if left unregulated to be dangerous to public safety and equality.

For example, a widely used risk-prediction program in the U.S. healthcare system was found to favor white patients over black patients in determining who would be likely to need extra medical care. ⁹ Similarly, an Amazon facial recognition technology, Rekognition, wrongly identified a number of professional athletes as criminals, including Duron Harmon, a professional football player and safety for the New England Patriots.¹⁰ Since federal agencies and their regulations are often designed to promote equality and safety, these incidents make it clear that there are significant risks with leaving AI technology unregulated.¹¹

Proceeding in three parts, this Note draws upon two examples of emerging AI technologies that demonstrate the need for federal regulation: autonomous vehicles (i.e., self-driving cars) and algorithmbased hiring software. Part I illustrates the public safety concerns associated with AI technologies by outlining the inadequacy of existing laws and regulations on autonomous vehicles. Part II addresses the

¹¹ See generally About Us, U.S. DEPT. LABOR,

⁵ Sunil Kumar, *Advantages and Disadvantages of Artificial Intelligence*, TOWARDS DATA SCI. (Nov. 25, 2019), https://towardsdatascience.com/advantages-and-disadvantages-of-artificial-intelligence-182a5ef6588c.

⁶ Id.

⁷ Id.

⁸ Id.

⁹ Cem Dilmegani, *Bias in AI: What It Is, Types, Examples & 6 Ways to Fix It in 2022,* AIMULTIPLE (Jan. 12, 2022), https://research.aimultiple.com/ai-bias/ (finding that the AI program associated past medical spending with medical needs which inadvertently created racial bias since race and income are heavily correlated).
¹⁰ Priya Dialani, *Famous AI Gone Wrong Examples in the Real World We Need to Know,* ANALYTICS INSIGHT (Mar. 9, 2021), https://www.analyticsinsight.net/famous-ai-gone-wrong-examples-in-the-real-world-we-need-to-know/.

https://www.dol.gov/general/aboutdol#:~:text=To%20foster%2C%20promote%2C% 20and%20develop,work%2Drelated%20benefits%20and%20rights (last visited Apr. 26, 2022); *About NHTSA*, U.S. DEPT. OF TRANSPORTATION,

https://www.nhtsa.gov/#:~:text=About%20NHTSA,%2C%20safety%20standards%2 C%20and%20enforcement (last visited Apr. 26, 2022) ("Our mission is to save lives, prevent injuries, and reduce economic costs due to road traffic crashes, through education, research, safety standards, and enforcement.").

shortcomings of current regulations on algorithm-based hiring software and the issue of discrimination and inherent bias in AI. Part III recommends the creation of a new federal agency to guide AI regulation and enforcement.

I. AUTONOMOUS VEHICLES AND THE IMMINENT THREAT TO PUBLIC SAFETY

Every year in the United States, more than 38,000 people die as a result of car accidents.¹² This means that over one hundred people die in the U.S. each day due to vehicle collisions, making road crashes the leading cause of death in the nation for people under the age of fifty-four.¹³ In addition to fatalities, approximately 4.4 million people are injured in car accidents and require medical treatment.¹⁴ A study conducted by the National Highway and Traffic Safety Administration ("NHTSA") found that the economic costs of motor vehicle crashes totaled \$242 billion in 2010.¹⁵ The numbers become more horrifying after factoring in lost quality of life valuations,¹⁶ which bring the total economic societal loss in America due to car crashes to \$836 billion.¹⁷ With nearly \$1 trillion in costs to American taxpayers, it is no wonder the government is attracted to the idea of autonomous vehicles and is worried about stifling innovation by creating regulations.

Autonomous vehicles are expected to increase the safety of American roadways because we largely attribute motor vehicle collisions

¹² Road Safety Facts, ASIRT, https://www.asirt.org/safe-travel/road-safety-

facts/#:~:text=More%20than%2038%2C000%20people%20die,for%20people%20ag ed%201%2D54 (last visited Jan. 28, 2022) ("Road crashes are the leading cause of death in the U.S. for people aged 1-54.").

¹³ Id.; NHTSA, Fatal Motor Vehicle Crashes: Overview, NHTSA,

https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812456.

¹⁴ *Id.*; *see also* Melanie Musson & Sara Routhier, *Which States Allow Self-Driving Cars?* (2021 Update), AUTO INS. (Nov. 17, 2021),

https://www.autoinsurance.org/which-states-allow-automated-vehicles-to-drive-on-the-road/.

¹⁵ MILLER BLINCOE ET AL., NHTSA, THE ECONOMIC AND SOCIETAL IMPACT OF MOTOR VEHICLE CRASHES, 1 (revised ed. 2010),

https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812013 (finding that the total economic loss of motor vehicle crashes in the U.S. is \$242 billion when considering factors such as "lost productivity, medical costs, legal and court costs, emergency service costs (EMS), insurance administration costs, congestion costs, property damage, and workplace losses").

¹⁶ The term "lost quality of life" or "diminished quality of life" refers to the reduction of a person's ability to enjoy normal areas of life and overall health because of the injures or disabilities resulting from an accident. *Diminished Quality of Life in a Personal Injury Lawsuit*, LEGAL MATCH, https://www.legalmatch.com/law-

library/article/diminished-quality-of-life-in-a-personal-injury-lawsuit.html (last visited May 1, 2022).

¹⁷ BLINCOE ET AL., *supra* note 15, at 1.

to human error.¹⁸ A study on autonomous vehicle collisions in California conducted by IDTechEx revealed that out of 187 reported autonomous vehicle accidents, only two were the fault of the performance of the autonomous system—roughly one percent of the accidents.¹⁹ This seems to lend support for a quick rollout of self-driving vehicles because "computer drivers are in principle fundamentally safer drivers. They never text, do their makeup, or fall asleep at the wheel." ²⁰ With widespread deployment and use of autonomous vehicles on our roadways, self-driving vehicles would be able to communicate with each other and warn nearby cars of its planned maneuver before changing lanes, coming to a stop, or similar actions.²¹ Computers also react faster at about 0.5 seconds compared to humans who typically have a reaction speed of approximately 1.6 seconds.²² Theoretically then, releasing autonomous vehicles into the public should prove to be a positive development that reduces fatalities, accidents, and injuries.

Unfortunately, there is good reason to be skeptical of any study that claims to show autonomous vehicle collisions are too infrequent to be important. For one, companies self-report their own collision statistics.²³ Second, even if the IDTechEx study is accurate, a small percent of crashes being caused by system failure becomes more significant when millions of these cars enter the roadways. Third, even if the lead developers of autonomous vehicles are releasing safe technology, that does not guarantee that competitors will not rush the

¹⁸ See Ben Wodecki, Human Error Causes 99% of Autonomous Vehicle Accidents: Study, IOT WORLD TODAY (Oct. 20, 2021),

https://www.iotworldtoday.com/2021/10/20/blame-the-humans-idtechex-finds-99percent-of-autonomous-vehicle-accidents-caused-by-human-error/ (finding that only one percent of autonomous vehicle collisions were the result of actual malfunction or poor performance by the vehicle's autonomous system).

¹⁹ *Id.* California requires companies testing autonomous vehicles to report all collisions to the California DMV which allowed IDTechEx to conduct its study seen in its report "Autonomous Cars, Robotaxis & Sensors 2022-2042." IDTechEx, *The Biggest Challenge for Autonomous Vehicles, Discussed by IDTechEx*, PR NEWSWIRE (Oct. 19, 2021), https://www.prnewswire.com/news-releases/the-biggest-challenge-for-autonomous-vehicles-discussed-by-idtechex-301403437.html.

²⁰ Nathan A. Greenblatt, *Self Driving Cars Will be Ready Before Our Laws Are*, IEEE SPECTRUM (Jan. 19, 2016), https://spectrum.ieee.org/selfdriving-cars-will-be-ready-before-our-laws-are.

²¹ Id.

²² *Id.*; Aarian Marshall, *Puny Humans Still See the World Better than Self-Driving Cars*, WIRED (Aug. 5, 2017), https://www.wired.com/story/self-driving-cars-perception-

humans/#:~:text=Machines%20can%20react%20faster%20than,autonomous%20veh icles%20do%20even%20better.

²³ U.S. DEP'T OF TRANSP., STANDING GENERAL ORDER 2021-01: INCIDENT REPORTING FOR AUTOMATED DRIVING SYSTEMS (ADS) AND LEVEL 2 ADVANCED DRIVER ASSISTANCE SYSTEMS (ADAS) (2021).

same process. Moreover, "human error" in the IDTechEx study refers to the error of human drivers of other vehicles or the human error of pedestrians.²⁴ Since it is unlikely and even improbable that *every* vehicle on American roadways will be replaced by autonomous vehicles in the near future, human drivers will remain and accidents will continue to occur, putting the public at risk. So, while it's expected that the implementation of autonomous vehicles on our highways will eventually decrease motor vehicle accidents, current evidence suggests that we should be hesitant to allow companies to release vehicles before the federal government deems them safe.²⁵ Indeed, ever since companies began testing vehicles with varying degrees of autonomous driving features on public roadways, there have been disturbing reports of system failure, some of which resulted in fatalities.²⁶

Taking into account that this technology has been released without federal safety regulations, it is unsurprising that self-driving cars are involved in more automobile collisions per miles driven than conventional cars.²⁷ Although the injuries sustained in these crashes are often less severe than those in human-driven cars,²⁸ this does not justify the lack of safety standards, regulations, or testing on self-driving vehicles *before* they are used on public roadways. As demonstrated by the following examples, extreme system failure in autonomous vehicles have resulted in tragedy.

²⁴ Id.

²⁵ See Steven Palermo, Self-Driving Car Manufacturers May be Safe from Lawsuits Even if Their Cars Cause Accidents, PALERMO L.,

https://thesuffolkpersonalinjurylawyer.com/self-driving-car-defects-manufacturermay-never-face-lawsuit/ (last visited Nov. 22, 2021) (claiming that self-driving cars could prevent tens of millions of traffic fatalities, but acknowledging that dangerous mistakes occasionally occur in technology); *see also* Rachel Abrams & Analynn Kurtz, *Joshua Brown, Who Died in Self-Driving Accident, Tested Limited of His Tesla*, N.Y. TIMES (July 1, 2016), https://www.nytimes.com/2016/07/02/business/joshua-browntechnology-enthusiast-tested-the-limits-of-his-tesla.html (reporting on Joshua Brown's death that occurred as a result of his Tesla's autopilot failing to apply the brakes after a tractor-trailer made a left turn in front of his vehicle).

²⁶ See Abrams & Kurtz, supra note 25; Ray Stern, *Trial Delayed for Backup Driver in Fatal Crash of Uber Autonomous Vehicle*, PHX. NEW TIMES (May 12, 2021), https://www.phoenixnewtimes.com/news/uber-crash-arizona-vasquez-herzberg-

trial-negligent-homicide-charge-11553424 (explaining that an Uber autonomous vehicle failed to brake as a pedestrian walked her bike across the road resulting in the death of Elaine Herzberg, the pedestrian).

²⁷ Autonomous Vehicles Statistics, GERBER INJ. L. (June 25, 2015),

https://gerberinjurylaw.com/autonomous-vehicle-statistics/; *The Dangers of Self-Driving Cars*, NAT'L L. REV. (May 5, 2021),

https://www.natlawreview.com/article/dangers-driverless-cars. ²⁸ *Id*.

A. Documented System Failure

The most well-known accident involving the system failure of an autonomous vehicle occurred in 2016 in Florida and was the first fatal Tesla autopilot crash.²⁹ Forty-five-year-old Joshua Brown died tragically after his Tesla Model S crashed into the side of a semi-truck while traveling on autopilot.³⁰ According to Tesla and Elon Musk, the white side of the tractor against a brightly lit sky caused the front-facing sensors of the autopilot system—a camera, a radar, and ultrasonic sensors—to fail to detect the semi-truck.³¹ Additionally, since the semi-truck was higher off the ground than typical vehicles, the radars tuned it out, believing it to be an overhead road sign, and thus the autopilot chose not to apply the brakes.³² More perplexing however, is that the NHTSA conducted an investigation into the crash, and ultimately decided that there was no defect on the Tesla sensor system and did not issue a recall.³³

Similar outcomes came of a 2018 Uber self-driving crash. A pedestrian named Elaine Herzberg was struck by one of Uber's autonomous vehicles while walking across the street in Arizona.³⁴ It was determined that the vehicle turned off its automatic braking system in order to avoid unsafe driving conditions, and that the driver, Rafaela Vazquez was watching "The Voice" in the Hulu app on her phone in the minutes leading up to the crash.³⁵ While it seems like both the vehicle and driver may be at fault, criminal prosecutors only pursued charges against the driver. ³⁶ These examples show the imperfection of autonomous vehicle technology, the drastic consequences of public

²⁹ Fred Lambert, *Tesla Is Under Scrutiny from Feds Again Over Crash with Semi Truck*, ELEKTREK (Mar. 16, 2021) [hereinafter *Tesla Crash*],

https://electrek.co/2021/03/16/tesla-under-scrutiny-feds-again-over-crash-semitruck/.

³⁰ Id.

³¹ Fred Lambert, Understanding the Fatal Tesla Accident on Autopilot and the NHTSA Probe, ELEKTREK (July 1, 2016) [hereinafter Elon Musk],

https://electrek.co/2016/07/01/understanding-fatal-tesla-accident-autopilot-nhtsa-probe/.

³² Id.

³³ *Tesla Crash, supra* note 29.

³⁴ Jim Gill, *How 3 Cases Involving Self-Driving Cars Highlight eDiscovery and the IOT*, JD SUPRA (Sept. 3, 2019), https://www.jdsupra.com/legalnews/how-3-cases-involving-self-driving-cars-76886/.

³⁵ Id.; Ray Stern, Trial Delayed for Backup Driver in Fatal Crash of Uber Autonomous Vehicle, PHX. NEW TIMES (May 12, 2021),

https://www.phoenixnewtimes.com/news/uber-crash-arizona-vasquez-herzberg-trial-negligent-homicide-charge-11553424 (explaining that the charges were filed against Rafael, Rafaela's name prior to her transition as a transgender woman). 36 *Id*.

testing, and the necessity of proactive federal regulations to prevent more needless accidents like these from occurring.

B. Defining Autonomous Vehicles and the State of Current Technology

The U.S. Department of Transportation has defined six levels of automation to categorize autonomous vehicles based on how much control the human operator maintains:

At SAE Level 0, the human driver does everything; [a]t SAE Level 1, an automated system on the vehicle can sometimes assist the human driver conduct some parts of the driving task; [a]t SAE Level 2, an automated system on the vehicle can actually conduct some parts of the driving task, while the human continues to monitor the driving environment and performs the rest of the driving task; [a]t SAE Level 3, an automated system can both actually conduct some parts of the driving task and monitor the driving environment in some instances, but the human driver must be ready to take back control when the automated system requests; [a]t SAE Level 4, an automated system can conduct the driving task and monitor the driving environment, and the human need not take back control, but the automated system can operate only in certain environments and under certain conditions; and [a]t SAE Level 5, the automated system can perform all driving tasks, under all conditions that a human driver could perform them.³⁷

For the purposes of this article, the assumption will be that any vehicles referred to as "autonomous" will fall between SAE levels 3-5 in which the human operator is not required to perform *any* driving tasks for at least some period of time. For these levels of automation, the human operator of the vehicle can be considered a passenger rather than a driver while the vehicle maintains control of itself.

³⁷ U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL AUTOMATED VEHICLES POLICY: ACCELERATING THE NEXT REVOLUTION IN ROADWAY SAFETY 9 (2016) [hereinafter FEDERAL AV POLICY].

C. The Inadequacy of Existing State Law and Federal Regulation

The role of states is commonly perceived to be regulating *drivers* while the regulation of *cars* is often left to the federal government.³⁸ Since the federal government has remained largely silent on the issue of autonomous-vehicle regulation, states have been conflicted between the choice of hindering innovation and trying to protect drivers and other individuals on their roads.³⁹ Most states' laws either assume a human being will be in control (or ready to retake control) of the vehicle or require that a human being with a valid driver's license remain in the driver seat at all times.⁴⁰ Due to the vagueness, lack of clarity, or lax laws and regulations, even fully autonomous vehicles can probably be legally deployed in any state as long as a licensed human is behind the wheel.⁴¹ However, the presence of a driver alone is an insufficient safeguard, because research shows that drivers of autonomous vehicles will often be unprepared or unable to regain control in the event of a system failure.⁴²

1. Current State Law on Autonomous Vehicles

As of 2017, twenty-eight states had already introduced legislation concerning autonomous vehicles, but these focused primarily on development and testing rather than actual safety standards and protections for public consumers and road users.⁴³ For example, in 2017, the New York legislature passed a law regulating autonomous vehicles on

³⁸ See Marielle Segarra & Sasha Fernandez, *The Road Ahead: What About Regulation for Self-Driving Cars?*, MARKETPLACE TECH. (Oct. 1, 2021),

https://www.marketplace.org/shows/marketplace-tech/what-about-regulation-for-self-driving-cars/.

³⁹ See id.

⁴⁰ HG Legal Resources, Are Self-Driving Cars Legal?, HG.ORG,

https://www.hg.org/legal-articles/are-self-driving-cars-legal-31687 (last visited Nov. 22, 2021); *see also* Press Release, New York City Department of Transportation, Notice of Adoption Relating to the Demonstration or Testing of Autonomous Vehicles (Sept. 7, 2021) (on file with author) [hereinafter Notice of Adoption].

⁴¹ HG Legal Resources, *supra* note 40 (stating that "the laws of most states assume a human being will be in control, but this legal vagueness means that autonomous vehicles may technically be allowed to operate over the roads provided a human being sits behind the wheel").

⁴² Nancy Grugle, *Human Factors in Autonomous Vehicles*, ABA (Nov. 20, 2019), https://www.americanbar.org/groups/tort_trial_insurance_practice/publications/to rtsource/2019/fall/human-factors-autonomous-vehicles/.

⁴³ See Ben Husch & Anne Teigen, *Regulating Autonomous Vehicles*, NAT'L CONF. STATE LEGS. (Apr. 2017), https://www.ncsl.org/research/transportation/regulating-autonomous-vehicles.aspx.

the roadway, requiring, *inter alia*, that there be a natural person with a valid driver's license present within the vehicle during the duration of the trip.⁴⁴ However, these regulations applied only to "demonstrations and tests."⁴⁵

In 2017, The National Conference of State Legislatures acknowledged that states needed to implement further regulations in areas including traffic enforcement, insurance, registration, and licensing, but theorized that the creation of these regulations was not a pressing concern because it "will likely be many years before fully autonomous vehicles see widespread deployment."⁴⁶ Although it is true that fully autonomous vehicles (i.e., Level 5 vehicles) have not yet been widely deployed in the United States, Level 3 vehicles have already infiltrated American roadways.⁴⁷

Tesla's recently released "Full Self-Driving Capability" package includes the ability for the vehicle to navigate on autopilot, auto lane change, auto park, summon itself, and have traffic light and stop sign control.⁴⁸ In addition, Tesla advertises that new features, such as the ability to autosteer on city streets are "coming soon."⁴⁹ Some states require companies to obtain permits before testing or deploying autonomous vehicles on public roadways,⁵⁰ but the permit application requirements are often insufficient to ensure public safety. For example, California requires that applicants for its Autonomous Vehicle Tester program have tested their vehicles and have "reasonably determined" that they are safe to operate.⁵¹ No further information is provided that defines what constitutes "reasonable." Given this ambiguity, one should be skeptical of a claim that a company has met sufficient safety guidelines or standards merely because they hold a permit.

⁴⁴ Notice of Adoption, *supra* note 40; RULES OF CITY OF NY DEP'T OF TRANSP, 34 RCNY § 4-17 (2021).

⁴⁵ Notice of Adoption, *supra* note 40.

⁴⁶ Husch & Teigen, *supra* note 43.

⁴⁷ Fred Lambert, *Tesla Launches its Full Self-Driving Subscription Package for \$199 Per Month*, ELECTREK (July 16, 2021, 8:33 PM), https://electrek.co/2021/07/16/teslalaunches-full-self-driving-subscription-package-199-per-month/ [hereinafter *Tesla Package*]. For a description of the automation levels, *see supra* Part I(B). ⁴⁸ *Tesla Package*, *supra* note 47.

⁴⁹ *Id*.

⁵⁰ Segarra & Fernandez, *supra* note 38.

⁵¹ STATE OF CALIFORNIA DEPARTMENT OF MOTOR VEHICLES, AUTONOMOUS VEHICLE TESTER (ATV) PROGRAM FOR MANUFACTURER'S TESTING PERMIT 4 (2020).

2. Current Federal Law and Regulations on Autonomous Vehicles

The lack of adequate state law and regulation on autonomous vehicles may be explained by the federal government's declaration that the federal government alone is responsible for "setting safety standards for new motor vehicles" and "enforcing compliance with the established safety standards."⁵² Yet, even at the federal level, there are no laws or mandatory standards specifically geared toward self-driving vehicles. The NHTSA released its first set of guidelines in September 2016, *Federal Automated Vehicle Policy: Accelerating the Next Revolution in Roadway Safety.*⁵³ While these appeared to be federal regulations on autonomous vehicles, they were merely non-mandatory guidelines and mostly impractical or based on misunderstandings of the technology.⁵⁴ For example, the policy asks manufacturers to ensure that ethical decisions are made "consciously and intentionally," which is improbable for an AI system. ⁵⁵ The National Conference of State Legislatures outlined the policy as follows:

Section 2 of the guidance, the Model State Policy (MSP) delineates federal versus state authority. While the federal government is responsible for setting motor vehicle safety standards, states remain the lead regulator when it comes to licensing, registration, traffic law enforcement, safety inspections, infrastructure, and insurance and liability.

The MSP outlines a road map for states wanting to move ahead with testing and eventually deploying autonomous vehicles. It offers steps a state could consider rather than a detailed set of legislative language. Specifically, it notes that "this guidance is not mandatory," though the agency may make "some elements of the guidance mandatory and binding through future rulemakings." Further, it identifies

⁵² See Musson & Routhier, supra note 14 (summarizing the federal and state responsibilities regarding self-driving cars).

⁵³ See generally FEDERAL AV POLICY, supra note 37.

⁵⁴ See Jeremy Laukkonen, Are Self-Driving Cars Legal in Your State?, LIFEWIRE (July 13, 2021), https://www.lifewire.com/are-self-driving-cars-legal-4587765.

⁵⁵ See Srikanth Saripalli, Before Hitting the Road, Self-Driving Cars Should Have to Pass a Driving Test, SCI. AM. (Feb. 22, 2018),

https://www.scientificamerican.com/article/before-hitting-the-road-self-driving-cars-should-have-to-pass-a-driving-test/; FEDERAL AV POLICY, *supra* note 37.

several areas of state law that might require updating to accommodate a world full of automated vehicles. These include law enforcement and emergency response, vehicle registrations, liability and insurance, education and training, vehicle inspections and maintenance, and environmental impacts.⁵⁶

This presents two irreconcilable ideas. First, the Federal Automated Vehicle Policy is an express set of non-mandatory guidelines. Thus, if states want autonomous vehicles to be subjected to mandatory safety standards, they must implement those standards alone. However, if the federal government lacks the knowledge and resources to regulate self-driving technology, individual states are likely to find themselves similarly situated. Second, according to the MSP, "setting safety standards" is the responsibility of the federal government.⁵⁷ States are explicitly encouraged not to regulate safety standards in order to "ensure the establishment of a consistent national framework rather than a patchwork of incompatible laws."58 In summary, the U.S. Department of Transportation gave itself the responsibility to provide states with motor safety standards for self-driving vehicles, and then failed to provide adequate protections through the implementation of mandatory regulations.⁵⁹ The MSP goes further to clarify that:

Under current law, manufacturers bear the responsibility to self-certify that all of the vehicles they manufacture for use on public roadways comply with all applicable Federal Motor Vehicle Safety Standards (FMVSS). Therefore, if a vehicle is compliant within the existing FMVSS regulatory framework and maintains a conventional vehicle design, there is currently no specific federal legal barrier to an HAV being offered for sale.⁶⁰

The 2016 Automated Vehicle Policy provided a performance guide that asked manufacturers to voluntarily provide a safety assessment that covered: data recording and sharing, privacy, system safety, vehicle cybersecurity, human machine interface, crashworthiness, consumer

⁵⁶ NAT'L CONF. STATE LEGS., Regulating Autonomous Vehicles,

https://www.ncsl.org/research/transportation/regulating-autonomous-vehicles.aspx. ⁵⁷ Musson & Routhier, supra note 14.

⁵⁸ FEDERAL AV POLICY, *supra* note 37, at 7.

⁵⁹ See generally id.

⁶⁰ Id.

education and training, registration and certification, post-crash behavior, federal, state, and local laws, ethical considerations, operational design domain, object and event detection and response, fall back, and validation methods.⁶¹ The system safety guidelines suggested that the goal should be designing systems "free of unreasonable safety risks," but failed to provide any meaningful standards by which manufacturers should measure such safety risks.⁶² This was still a step in the right direction, but the voluntary nature of the guidelines rendered them less effective and inhibited public confidence. Additionally, although the 2016 policy predicted possible mandatory guidelines in the future, the three subsequent reports have followed the voluntary framework of their predecessors.⁶³

As of July 13, 2021, "nowhere in the United States is it strictly illegal to own or operate a self-driving car."64 This absence of regulations means manufacturers are able to release their newly developed selfdriving features to the public without meeting any federal safety standards specific to autonomous vehicles.⁶⁵ In large part, the reason for Congress's absence in self-driving car regulation is due to the difficulty of writing performance standards in an unfamiliar emerging technology such as autonomous vehicle software.⁶⁶ Further, technology companies who have not been traditionally subject to such regulations have significantly opposed any proposed legislation attempting to fill this void.⁶⁷ The consequences are drastic. In the absence of substantive regulation, manufacturing companies have been using the general public as "guinea pigs." Jason Levine, executive director of the Center for Auto Safety, stated that tech and car companies are testing the safety of their self-driving modes by "using you and me and everyone in your neighborhood as part of their experiment . . . just putting vehicles out on public roads, public highways, neighborhood streets, across the country, and collecting data and seeing how it goes."68 As discussed above, the NHTSA-instead of imposing proactive safety restrictions, standards, or

⁶¹ *Id*. at 15.

⁶² FEDERAL AV POLICY, supra note 37.

⁶³ NATIONAL SCIENCE & TECHNOLOGY COUNCIL & U.S. DEPARTMENT OF TRANSPORTATION, AUTOMATED VEHICLES 4.0: ENSURING AMERICAN LEADERSHIP IN AUTOMATED VEHICLE TECHNOLOGIES 29-30 (2020) ("The U.S. Government will promote voluntary consensus standards as a mechanism to encourage increased investment and bring cost-effective innovation to the market more quickly.").

⁶⁴ FEDERAL AV POLICY, *supra* note 37.

⁶⁵ Segarra & Fernandez, *supra* note 38.

⁶⁶ Id.

⁶⁷ See id.

⁶⁸ See id.

regulations on manufacturing companies—has required manufacturers to report when their vehicles crash.⁶⁹ While that is important data to collect, the NHTSA is essentially trying to determine whether the cars are safe by seeing how many people get into accidents rather than making sure the cars are safe *prior* to releasing them into the public.⁷⁰

Despite these criticisms on the NHTSA's automated vehicle guidelines, the real issue is that the NHTSA is ill-equipped to develop anything more substantial. In fact, the NHTSA has expressed its desire to create a safety framework with objective standards to define and measure the safety of autonomous vehicles,⁷¹ but also acknowledged that it lacks the necessary funding and expertise to accomplish this goal.⁷² This illustrates the inadequacy of current federal regulations and supports the conclusion that the creation of a federal AI agency may be a workable solution by providing an increase in expertise, funding, and rulemaking authority.

II. AI HIRING ALGORITHMS AND DISCRIMINATION PROTECTION

Employers in the United States are increasingly using AI programs in their hiring practices.⁷³ In 2019, a Mercer report found that 40% of U.S. companies used AI programs to assist their hiring processes.⁷⁴ There are a variety of programs that recruiters may use throughout the different stages of the hiring process.⁷⁵ At the earliest stage, companies use AI programs to selectively advertise certain job openings to candidates based on information submitted by the candidates and their job application history on the site.⁷⁶

⁶⁹ *Id.*; U.S. DEP'T OF TRANSP., STANDING GENERAL ORDER 2021-01: INCIDENT REPORTING FOR AUTOMATED DRIVING SYSTEMS (ADS) AND LEVEL 2 ADVANCED DRIVER ASSISTANCE SYSTEMS (ADAS) (2021).

⁷⁰ See id.

⁷¹ U.S. DEP'T OF TRANSP., AUTOMATED VEHICLES: COMPREHENSIVE PLAN 12 (2021). ⁷² NAT'L CONF. STATE LEGS., *supra* note 56 ("Finally, the guidance lays out some possible policy changes that NHTSA believes could help it better respond to this new technology. These include additional funding to support more research, a larger network of experts, premarket approval authority for vehicles and software upgrades after vehicles sell.").

⁷³ Rebecca Heilweil, *Artificial Intelligence Will Help Determine if You Get Your Next Job*, Vox (Dec. 12, 2019),

https://www.vox.com/recode/2019/12/12/20993665/artificial-intelligence-ai-job-screen.

⁷⁴ Tim Kulp, *AI and Hiring Bias: Why You Need to Teach Your Robots Well*, HUM. Res. Exec. (Apr. 14, 2021), https://hrexecutive.com/ai-and-hiring-bias-why-you-need-to-teach-your-robots-well/.

⁷⁵ Heilweil, *supra* note 73.

⁷⁶ Id.

Other companies offer a recruiting tool that goes beyond selfsubmitted information by potential candidates, and find top candidates based on information on the open web.⁷⁷ This recruiting tool is sometimes even able to identify candidates most likely to leave their current job.⁷⁸ At the next stage of the recruiting process, companies may use AI tools to filter through resumes and present the employer with a list compiling the top candidates to interview.⁷⁹ One of the companies that offers this tool, HireVue, takes this practice a step further and uses AI to analyze and conduct actual interviews, during which candidates are prompted with structured questions and asked to record themselves responding.⁸⁰ The AI program uses proprietary machine learning algorithms to analyze data points from the interview—including, for example, non-verbal cues such as "facial expressions, eye-movements, body movements, details of clothes, and nuances of voice"—to predict future job performance.⁸¹

Like self-driving cars, the use of AI in hiring practices has the potential for many societal benefits.⁸² These programs are often used by companies and recruiters to greatly reduce the time and effort needed to sift through and evaluate candidates.⁸³ Proponents of AI hiring boast its potential to remove human biases from the recruiting process and its ability to be more predictive of job success than traditional interviews.⁸⁴

Yet, the use of this emerging technology has revealed disturbing discrepancies between its goal of removing racial bias and its unintended result of racial and gender discrimination.⁸⁵ For example, Amazon, the world's largest online retailer, abandoned its 2014 project to create an AI program to automate its recruitment process after discovering that it filtered out female candidates.⁸⁶ The initial goal of Amazon's AI program

⁷⁷ Id.; Products: Arya Quantum, ARYA LEOFORCE, [hereinafter Arya]

https://goarya.com/arya-quantum/ (last visited Jan. 30, 2022).

⁷⁸ See Arya, supra note 77.

⁷⁹ See Heilweil, supra note 73.

⁸⁰ *Hiring Experience Platform*, HIREVUE, https://www.hirevue.com/ (last visited Jan. 30, 2022).

⁸¹ *HireVue Interview Guide: How to Prepare for a HireVue Interview*, CORP. FIN. INST., https://corporatefinanceinstitute.com/resources/careers/interviews/about-hirevue-interview/ (last visited Jan. 30, 2022).

⁸² McKenzie Raub, Bots, Bias, and Big Data: Artificial Intelligence, Algorithmic Bias and Disparate Impact Liability in Hiring Practices, 71 ARK. L. REV. 529, 530 (2018).
⁸³ Heilweil, supra note 73.

⁸⁴ Id.

⁸⁵ See generally id.

⁸⁶ Isobel Asher Hamilton, *Amazon Built an AI Tool to Hire People but Had to Shut It Down Because It Was Discriminating Against Women*, INSIDER (Oct. 10, 2018), https://www.businessinsider.com/amazon-built-ai-to-hire-people-discriminated-

was to create a system capable of analyzing resumes and producing a list of top candidates.⁸⁷ After a year, developers realized that the AI software used statistics about the company's past male-dominated employment and resume collection, which led the AI program to conclude that male candidates were preferred.⁸⁸ Thus, the AI engine scored resumes lower or filtered out the candidate altogether if their resume contained the word "women's" or the candidate had attended an all-women's college.⁸⁹ Similarly, the Electronic Privacy Information Center ("EPIC") filed a complaint against HireVue with the Federal Trade Commission alleging "unfair and deceptive trade practices."⁹⁰ Although it is unclear whether the program actually displayed racial biases because the biometric data was analyzed secretly, HireVue reportedly stopped using facial expressions as a factor in its algorithmic analysis of video interviews after the complaint was filed.⁹¹

These companies are not alone in their struggle to develop a nondiscriminatory AI hiring program, and the issue is not limited to the context of employment discrimination.⁹² The same issue was found in a 2016 ProPublica study on AI software that aided in making parole judgments by predicting which criminals were likely to reoffend.⁹³ This software was found to display racial biases against Black defendants, finding them more likely to reoffend based only on their skin color.⁹⁴ EPIC criticizes the use of AI in similar practices alleging that it has caused substantial harm to the American public whom are subjected to "opaque and un-provable decision-making in employment, credit, healthcare,

against-women-2018-10; Troy Segal, *Who Are Amazon's (AMZN) Main Competitors?*, INVESTOPEDIA (July 17, 2021),

https://www.investopedia.com/ask/answers/120314/who-are-amazons-amzn-main-competitors.asp#:~:text=Amazon%20is%20the%20world's%20largest,subscription%20services%2C%20and%20web%20services.

⁸⁷ *Id.* (quoting an unnamed source: "They literally wanted it to be an engine where I'm going to give you 100 résumés, it will spit out the top five, and we'll hire those"); Jeffrey Dastin, *Amazon Scraps Secret AI Recruiting Tool that Showed Bias Against Women*, REUTERS (Oct. 10, 2018), https://www.reuters.com/article/us-amazon-com-jobs-automation-insight/amazon-scraps-secret-ai-recruiting-tool-that-showed-bias-against-women-idUSKCN1MK08G.

⁸⁸ See Dastin, supra note 87.

⁸⁹ Id.

⁹⁰ Jeremy Kahn, *HireVue Drops Facial Monitoring Amid A.I. Algorithm Audit*, FORTUNE (Jan. 19, 2021), https://fortune.com/2021/01/19/hirevue-drops-facialmonitoring-amid-a-i-algorithm-audit/; Complaint, In re HireVue, Inc. (F.T.C. Nov. 6, 2019), https://epic.org/wp-

content/uploads/privacy/ftc/hirevue/EPIC_FTC_HireVue_Complaint.pdf. 91 *Id*.

⁹² Dastin, *supra* note 87.

⁹³ Id.

⁹⁴ Id.

housing, and criminal justice."⁹⁵ According to EPIC, other commercial uses of this technology include ranking sports players and evaluating potential Airbnb guests.⁹⁶

A. What Causes an Algorithm to be Discriminatory or Biased?

Algorithm developers and recruiters hope that AI hiring systems can provide a way to evaluate candidates objectively and eliminate human prejudice and subjectivity, but the current reality is that human biases unexpectedly infiltrate decisions made by AI.97 One source of bias in AI programming originates from the creation of the algorithms themselves and those designing them. Accordingly, many argue that AI algorithms are biased due to the "lack of meaningful diversity in Silicon Valley."98 The fundamental problem is that algorithms are thought to embed the authors' opinions into the code.99 Since there is a lack of diversity in the tech industry-and thus, a lack of diversity in the creators of these algorithms-the algorithms reproduce the authors' implicit biases as well as existing societal biases.¹⁰⁰ When human resource managers work together with data scientists to create these algorithms, they decide which factors are important and how the AI coding can account for them.¹⁰¹ In doing so, they design AI systems to consider certain factors without accounting for many of the unconscious judgments that would normally help inform the human recruiter.¹⁰² For example, while a human recruiter may value proximity of the address on an applicant's resume to the firm's location, an AI tool designed to value the same factor may inadvertently discriminate on race in a segregated city.¹⁰³ Additionally, non-minority white developers may not ensure (or even be aware that they should be ensuring) the programs they design

⁹⁵ Kahn, *supra* note 90.

⁹⁶ Id.

⁹⁷ Miranda Bogen, *All the Ways Hiring Algorithms Can Introduce Bias*, HARV. BUS. REV. (May 6, 2019), https://hbr.org/2019/05/all-the-ways-hiring-algorithms-can-introduce-bias.

⁹⁸ Raub, *supra* note 82, at 540.

⁹⁹ *Id.* at 542.

¹⁰⁰ *Id.* at 542. Implicit bias is loosely defined as "preconceived notions or stereotypes that—[we all have and that are] beyond our control—affect our understanding, actions, and decisions about others." Stacy Cantu-Pawlik, *What Is Implicit Bias and Why Should You Care?*, SALUD AMERICA (Apr. 1, 2019), https://salud-america.org/what-is-implicit-bias-and-why-should-you-care/.

¹⁰¹ Was Rahman, *AI-Powered Recruitment Can Be Racist or Sexist – and Here's Why*, DIVERSITYQ (Jan. 13, 2021), https://diversityq.com/ai-powered-recruitment-can-be-racist-or-sexist-and-heres-why-1511217/.

 $^{^{102}}$ *Id*.

¹⁰³ Id.

sufficiently distinguish non-white faces and fairly assess non-verbal cues for minority users.¹⁰⁴ A lack of diversity also creates gender bias. For example, recruiters designing an AI program to analyze resumes may want to weed out those that have career gaps.¹⁰⁵ However, if those designers are men, they may not account for the fact that many women will have gaps in their employment due to maternity leave and other childcare obligations, and effectively use gender as an eliminating or downgrading criteria.¹⁰⁶

Machine learning, defined as "a class of methods for automatically creating models from data," 107 is another source of bias and discrimination in AI hiring. The Amazon program referenced earlier is a great example of machine learning and illustrates how an algorithm can unintentionally create discriminatory preferences through data analysis. The data in that case was a ten-year collection of resumes submitted to Amazon, most of which came from male candidates.¹⁰⁸ The male dominance in the industry led the program to infer that male candidates were better suited for the job and thus, began recommending men over women.¹⁰⁹ Further, the system analyzed the text on the resumes for commonalities and began to assign little value to skills that were common to all applicants, and placed higher value on verbs found mostly on men's resumes such as "executed."110 Although Amazon was able to revise the algorithm to be gender-neutral in these contexts, the unpredictability of the program making future discriminatory inferences was so great that the developers ultimately abandoned the project.¹¹¹ The root of the problem in machine learning is that it acts to perpetuate existing biases and underrepresentation in historical data. When your data set lacks a representative amount of diversity, a program modeled after that data has no way of determining how those groups have performed in the

¹⁰⁴ Michael Li, *To Build Less-Biased AI, Hire a More Diverse-Team*, HARV. BUS. REV., (Oct. 26, 2020), https://hbr.org/2020/10/to-build-less-biased-ai-hire-a-more-diverse-team.

¹⁰⁵ See Parmy Olson, *Employers Beware: Hiring Software Could Weed Out Future Stars*, WASH. POST (Sept. 14, 2021),

https://www.washingtonpost.com/business/employers-beware-hiring-software-could-weed-out-future-stars/2021/09/14/e2fcb574-152a-11ec-a019-cb193b28aa73_story.html.

¹⁰⁶ Rahman, *supra* note 101.

¹⁰⁷ Martin Heller, *Machine Learning Algorithms Explained*, INFOWORLD (May 9, 2019), https://www.infoworld.com/article/3394399/machine-learning-algorithms-explained.html.

¹⁰⁸ Dastin, *supra* note 87.

¹⁰⁹ Id.

¹¹⁰ *Id*.

¹¹¹ *Id*.

past—and therefore, no way of knowing how they will perform in the future.¹¹² Thus, because minorities have historically been drastically underrepresented in many industries, AI programs are modeled to determine that they are less preferable than white candidates with tons of collected historical data to analyze.¹¹³

B. Existing Laws and Regulations on AI Employment Discrimination

Many states have introduced bills targeting AI, but few have actually enacted any AI legislation. Many of these bills contain loopholes or regulate only certain entities, and are therefore, insufficient to provide employment protections to consumers from discriminatory AI hiring tools.¹¹⁴ Since there is also a lack of federal AI regulation, there is hardly any oversight on AI hiring programs in the United States.¹¹⁵ Still, we can find examples of promising state legislation in Illinois, New York, and Maryland.

Illinois passed one of the first laws that targeted AI hiring practices: the Artificial Intelligence Video Interview Act (the "AIVIA"), which took effect in January 2020.¹¹⁶ The AIVIA took the first step towards regulating a largely uncertain, nontransparent technology by focusing on privacy, disclosure, and consent.¹¹⁷ Essentially, the law requires companies that use AI video interviewing programs to disclose to applicants that their applications will be reviewed by AI rather than a human recruiter.¹¹⁸ Additionally, the law requires that such applicants consent to an AI interview before employers may subject them to one.¹¹⁹ At face value, this law appears to provide consumers with protections, but in reality it falls short—far too short. For starters, the law fails to address any concerns for bias, and thus, fails to provide any protections

applications-illinios-video-interivew-act.

¹¹² Sarah K. White, *AI in Hiring Might Do More Harm Than Good*, CIO (Sept. 17, 2021), https://www.cio.com/article/189212/ai-in-hiring-might-do-more-harm-than-good.html.

¹¹³ See generally id.

¹¹⁴ *Id*.

¹¹⁵ Id.

¹¹⁶ Artificial Intelligence Video Interview Act § 1, 820 ILL. COMP. STAT. 42/1 (2020); Rebecca Heilweil, *Illinois Says You Should Know if AI Is Grading Your Online Job Interview*, VOX (Jan. 1, 2020) [hereinafter *Illinois AI Video Interview Act*], https://www.vox.com/recode/2020/1/1/21043000/artificial-intelligence-job-

¹¹⁷ Artificial Intelligence Video Interview Act § 5; *Illinois AI Video Interview Act, supra* note 116.

¹¹⁸ Illinois AI Video Interview Act, supra note 116.¹¹⁹ Id.

for discrimination. ¹²⁰ Additionally, the law reaches only video interviewing technology, which makes up a relatively small portion of the AI hiring tools. ¹²¹ Lastly, although the law requires consent by the interviewee, it does not offer any alternative remedies to those who do not wish to consent—thus, potential applicants are left with a choice between: (1) consenting to the AI interview program despite their reservations; or (2) withdrawing their application and not being considered for the job at all.¹²² Notwithstanding these shortcomings, the AIVIA did increase interview transparency to some degree. Transparency is important to protect candidates against discrimination because candidates are often unaware that they were even eliminated by a program rather than a human.

The New York City Council passed a bill in early November 2021, which prohibits employers from using AI hiring tools unless the program undergoes a "bias audit" one year prior to its use and can demonstrate that the program will not discriminate based on an applicant's race or gender.¹²³ Additionally, the bill follows the AIVIA's strides towards transparency, and requires that employees and candidates be notified if an AI tool is used to make the hiring decision.¹²⁴ The penalty for failure to disclose is a fine of \$500 to \$1500.125 Although the requirement of an audit is a promising start, many critics argue that the law sets too weak of a standard to effectively protect against bias.¹²⁶ One issue is that the audit requirement is too vague and only requires companies to show that they comply with basic requirements that are "very easy to meet."¹²⁷ The ineffectiveness of audits can be seen through a third-party audit of HireVue, which despite the problems in the system, commended the company for its efforts to eliminate potential bias.¹²⁸ The auditors went on to *recommend* that the company take further steps to investigate

¹²³ Automated Employment Decision Tools, N.Y. COMP. CODES R. & REGS. tit. 20, § 870-74 (2023); Matt O'Brien, *A New Bill Would Limit Employers' Use of A.I. Hiring Tools to Recruit New York City Applicants*, FORTUNE (Nov. 19, 2021), https://fortune.com/2021/11/19/new-york-city-bill-employers-ai-hiring-tools-

¹²⁰ Id.

 $^{^{121}}$ Id.

 $^{^{122}}$ Id.

applicants/.

¹²⁴ Erin Mulvaney, *NYC Targets Artificial Intelligence Bias in Hiring Under New Law*, BLOOMBERG L. (Dec. 10, 2021), https://news.bloomberglaw.com/daily-labor-report/nyc-targets-artificial-intelligence-bias-in-hiring-under-new-law. ¹²⁵ Id.

¹²⁶ O'Brien, *supra* note 123; *see also* Kate Kaye, *New York City Passed a Bill Requiring* 'Bias Audits' of AI Hiring Tech, PROTOCOL (Nov. 12, 2021),

https://www.protocol.com/bulletins/nyc-ai-hiring-tools.

¹²⁷ O'Brien, *supra* note 123.

¹²⁸ Kahn, *supra* note 90.

potential biases.¹²⁹ Another issue is that the law only protects against racial and gender bias and fails to address other protected classes, such as disability or age.¹³⁰ The measure will go into effect on January 1, 2023.¹³¹

Maryland passed legislation similar to the AIVIA. The new law simply requires employers to get applicant consent before they can use a facial recognition service (essentially Maryland's coined phrase to refer to AI video interviewing programs that analyze facial expression, word choice, and voice).¹³² Because the Maryland law is very similar to its counterpart in Illinois, it likewise faces similar challenges. Thus, consent does not adequately protect applicants from biased AI hiring tools. Additionally, as Maryland employment attorneys have noted, the law does not specify any penalties or fines for companies that fail to comply.¹³³

To date, there are no existing federal regulations that address AI discrimination in employment.¹³⁴ However, Title VII of the Civil Rights Act of 1964, amended by the Americans with Disabilities Act and the Pregnancy Discrimination Act of 1978, prohibits employment discrimination on the basis of race, color, religion, sex, disability, pregnancy and national origin.¹³⁵ Although these laws do not address the use of AI in hiring, their protections may extend to such situations.

Title VII liability falls into two separate categories of claims: (1) disparate treatment, and (2) disparate impact claims.¹³⁶ Disparate treatment claims require intentional discrimination, and thus, aside from being extremely difficult to prove, would theoretically not apply to unintentionally created bias from AI hiring tools.¹³⁷ Consequently, job

¹²⁹ Id.

¹³⁰ O'Brien, *supra* note 123.

¹³¹ Jason C. Gavejian, *NYC Places Groundbreaking Restrictions on AI Use in Hiring Practices*, JACKSONLEWIS (Dec. 20, 2021),

https://www.workplaceprivacyreport.com/2021/12/articles/artificial-

intelligence/nyc-places-groundbreaking-restrictions-on-ai-use-in-hiring-practices/. ¹³² MD. CODE ANN., LAB. & EMPL. § 3-717 (West 2020); Charles R. Bacharach & James D. Handley, *Maryland Passes Consent Requirement for Employment Interview Use of Facial Recognition Services*, GORDON FEINBLATT (June 16, 2020),

https://www.gfrlaw.com/what-we-do/insights/maryland-passes-consent-requirement-employment-interview-use-facial-recognition.

¹³³ Id.

¹³⁴ Sussman et al., *supra* note 4.

¹³⁵ Civil Rights Act of 1964, 42 U.S.C. § 2000e-2 (1964); Americans with Disabilities Act of 1990, 42 U.S.C. §§ 12101-12213 (2008); *Title VII of the Civil Rights Act of 1964*, SHRM, https://www.shrm.org/hr-today/public-policy/hr-public-policy-issues/pages/titleviiofthecivilrightsactof1964.aspx (last visited Jan. 31, 2022). ¹³⁶ Raub, *supra* note 82, at 544.

¹³⁷ *Id.*; Charles A. Sullivan, *Employing AI*, 63 VILL. L. REV. 395, 405 (2018).

applicants are likely limited to disparate impact claims under Title VII as their legal avenue for protection from discriminatory AI hiring tools. These claims arise when an employer uses a policy that is neutral on its face (appears to be non-discriminatory at face value), but has a discriminatory effect on the basis of one of the protected classes.¹³⁸ As the United States Supreme Court held in Griggs v. Duke Power Co., Title VII covers practices that are "fair in form, but discriminatory in operation."139 This language seems to indicate that Title VII should extend to AI hiring, but many scholars are skeptical of its application. Some argue that AI hiring discrimination cases being brought as disparate impact claims will likely fail due to the business necessity defense, or because the algorithm in question would be facially discriminatory as it "classifies on a prohibited ground."¹⁴⁰ If the practice is not facially neutral, it would need to be brought as a disparate treatment claim, and therefore, would fail due to the difficulty in proving intent.141

Even if Title VII encompasses AI hiring discrimination, discriminatory impact claims face the problem of "intentional reverse discrimination." This term is used to describe the situation in which an employer actively tries to account for disparate impact on a protected group by actively making that group more likely to get a job-thereby, intentionally discriminating against those not in the protected group. The conception of this term arises from the Supreme Court case, *Ricci v*. DeStefano, in which the city of New Haven, Connecticut discovered that white candidates consistently outperformed minority candidates on an examination they used to evaluate potential firefighters.¹⁴² When city officials found the racial disparity, they threw out the results of the exam in order to make the hiring criteria more equitable for Black candidates.¹⁴³ The Court held that the city's intentional discrimination was impermissible under Title VII, absent a strong showing that the city would have been liable under a disparate impact claim if no action was taken.¹⁴⁴ This case creates an uncertainty of how and whether companies can account for racial disparities they discover in their AI hiring programs. The holding also makes clear that the standard for disparate impact is not such a low bar, and it remains to be decided whether racial

¹³⁸ Raub, *supra* note 82, at 544.

¹³⁹ 401 U.S. 424, 431 (1971).

¹⁴⁰ Sullivan, *supra* note 137, at 410-11.

¹⁴¹ *Id*. at 411.

¹⁴² 557 U.S. 557, 562 (2009).

¹⁴³ Id.

¹⁴⁴ *Id*. at 563.

disparities present in AI hiring programs would meet that bar. Yet, even if disparate impact claims could succeed, the current law almost encourages companies to forgo taking corrective measures since doing so may open them up to the same sort of liability found in *Ricci*.¹⁴⁵

The lack of transparency in AI hiring makes it extremely difficult for candidates to learn why they were eliminated, particularly where state laws do not require consent. Reactive solutions like Title VII claims are insufficient to protect those that rarely know they were victims of discrimination. The American public should not be forced to rely on companies to self-regulate their AI hiring tools. It is unrealistic to hope that every company will strictly scrutinize its AI software data, find discriminatory results, and correct or abandon the programs. Therefore, it is vital that this technology is proactively regulated. Until effective regulations are created, companies will continue to use and test their programs at the expense of candidates who are serving as guinea pigs in this nationwide experiment.

III. RECOMMENDATION: THE UNITED STATES ARTIFICIAL INTELLIGENCE AGENCY

Before arguing that a United States Artificial Intelligence Agency is necessary, it is fundamental to explain why federal regulations are necessary. AI is everywhere—driving on our roads, scouring our social media, and sitting behind a desk reading our resumes—and it affects everyone. Any single flaw in AI could affect millions of people in the U.S. ¹⁴⁶ Without federal regulations, consumers are left without protections and are often unaware of the effects that AI may be having on them. Disclosure regulations are extremely important. In the AI hiring context, companies are not required to provide any proof that their programs actually detect factors relevant to job performance.¹⁴⁷ Many AI scholars suggest that future regulations on AI should require controls on the application of AI technologies, data collection, limits on how long data can be retained, the use of the AI technologies, the use of independent third-party testing, and significant transparency.¹⁴⁸

¹⁴⁵ *See* Raub, *supra* note 82, at 555.

¹⁴⁶ François Candelon et al., *AI Regulation is Coming: How to Prepare for the Inevitable*, HARV. BUS. REV., Sept.-Oct. 2021, https://hbr.org/2021/09/ai-regulation-is-coming.

¹⁴⁷ Mark MacCarthy, *AI Needs More Regulation, Not Less*, BROOKINGS (Mar. 9, 2020), https://www.brookings.edu/research/ai-needs-more-regulation-not-less/. ¹⁴⁸ White, *supra* note 112.

This is a national problem, and national problems require national solutions. As one commentator notes, the creation of a federal agency is a proven solution when "an entire field begins to set a broad set of challenges for the public, demanding thoughtful regulation."149 A federal agency was created to help alleviate a new national concern in: (1) 1906, when the Food and Drug Administration ("FDA") was created in response to a national concern of unsanitary and shocking conditions in U.S. meat-packing plants; (2) 1934, when the Securities and Exchange Commission ("SEC") was created in response to the national concern of the worst stock market crash in history; and (3) 1970, when the Environmental Protection Agency ("EPA") was created in response to the national concern for pollution.¹⁵⁰ The list goes on and on, and the theme is consistent-when the nation is faced with a broad issue, the federal government has successfully responded by creating federal agencies to make and enforce effective regulations. Although the government has recently created the National Artificial Intelligence Initiative ("NAII"), it does not carry the same authority as an agency and the NAII's mission is geared towards winning the international race on AI.¹⁵¹ Further, the NAII simply works between the existing agencies that are not equipped with AI expertise or focused on AI regulation.¹⁵² In contrast, federal agencies have a significant amount of expertise in specialized areas, and they are required to allow public participation through public comments.¹⁵³ Most significantly, agencies have rulemaking authority to "write and enforce regulations that have the force and effect of law."154

A. Addressing Existing Criticism Toward an AI Agency

There are two main concerns in the literature that have created skepticism about the idea of creating an AI agency: (1) the complexity of the technology, and (2) impeding innovation.¹⁵⁵ The first concern expresses the fear that regulators will be unable to understand complex

¹⁴⁹ Rob Toews, *Here Is How the United States Should Regulate Artificial Intelligence*, FORBES (June 28, 2020), https://www.forbes.com/sites/robtoews/2020/06/28/here-is-how-the-united-states-should-regulate-artificial-intelligence/?sh=402d86377821. ¹⁵⁰ *Id*.

¹⁵¹ National Artificial Intelligence Initiative: Overseeing and Implementing the United States National AI Strategy, NAT'L A.I. INITIATIVE, https://www.ai.gov/ (last visited Jan. 31, 2022).

 $^{^{152}}$ *Id*.

¹⁵³ See MAEVE P. CAREY, CONG. RSCH. SERV., IF10003, AN OVERVIEW OF FEDERAL REGULATIONS AND THE RULEMAKING PROCESS (2021),

https://sgp.fas.org/crs/misc/IF10003.pdf.

 $^{^{154}\,\}bar{I}d.$

¹⁵⁵ See generally Raub, supra note 82, at 566-67.

coding, and thus, unable to create meaningful regulations on AI programs. ¹⁵⁶ This concern is rooted in the false assumption that regulators need to regulate *inputs* rather than *outputs*.

The distinction between inputs and outputs can be better illustrated in the context of medicine.¹⁵⁷ One issue with regulating autonomous vehicles is that it is not obvious how to test the effectiveness of an algorithm. Likewise, it would be difficult to effectively regulate the vast amount of data going into and being analyzed by an AI hiring program. One way to solve this is to test algorithms the same way we test new medications.¹⁵⁸ In both cases, it is difficult for researchers to always know exactly why something works, but it is still possible to evaluate what it does (i.e., evaluate the outcome). In the case of medicine, the outcome tested for is whether a sick person gets better after taking the medication. In the case of algorithms, the outcome tested for could be whether a vehicle is able to detect and slow down for pedestrians walking against a red light or whether an AI hiring program displays racial disparities. Some state legislatures are already taking this outputfocused approach. The New York City Council introduced a bill that aimed to increase transparency by disclosure of algorithms, but after backlash, amended the bill to focus on evaluating the outputs of AI to "figure out if and when there is harm done."159

The second concern, that strict AI regulations will impede innovation, is greatly contested by scholars.¹⁶⁰ In fact, many argue that regulations would actually increase innovation, because among other things, they encourage greater public trust.¹⁶¹ This phenomenon was observed after Congress passed the 1974 Fair Credit Billing Act ("FCBA") to regulate credit card companies.¹⁶² The protections from the FCBA increased public trust in the new technology and stimulated growth in the industry and an increase in innovation.¹⁶³ The key to is to be proactive. Proactive regulation gets out in front of the new technology to

¹⁵⁶ Tristan Greene, *US Government Is Clueless About AI and Shouldn't Be Allowed to Regulate It*, TNW (Oct. 24, 2017), https://thenextweb.com/news/us-government-is-clueless-about-ai-and-shouldnt-be-allowed-to-regulate-it.

¹⁵⁷ See Srikanth Saripalli, Before Hitting the Road, Self-Driving Cars Should Have to Pass a Driving Test, SCI. AM. (Feb. 22, 2018),

https://www.scientificamerican.com/article/before-hitting-the-road-self-driving-cars-should-have-to-pass-a-driving-test/.

¹⁵⁸ See id.

¹⁵⁹ Raub, *supra* note 82, at 567.

¹⁶⁰ See, e.g., MacCarthy, supra note 147.

¹⁶¹ *Id*.

¹⁶² The FCBA amended the Truth in Lending Act. *See* Truth in Lending Act of 1968, 15 U.S.C. § 1666 (2010).

¹⁶³ MacCarthy, *supra* note 147.

protect consumers who will then trust and support further innovation.¹⁶⁴ Multiple research studies support the conclusion that well-designed regulations increase innovation, particularly when coupled with incentives for adoption of the technology.¹⁶⁵ However, even if innovation is stunted by regulations, the cost of regulative restraint falls largely on minority groups—a consequence that should be enough in itself to outweigh any potential loss of innovation.¹⁶⁶

B. Setting the Floor for States to Build Upon

1. The Seat Belt Example

The need for automobile safety was a concern well before the development of autonomous vehicles. The federal government has continuously struggled to combat the horrific number of annual fatalities attributed to automobiles collisions. In 1966, Congress responded by passing the National Traffic and Motor Vehicle Safety Act of 1966 ("NTMVSA"), whose purpose was "to provide for a coordinated national safety program and [the] establishment of safety standards for motor vehicles in interstate commerce to reduce accidents involving motor vehicles and *to reduce the deaths and injuries occurring in such accidents.*" ¹⁶⁷ The NTMVSA further stipulated that the Secretary of Commerce shall establish appropriate standards to protect the public against "unreasonable risk of accidents occurring as a result of the design, construction or performance of motor vehicles" and against unreasonable risks to persons in the events of accidents.¹⁶⁸

Seat belt legislation is one example of federal motor vehicle safety regulation. The first seat belt law took effect in 1968 and required car manufacturers to install seat belts in every vehicle.¹⁶⁹ While this new law required vehicles to *have* seat belts, it did not require drivers or

¹⁶⁴ Id.

¹⁶⁵ Will Upington, *Driving AI Innovation in Tandem with Regulation*, TECH. CRUNCH (Oct. 6, 2021), https://techcrunch.com/2021/10/06/driving-ai-innovation-in-tandem-with-regulation/.

¹⁶⁶ Louise Russell-Prywata, *Book Review: Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor by Virginia Eubanks*, LSE REV BOOKS (July 2, 2018), https://blogs.lse.ac.uk/lsereviewofbooks/2018/07/02/book-review-automating-inequality-how-high-tech-tools-profile-police-and-punish-the-poor-by-virginia-eubanks/.

¹⁶⁷ National Traffic and Motor Vehicle Safety Act of 1966, Pub. L. No. 89-563, pmbl., 80 Stat. 718, 718 (1966) (emphasis added).

¹⁶⁸ *Id.* at § 102(1).

¹⁶⁹ Jennifer L. Donaldson, *History of Seat Belts: Effective for Men and Women?*, SAFE RIDE4KIDS, https://saferide4kids.com/blog/history-of-seat-belts-effective/.

passengers to *use* the seat belts. Notwithstanding this shortcoming, the federal government's action still gave state legislatures the means to implement seat belt *use* laws. Essentially, without a federal law requiring vehicles to have seat belts, states would be incapable of passing—and definitely incapable of enforcing—seat belt *use* laws.¹⁷⁰ Thus, the federal government opened the door for states to regulate seat belt use and increase motor vehicle safety by legislating on seat belts.

The 1968 seat belt law was very successful. New York passed the first seat belt use law in 1984, 171 which required drivers, front-seat passengers, and back-seat occupants under the age of 10 to wear a seat belt at all times.¹⁷² Many states soon followed New York's lead and passed similar laws. Today, every state except New Hampshire has some variation of a seat belt law.¹⁷³ They often vary between primary and secondary enforcement and front-seat-only or all-seat requirements.¹⁷⁴ Despite these enforcement differences, seat belt laws have increased seat belt use, which in turn has reduced automobile collision deaths and injuries.¹⁷⁵ In fact, according to the National Highway Traffic Safety Administration, the national use rate of seat belts was 90.3 percent in 2020.¹⁷⁶ Furthermore, seat belt use in vehicles saved approximately 14,955 lives in 2017.¹⁷⁷ This increase in seat belt usage—and therefore the increase in survivability of occupants involved in car crashes-owes its thanks to the federal government for setting the floor (the minimum standard) for states to build upon.

¹⁷⁰ It's important to consider that state laws requiring manufacturers to install seat belts in vehicles would likely be ineffective since they would only reach those manufacturing companies incorporated in that state.

¹⁷¹ Dennis Hartman, *When Did Seat Belts Become Mandatory*, ITSTILLRUNS, https://itstillruns.com/did-seat-belts-become-mandatory-5506603.html (last visited Jan. 31, 2022).

¹⁷² Id.

¹⁷³ Samantha Bloch, NAT'L CONF. STATE LEGS., *State and Federal Efforts to Increase Adult Seat Belt Use*, 28 LEGISBRIEF, no. 16, May 2020,

https://www.ncsl.org/research/transportation/state-and-federal-efforts-to-increase-adult-seat-belt-use.aspx.

¹⁷⁴ Primary enforcement is when police officers can stop vehicles based solely on a seat belt violation, while secondary enforcement allows police officers to enforce seat belt violations only when the stop was made pursuant to a different crime or traffic violation. *See* Riccola Voigt, *Primary and Secondary Traffic Violations*, NOLO, https://www.drivinglaws.org/resources/primary-and-secondary-traffic-

violations.html (last visited Apr. 27, 2022)

¹⁷⁵ Seat Belt Laws, U.S. DEP'T TRANSP.,

https://www.transportation.gov/mission/health/seat-belt-laws (Aug. 24, 2015). ¹⁷⁶ Seat Belts, NHTSA, https://www.nhtsa.gov/risky-driving/seat-belts (last visited Mar. 13, 2022, 6:45 PM).

¹⁷⁷ Id.

2. The Employment Discrimination Example

Although the federal government has not specifically regulated the use of AI as it relates to employment discrimination, it has already set the employment discrimination floor that states have built upon. That floor is Title VII of the Civil Rights Act of 1964.¹⁷⁸ This federal law protects workers from discriminatory employment practices based on race, color, religion, sex, and national origin.¹⁷⁹ The federal government added protections for people with disabilities in 1990 with the passage of the Americans with Disabilities Act ("ADA"). ¹⁸⁰ These are the basic protections that all states have to comply with, or better phrased: the bare minimum list of categories states must protect against employment discrimination.

Title VII allowed states to build upon these mandatory protections and add additional protected classes to state laws. Some states impose fewer protections while other states go further in their protections and have passed anti-discrimination laws to provide equal employment regardless of sexual orientation, marital status, or weight.¹⁸¹ For example, Alabama does not have a law protecting against racial discrimination, and therefore, leaves the issue in the realm of federal law.¹⁸² In contrast, California expands Title VII to protect workers from discrimination based on gender identity, marital status, and sexual orientation.¹⁸³ Similar to California, New York is generally seen as "employee-friendly" in its employment discrimination laws and often

¹⁷⁸ Lisa Nagele-Piazza, *Not All State Employment Discrimination Laws Are Created Equal*, SHRM (Sept. 15, 2017), https://www.shrm.org/resourcesandtools/legal-and-compliance/state-and-local-updates/pages/state-employment-discrimination-laws.aspx.

¹⁷⁹ Civil Rights Act of 1964, 42 U.S.C. § 2000e-2 (1964); *Know Your Civil Rights*, END HATE, https://www.endasianhate.org/your-civil-

rights?gclid=CjoKCQiArt6PBhCoARIsAMF5wagfOI4MwyjzKKZhew9tnrzj7mEAYCg1 dRUouJnpz8nvqxPdP7aEFmcaAu3CEALw_wcB (last visited Jan. 31, 2022).

¹⁸⁰ Americans with Disabilities Act of 1990, 42 U.S.C. §§ 12101-12213 (2008); *Questions and Answers: The Application of Title VII and the ADA to Applicants or Employees Who Experience Domestic or Dating Violence, Sexual Assault, or Stalking*, EQUAL EMPLOYMENT OPPORTUNITY COMM'N,

https://www.eeoc.gov/laws/guidance/questions-and-answers-application-title-vii-and-ada-applicants-or-employees-

who#:~:text=Title%20VII%20of%20the%20Civil,on%20the%20basis%20of%20disab ility (last visited Jan. 31, 2022) [hereinafter *Title VII & ADA*].

¹⁸¹ *Employment Discrimination in Your State*, NoLO, https://www.nolo.com/legalencyclopedia/employment-discrimination-in-your-state-31017.html (last visited Jan. 31, 2022).

¹⁸² Nagele-Piazza, *supra* note 178.

¹⁸³ Id.

includes protected classes outside the scope of Title VII.¹⁸⁴ Additionally, Title VII only applies to businesses with a minimum of fifteen or twenty employees (depending on the state) and many states decrease that number to be more employee-friendly.¹⁸⁵ These state law additions built upon the groundwork laid by Title VII of the Civil Rights Act of 1964.

3. Application to AI

An effective U.S. Artificial Intelligence Agency ("USAIA") would focus on regulating the outputs of the algorithms, rather than inputs. This way, instead of struggling to analyze the data going into the coding, regulators could avoid the complexities of the technology by requiring that companies reach reasonable and acceptable results. By following the lead of the FDA and New York City Council, the USAIA could regulate even the most complex codes. The burden would shift away from lawmakers, and onto AI developers to obtain results within a tolerable range. Similar to the federal law requiring vehicles to have seat belts and Title VII of the Civil Rights Act of 1964, the USAIA needs to set a "floor" for AI regulations. These regulations may look like minimum safety standards or tests that autonomous vehicles need to pass, such as requiring them to be able to maneuver through unpredictable environments. In the context of AI hiring, possible regulations could be a requirement that any racial disparities in the system be negligible, and mandatory statistical studies on the outputs of the AI programs along with public reporting on the companies' findings. The USAIA may also choose to implement broader regulations such as prohibitions on technologies that violate fundamental human rights (e.g., predictive policing systems), clear public disclosure rules, accountability rules, remedies for consumers, and enforcement rules.186

In addition, the USAIA must ensure it is practical and safe for programmers to fix disparities based on race, gender, and other protected classes. AI developers will be hesitant to follow regulations that require them to correct discrimination in their programs unless they have confidence that doing so will not expose them to liability. Therefore, in creating regulations, it would be wise for the USAIA to consider the

¹⁸⁴ Id.

¹⁸⁵ *Id.* ("California's Fair Employment and Housing Act generally applies to businesses with five or more employees.").

¹⁸⁶ Jascha Galaski, AI Regulation: Present Situation and Future Possibilities,

LIBERTIES (Sept. 8, 2021), https://www.liberties.eu/en/stories/ai-regulation/43740.

Supreme Court's holding in *Ricci* and other applicable law that risk subjecting companies to "intentional reverse discrimination."¹⁸⁷

The USAIA's jurisdiction would encompass all forms of AI, but should be limited to those that interact with the general public. Essentially, the USAIA would regulate the readiness of AI products to be released to consumers. This would prevent the agency from being overburdened while also allowing it to ensure companies are not using human guinea pigs to test the safety and fairness of their AI products.

CONCLUSION

Artificial intelligence will continue to spark rigorous debate and concern in the United States as new and uncertain technologies continue to emerge. Although the future societal benefits may be great, we cannot ignore the immediate threats to cybersecurity, privacy, public safety, discrimination, biases, and civil and criminal liability. If left unregulated, artificial intelligence has the potential to cause severe societal harm. Autonomous vehicles are just one example of a public safety risk that artificial intelligence technologies create. Through this illustration, it becomes clear that our state and federal governments lack effective regulations to protect the public from these new dangers. With no mandatory federal regulations in place, car manufacturers will continue to use American public roadways as testing sites for unregulated and dangerous technologies. Likewise, artificial intelligence hiring tools highlight the lack of accountability and transparency of artificial intelligence technologies. Without effective and proactive regulation, the public will continue to serve as guinea pigs and minorities will continue to suffer disproportionately. The creation of the USAIA would increase funding and expertise in the regulation of artificial intelligence, thereby fostering targeted, meaningful, proactive regulations. These regulations will increase public safety, public trust, and innovation, allowing artificial intelligence technologies to flourish, and encouraging reluctant users to embrace the technology with confidence-leading to more fulfilling and happier lives.

¹⁸⁷ Ricci v. DeStefano, 557 U.S. 557, 562 (2009).