ACCESSIBLE LAW

ARTICLES

COMMENTS

SMARTER JUSTICE FOR ANIMALS IN TEXAS THROUGH ARTIFICIAL INTELLIGENCE

Priscilla Connor
Shannon W. Conway, Contributor Author*

I.   Introduction

Our world has been inundated with Artificial Intelligence ("AI") for some time. YouTube's video recommendations, spell check corrections, and nearly all other digital conveniences are the products of AI.[1] In the legal industry, law students unabashedly use AI to help with their studies; in fact, many law schools are now embracing AI and incorporating its use into their curricula.[2] Think of artificial intelligence, particularly Generative Pre-trained Transformers ("GPT"), like a brain that has been exposed to vast amounts of information.[3]And when it comes to practicing lawyers, well, perhaps it is best to say their use of AI and the courts' willingness to embrace that use of AI is a work-in-progress.[4] But with AI's ability to increase research and discovery efficiency, it has the potential to vastly reduce the financial burden of litigation and become an incredibly useful tool in the legal industry.

This article focuses on the potential use of AI in animal cruelty cases in Texas courts, which have proven to be challenging to prosecute. Part I provides a general overview of the types of animal cruelty cases that may be prosecuted in Texas and the challenges their prosecutions present. Part II proposes how AI might be incorporated to meet those challenges and discusses the ethical and practical considerations that

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* Priscilla Connor is a third-year law student at UNT Dallas College of Law, where her Contributing Author, Shannon W. Conway, is an Assistant Professor of Law teaching Torts, Insurance Law, and International Criminal Law.

[1] *What's Next: The Future with Bill Gates*, NETFLIX (Sept. 18, 2024), https://www.netflix.com/watch/81680791.

[2] *ABA Task Force on Law and Artificial Intelligence releases survey on AI and legal education*, ABA NEWS (June 24, 2024), https://www.americanbar.org/news/abanews/aba-news-archives/2024/06/aba-task-force-law-and-ai-survey/#:~:text=More%20than%20half%20of%20the,to%20use%20AI%20tools%20effectively.

[3] *Id.*

[4] *See, e.g.,* Al-Hamim v. Star Hearthstone, LLC, No. 24CA0190, 2024 WL 5230126, at *5 (Colo. Ct. App. Dec. 26, 2024) (quoting Practice of Law, and Closing the Access to Justice, 53 Colo. Law. 40, 43 (2024)) (noting that reliance on an AI "tool not trained with legal authorities can 'lead both unwitting lawyers and nonlawyers astray.'").

must be taken into account. Part III concludes with suggestions for future applications of AI in animal cruelty law.

II.   The Types of Animal Cruelty Cases Prosecuted in Texas and the Challenges They Present

Texas' Animal Cruelty Laws

Compared to other states, Texas has significant room for improvement in its laws to protect animals. Texas' animal cruelty laws do not include protection for circus animals, wild animals, or animals used in experiments. As one example, unlike in California, the animal cruelty laws in Texas do not include the protection of circus animals, wild animals, and animals used in experiments.[5]

However, the Texas Penal Code does at least contain some provisions intended for the protection of animals. The first law is Texas Penal Code Section 42.09, titled "Cruelty to Livestock Animals." Under this law, it is illegal for a person to "intentionally or knowingly" engage in actions such as torturing, neglecting (by failing to provide food, water, or care), abandoning, cruelly confining, or poisoning animals.[6] Section 42.09 defines several additional specific offenses, including causing animals to fight one another, using livestock as a lure in dog race training or dog coursing on a racetrack, tripping horses, or severely overworking an animal.[7]

The punishment for cruelty to livestock animals depends on the specific offense and the offender's prior convictions.[8] For offenses like overworking, cruelly confining, or failing to provide food or water, the crime is classified as a Class A misdemeanor, carrying a penalty of up to one year in county jail and a fine of up to $4,000.[9] However, if the offender has two or more prior convictions under either Section 42.09 (Cruelty to Livestock Animals) or Section 42.092 (Cruelty to

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[5] In 2020, California enacted the Circus Cruelty Prevention Act, which states that "a person shall not sponsor, conduct, or operate a circus . . . that uses any animal other than a domestic dog, domestic cat, or domesticated horse", or "exhibit or use any other animals than those animals." Cal. Fish & Game Code § 2209. *See also* Me. Rev. Stat. Ann. Tit. 10, § 1500-M (protecting defenseless animals in a different way by prohibiting manufacturers from selling a cosmetic if it was developed or manufactured using cosmetic animal testing that was conducted or contracted for by the manufacturer or any supplier of the manufacturer.").

[6] TEX. PENAL CODE ANN. § 42.09(a).

[7] *Id.*

[8] *Id.* § 42.09(c).

[9] *Id.* § 12.35(a).

Non-Livestock Animals), the offense is upgraded to a state jail felony, punishable by 180 days to two years in a state jail facility and a fine of up to $10,000.[10]

More severe offenses, such as torturing, poisoning, killing, or causing serious bodily injury to livestock, are classified as state jail felonies, with a sentence range from 180 days to two years in prison and a fine of up to $10,000.[11] If the offender has two or more prior convictions under either Section 42.09 or Section 42.092, the charge is elevated to a third-degree felony, which is punishable by 2 to 10 years in prison and a fine of up to $10,000.[12]

Texas Penal Code Section 42.092 is titled "Cruelty to Nonlivestock." This law criminalizes various forms of cruelty and neglect.[13] It effectively requires individuals who have custody of animals to provide essential care, including food, water, shelter, and medical treatment, to ensure the animals' well-being.[14] The statute defines several acts of cruelty, including intentional torture or infliction of serious bodily injury on an animal, killing or poisoning without the owner's consent, neglect, abandonment, inhumane confinement, and forcing animals to fight.[15] The law also prohibits using live animals as bait in dog racing and overworking animals to the point of suffering.[16] There are defenses available under the law, such as acting in self-defense against dangerous wild animals or participating in lawful hunting or scientific research. Additionally, humane programs like Trap-Neuter-Return, which manages stray animal populations, are not considered abandonment under Section 42.092.[17] Violations of Section 42.092 can lead to criminal charges that range from Class A misdemeanors to felonies, with the specific charge depending on the severity of the offense and the individual's criminal history.[18]

Texas also has laws specifically addressing assistance animals. Texas Penal Code Section 42.091 focuses on the protection of assistance animals, such as service dogs, acknowledging their vital role in supporting individuals with disabilities.[19] Under this law, it is an

[10] *Id.* §§ 42.09(c), 12.35(a).
[11] *Id.* § 12.35(a)–(b).
[12] *Id.* §§ 42.092(c-2), 12.34(a)–(b).
[13] *Id.* § 42.092(a).
[14] *Id.* § 42.092(a)(3).
[15] *Id.* § 42.092(a).
[16] *Id.* § 42.092(a)(8)–(9).
[17] *Id.* § 42.092(c).
[18] *Id.* § 42.092.
[19] *Id.* § 42.091.

offense to intentionally, knowingly, or recklessly harm an assistance animal, including allowing one's own animal to attack an assistance animal.[20] The severity of the crime depends on the harm inflicted: a Class A misdemeanor for an attack, a state jail felony for causing injury, and a third-degree felony for killing an assistance animal.[21]

Despite the laws that Texas has in place, it is still a daunting task for prosecutors to proceed with a trial against an offender. This is where artificial intelligence can step in and make a meaningful difference. By leveraging AI's ability to analyze large volumes of data, identify trends, and assist in evidence evaluation, AI can help bridge the gaps in enforcement, increase the accuracy of investigations, and ultimately lead to more successful prosecutions of animal cruelty cases.

Prosecuting Animal Cruelty Cases in Texas and the Associated Challenges

Shelby Bobosky, Executive Director of the Texas Humane Legislation Network, identifies three primary obstacles that hinder the full prosecution of animal cruelty cases in Texas: (1) a lack of clear evidence; (2) a lack of funding and resources to bring these cases to trial; and (3) juries' dismissive attitudes toward dog cruelty cases.[22]

These obstacles do not simply hinder the prosecution of these cases. They allow abusers to avoid paying for their actions, and without the guarantee of retribution, future abusers cannot be deterred from committing these crimes.[23] The first obstacle is the lack of reliable evidence that prosecutors can use to prove animal cruelty; after all, animals cannot take the witness stand.[24] Additionally, many of the cases of animal cruelty are reported anonymously, so the person reporting rarely testifies.[25] Without costly expert testimony—like forensic veterinarians—it is difficult to establish the necessary evidence for a guilty verdict.[26]

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[20] *Id.* § 42.091(a)–(b).

[21] *Id.* § 42.091(c).

[22] Interview with Shelby Bobosky, Exec. Dir., Tex. Humane Legis. Network, in Dall., Tex. (Feb. 10, 2025).

[23] *Id.*

[24] *Id.*

[25] *Id.*

[26] *Id.*

The second is that the cost of animal cruelty cases can add up quickly.[27] For example, when an animal has died, a necropsy—an examination of an animal after it has died—is often required to determine the cause of death.[28] This process is both time-consuming and expensive. A pathologist will carefully dissect, observe, and document his findings and draw a conclusion about the cause of death of the animal. Lawyers can use those pathologists as witnesses in animal cruelty cases, but they also add financial strain to an already expensive process of prosecuting such cases.[29]

The third obstacle involves the lack of investment from juries.[30] Surprisingly, juries often struggle to take animal cruelty cases seriously, seeing them as a waste of time and resources. Some jurors voice their frustration, saying things like, "What are we doing here? It's just a dog."[31] This kind of unsympathetic attitude makes it more difficult to secure convictions: jurors simply do not recognize the seriousness of these crimes and the broader impact of animal abuse.[32] While artificial intelligence might take jobs away from the market and may not always be the most reliable, AI can be beneficial to prosecutors because it can find evidence in all corners of the digital world, move quickly and accurately, and potentially saves prosecutors a significant amount of time in preparation for their animal cruelty cases.

III. How AI Can Assist in Prosecution and the Ethical and Practical Considerations

Evidence Collection and Analysis

Artificial intelligence is rapidly becoming a critical tool in the courtroom, providing innovative ways to collect evidence.[33] AI technology allows "users to quickly search through billions of photos to help identify an unknown suspect in a crime scene photo."[34] As one

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[27] *Id.*

[28] *Necropsy*, AM. COLL. OF VETERINARY PATHOLOGISTS, https://www.acvp.org/page/Necropsy (last visited Feb. 23, 2025).

[29] *Id.*

[30] Bobosky, *supra* note 22.

[31] Bobosky, *supra* note 22.

[32] Bobosky, *supra* note 22.

[33] *See Facial Recognition Technology: Federal Law Enforcement Agency Efforts Related to Civil Rights and Training*, Pub. Briefing before the U.S. Comm'n on Civ. Rights, at 1 (Mar. 8, 2024) (opening remarks of Gretta L. Goodwin, Director, Homeland Security and Justice, U.S. Government Accountability Office), https://www.gao.gov/assets/870/868079.pdf.

[34] *Id.*

example, in cases where perpetrators attempt to remain anonymous, such as when witnesses share footage of animal abuse or dog fighting online, AI can analyze these images, cross-reference them with databases, and identify the culprit.[35] AI's assistance in analyzing shared videos of animal cruelty is significantly more efficient than the current manual process used by some prosecutors. As the Animal Legal Defense Fund explains, law enforcement must retrieve original uploads, metadata, and IP addresses before evidence disappears.[36] AI can expedite this process by quickly identifying and preserving key digital traces.[37]

In lay terms: (1) law enforcement will first contact the host site to get the original content that was uploaded, the date and time it was uploaded, any data regarding the location the file was posted from if they maintain that data, the IP address, and any interaction other individuals had with the post; and (2) once the officer has these details, law enforcement is able to send legal process to the poster's Internet Service Provider (ISP) for the subscriber information associated with the IP address used to complete the upload.[38]

The dark web is home to the most heinous of crimes, including animal fighting rings, animal torture and abuse, and illegal animal trade; many of these dogs endure extreme cruelty and spend their lives in isolation on heavy chains and are often conditioned with anabolic steroids to increase aggression.[39] Fights can last hours, leaving dogs with severe injuries such as broken bones, deep wounds, and even fatal blood loss. Despite dogfighting being a felony in all 50 states and U.S. territories, it continues to persist across the country, often linked to illegal gambling and other criminal activities.[40]

One of the most infamous cases that sparked outrage, and legal action was in 2007—the Michael Vick case.[41] A month after Vick's arrest,

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[35] Ben Nancholas, *Digital eyes: The rise of image recognition*, UNIV. OF WOLVERHAMPTON (Apr. 5, 2024), https://online.wlv.ac.uk/digital-eyes-the-rise-of-image-recognition/.

[36] *What To Do if You Witness Animal Cruelty Online*, ANIMAL LEGAL DEF. FUND, https://aldf.org/article/what-to-do-if-you-witness-animal-cruelty-online/ (last visited Mar. 30, 2025).

[37] *Id.*

[38] *Id.*

[39] *Id.*

[40] *The Criminal, Underground World of Dogfighting*, ASPCA, https://www.aspca.org/investigations-rescue/dogfighting (last visited Feb. 25, 2025).

[41] *Case Study: Animal Fighting—Michael Vicks*, ANIMAL LEGAL DEF. FUND (Dec. 15, 2010), https://aldf.org/case/case-study-animal-fighting-michael-vick/.

former President George W. Bush signed a law that made dog fighting a felony at the federal level.[42] Despite increased awareness and harsher legal consequences, the issue continues to persist. Most dog fighting rings are found in the southeastern United States.[43] This is due to the efforts of the U.S. Attorney's office in South Carolina, which has two prosecutors dedicated to dog fighting cases.[44] This shows that animal cruelty is widespread but also shows that, with the right resources, these cases can be successfully prosecuted, and cruelty can be reduced. We know that AI systems are trained by ingesting large datasets, including information from the internet, to learn, decode, and make them readily accessible for human understanding.[45] AI can also scour the dark web to detect content related to animal cruelty, uncovering hidden networks and enabling law enforcement to act.

Another significant advantage of AI in prosecuting animal cruelty is its ability to analyze vast amounts of data to detect patterns, such as identifying serial offenders. By processing large datasets, AI can track trends over time and across different locations, helping investigators identify individuals who repeatedly engage in animal cruelty. This technology can also monitor social media platforms and online marketplaces for signs of animal abuse, such as the illegal sale of animals or involvement in dog fighting rings. AI can automatically flag suspicious activities, alerting authorities and providing them with crucial evidence that may otherwise go unnoticed.

By leveraging AI's capacity to analyze images, videos, social media, and large datasets, we can improve evidence collection, track abusers, and ultimately ensure that perpetrators are held accountable for their actions. As AI continues to evolve, it will be an invaluable ally in the ongoing battle to protect animals from cruelty and exploitation.

Saving Money and Resources

For prosecutors, conducting legal research is vital to preparing a strong case, and like with any cause, achieving a successful result typically requires exhausting all legal research sources. Even for the most skilled practitioners, legal research can be complicated and time-consuming. Before AI, legal research meant lawyers had to pour over

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[42] Isabelle Chapman, *Inside the underground world of dog fighting: How the brutal blood sport thrives in the shadows*, CNN, https://www.cnn.com/2023/12/27/us/underground-dog-fighting-seizures-invs/index.html (Dec. 27, 2023, 8:10 AM).

[43] *Id.*

[44] *Id.*

[45] NETFLIX, *supra* note 1.

case law, statutes, and legal precedent to find the best cases to support their argument (at one time, even sitting in a library reading actual books!).[46]

The legal community can use AI to speed up case preparation and optimize workflows. AI tools can automate labor-intensive tasks such as evidence review and drafting motions, legal briefs, and settlement agreements.[47] Indeed, the adoption of AI in legal research and drafting has the potential to substantially decrease both the time and financial resources expended by prosecutors. This technological advancement allows prosecutors to make more efficient use of public funds. But changing legal processes creates important ethical and practical considerations.

Ethical and Practical Considerations

In the documentary *What's Next? The Future with Bill Gates*, the renowned filmmaker, James Cameron, shares his concerns about the future of AI in an interview with Bill Gates. Cameron states, "I think we're going to get to a point where we're putting our faith more and more and more in the machines without humans in the loop, and that can be problematic."[48]

He compares the growing anxiety about AI to the fear and frustration that individuals experience with early-onset dementia because, in both instances, people feel a loss of control.[49] This sense of helplessness, Cameron notes, leads to anger and depression because the threat of AI, much like the symptoms of Alzheimer's and dementia, appears inevitable and unrelenting. He challenges the AI community to relieve the anxiety and fear that people are feeling towards this dooming form of intelligence.[50]

The benefits of AI in law cannot be discussed without acknowledging its downsides. One major downside is the impact on jobs within the legal profession. According to a CBS News MoneyWatch report by

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[46] Jonathan Ciottone, *The Economic Benefits of AI in Civil Defense Litigation*, THE NAT'L L. REV. (July 18, 2024), https://natlawreview.com/article/economic-benefits-ai-civil-defense-litigation.

[47] *AI for Legal Research: A Guide for Legal Professionals*, BLOOMBERG LAW, https://pro.bloomberglaw.com/insights/technology/ai-for-legal-research (last visited Feb. 23, 2025).

[48] NETFLIX, *supra* note 1.

[49] NETFLIX, *supra* note 1.

[50] NETFLIX, *supra* note 1.

Elizabeth Napolitano, AI eliminated nearly 4,000 jobs in May 2023.[51] This solidifies the fear that AI could replace human roles rather than simply assist them. Specifically, in the context of animal cruelty cases, AI could reduce the need for certain investigative positions and even lessen the number of prosecutors required in the courtroom, raising important ethical and practical considerations.[52]

Another notable downside is the severely lacking reliability in the use of AI in the courtroom. AI has been known to have "hallucinations," which is the creation of fake information to provide an answer to the user.[53] In February 2025, attorneys from the firm Morgan & Morgan faced potential penalties for submitting fictitious case citations in a lawsuit against Walmart, attributed to AI-generated inaccuracies.[54] In 2024, the Colorado Court of Appeals heard a case where a plaintiff representing themselves presented the court with a brief containing GAI-derived hallucinations.[55] Although the court decided to not impose penalties here, it made it known that anyone who presents the court with filings that include GAI-generated hallucination may face discipline from the court.[56] A study by Stanford University revealed that the popular AI-driven legal research systems "Lexis+" and "Practical Law" produced incorrect information more than 17% of the time, while Westlaw's AI-Assisted Research hallucinated more than 34% of the time."[57]

These instances emphasize the necessity for legal professionals to meticulously verify AI-generated information to satisfy their ethical standards and ensure the accuracy of legal documents. AI will not be eliminated from the workplace, especially in law firms and courthouses. So, it is also important for clear protocols to be

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[51] Elizabeth Napolitano, *AI eliminated nearly 4,000 jobs in May, report says*, CNN (June 2, 2023, 5:59 PM), https://www.cbsnews.com/news/ai-job-losses-artificial-intelligence-challenger-report/.
[52] *Id.*
[53] Sara Merken, *AI 'hallucinations' in court papers spell trouble for lawyers*, REUTERS (Feb. 18, 2025, 2:55 PM), https://www.reuters.com/technology/artificial-intelligence/ai-hallucinations-court-papers-spell-trouble-lawyers-2025-02-18/.
[54] *Id.*
[55] GAI is generative artificial intelligence that creates new material that "mimics human-like creativity." *What is GenAI?*, SNAPLOGIC, https://www.snaplogic.com/glossary/what-is-genai (last visited Mar. 30, 2025).
[56] Al-Hamim v. Star Hearthstone, LLC, No. 24CA0190, 2024 WL 5230126, at *8 (Colo. Ct. App. Dec. 26, 2024).
[57] Faiz Surani & Daniel E. Ho, *AI on Trial: Legal Models Hallucinate in 1 out of 6 (or More) Benchmarking Queries*, STANFORD UNIV. HAI (May 23, 2024), https://hai.stanford.edu/news/ai-trial-legal-models-hallucinate-1-out-6-or-more-benchmarking-queries.

established. That could include mandatory oversight by humans during each stage in using AI for legal research, in addition to more training on the limitations of AI and how it should be used as a tool rather than a replacement for critical thinking and professional expertise.

IV.   Future Prospects for the Use of AI in Animal Cruelty Law

Examples of AI's use in Wildlife Tracking

Authorities have discovered people harvesting endangered sea turtles and shipping their parts abroad; other perpetrators mutilate hawks and eagles to make jewelry. If someone were to be caught for this crime, the punishment could range from a class D misdemeanor to a felony, with federal charges and significant penalties costing tens of thousands of dollars.[58]

The AI Guardian of Endangered Species 2.0 is one of the most recent advancements in artificial intelligence designed to combat the evolving trends of illegal wildlife trade online. With an average accuracy rate of 86%, this technology can identify illegal wildlife products and flag them for prosecution.[59] Organizations such as the International Fund for Animal Welfare have developed AI tools that analyze images of trafficked wildlife products, boasting an accuracy rate of 75%.[60] These innovations represent a significant step forward in the fight against wildlife trafficking.[61]

AI's role in forensic investigations extends to illegal wildlife trafficking as well. By analyzing online transactions and monitoring the sale of exotic animals or endangered species, AI can assist in uncovering illegal trade networks. With the ability to detect suspicious behavior across digital spaces, AI can provide law enforcement with real-time insights into illegal trafficking activities, helping to dismantle criminal networks.[62]

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[58] *Id.*

[59] Press Release, Int'l Fund for Animal Welfare, Disrupting wildlife trade with an advanced AI solution (Nov. 21, 2024), https://www.ifaw.org/press-releases/disrupting-wildlife-trade-advanced-ai-solution.

[60] *Id.*

[61] Press Release, Int'l Fund for Animal Welfare, AI Guardian of Endangered Species recognizes images of illegal wildlife products with 75% accuracy (Apr. 22, 2020), https://www.ifaw.org/press-releases/ai-endangered-species-recognize-images-illegal-wildlife.

[62] *Id.*

Offering Affordable Care

Animal neglect is another, less overt form of animal abuse. And it is not always insidious; a family in poverty may be unable to afford the medical care their beloved pet needs, or a competent veterinarian may not be available within driving distance. In Texas, nearly 60% of households have at least one pet.[63] However, there are only about 5,600 veterinarians in the state.[64]

AI is being trained to act as a medical doctor for remote villages without access to a medical care provider.[65] It could also be trained as a veterinarian. For example, AI can analyze images or videos of an animal and identify symptoms of malnutrition, injury, or illness, offering potential solutions for intervention. This technology could be vital for pet owners in underserved areas, giving them valuable diagnostic insights when they don't have easy access to a vet.

V.   Conclusion

Prosecutors can leverage artificial intelligence to seek justice and provide a voice for abused animals. Although the prosecutors work as many cases as they can considering the demands on their time, animal cruelty and illegal animal trafficking continue to be overlooked problems in our society. AI can help curb those issues by serving as a quick, rational, and resourceful partner empowering prosecutors to get justice for the far-too-many animals subjected to cruelty.
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[63] *Pet Ownership Statistics by State 2025*, WORLD POPULATION REV., https://worldpopulationreview.com/state-rankings/pet-ownership-statistics-by-state (last visited March 22, 2024).
[64] *Texas must tackle veterinarian shortage*, DALL. MORNING NEWS (July 8, 2024, 2:00 AM), https://www.dallasnews.com/opinion/editorials/2024/07/08/texas-must-tackle-veterinarian-shortage/.
[65] NETFLIX, *supra* note 1.

The following is a supplementary infographic for *Smarter Justice for Animals in Texas Through Artificial Intelligence* created to promote legal comprehension.

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SMARTER JUSTICE FOR ANIMALS IN TEXAS THROUGH AI

WHAT IS THE ISSUE?

Texas animal cruelty cases are under-prosecuted due to:

- **Lack of Evidence**– Courts need proof of animal cruelty and this can be difficult to provide
- **Limited Resources**– It can be expensive to pursue animal justice causes
- **Jury Apathy**– Some jurors do not believe animal cases are very important[1]

HOW AI CAN HELP

1. Evidence Collection & Pattern Recognition[2]
- Can search billions of online images to identify suspects
- Analyze metadata, IP addresses, social media activity
- Detect patterns of abuse and repeat offenders

2. Reducing Costs & Saving Time
- AI automates document review, motion drafting, and legal research to reduce delays[3]

FUTURE USES OF AI IN ANIMAL LAW

1. Fighting Wildlife Trafficking
- AI Guardian 2.0 can flag illegal wildlife sales online and is 86% accurate in image recognition[4]

2. Expanding Veterinary Access
- AI analyzes images of sick and injured animals in remote areas
- Helps in underserved communities with few veterinarians

Source: *Smarter Justice for Animals in Texas Through Artificial Intelligence* by Priscilla Connor & Shannon W. Conway. Infographic created by Kate Johnson, Director of Acquisitions (2024-2025).

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[1] Interview with Shelby Bobosky, Exec. Dir., Tex. Humane Legis. Network, in Dall., Tex. (Feb. 10, 2025).
[2] Ben Nancholas, *Digital eyes: The rise of image recognition*, UNIV. OF WOLVERHAMPTON (Apr. 5, 2024), https://online.wlv.ac.uk/digital-eyes-the-rise-of-image-recognition/.
[3] Jonathan Ciottone, *The Economic Benefits of AI in Civil Defense Litigation*, NAT'L L. REV. (July 18, 2024), https://natlawreview.com/article/economic-benefits-ai-civil-defense-litigation/.
[4] Press Release, Int'l Fund for Animal Welfare, *Disrupting wildlife trade with an advanced AI solution* (Nov. 21, 2024), https://www.ifaw.org/press-releases/disrupting-wildlife-trade-advanced-ai-solution.

LAW ◊ REVIEW
UNT DALLAS COLLEGE of LAW
ACCESSIBLE LAW

<u>DECENTRALIZED AUTONOMOUS ORGANIZATIONS:</u>
<u>AN OVERVIEW OF AN EMERGING CORPORATE GOVERNANCE</u>
<u>STRUCTURE</u>

Jarrett Mendoza*

I.   Introduction

In May 2016, with the goal of creating a revolutionary venture capital fund, a small group of cryptocurrency investors launched the first Decentralized Autonomous Organization (DAO).[1] Conveniently, they named their venture capital fund "The DAO."[2] The seeding stage of The DAO, where venture capital funds raise their initial capital to invest, was an unexpected success.[3] The DAO raised approximately $150 million from both institutional investors and retail investors, making it one of the biggest crowdfunding campaigns in history.[4] The shocking crowdfunding victory spurred a frenzy of other investors that aimed to capitalize on the innovative venture capital model.[5]

Unfortunately, the successes of The DAO didn't last long. In June 2016, a hacker found a loophole in the coding that allowed him to drain funds from The DAO.[6] In the first few hours of the cyberattack, the hacker stole about $70 million from the investors.[7] Although most of the stolen money was soon recovered, and investors received a portion of their money back, the event scared many affiliated business partners of The DAO.[8] By late 2016, many cryptocurrency exchange platforms delisted The DAO from their platforms, making it harder for investors to do business with The DAO.[9] The Crypto community

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* Jarrett Mendoza is a UNT Dallas College of Law alumni and an Associate at Baker Hostetler, where his focus areas are business and mergers and acquisitions.
[1] *See* Samuel Falkon, *The Story of the DAO – Its History and Consequences*, MEDIUM (Dec. 24, 2017), https://medium.com/swlh/the-story-of-the-dao-its-history-and-consequences-71e6a8a551ee.

[2] *Id.*

[3] *Id.*

[4] *Id.*

[5] *See* Guilio Prisco, *The DAO Raises More Than $117 Million in World's Largest Crowdfunding to Date*, BITCOIN MAG. (May 16, 2016), https://bitcoinmagazine.com/business/the-dao-raises-more-than-million-in-world-s-largest-crowdfunding-to-date-1463422191.

[6] *See* Ernesto Frontera, *A History of 'The DAO' Hack*, COINMARKETCAP (2022), https://coinmarketcap.com/academy/article/a-history-of-the-dao-hack.

[7] Falkon, *supra* note 1.

[8] Frontera, *supra* note 6.

[9] Falkon, *supra* note 1.

quickly moved on from The DAO experiment, in search of the next big thing.

Nonetheless, The DAO's revolutionary governance procedures, explained below, inspired many emerging companies to imitate DAO, unperturbed by the demise.[10]

II.   What Are Decentralized Autonomous Organizations?

Put simply, a DAO is an organization that runs on a blockchain platform, where the owners of the business directly make decisions that are automatically executed by smart contracts.[11] Blockchains can be thought of as virtual ledgers, where each and every transaction or proposal within a business is recorded and stored.[12] The blockchain records and stores each transaction to ensure security and accuracy among owners, investors, and managers.[13]

A DAO is identified by the company's decision-making processes.[14] The inner workings of a DAO can vary from company to company.[15] As of the publication date of this article, there are approximately 20,000 DAOs in existence.[16] Over the past few years, since the fall of The DAO, these types of organizations have become increasingly complex and diverse. However, all DAOs have a few things in common: decentralization and automaticity.[17]

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[10] Usman W. Chohan, *Decentralized Autonomous Organizations (DAOs): Their Present and Future* 5–6, https://ssrn.com/abstract=3082055.

[11] *Id.*

[12] Blockchain platforms are the technology that support a program to function, similar to how Apple's Internal Operating System (iOS) supports certain apps to function. Sinclair Davidson et al., *Disrupting Governance: The New Institutional Economics of Distributed Ledger Technology* 4, https://dx.doi.org/10.2139/ssrn.2811995.

[13] There are various blockchain platforms, with Bitcoin and Ethereum being the most well-known. According to recent data, most DAOs run off the Ethereum blockchain platform. *See* Gail Weinstein et al., *A Primer on DAOs*, HARV. L. SCH. F. ON CORP. GOVERNANCE (Sept. 17, 2022), https://corpgov.law.harvard.edu/2022/09/17/a-primer-on-daos/.

[14] Preeta Singh, *So, what's happening with DAOs?*, MEDIUM (Mar. 10, 2024), https://medium.com/@preeta.singh/so-whats-happening-with-daos-778256c94543.

[15] Chohan, *supra* note 10, at 4–5.

[16] Singh, *supra* note 14.

[17] *See* Chohan, *supra* note 10, at 2.

A. Decentralization

The concept of decentralization refers to where the decision-making power within a company resides.[18] In a DAO, there are often no boards of directors, officers, or managers. Instead, each person that owns 'tokens' of the DAO has a role in the decision-making process.[19] This concept spreads the power across the entirety of the token-holders of the organization, rather than giving power to a singular decision-making body.[20]

For example, if there were 100 outstanding tokens of my personal DAO, Mendaoza Inc., and I owned ten Mendaoza tokens, I would effectively have 10% of the decision-making power. If the other ninety outstanding tokens were owned by my nine closest friends in equal amounts, each of us would have equal decision-making authority.

B. Automaticity

The concept of automaticity refers to how the decision-making process is carried out—automatically.[21] While it varies from DAO to DAO, certain token-holders of a DAO can usually introduce a proposal to vote on.[22] The proposal is then sent to the other token-holders of the DAO with a deadline to vote on the proposal.[23] As soon as the proposal has a majority of votes for a singular action (approving or denying the proposal), the proposal will self-execute, and the proposal will be integrated into the DAO.[24] The integration process of an approved proposal is executed through a series of smart contracts.[25]

Smart contracts are agreements that automatically execute and perform when certain conditions are met.[26] Entities use smart

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[18] Singh, *supra* note 14.

[19] *See* Singh, *supra* note 14. (Tokens in the present context can be loosely translatable to voting and ownership shares of a corporation).

[20] *See* Chohan, *supra* note 10, at 4–6.

[21] Chohan, *supra* note 10, at 4–6.

[22] Robert Leonhard, *Corporate Governance on Ethereum's Blockchain* 16, https://dx.doi.org/10.2139/ssrn.2977522.

[23] *Id.*

[24] *Id.* at 16–17.

[25] *Id.* at 6–7.

[26] VITALIK BUTERIN, ETHEREUM: A NEXT-GENERATION SMART CONT. & DECENTRALIZED APPLICATION PLATFORM 13 (2013), https://blockchainlab.com/pdf/Ethereum_white_paper-a_next_generation_smart_contract_and_decentralized_application_platform-vitalik-buterin.pdf.

contracts for many purposes, such as automated tracking throughout supply chains, creating secure voting environments, and streamlining payment systems.[27] As they pertain to DAOs, smart contracts automate many aspects of the business and are stored on the blockchain, reviewable by any token-holder within the DAO.[28]

Using the same example as above, if I wanted to propose that Mendaoza, Inc. invest in a flashy new startup, I would write up the proposal and send it to my nine closest friends (the other token-holders) with a deadline to vote. The proposal would be detailed and have a step-by-step on how to make the investment happen through a series of smart contracts. My fellow token-holders would consider the proposal and vote accordingly. However, as soon as the proposal receives more than five votes to approve, the proposal would automatically execute, and the details contained within the proposal would begin to self-execute. I wouldn't have to wait for my slower moving friends to vote because I already received the requisite number of votes.

C. Transparency

When a DAO approves a proposal, and the smart contracts begin to put the proposal into action, the agreements are transcribed on the blockchain for present and future token-holders to review.[29] All token-holders within a DAO have access to past agreements that self-execute, making it easier to analyze the performance of the business.[30] Further, the transparency that the blockchain provides builds trust and accountability for token-holders and investors.[31] Because each and every proposal of a DAO is recorded, and because a DAO can't make business decisions without a proposal, DAOs are easily audited.[32] This transparency can be attractive when investors consider the risks of investment in a DAO.

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[27] *See id* at 1.
[28] *Id.* at 18.
[29] Falkon, *supra* note 1.
[30] Falkon, *supra* note 1.
[31] Falkon, *supra* note 1.
[32] Falkon, *supra* note 1.

III.   How DAOs Differ From Typical Corporate Structure

A DAO's constitution is a document that establishes the rules and governance system for the DAO.[33] It is a contract between the DAO's members that regulates how they interact and influence the business. In other words, the DAO's constitution defines who can join the DAO as a member, the conditions of such membership, how proposals regarding protocol are published, and how voting is organized.[34]

A. The DAO Constitution

The constitution of a DAO is the equivalent of an operating agreement to an LLC or the bylaws of a corporation. While operating agreements may appoint managers, stipulate voting procedures, and allocate liability, DAO constitutions allow the same flexibility for token-holders to maintain the DAO as they see fit.[35]

B. Shareholder Governance vs. Token Governance

In a typical corporate structure, shareholders own the corporation.[36] Shareholders vote to elect a Board of Directors to manage the business and day-to-day affairs of the corporation.[37] The Board also appoints officers of the company such as the chief executive officer, the treasurer, and the secretary.[38] With this structure, there is a clear chain of responsibilities from the shareholders to the officers.[39]

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[33] Paul van Vulpen et al., *Building the Foundation: a Constitutional Framework for Decentralized Autonomous Organizations* 1, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4831039.
[34] *DAO Constitution and Token Foundation: Structuring Fundraising for a DAO + DAO Constitution Template*, LEGAL NODES (Mar. 23, 2023), https://legalnodes.com/template/dao-constitution-token-foundation.
[35] Vulpen, *supra* note 33, at 2.
[36] Oberly v. Kirby, 592 A.2d 445, 458 (Del. 1991); *see* Grimes v. Donald, No. CIV.A. 13358, 1995 WL 54441, at *7 (Del. Ch. Jan. 11, 1995), *aff'd*, 673 A.2d 1207 (Del. 1996).
[37] MM Cos., Inc. v. Liquid Audio, Inc., 813 A.2d 1118, 1126–27 (Del. 2003), *holding modified* by Coster v. UIP Cos., Inc., 300 A.3d 656 (Del. 2023).
[38] *Grimes*, 1995 WL 54441, at *8 ("[T]he law recognizes that corporate boards … may satisfy their obligations by thoughtfully appointing officers ….").
[39] See Williamson v. Cox Commc'ns, Inc., No. CIV.A. 1663-N, 2006 WL 1586375, at *4 (Del. Ch. June 5, 2006) ("A shareholder is a 'controlling' one in a corporation if she owns more than 50% of the voting power in a corporation or if she 'exercises control over the business and affairs of the corporation.'"); *Board of Directors and Corporate Structure: Directors, Officers, and Shareholders*, FINDLAW, https://www.findlaw.com/smallbusiness/incorporation-and-legal-structures/corporate-structure-directors-to-shareholders.html (May 22, 2024).

In a DAO, the decision-making authority over day-to-day affairs lies with the token-holders.[40] These decisions are automatically executed by smart contracts, rather than officers of a corporation acting to uphold shareholder wishes.[41]

IV.   An Example of Modern DAO: Arbitrum DAO

The Arbitrum DAO manages different programs in a variety of tech-related areas.[42] For example, the Arbitrum DAO manages Arbitrum Rollup, which is a protocol that aims to make Ethereum transactions faster and cheaper.[43] The DAO also manages Arbitrum Nova; a blockchain that helps developers build user-friendly decentralized apps.[44] The Arbitrum DAO launched its governance token through an airdrop in March of 2023.[45] Investors who wished to have a say in the governance of the Arbitrum DAO could purchase $ARB tokens.[46]

To cut down on a potential flood of proposals, the Arbitrum DAO also utilizes a 'temperature check' stage for proposals.[47] Proposals are first submitted to the Arbitrum DAO governance forum for community discussion and debate.[48] These forum submissions are usually accompanied by a Snapshot poll that gauges the community's interest in the proposal without a formal vote.[49] If the proposal passes the temperature check, it will move on to a formal voting process, needing a simple majority to pass.[50]

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[40] Vulpen, *supra* note 33, at 1.

[41] Vulpen, *supra* note 33, at 13.

[42] *A gentle introduction to the Arbitrum DAO*, ARBITRUM DAO – GOVERNANCE DOCS [hereinafter *ARBITRUM DAO*], https://docs.arbitrum.foundation/gentle-intro-dao-governance (last visited Mar. 23, 2025).

[43] *Id.*

[44] *Id.*

[45] ARBITRUM DAO, *supra* note 42; An airdrop is a marketing tactic where a blockchain project distributes free tokens to a large number of wallet addresses, usually to raise awareness about their project, attract new users, and build a community by giving people a small amount of their tokens for free. *What is a crypto airdrop?*, FIDELITY (Jan. 3, 2024), https://www.fidelity.com/learning-center/trading-investing/crypto-airdrop.

[46] Under the Arbitrum DAO's constitution, to submit a proposal, a token-holder must have at least 1 million votable tokens. This serves as a deterrent from the system being flooded with endless arbitrary proposals. ARBITRUM DAO, *supra* note 42.

[47] ARBITRUM DAO, *supra* note 42.

[48] ARBITRUM DAO, *supra* note 42.

[49] ARBITRUM DAO, *supra* note 42.

[50] ARBITRUM DAO, *supra* note 42.

The bylaws of the Arbitrum Foundation state that it focuses on fostering, developing, authorizing, and governing Arbitrum DAO-approved blockchains, however, the Arbitrum DAO also takes a proactive approach by funding research and development projects.[51] The decision of which research and development projects to fund, much like many other decisions within the DAO, is left to the token-holders.[52]

In an effort to avoid similar pitfalls of the aforementioned The DAO, the Arbitrum DAO utilizes a security council to address critical risks associated with the Arbitrum protocol and its ecosystem.[53] This 12-member security council is responsible for making emergency response decisions that protect the interests of the DAO, its members, and the broader Arbitrum community.[54] According to the Arbitrum DAO's governance documents, the security council is subject to the oversight and control of the DAO's token-holders, who have the power to remove security council members if they are not acting in the best interests of the DAO.[55]

V.   Investments in a DAO

With the fall of The DAO in 2016, the Securities and Exchange Commission (SEC) took a particular interest in DAOs as a whole. Like other crypto investments, the SEC was concerned that retail investors were unprepared for the degree of risk that a DAO could present.[56] This necessitated the question of whether DAO tokens should be considered commodities or securities. If the DAO tokens were labeled securities, the SEC would have jurisdiction to regulate the sale and distribution of all DAO tokens.[57]

In July 2017, the SEC released "The DAO Report," which labeled DAO tokens as "investment contracts" subject to U.S. securities regulations.[58] The SEC analyzed DAO tokens under the *Howey* test to reach their conclusion, specifically looking at whether the token-

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[51] ARBITRUM DAO, *supra* note 42.

[52] ARBITRUM DAO, *supra* note 42.

[53] ARBITRUM DAO, *supra* note 42.

[54] ARBITRUM DAO, *supra* note 42.

[55] To ensure maximum security and fairness, each security council member is elected by $ARB token-holders. ARBITRUM DAO, *supra* note 42.

[56] *Securities, Regulations, and DAOs*, O'MELVENY (May 19, 2022) [hereinafter *O'MELVENY*], https://www.omm.com/insights/alerts-publications/securities-regulations-and-daos.

[57] *Id.*

[58] *Id.*

holders expected any profits to be generated by the "efforts of others."[59] The SEC reasoned that, because there is often insufficient information to make informed decisions and the ability to communicate and coordinate effectively is limited, DAO tokens satisfy at least one requirement of the *Howey* test.[60]

Because DAO tokens are generally considered securities, the projects issuing DAO tokens must typically register their offerings with the SEC before selling them to the public.[61] If a DAO issues tokens without proper registration, the SEC could take enforcement actions against the DAO developers, marketers, or organizers.[62] The SEC's goal is to protect investors, prevent fraudulent practices, and ensure transparency in the market through mandatory disclosure requirements.[63]

VI.   Conclusion

Decentralized Autonomous Organizations bring fresh ideas to corporate governance. Their decentralization offers direct decision-making, and their automaticity offers instantaneous execution. While there have been prime examples of failure in the DAO community, there are also prime examples of potential success. The SEC aims to regulate these emerging organizations to protect investors, but ultimately time will tell whether DAOs serve a future purpose in the crypto sphere.

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[59] O'MELVENY *supra* note 56; *see* SEC v. W.J. Howey Co., 328 U.S. 293, 301 (1946).
[60] O'MELVENY *supra* note 56; *see W.J. Howey Co.*, 328 U.S. at 301.
[61] *A Brief History of Securities Regulation*, WIS. DEP'T OF FIN. INSTS., https://dfi.wi.gov/Pages/Securities/Filings/SecuritiesRegulationHistory.aspx (last visited Feb. 18, 2025).
[62] *Id.*
[63] *Id.*

The following is a supplementary infographic for *Decentralized Autonomous Organizations: An Overview of an Emerging Corporate Governance Structure* **created to promote legal comprehension.**

DECENTRALIZED AUTONOMOUS ORGANIZATIONS (DAO)

WHAT IS A DAO?

A DAO is an organization run by virtual ledgers that track and record every transaction or proposal made by its owners, known as token-holders.[1]

HOW ARE DAOS DIFFERENT FROM REGULAR CORPORATIONS?

Corporations

- The Operating Agreement designates managers, specifies voting procedures, and distributes liability.[2]

- Shareholders elect a Board of Directors to oversee the corporation, which subsequently appoints officers, including a CEO.[3]

DAOs

- The Constitution serves as a contract among members, outlining the criteria for membership, voting methods, and the procedure for submitting proposals.[4]

- Token holders are responsible for daily decisions, which are implemented through smart contracts instead of officers.[5]

THE FIRST DAO

In 2016, a group of cryptocurrency investors launched the first decentralized autonomous organization, a venture capital fund called "The DAO," which successfully raised nearly $150 million.[6] After hackers managed to steal $70 million from The DAO, associated business partners were deterred.[7] Nevertheless, the shift had already begun.

SINCE THE FIRST DAO

In an effort to protect investors from another risk as high as The DAO hack, the Securities and Exchange Commission (SEC) released "The DAO Report," labeling DAO tokens as "investment contracts."[8] This gave the SEC the authority to regulate the sale and distribution of DAO tokens.[9]

[1] Usman W. Chohan, *Decentralized Autonomous Organizations (DAOs): Their Present and Future* 4–6, https://ssrn.com/abstract=3082055; *see* Gail Weinstein et al., *A Primer on DAOs*, HARV. L. SCH. F. ON CORP. GOVERNANCE (Sept. 17, 2022), https://corpgov.law.harvard.edu/2022/09/17/a-primer-on-daos/.

[2] *What is an operating agreement for an LLC?*, XERO (Mar. 2024), https://www.xero.com/us/guides/llc-operating-agreement/.

[3] MM Cos., Inc. v. Liquid Audio, Inc., 813 A.2d 1118, 1126–27 (Del. 2003), *holding modified* by Coster v. UIP Cos., Inc., 300 A.3d 656 (Del. 2023); *see* Grimes v. Donald, No. CIV.A. 13358, 1995 WL 54441, at *8 (Del. Ch. Jan. 11, 1995), *aff'd*, 673 A.2d 1207 (Del. 1996).

[4] *DAO Constitution and Token Foundation: Structuring Fundraising for a DAO + DAO Constitution Template*, LEGAL NODES (Mar. 23, 2023), https://legalnodes.com/template/dao-constitution-token-foundation.

[5] Paul van Vulpen et al., *Building the Foundation: a Constitutional Framework for Decentralized Autonomous Organizations* 1, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4831039.

[6] *See* Samuel Falkon, *The Story of the DAO – Its History and Consequences*, MEDIUM (Dec. 24, 2017), https://medium.com/swlh/the-story-of-the-dao-its-history-and-consequences-71e6a8a551ee; s*ee* Guilio Prisco, *The DAO Raises More Than $117 Million in World's Largest Crowdfunding to Date*, BITCOIN MAG. (May 16, 2016), https://bitcoinmagazine.com/business/the-dao-raises-more-than-million-in-world-s-largest-crowdfunding-to-date-1463422191.

[7] Falkon, *supra* note 6; *see* Ernesto Frontera, *A History of 'The DAO' Hack*, COINMARKETCAP (2022), https://coinmarketcap.com/academy/article/a-history-of-the-dao-hack.

[8] *Securities, Regulations, and DAOs*, O'MELVENY (May 19, 2022), https://www.omm.com/insights/alerts-publications/securities-regulations-and-daos.

[9] *Id.*

LAW ❖ REVIEW
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WHEN ALGORITHMS JUDGE YOUR CREDIT: UNDERSTANDING AI BIAS IN LENDING DECISIONS

Korin Munsterman*

I.   Introduction

Imagine a small business owner with a strong record of paying her bills and managing her finances being denied a loan, not because of her creditworthiness, but because an AI system flagged her irregular income patterns as "high risk." Or say a recent immigrant with an advanced degree and a stable job receives an interest rate 3% higher than his colleagues simply because he lacks a conventional American credit history. Or think about a twenty-year-old African American woman who has virtually no credit history, owns an Android cell phone, has a Yahoo email account, and shops online late at night because she works during the day and goes to school at night is denied a car loan. These aren't hypothetical scenarios—they represent real consequences of AI bias in lending. As artificial intelligence increasingly determines who gets loans and at what cost, seemingly neutral algorithms can perpetuate and amplify existing patterns of discrimination, affecting millions of Americans' access to credit.[1]

II.   The Evolution of Credit Assessment

Before diving into AI bias, it's important to understand how lending decisions have evolved. Before the advent of algorithms, decisions regarding hiring, advertising, criminal sentencing, and lending were primarily made by individuals and organizations. These decisions were typically guided by various federal, state, and local laws that aimed to ensure fairness, transparency, and equity in the decision-making process.[2] In contrast, today, many of these decisions are either fully automated or significantly impacted by machines, which offer

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* Korin Munsterman is a Professor and the Director of the Legal Education Technology program at UNT Dallas College of Law. Prior to joining UNT Dallas, she worked as a professor of practice, law librarian, and director of technology at several law schools, and consulted with law schools, firms, and government agencies on the integration of technology into legal practice and education. She is currently writing AI AND THE PRACTICE OF LAW IN A NUTSHELL for West Academic.

[1] Nicol Turner Lee et al., *Algorithmic bias detection and mitigation: Best practices and policies to reduce consumer harms*, BROOKINGS INST. (May 22, 2019) [hereinafter *Lee*], https://www.brookings.edu/articles/algorithmic-bias-detection-and-mitigation-best-practices-and-policies-to-reduce-consumer-harms/.

[2] *Id.*

remarkable efficiencies due to their scale and statistical precision.[3] The emergence of AI in credit scoring stems from the need for more sophisticated approaches that can analyze vast datasets, identify intricate patterns, and make more accurate predictions.[4]

Traditional vs. AI-Powered Credit Assessment

Anyone who has applied for a credit card, mortgage, or car loan is familiar with the process and often believe that only traditional determine whether the credit will be granted and at what interest rate. Those traditional sources come from the three main credit reporting agencies: Equifax, Experian, and TransUnion.[5] Non-traditional credit assessment might rely on other additional key factors:
- Income verification
- Employment history
- Outstanding debts
- Payment history
- Credit utilization[6]

Modern AI Credit Assessment: Leveraging Your "Digital Footprint"

AI is revolutionizing how lenders decide who gets credit by looking beyond traditional credit scores. While FICO scores have long served as the standard, they exclude many individuals without sufficient credit history. Today's AI systems can analyze thousands of data points from your "digital footprint": information you leave online simply by browsing websites or making purchases. That information can predict repayment behavior.[7] For example:

> **Device type:** Studies found that iPhone users default at nearly half the rate of Android users. This likely connects to income differences (iPhones tend to be much more expensive), as iOS device ownership

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[3] *Id.*

[4] Wilhelmina Afua Addy et al., *AI in Credit Scoring: A Comprehensive Review of Models and Predictive Analyti*cs, Glob. J. Eng'g & Tech. Advances, March 2025, at 118, 126.

[5] Mikella Hurley & Julius Adebayo, *Credit Scoring in the Era of Big Data*, 18 Yale J.L. & Tech. 148, 154 (2016).

[6] *Id.* at 162.

[7] Tobias Berg et al., *On the Rise of FinTechs: Credit Scoring using Digital Footprints*, 33 Rev. Fin. Stud. 2845, 2845–46 (2019) [hereinafter *Berg*].

strongly correlates with being in the top income quartile.[8]

Email provider choice: Your email provider says a lot about you financially. Research shows that people using premium email services, such as Outlook, defaulted at just 0.51% (well below average), while users of older free services like Yahoo and Hotmail had much higher default rates (1.96%). This pattern suggests different economic profiles among email service users.[9]

Shopping timing patterns: Night owls beware: people shopping between midnight and 6 AM defaulted at nearly twice the rate (1.97%) of those shopping during business hours. This correlation might reflect different lifestyle patterns or self-control habits.[10]

Text formatting habits: Consistently typing in all lowercase correlated with a default rate more than twice that of people who used proper capitalization. Even more striking, customers who made typing errors in their email addresses had a default rate of 5.09% compared to the average of 0.94%.[11]

Shopping approach: People arriving at shopping sites via price comparison websites were almost half as likely to default as those clicking through advertising links, suggesting that comparison shoppers are more financially cautious overall.[12]

These correlations demonstrate how seemingly trivial digital behaviors can form a surprisingly accurate picture of financial responsibility.

If all of this analysis of your behavior online sounds a little like "Big Brother," there are advantages to leveraging digital footprints for both lenders and borrowers alike. There are an estimated two billion adults worldwide who are considered "unbanked" and who lack traditional

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[8] *Id.* at 2859.

[9] *Id.*

[10] *Id.*

[11] *Id.*

[12] *Id.*

credit histories.[13] Because traditional sources used by credit bureaus are limited, banks are prevented from lending to these people. By using digital footprints instead of the traditional methods to determine credit worthiness—which are proven to be just as reliable when predicting repayment behavior—these people can get credit.[14] Additionally, since digital footprints capture different aspects of creditworthiness than traditional scores, combining both approaches creates significantly more accurate predictions than either method alone. This means fewer good customers being denied credit and fewer risky loans being approved. Research indicates "that digital footprints have the potential to boost financial inclusion to parts of the currently two billion working-age adults worldwide that lack access to services in the formal financial sector."[15]

When lenders use your online behavior to make credit decisions, they enter a complex ethical territory. Every website visit, device choice, and even typing habit becomes part of an invisible financial profile. A significant concern is how digital signals can function as "proxies," which are indirect indicators that correlate with characteristics that lenders are not supposed to consider by law. For example, certain email providers or shopping patterns might unintentionally correlate with age, socioeconomic status, or even protected characteristics like race or gender, potentially creating discriminatory outcomes without explicitly using those factors.

And how does it affect our behavior? Imagine second-guessing every website you visit or feeling pressure to purchase an iPhone that you may not be able to afford, instead of an Android device, simply to appear more creditworthy. You might feel you have to "game the system" instead of navigating the web as you would normally, without knowing how your credit might be affected. And the convenience of instant credit decisions comes with a troubling tradeoff—the transformation of casual online activities into financial data points that follow consumers across the digital landscape. Finding a balance between innovation and privacy protection remains one of the most significant challenges in this evolving landscape.

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[13] Anastasiya Shitikova, *How to Boost Predictive Power Using Digital Footprints*, RISKSEAL (Aug. 6, 2024), https://riskseal.io/blog/how-to-improve-credit-scoring-using-digital-footprints.

[14] Berg, *supra* note 6, at 2847.

[15] *Id.*

III. Understanding AI Bias

AI bias manifests in various forms, each with its own challenges and implications.

Understanding these different types of bias is important for both consumers and those working in the credit industry.

Historical Bias: The Legacy of Discrimination

Historical bias occurs when AI systems learn from data that reflects past discriminatory practices. A recent study found that AI lending models trained on historical data consistently replicated patterns of racial discrimination in mortgage lending.[16] This happens because of:

1. **Training Data Issues**: Historical lending data reflects decades of systematic discrimination;
2. **Pattern Recognition**: AI systems identify and replicate historical correlations;
3. **Reinforcement**: Biased decisions create new data that reinforces existing patterns.[17]

For example, although outlawed by the Fair Housing Act of 1968, beginning in 1930, banks and lenders engaged in a practice called "redlining." Redlining refers to the discriminatory practice where banks and lenders would literally draw red lines on maps around certain neighborhoods—predominantly those with Black, immigrant, or minority populations—and systematically deny mortgages to residents in these areas regardless of their actual creditworthiness.[18]

In 2022, Wells Fargo faced accusations of discriminatory lending practices driven by an algorithm intended to assess the creditworthiness of loan applicants.[19] An investigation found that the algorithm gave higher risk scores to Black and Latino applicants compared to white applicants with similar financial backgrounds.[20] As a result, Black and Latino individuals were denied loans at a

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[16] Lee, *supra* note 1.

[17] Lee, *supra* note 1.

[18] Steve D. Boilard, *Redlining*, EBSCO (2024), https://www.ebsco.com/research-starters/social-sciences-and-humanities/redlining.

[19] Bashir Iliyasu Bashir, *Case Study: Algorithmic Bias in Loan Denials*, MEDIUM (Jan. 23, 2024) https://medium.com/@vanderbash/case-study-algorithmic-bias-in-loan-denials-6aa4c6736b8e.

[20] *Id.*

significantly higher rate, even though their qualifications were on par with those of white applicants.[21]

Representation Bias: The Missing Stories in AI Training Data

Representation bias is a significant issue in the use of artificial intelligence for credit decisions, especially in areas like mortgage lending and consumer credit. This type of bias arises when the data used to train AI does not adequately represent the varied demographics of the population it aims to assist, which can lead to certain communities being overlooked by AI systems. According to the Consumer Financial Protection Bureau (CFPB), "one in ten adults in the U.S., or about 26 million people, are 'credit invisible.'"[22] Being credit invisible means that someone has no credit history at all with any of the major credit bureaus (Equifax, Transunion, and Experian).[23] Twenty-six million people, then, lack a credit history with one of the national credit reporting firms. Approximately 10 million people had thin files with inadequate credit history or stale files lacking any recent credit history.[24] There are 45 million consumers overall who might be denied credit since they lack credit records with a scoring capability.[25] Credit invisible or unscorable consumers typically lack access to quality credit and may have a variety of problems, from trying to get credit to leasing an apartment.[26]

Who are these credit-invisible people?

Low-income consumers are more likely to have unscorable credit records and are disproportionately credit invisible.[27] Of the low-income area residents, roughly 30% are credit invisible, and another 15% have records that are unscorable.[28] In upper-income communities, these rates are even lower. For instance, just 4% of the population in upper-income communities is credit invisible, and another 5% is unscorable.[29]

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[21] *Id.*

[22] CFPB, WHO ARE THE CREDIT INVISIBLES? HOW TO HELP PEOPLE WITH LIMITED CREDIT HISTORIES 2 (2016) [hereinafter *Credit Invisibles*], https://files.consumerfinance.gov/f/documents/201612_cfpb_credit_invisible_policy_report.pdf.

[23] *Id.*

[24] *Id.*

[25] *Id.*

[26] *Id.*

[27] *Id.*

[28] *Id.* at 3.

[29] *Id.*

In addition, along with having unscored credit reports, Black and Hispanic individuals are far more likely to be credit invisible than White or Asian consumers. Compared to 9% of White customers, over 15% of Black and Hispanic consumers are credit invisible.[30] Comparatively, 7% of White consumers, 13% of Black consumers, and 12% of Hispanic consumers have unscorable records.[31] Studies have shown that minority borrowers face higher barriers to obtaining credit. Even when controlling for income and debt ratios, high-earning Black applicants with less debt were found to be rejected more often than high-earning White applicants with more debt.[32]

Not surprisingly, younger consumers are likely to be credit invisible simply because they are just starting out in life and have not built up any or sufficient credit.[33]

Furthermore, according to geographical analysis, 22.3% of adults in Mississippi are either credit invisible or unscorable.[34] In fact, of "the Top 25 Micropolitan Statistical Areas, 21 are located in the South," and all of the areas have very high poverty rates; more than half "those areas have poverty rates more than double the national rate."[35]

Impact of Underrepresentation

Credit scoring isn't just used for loans; it has a wide range of effects on people who want to get a lot of different financial goods and services. Credit scores and other scoring systems are used by employers to judge job applicants; insurers use credit scores to decide who gets car, life, and home insurance and set the premiums accordingly;[36] and landlords to check out potential tenants.[37] Indeed, most states allow utility companies to consider credit scores when

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[30] *Id.* at 4.

[31] *Id.*

[32] Emmanuel Martinez & Lauren Kirchner, *The Secret Bias Hidden in Mortgage-Approval Algorithms*, THE CTR. FOR PUB. INTEGRITY (Aug. 25, 2021), https://publicintegrity.org/inequality-poverty-opportunity/bias-mortgage-approval-algorithms.

[33] Credit Invisibles, *supra* note 21, at 5.

[34] Credit Invisibles, *supra* note 21, at 6.

[35] Credit Invisibles, *supra* note 21, at 6, 15–17.

[36] *Credit-Based Insurance Scores Aren't the Same as a Credit Score. Understand How Credit and Other Factors Determine Your Premiums*, NAT'L ASS'N INS. COMM'RS: CONSUMER INSIGHT (July 22, 2020), https://content.naic.org/article/consumer-insight-credit-based-insurance-scores-arent-same-credit-score-understand-how-credit-and-other-factors.

[37] Lisa Rice & Deidre Swesnik, *Discriminatory Effects of Credit Scoring on Communities of Color*, 46 SUFFOLK U. L. REV. 935, 938 (2012).

determining service.[38] Credit scores are even being used to figure out which people are more likely to follow through with their medicine.[39]

Algorithmic Bias: The Proxy Problem

Algorithmic decisions can be made based on proxies for explicitly protected characteristics (e.g., race, gender, or religion), but which correlate strongly with these characteristics. For example, a zip code might serve as a proxy for race because of historical housing segregation patterns. While the algorithm isn't directly considering race—which would likely violate anti-discrimination laws—it achieves a similar effect by using zip code as a decision factor.

Social media usage as a credit factor raises even more complex issues. Algorithms may analyze a person's online connections, posting patterns, or even the content of their communications to make inferences about creditworthiness. When people with limited financial resources use technology that increases their exposure to monitoring, and they don't limit access to their online content (whether intentionally or not), they may face additional forms of commercial data gathering.[40] This creates a troubling dynamic where those with fewer resources are more exposed to algorithmic scrutiny of their social lives.

Indeed, data-driven analysis might provide businesses with novel justifications for denying specific groups access to certain opportunities. For instance, one analytics study found that individuals who complete online job applications using deliberately installed

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[38] *Getting Utility Services: Why Your Credit Matters*, F.T.C. CONSUMER ADVICE (Oct. 2024), https://consumer.ftc.gov/articles/getting-utility-services-why-your-credit-matters ("Getting utility services—gas, electricity, water—has a lot to do with your credit history. The better your credit history, the easier it can be for you to get services. And your on-time (or late) payment history with utility companies can be an important factor for your credit in the future.").

[39] Tara Parker-Pope, *Keeping Score on How You Take Your Medicine*, N.Y. TIMES: WELL (June 20, 2011, 5:23 PM), https://archive.nytimes.com/well.blogs.nytimes.com/2011/06/20/keeping-score-on-how-you-take-your-medicine/ (" FICO, a company whose credit score is widely used to assess the credit worthiness of millions of consumers ... developed a new FICO Medication Adherence Score that it says can predict which patients are at highest risk for skipping or incorrectly using prescription medications . . . . The FICO medication score is based on publicly available data, like home ownership and job status, and does not rely on a patient's medical history or financial information to predict whether he or she will take medication as directed. So, like a credit rating, it can be compiled without a person's knowledge or permission.").

[40] Mary Madden et al., *Privacy, Poverty, and Big Data: A Matrix of Vulnerabilities for Poor Americans.* 95 WASH. U. L. REV. 53, 56–57 (2017) [hereinafter *Madden*].

browsers (such as Firefox or Chrome) rather than pre-installed ones tend to perform better and have lower job turnover rates.[41] Should employers use this correlation as a proxy to avoid hiring candidates who use particular browsers, they might inadvertently reject qualified applicants based on factors irrelevant to the actual job requirements. And, of course, the denial of employment opportunities could lead to poor credit and financial conditions.

Purchase history represents another problematic data source. Credit algorithms might analyze where a person shops, what they purchase, and even the timing of their purchases and use those patterns as a proxy for socio-economic status. For example, in the *CompuCredit* case, the Federal Trade Commission alleged that a credit card marketing company promoted consumers' ability to obtain cash advances while deceptively omitting that the company would reduce consumers' credit limits based on a behavioral scoring model if they used their cards for cash advances or specific transactions. These transactions included visits to marriage counselors, bars and nightclubs, pawn shops, automobile tire retreading and repair shops, and massage parlors.[42]

The "black box" nature of these algorithms compounds these problems. When credit decisions move from straightforward formulas to complex machine learning models, decisions become increasingly opaque, making it nearly impossible for consumers—or even regulators—to understand why a particular decision was made. For example, algorithms might assign low scores to jobs like seasonal agricultural work or low-wage service positions. While this correlation might not be intentionally discriminatory, it could unfairly affect loan outcomes for racial minorities who disproportionately hold these jobs. To verify this, we would need access to the core components of credit-scoring systems—source code, programmer documentation, and algorithms—which remain unavailable to us. Credit bureaus may effectively be concealing discrimination within these opaque scoring systems that remain protected from examination.[43] This immunity stems from both technical complexity and legal protections for trade secrets, creating

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[41] FTC, BIG DATA: A TOOL FOR INCLUSION OR EXCLUSION? UNDERSTANDING THE ISSUES 10–11 (2016), https://www.ftc.gov/system/files/documents/reports/big-data-tool-inclusion-or-exclusion-understanding-issues/160106big-data-rpt.pdf.

[42] Complaint at 35, FTC v. CompuCredit Corp., No. 1:08-cv-1976-BBM-RGV, 2008 U.S. Dist. LEXIS 123512 (N.D. Ga. filed June 10, 2008).

[43] Danielle Keats Citron & Frank Pasquale, *The Scored Society: Due Process for Automated Predictions*, 89 WASH. L. REV. 1, 14 (2014).

a situation where discriminatory effects can persist undetected and unchallenged.[44]

The consequences of these proxy variables extend beyond individual credit decisions. When algorithms systematically disadvantage certain communities by using seemingly neutral factors, they create what scholars call "networked discrimination."[45] This occurs when an individual is judged not only by their own characteristics but by those of people with whom they are associated, whether through neighborhood, social connections, or shopping patterns. This form of discrimination is particularly harmful because it can be difficult to identify, challenge, or remedy under existing legal frameworks that were designed for more direct forms of discrimination.

Generalization Bias: When AI Makes Assumptions

In the context of credit scoring and financial decision-making, generalization bias manifests when prediction models (like those used to determine creditworthiness) perform with different levels of precision across different demographic groups. For example, research indicates that credit scores are statistically noisier indicators of default risk for minority and low-income applicants compared to other populations.[46] In simple terms, "statistical noise" refers to random or unpredictable variation in data that makes it harder to identify true patterns or relationships. When a measurement or prediction contains more noise, it's less reliable or accurate. This means lenders face greater uncertainty when assessing the default risk of historically underserved populations, even when looking at the same credit score numbers. Two applicants with identical credit scores—one from a minority group and one not—may actually have different true default risks, but the scoring system is less able to accurately capture this for the minority applicant.

Why? As previously discussed, minority consumers are roughly twice as likely as non-minority consumers to have very few accounts. When there's less data to analyze, predictions naturally become less reliable.

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[44] Brenda Reddix-Smalls, *Credit Scoring and Trade Secrecy: An Algorithmic Quagmire or How the Lack of Transparency in Complex Financial Models Scuttled the Finance Market*, 12 U.C. DAVIS BUS. L.J. 87, 116–20 (2011).

[45] Madden, *supra* note 39, at 82.

[46] Laura Blattner & Scott Nelson, *How Costly is Noise? Data and Disparities in Consumer Credit* 2 (Stan. Graduate Sch. of Bus., Working Paper No. 3978), https://arxiv.org/pdf/2105.07554.

Also, the credit data available for minority applicants may not fully capture their financial behaviors and responsibilities. Many minority consumers may use financial services that don't report to traditional credit bureaus, such as payday lenders or community-based lending circles.[47]

This bias doesn't necessarily stem from intentional discrimination or flawed modeling techniques, but often results from underlying differences in the quality, quantity, and representativeness of data available for different groups. When certain populations have "thinner" credit files (less historical data), more limited types of credit accounts, or different patterns of financial behavior that aren't well-captured by traditional metrics, the models make less reliable predictions for these groups.

This generalization bias creates a troubling feedback loop in credit markets. When scoring systems cannot accurately assess the creditworthiness of minority or low-income applicants, lenders face greater uncertainty about these borrowers' default risk. This uncertainty typically translates into more conservative lending decisions, further limiting these groups' access to credit. Without access to mainstream credit, these consumers cannot build the robust credit histories needed for accurate assessment, perpetuating the cycle of exclusion. The problem is structural rather than individual—even if a consumer from an underserved group is equally creditworthy as another borrower, the information asymmetry means they're less likely to be recognized as such.[48]

IV.   Real-World Impact: The Apple Card Controversy

In November 2019, tech entrepreneur David Heinemeier Hansson ignited a firestorm on Twitter when he revealed that Apple's newly launched credit card had offered him a credit limit 20 times higher than his wife's, despite her having a better credit score.[49] Adding fuel to the controversy, Apple co-founder Steve Wozniak chimed in, sharing that he had experienced a similar disparity with his wife.[50] These allegations prompted an immediate investigation by New York's Department of Financial Services (DFS), which stated that "any algorithm that intentionally or not results in discriminatory

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[47] *Id.* at 18.

[48] *Id.*

[49] *Apple's 'sexist' credit card investigated by US regulator*, BBC (Nov. 11, 2019), https://www.bbc.com/news/business-50365609.

[50] *Id.*

treatment of women or any other protected class violates New York law."[51]

The resulting investigation by the DFS ultimately "did not produce evidence of deliberate or disparate impact discrimination but showed deficiencies in customer service and transparency."[52] Nevertheless, the controversy highlighted a significant concern about algorithmic bias in financial services. Goldman Sachs, the issuing bank for the Apple Card, defended itself by claiming that its algorithm was "gender-blind" and didn't use gender as an input. However, as reported in *Wired*, this defense is "doubly misleading" because "it is entirely possible for algorithms to discriminate on gender, even when they are programmed to be 'blind' to that variable."[53]

Furthermore, the controversy revealed a paradoxical challenge in preventing algorithmic discrimination. As Paul Resnick, a professor at the University of Michigan's School of Information, noted, the fact that Equal Credit Opportunity Act prohibits financial businesses from using information such as gender or race "may actually make this problem worse by deterring those businesses from collecting this important information in the first place."[54] This creates what AI ethics researchers call the "fairness paradox": we can't directly measure bias against protected categories if we don't collect data about those categories, yet collecting such data raises concerns about potential misuse. This tension makes auditing for bias extraordinarily difficult and complicates regulatory oversight in an increasingly algorithmic financial landscape.

The Apple Card incident underscores how modern algorithms can perpetuate historical discrimination. The New York DFS report acknowledges that "[e]ven when credit scoring is done in compliance with the law, it can reflect and perpetuate societal inequality" because "these same variables often reflect the nation's long history of racial and gender discrimination."[55] Consequently, the algorithms can inadvertently perpetuate biases through proxy variables, i.e., data

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[51] *Id.*

[52] N.Y. DEP'T OF FIN. SERVS., REPORT ON APPLE CARD INVESTIGATION 2 (2021) [hereinafter *Apple Card Investigation*].

[53] Will Knight, *The Apple Card Didn't 'See' Gender—and That's the Problem*, WIRED (Nov. 19, 2019, 9:15 AM), https://www.wired.com/story/the-apple-card-didnt-see-genderand-thats-the-problem/.

[54] *Id.*

[55] Apple Card Investigation, *supra* note 51, at 15.

points that correlate with protected characteristics like gender or race.

Accordingly, the Apple Card controversy has illuminated the need for more sophisticated regulation of financial technology. Karen Mills, a Senior Fellow at Harvard Business School, argues that "this is a new frontier for the financial services sector—and the industry's regulators are also operating without a roadmap."[56] What makes this regulatory challenge particularly vexing is that as algorithms become more complex and opaque, traditional regulatory approaches centered on disclosure requirements and compliance checklists become less effective. The future of financial regulation likely requires regulatory bodies to develop significant technical expertise in AI and machine learning, enabling them to conduct meaningful algorithm audits that can detect potential discrimination without stifling innovation. This represents a fundamental shift in how we approach financial regulation, moving from rules-based compliance to outcomes-based oversight. Mills proposes a three-part approach to "smart regulation": disclosure rules regarding algorithm transparency, increased technical expertise at regulatory agencies, and better data collection to identify lending gaps.[57] Without such measures, we risk allowing technological innovation to undermine decades of progress in fair lending.

V. Constitutional and Statutory Protections in Credit Decisions

Equal access to credit is fundamental to economic opportunity in America, protected by both constitutional principles and statutory frameworks designed to prevent discrimination. The Equal Credit Opportunity Act (ECOA) of 1974[58] stands as one of the most significant legal protections, prohibiting lenders from discriminating against credit applicants on the basis of race, color, religion, national origin, sex, marital status, age, or because they receive public assistance.[59] This protection extends to all aspects of a credit transaction, including application procedures, evaluation standards,

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[56] Karen G. Mills, *Gender Bias Complaints against Apple Card Signal a Dark Side to Fintech*, HARV. BUS. SCH.: WORKING KNOWLEDGE (Nov. 19, 2019), https://www.library.hbs.edu/working-knowledge/gender-bias-complaints-against-apple-card-signal-a-dark-side-to-fintech.
[57] *Id.*
[58] Equal Credit Opportunity Act (ECOA), 15 U.S.C. § 1691.
[59] Kate Crawford & Jason Schultz, *Big Data and Due Process: Toward a Framework to Redress Predictive Privacy Harms*, 55 B.C. L. REV. 93, 100 (2014) [hereinafter *Crawford*].

and terms of credit.[60] The Fair Housing Act (FHA) provides additional protection specifically in the housing market, prohibiting discrimination in financing real estate transactions based on similar protected characteristics.[61]

Despite these protections, companies have employed Big Data models to identify and exclude internet users with poor credit scores from loan advertisements.[62] Similarly, Big Data could eliminate the need for housing providers to explicitly state discriminatory preferences in advertisements.[63] Instead, they could develop algorithms to predict personal identifying information of potential buyers or renters and selectively advertise properties only to preferred demographic profiles.[64]

In the housing market, providers may increasingly utilize publicly available personal information to create these targeted profiles. Just as Big Data can prevent qualified candidates from seeing beneficial loan opportunities, housing suppliers could potentially use these techniques to discriminate while evading fair housing regulations.[65]

The legal framework addressing credit discrimination encompasses two distinct concepts: disparate treatment and disparate impact. Disparate treatment occurs when lenders explicitly treat applicants differently based on a protected characteristic.[66] For example, let's say a mortgage lender explicitly tells Black applicants they need a credit score of 700 to qualify for a loan, while telling white applicants they only need a score of 650. This is disparate treatment because the lender is directly treating applicants differently based on their race. The discrimination is intentional and applies different standards to different racial groups.

Disparate impact, meanwhile, occurs when facially neutral practices nevertheless result in disproportionate adverse effects on protected groups.[67] In this situation, a lender has a policy requiring all applicants to have at least five years of credit history to qualify for a mortgage. This policy appears neutral since it applies to everyone equally.

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[60] *See* 15 U.S.C. § 1691.

[61] Fair Housing Act of 1968, 42 U.S.C. § 3604(c).

[62] Crawford, *supra* note 58, at 100–01.

[63] *Id.* at 100.

[64] *Id.* at 101.

[65] *Id.*

[66] FED. DEPOSIT INS. CORP., CONSUMER COMPLIANCE EXAMINATION MANUAL pt. IV, at 1.2–.3 (2024).

[67] *Id.* at 1.3.

However, it may have a disparate impact on recent immigrants who haven't had the opportunity to build lengthy credit histories in the U.S., even if they are financially responsible. In this case, the lender isn't intentionally discriminating against immigrants, but their seemingly neutral policy disproportionately excludes people based on national origin.

The key difference is that disparate treatment involves intentional discrimination based on a protected characteristic, while disparate impact occurs when a seemingly neutral policy or practice disproportionately affects a protected group, regardless of intent.
As the Supreme Court affirmed in *Texas Department of Housing and Community Affairs v. Inclusive Communities Project*, the FHA permits disparate impact claims, with the Court noting that such claims play "a role in uncovering discriminatory intent" by allowing plaintiffs to "counteract unconscious prejudices and disguised animus."[68]

The rise of artificial intelligence and machine learning in credit decisions presents both opportunities and new challenges for these legal frameworks. While automated systems theoretically remove human bias from decisions, they may still perpetuate discrimination if trained on historically biased data or if they employ variables that correlate with protected characteristics. As noted in President Biden's 2023 Executive Order on AI, "irresponsible use could exacerbate societal harms such as fraud, discrimination, bias, and disinformation."[69] The Consumer Financial Protection Bureau (CFPB) has specifically addressed this concern, stating in a 2022 circular that "ECOA and Regulation B require creditors to provide statements of specific reasons to applicants against whom adverse action is taken" regardless of the technology used.[70] Furthermore, in a 2023 circular, the CFPB clarified that creditors may not rely on standardized checklists of reasons for adverse action notices if those reasons don't "specifically and accurately indicate the principal reason(s) for the adverse action."[71]

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[68] Tex. Dep't of Hous. & Cmty. Affs. v. Inclusive Cmtys. Project, 576 U.S. 519, 521 (2015).

[69] Exec. Order No. 14110 on Safe, Secure, and Trustworthy Artificial Intelligence, 88 Fed. Reg. 75191 (Oct. 30, 2023), *revoked by* Exec. Order No. 14148, 90 Fed. Reg. 8237 (Jan. 20, 2025).

[70] CFPB, Circular on adverse action notification requirements in connection with credit decisions based on complex algorithms (May 26, 2022).

[71] *Id.*

Consequently, as lending increasingly relies on complex algorithms, regulatory authorities have emphasized the need for explainability and transparency. AI explainability is the ability to understand and explain how an AI system reaches its decisions.[72] Transparency is about making the AI's processes visible and understandable to humans.[73] Imagine you apply for a loan and receive this response: "Your loan was denied." This shows a lack of explainability. With explainability, you would get a response closer to, "Your loan was denied because your debt-to-income ratio is 45%, which exceeds our threshold of 40%. Additionally, you've had two late payments in the past year." Transparency works hand-in-hand with explainability. More than simply showing what was considered, transparency involves showing how the system arrived at the decision, for example, "the model considers 15 factors of income, credit score, payment history, employment duration, and debt levels." Also, the application or bank might offer to show you the complete criteria and how different factors are weighted in the decision process *before* you apply for the loan.

However, most AI systems are not transparent. And this is why they are called the "black box." Transparency requirements are about opening up the "black box" of the AI system before, during, and after decisions are made. It's not just explaining the outcome (explainability) but making visible how the entire system operates.

Complex lending algorithms that predict creditworthiness better often can't explain their decisions clearly. This creates a conflict:

> **On one side:** Modern AI can make more accurate predictions about who will repay loans.

> **On the other side**: Consumer protection laws require lenders to explain why they approved or denied your application.

This creates a dilemma: Do we use the more accurate "black box" systems that can't explain themselves well, or stick with simpler methods that might be less accurate but can provide clear explanations as required by law?

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[72] *What is explainable AI?*, IBM (Mar. 29, 2023), https://www.techtarget.com/whatis/definition/explainable-AI-XAI.
[73] *Id.*

It's like having a brilliant doctor who makes excellent diagnoses but can't tell you how they reached their conclusions, when the law specifically requires doctors to explain their reasoning to patients. But the regulatory landscape is evolving... away from regulation.

VI.   Recent Changes to the AI Regulatory Framework

Since President Trump was sworn into office on January 20, 2025, significant administrative changes have occurred.

Executive Order 14110 on "Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence" (issued October 23, 2023) was rescinded on January 20, 2025, as part of a broader policy shift by the new Trump administration.[74]

A new Executive Order titled "Removing Barriers to American Leadership in Artificial Intelligence" aims to reorient federal AI policy toward promoting innovation and competitiveness.[75] It directs federal agencies to reevaluate existing AI regulations, calls for the development of a new AI Action Plan, and prioritizes policies that strengthen economic growth and national security interests.[76] This change represents a significant pivot in the federal government's approach to AI governance, emphasizing market-driven development and reduced regulatory oversight.[77]

Additionally, operations at the Consumer Financial Protection Bureau (CFPB) were shut down in February 2025.[78]

These recent developments may affect the regulatory framework for AI in financial services. Legal professionals should consult current sources when addressing matters related to AI governance in lending practices, as the regulatory landscape continues to evolve.

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[74] Exec. Order No. 14148, 90 Fed. Reg. 8237 (Jan. 20, 2025).

[75] Exec. Order No. 14179, 90 Fed. Reg. 8741 (Jan. 23, 2025).

[76] *Id.*

[77] *Id.*

[78] Joe Hernandez, *The Trump administration has stopped work at the CFPB. Here's what the agency does*, NPR (Feb. 10, 2025, 4:35 PM), https://www.npr.org/2025/02/10/nx-s1-5292123/the-trump-administration-has-stopped-work-at-the-cfpb-heres-what-the-agency-does.

VII. Practical Guidance for Consumers: Understanding and Managing Your Credit Report and Score

As we have seen, credit reports play a critical role in determining access to essential financial opportunities for a vast number of people in the United States and influencing numerous aspects of consumers' lives beyond mere lending decisions. According to the CFPB, "[c]redit reports serve as economic gatekeepers for millions of Americans seeking to buy a home, start a business, or get a car loan."[79] Given this pivotal role, understanding the mechanics of credit reporting and your legal rights is essential for navigating today's credit-dependent marketplace effectively.

Your credit report contains detailed information about your financial history, including residential information, payment patterns, and legal matters like judgments or bankruptcies. An important distinction exists between credit reports and credit scores—related but distinct concepts: Your credit reports and your credit scores are two different things. A credit report is a statement that has information about your credit activity and current credit situation.[80] Your credit scores are calculated based on the information in your credit report.[81]

The Fair Credit Reporting Act (FCRA) establishes the legal framework for consumer rights in credit reporting.[82] This federal legislation mandates that credit reporting agencies implement reasonable procedures for information collection and maintenance while setting accuracy standards for information furnishers.[83] Under this framework, consumers possess several fundamental rights: access to their file information, the ability to dispute inaccurate or incomplete information, and protection from outdated negative information after specified time periods.[84]

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[79] Seth Frotman, *Holding Credit Reporting Companies Accountable for Junk Data*, CFPB (Jan. 16, 2025), https://www.consumerfinance.gov/about-us/blog/holding-credit-reporting-companies-accountable-for-junk-data/.

[80] *What is a credit report?*, CFPB: ASK CFPB, https://www.consumerfinance.gov/ask-cfpb/what-is-a-credit-report-en-309/ (Jan. 29, 2024).

[81] Frotman, *supra* note 78.

[82] 15 U.S.C. § 1681.

[83] Amy Loftsgordon, *Disputing Incomplete and Inaccurate Information in Your Credit Reports*, NOLO (Jan. 7, 2025), https://www.nolo.com/legal-encyclopedia/disputing-incomplete-and-inaccurate-information-in-your-credit-report.html.

[84] Frotman, *supra* note 78.

Regular monitoring of your credit reports constitutes a fundamental consumer protection strategy. The three major credit reporting companies—Equifax, Experian, and TransUnion—must provide you with a free annual credit report upon request.[85] Consumers can access credit reports through AnnualCreditReport.com. Furthermore, you qualify for additional free reports in specific circumstances, such as adverse credit decisions, credit limit reductions, or identity theft victimization.[86]

When reviewing your credit report, check carefully for errors, which are surprisingly common. If you find inaccuracies, federal law gives you the right to dispute them. The CFPB advises that "if you identify an error on your credit report, you should start by disputing that information with the credit reporting company."[87] You can file disputes online, by mail, or by phone, but for significant issues, many experts recommend sending your dispute via certified mail with return receipt requested to ensure documentation of your communication.[88] A sample letter can be found here: https://consumer.ftc.gov/articles/sample-letter-disputing-errors-credit-reports-business-supplied-information.

The dispute resolution process follows specific procedural requirements. Your dispute correspondence should contain your complete contact information, clearly identify each contested item with supporting rationale, and explicitly request correction or removal.[89] Including supporting documentation and a marked copy of your credit report highlighting disputed items enhances your claim's effectiveness.[90] Credit reporting agencies must investigate disputes within a 30-day timeframe and must transmit relevant information to the data furnisher.[91] Upon investigation completion, the agency must

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[85] 15 U.S.C. § 1681j(a)(1)(A).

[86] Loftsgordon, *supra* note 82.

[87] *What are some ways to start or rebuild a good credit history?*, CFPB: ASK CFPB, https://www.consumerfinance.gov/ask-cfpb/what-are-some-ways-to-start-or-rebuild-a-good-credit-history-en-2155/ (Sep. 13, 2024).

[88] St. Mary's Univ. Sch. of L. Ctr. for Legal & Soc. Just., *How to Dispute Errors in a Credit Report*, TEXAS LAW HELP [hereinafter *Ctr. for Legal & Soc. Just.*], https://texaslawhelp.org/article/how-to-dispute-errors-in-a-credit-report (Feb. 27, 2023).

[89] *How do I dispute an error on my credit report?*, CFPB: ASK CFPB, https://www.consumerfinance.gov/ask-cfpb/how-do-i-dispute-an-error-on-my-credit-report-en-314/ (Dec. 12, 2024).

[90] *Id.*

[91] *Id.*

provide written results and a free credit report copy if the dispute prompts any changes.[92]

The dispute resolution system has demonstrated significant practical limitations. In January 2022, the CFPB reported that "Equifax, Experian, and TransUnion failed to appropriately respond to almost all of the 700,000 complaints filed against them from January 2020 through September 2021."[93] When disputes remain unresolved, consumers have several recourse options: submitting new disputes with additional information, adding explanatory statements to their reports, filing CFPB complaints, or consulting consumer law attorneys for potential legal action.[94]

Beyond remedial measures for inaccuracies, proactive credit management requires consistent positive financial behaviors. The CFPB recommends several essential practices: consistent on-time payments, maintaining low credit utilization ratios (preferably below 30%), establishing extended credit histories, limiting credit applications to necessary purposes, and regular credit report monitoring.[95] For consumers establishing or rebuilding credit, specialized financial products offer structured pathways, including secured credit cards, credit builder loans, and retail credit accounts. These instruments, when used responsibly, facilitate gradual credit profile development over time.[96]

VIII. Beyond the Credit Score: Consumer Strategies in an AI-Driven Credit World

Monitoring traditional credit reports is vitally important to protect your financial interests. However, in today's digital financial landscape, understanding how your credit is assessed has become increasingly complex. Traditional credit reporting systems remain important gatekeepers for major financial decisions, but they now operate alongside sophisticated artificial intelligence systems that analyze aspects of your digital life you might never have considered relevant to your creditworthiness.

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[92] Ctr. for Legal & Soc. Just., *supra* note 87.

[93] Loftsgordon, *supra* note 82.

[94] Loftsgordon, *supra* note 82.

[95] *How do I get and keep a good credit score?*, CFPB: Ask CFPB, https://www.consumerfinance.gov/ask-cfpb/how-do-i-get-and-keep-a-good-credit-score-en-318/ (Dec. 12, 2024).

[96] *Id.*

Beyond traditional credit monitoring, consumers should recognize that their everyday digital behaviors—from email correspondence habits to the timing of online shopping—may now factor into credit decisions. While traditional credit reports offer transparency and dispute mechanisms, these newer assessment dimensions often operate in proprietary "black box" systems with limited oversight or recourse options. This opacity creates challenges for consumers seeking to understand or contest adverse credit decisions based partly on digital footprint analysis. As AI-powered credit assessment becomes more prevalent, consumers face a challenging balance between leveraging the benefits of digital convenience and protecting their privacy. Consider creating strategic boundaries between your financial activities and personal digital life when possible. Using privacy tools like virtual private networks (VPNs)[97] or browser settings that limit tracking may help reduce unwanted data collection, though this could potentially limit the positive aspects of your digital footprint that might otherwise support credit access. The most practical approach may be maintaining awareness of these systems while focusing primarily on the fundamentals of financial responsibility that remain relevant across all assessment models.

Ultimately, while the mechanics of credit assessment are evolving rapidly, the principles of financial responsibility remain consistent. By understanding both traditional credit reporting protections and the emerging reality of AI-powered assessment, consumers can more effectively navigate this increasingly complex landscape. Regular monitoring, prompt dispute resolution, responsible credit usage, and awareness of digital footprint implications provide a comprehensive approach to maintaining positive credit standing in today's financial ecosystem.

IX.   Conclusion

The challenge of AI bias in lending represents a critical intersection of technology, finance, and civil rights. While AI promises more efficient and accurate lending decisions, its potential to perpetuate and amplify existing biases cannot be ignored. Success in addressing

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[97] While detailed explanations of technology precautions are beyond the scope of this article, a VPN, or Virtual Private Network, is a service that creates a secure, encrypted connection between your device and the internet. Think of it as a private tunnel for your internet traffic. *Pull The Shades Down On Your Browsing With A VPN*, NAT'L CYBERSECURITY ALL. (July 3, 2023), https://www.staysafeonline.org/articles/pull-the-shades-down-on-your-browsing-with-a-vpn.

these challenges requires a coordinated effort from regulators, industry participants, and consumers.

The future of fair lending depends on continued trustworthy technological innovation, strong regulatory oversight (which is unlikely in the next four years), an industry commitment to fairness (also unlikely given the race toward being the first at market with new technologies), consumer awareness and advocacy, ongoing research and development, and community engagement.

The following is a supplementary infographic for *When Algorithms Judge Your Credit: Understanding AI Bias in Lending Decisions* created to promote legal comprehension.

Judged by a Machine: AI's Role in Credit Scoring

1 The Problem

- Lenders traditionally looked at: income, job, debts, credit utilization, and payment history.[1]

- AI looks at *thousands* of things you might have never thought matters in credit lending such as:
  - your phone brand[2]
  - what email provider you use[3]
  - what time you shop online[4]
  - typing habits[5]
  - your shopping approach[6].

- AI is the problem because it brings seemingly neutral data into credit lending to make decisions that disproportionately harm marginalized communities. These algorithmic decisions also lack transparency and accountability, making it nearly impossible for consumers to understand, challenge, or prevent biased outcomes.[7][8]

2 Who Gets Left Out?

- 45 million are credit invisible or "unscorable," meaning they have thin credit history files that are inadequate or lack any credit history.[9]
- This disproportionately affects Black, Hispanic,[10] low-income,[11] and younger individuals.[12]
- Furthermore, geographic location can play a role in who's left out.
- For example, 21 out of the 25 areas that are credit invisible are in the South and have some of the highest poverty rates.[13]

3 Can The Law Help?

- Yes! The Equal Credit Opportunity Act (ECOA) is one of the most significant laws that prohibits lenders from discriminating against credit applicants.[14] Similarly, the Fair Housing Act (FHA) also provides protection for credit applicants in the housing market.[15] Both laws protect against discrimination on the basis of race, color, religion, national origin, sex, marital status, age, or on the basis of their enrollment in government aid.[16][17]
- Recently, a new Executive Order mandates federal agencies to evaluate existing AI regulations and prioritizes AI policies that contribute to national security and stronger economic growth.[18] This Order requires federal agencies to review current AI regulations, initiate the creation of a new AI Action Plan, and emphasize policies that promote economic growth and national security.[19] This Order may have an impact on AI in financial institutions and credit lending.[20]
- However, the Consumer Financial Protection Bureau (CFPB) was shut down in February 2025 which could impact enforcement of some laws protecting consumers.[21]

4 What Can You Do?

- Retrieve your free credit report from annualcreditreport.com and check for errors[22]
- Familiarize yourself with the credit dispute process outlined by the CFPB[23]
- Know your rights under the Fair Credit Reporting Act[24]
- The CFPB recommends other essential practices such as: making on-time payments, maintaining low credit utilization rations, establishing extended credit histories, limiting credit applications, and regularly monitoring your credit report.[25]
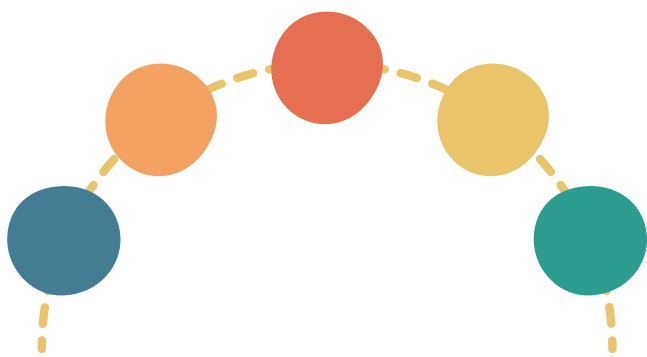
Source: *When Algorithms Judge Your Credit* by Korin Munsterman. Infographic created by Victoria Saucedo. Staff Reporter (2024-2025).
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[2] Tobias Berg et al., *On the Rise of FinTechs: Credit Scoring using Digital Footprints*, 2–3 (FDIC CFR Working Paper Series), https://www.fdic.gov/analysis/cfr/working-papers/2018/cfr-wp2018-04.pdf
[3] *Id.* at 14.
[4] *Id.*
[5] *Id.*
[6] *Id.*
[7] Nicol Turner Lee, Paul Resnick & Genie Barton, *Algorithmic Bias Detection and Mitigation: Best practices and Policies to Reduce Consumer Harms*, Brookings Institution, May 22, 2019, https://www.brookings.edu/articles/algorithmic-bias-detection-and-mitigation-best-practices-and-policies-to-reduce-consumer-harms/
[8] *Who Are the Credit Invisibles? How to Help People with Limited Credit Histories*, C.F.P.B., (2016).
[9] *Id.* at 2.
[10] *Id.* at 4.
[11] *Id.* at 3.
[12] *Id.* at 5.
[13] *Id.* at 6.
[14] Kate Crawford & Jason Schultz, *Big Data and Due Process: Toward a Framework to Redress Predictive Privacy Harms*, 55 B.C. L. Rev. 1, 93-128 (2014).
[15] Fair Housing Act of 1968, 42 U.S.C. § 3604(c) (2006).
[16] Crawford & Schultz, *supra* note 14, at 93–128.
[17] 42 U.S.C. § 3604(c).
[18] Exec. Order No. 14179, 90 Fed. Reg. 8741 (Jan. 31, 2025).
[19] *Id.*
[20] *See Id.*
[21] Joe Hernandez, *The Trump administration has stopped work at the CFPB. Here's what the agency does*, NPR (Feb. 10, 2025, 4:35 PM), https://www.npr.org/2025/02/10/nx-s1-5292123/the-trump-administration-has-stopped-work-at-the-cfpb-heres-what-the-agency-does.
[22] Amy Loftsgordon, *Disputing Incomplete and Inaccurate Information in Your Credit Reports*, NOLO (Jan. 7, 2025), https://www.nolo.com/legal-encyclopedia/disputing-incomplete-and-inaccurate-information-in-your-credit-report.html.
[23] *What are some ways to start or rebuild a good credit history?*, Consumer Fin. Prot. Bureau, https://www.consumerfinance.gov/ask-cfpb/what-are-some-ways-to-start-or-rebuild-a-good-credit-history-en-2155/ (Sept. 13, 2024).
[24] Loftsgordon, *supra* note 22.
[25] *How do I get and keep a good credit score?*, Consumer Fin. Prot. Bureau, https://www.consumerfinance.gov/ask-cfpb/how-do-i-get-and-keep-a-good-credit-score-en-318/ (Dec. 12, 2024).

WHY NEW AI LAWS MAY NOT CHANGE UNITED STATES COPYRIGHT LAWS IN THE FUTURE SINCE AI HAS BEEN IN WIDESPREAD USE IN SOFTWARE SYSTEMS FOR 30+ YEARS

Peter S. Vogel*

This article will focus on the United States copyright laws but also describes related current laws for patents, trademarks, trade secrets, and copyrights ("Intellectual Property" or "IP") to understand how IP was created using AI rather than human beings who claim to be the inventors or authors.

I.   Intellectual Property (IP)

To set the stage for AI's impact on IP, it is important to set out a baseline set of information regarding what IP is so the reader will best understand the impact of AI.

The origins of IP in the United States are in the 1789 Constitution Article I, Section 8, Clause 8:

> [The Congress shall have Power. . .] To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries. . .[1]

As a result, the United States Constitution governs the writings of authors, copyrights, and discoveries of inventors, including patents and trademarks.[2]

A. Copyrights

The 1976 Copyright Act replaced the 1909 Copyright Act and improved things a lot. Before the 1976 Copyright Act, each state and the District of Columbia had their own copyright laws separate the federal law.

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* Peter Vogel is a Dallas-based attorney with over 30 years of experience. He advises clients across sectors in IT, eCommerce, cybersecurity, and emerging technology like AI, and serves as a mediator and arbitrator in complex technology disputes.

[1] U.S. CONST. art. I, § 8, cl. 8.

[2] *Id*; *In re* Trade-Mark Cases, 100 U.S. 82, 97–98 (1879) (stating federal trademark legislation is authorized through the Commerce Clause of the U.S. Constitution.).

In 1976, copyrights were simplified.[3] Since that year, only federal copyright law exists in the United States.[4] At the moment the author affixes their writing to a medium, like a pen on paper or a computer key creating a computer data, then the copyright is created, whether the author likes it or not. There is no obligation to file a registration with the Copyright Office.[5] However, to receive statutory damages for copyright infringement, registration must be filed within ninety days of the first publication.[6]

A copyright must be registered before an author can file a federal lawsuit for infringement.[7] Federal courts have exclusive jurisdiction[8] for infringement claims.[9]

As part of the registration process, an author merely files a copy of their copyrighted works, along with a completed application and a nonrefundable filing fee.[10] If the registration is for computer software that includes trade secrets, the Copyright Office allows redactions and limits the number of pages that can be submitted.[11]

B. Patents

Patents, on the other hand, are inventions that are new, novel, and unique, and they must be filed within one year of invention in the United States.[12] Outside the United States, the rules about filing are related to the time of invention.[13] In order to secure a United States patent, one must file a formal application which may or may not be granted.[14]

When filing a patent application, the inventor may seek assistance from a person who is registered with the United States Patent & Trademark Office (USPTO) or file the application on their own (pro

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[3] H.R. REP. NO. 94–1476, at 47 (1976).

[4] *Id.*

[5] 17 U.S.C. § 102(a).

[6] 17 U.S.C. § 412.

[7] *Id.*

[8] Jurisdiction is when a court has the power and authority to apply the law or make judgments in a case. *Jurisdiction*, BLACK'S LAW DICTIONARY (12th ed. 2024).

[9] 28 U.S.C. § 1338(a).

[10] *Copyright Basics*, U.S. COPYRIGHT OFF. 1, 5 (2021), http://copyright.gov/circs/circ01.pdf.

[11] 17 U.S.C. § 412; 37 C.F.R. § 202.20(c)(2)(viii)(A) (1986).

[12] 35 U.S.C. §§ 102–03; Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011).

[13] 35 U.S.C. § 184.

[14] 35 U.S.C. § 111.

se).[15] Less than 60% of patent applications in the United States are accepted and granted.[16] A granted U.S. patent is valid for 20 years from the application's filing date.[17] Inventors may also file related patents, such as continuations or new applications, to build upon the original invention.[18]

C. Trademarks

The USPTO regulates trademarks, which are categorized into 45 classes under the current edition of the Nice Agreement.[19] To secure registration, a trademark inventor must select one or more classes where their mark does not create a likelihood of confusion with existing trademarks.[20]

For example, I filed a trademark application a number of years ago for a Texas based CPA training program. There was a very similar trademark name for a dog obedience school in Wisconsin, but because there was no likelihood of confusion, my client received a registration for its trademark.

After filing a trademark application, if there is no conflict with an existing trademark, the Trademark Office makes the application public so that others can challenge it if they believe it conflicts with their existing rights.[21]

Service marks are also known as trademarks but are more for art like the Coca-Cola logo, a design that identifies the sources of services, than the name itself.[22] Given the complexities of trademark law, it is

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[15] *Applying for Patents*, USPTO, https://www.uspto.gov/patents/basics/apply (last visited Feb. 19, 2025).

[16] *See U.S. Patent Statistics Chart Calendar Years 1963-2020*, USPTO, https://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm (last visited Feb. 19, 2025).

[17] *Applying for Patents*, *supra* note 14.

[18] *Applying for Patents*, *supra* note 14.

[19] *Nice Agreement current edition version - general remarks, class headings and explanatory notes*, U.S. PAT. AND TRADEMARK OFF., https://www.uspto.gov/trademarks/trademark-updates-and-announcements/nice-agreement-current-edition-version-general-remarks (last visited Feb. 19, 2025).

[20] 15 U.S.C. § 1052(d).

[21] *Approval for publication*, USPTO, https://www.uspto.gov/trademarks/basics/approval-publication (last visited Feb. 19, 2025).

[22] 15 U.S.C. § 1127; *Trademark FAQs*, USPTO, https://www.uspto.gov/learning-and-resources/trademark-faqs.

advisable for U.S.-domiciled applicants to be supported by an experienced trademark professional.[23]

If a trademark owner does not challenge infringement in a timely manner, they may lose the ability to enforce their rights due to the legal doctrine of laches.[24]

D. Trade Secrets

A trade secret is a type of intellectual property that comprises formulas, practices, processes, designs, instruments, patterns, or compilations of information that have inherent economic value because they are not generally known or readily ascertainable by others and which the owner takes reasonable measures to keep secret.[25] In some jurisdictions, trade secrets are referred to as a specific type of confidential information that meet legal standards for protection.[26]

Most states have adopted the Uniform Law Commission Uniform Trade Secrets Act.[27] Additionally, the 2016 Federal Defend Trade Secrets Act was created so that owners of trade secrets may file lawsuits in federal court.[28]

Trade secrets are protected through private legal action under state laws and the federal Defend Trade Secrets Act (DTSA).[29] Additionally, the Economic Espionage Act of 1996 criminalizes trade secret theft, providing legal consequences for misappropriation.[30]

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[23] *See Do I need an attorney?*, USPTO, https://www.uspto.gov/trademarks/basics/do-i-need-attorney (last visited Feb. 19, 2025).

[24] Henry J. Weiner, *You Snooze, You Lose: The Doctrine of Latches in Trademark Enforcement*, 9 STATE BAR OF WIS. BUS. L. (2017) ("A laches defense claims that the plaintiff has delayed bringing an action for such a long period of time that the defendant party has been prejudiced").

[25] 18 U.S.C. §§ 1839(3), (5)(B).

[26] Vivian Desmonts & Alexis Augustin, *Confidential information, know-how and trade secrets: The importance of definition in valuation*, Gowling WLG (Sept. 12, 2023), https://gowlingwlg.com/en/insights-resources/articles/2023/distinction-confidential-information-know-how#_ftn1.

[27] *See Trade Secrets Act*, UNIF. L. COMM'N, https://www.uniformlaws.org/committees/community-home?communitykey=3a2538fb-e030-4e2d-a9e2-90373dc05792 (last visited Feb. 19, 2025).

[28] 18 U.S.C. §§ 1831, 1836(b).

[29] *Trade secrets/regulatory data protection*, U.S. PAT. AND TRADEMARK OFF., https://www.uspto.gov/ip-policy/trade-secret-policy (last visited Feb. 19, 2025).

[30] *Id.*

II.   History of Artificial Intelligence (AI)

Although the media has promoted AI in the past couple of years, in fact, most computer professionals believe that the field of AI was initially founded in 1956 at Dartmouth University and has been in wide-spread use ever since.[31] However, most software companies did not promote AI features in a way that users knew or understood that AI was being used.

By way of example, the most common form of AI used in the past thirty years has been machine learning (ML), where computer software is trained by adding data to educate the software.[32] In 2025, Internet users rely on search engines such as Google, Bing, and other platforms to find information online. Every user adds data with each search, and over time, because of ML, the search engine knows what the user seeks or which URL they want to visit and review.[33]

The foundation of the Internet began in 1958 following Russia's launch of Sputnik in 1957, which prompted the creation of the Defense Advanced Research Projects Agency (DARPA) for United States military purposes.[34] Much like the old days before Microsoft Windows in 1985, using computers was more of challenge since computer users needed to know and understand Disk Operating System (DOS) commands.[35] With the advent of Windows computer users could use a mouse with graphics rather than having to know all the complex DOS commands.

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[31] Andreas Kaplan & Michael Haenlin, *Siri, Siri, in my hand: Who's the fairest in the land? On the interpretations, illustrations, and implications of artificial intelligence*, 62 BUS. HORIZONS 15, 19 (2018), https://www.sciencedirect.com/science/article/pii/S0007681318301393?via%3Dihub.

[32] *See* Sara Brown, *Machine learning, explained*, MIT MGMT. SLOAN SCH. (Apr. 21, 2021), https://mitsloan.mit.edu/ideas-made-to-matter/machine-learning-explained#:~:text=Supervised%20machine%20learning%20models%20are,most%20common%20type%20used%20today.

[33] Kevin Rowe, *How Search Engines Use Machine Learning: 9 Things We Know For Sure*, SEARCH ENGINE JOURNAL (Aug. 13, 2021), https://www.searchenginejournal.com/ml-things-we-know/408882/.

[34] *About DARPA*, DEF. ADVANCED RSCH PROJECTS AGENCY, https://www.darpa.mil/about (last visited Mar. 9, 2025); Barry M. Leiner et al., *Brief History of the Internet*, INTERNET SOC'Y (1997), https://www.internetsociety.org/wp-content/uploads/2017/09/ISOC-History-of-the-Internet_1997.pdf.

[35] *Microsoft Windows*, BRITANNICA, https://www.britannica.com/technology/Microsoft-Windows (last visited Mar. 9, 2025).

Until November 30, 2022, when OpenAI introduced ChatGPT,[36] only people who worked in the Information Technology (IT) industry worked with AI and ML. The widespread publicity led to 100 million customers by January 2023, and that changed everything.[37] Since then, AI has been headline news every day.

A. AI at the Copyright Office

As early as 1965, the Copyright Office began questioning the use of software to create copyrighted works and issued a report including this statement:

> The crucial question appears to be whether the "work" is basically one of human authorship, with the computer merely being an assisting instrument, or whether the traditional elements of authorship in the work (literary, artistic, or musical expression or elements of selection, arrangement, etc.) were actually conceived and executed not by man but by a machine.[38]

After the 1976 Copyright Act, in 1978, the *National Commission on New Technological Uses of Copyrighted Works (CONTU)* issued its Final Report which had been established by Congress:

> [A]s part of an effort to revise comprehensively the copyright laws of the United States . . . concerning those changes in copyright law or procedure needed both to assure public access to copyrighted works used in conjunction with computer and machine duplication systems and to respect the rights of owners of copyrights in such works, while considering the concerns of the general public and the consumer.[39]

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[36] Bernard Marr, *A Short History of ChatGPT: How We Got To Where We Are Today*, FORBES (May 19, 2023, 1:14 A.M.), https://www.forbes.com/sites/bernardmarr/2023/05/19/a-short-history-of-chatgpt-how-we-got-to-where-we-are-today/.

[37] Dan Milmo, *ChatGPT reaches 100 million users two months after launch*, THE GUARDIAN (Feb. 2, 2023, 3:46 PM), https://www.theguardian.com/technology/2023/feb/02/chatgpt-100-million-users-open-ai-fastest-growing-app?CMP=share_btn_url.

[38] 68 U.S. COPYRIGHT OFF. ANN. REP. 5 (1965).

[39] 1979 U.S. DEP'T OF COM., Stanley H. Fuld, *Final Report of the July 31, 1978 National Commission on New Technological Uses of Copyrighted Works*, LIBR. OF CONG. COPYRIGHT OFF., 1979, at 1.

CONTU addressed these issues and made recommendations in the Final Report and specifically in Chapter 3, "Computers and Copyrights."[40]

Because of the dramatic increase in the use of AI in 2022, on August 30, 2023, the Copyright Office issued the following Notice in the Federal Register about artificial intelligence and copyright:

> The United States Copyright Office is undertaking a study of the copyright law and policy issues raised by artificial intelligence ("AI") systems. To inform the Office's study and help assess whether legislative or regulatory steps in this area are warranted, the Office seeks comment on these issues, including those involved in the use of copyrighted works to train AI models, the appropriate levels of transparency and disclosure with respect to the use of copyrighted works, and the legal status of AI-generated outputs.[41]

Following the NOI in July 2024, the Copyright Office issued its *Copyright and Artificial Intelligence, Part 1: Digital Replicas Report* in which the Register of Copyrights stated in the Foreword:

> One of the areas affected is intellectual property. Copyright issues in particular have risen to the forefront, due to their visibility, immediacy, and relevance to the average person. By the fall of 2022, millions of Americans were utilizing generative AI systems and services to produce an astonishing array of expressive material, including visual art, text, and music. Almost weekly, tremendous strides have been announced in the technology's capabilities. Artists have harnessed the power of AI to find new ways to express themselves and new ways of connecting with audiences. At the same time, AI-generated deepfakes have proliferated online, from celebrities' images endorsing products to politicians' likenesses seeking to affect voter behavior. Over the past year or so, the resulting debates have intensified, with enthusiasm about the promise of extraordinary technical potential

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[40] *Id.* at 9–46.

[41] Notice of Inquiry, 88 Fed. Reg. 59942, 59948 (Aug. 30, 2023).

tempered by concern about the impact on individuals'
livelihoods and reputations.[42]

The *Copyright and Artificial Intelligence, Part 1 Digital Replicas Report*
stated that there were approximately 1,000 responses from individuals
to NOI. "The majority advocated for the enactment of new federal
legislation. The scope, duration, and assignability of the right to be
provided, as well as its relationship to existing state laws, were the
subject of greater disagreement."[43]

As well, the Federal Trade Commission submitted a response to the
NOI, stating: "The FTC is empowered under Section 5 of the FTC
Act to protect the public against unfair methods of competition,
including when powerful firms unfairly use AI technologies in a
manner that tends to harm competitive conditions."[44]

> It explained that it is empowered to protect the public
> against deceptive and unfair uses of AI technologies
> that harm competition, and "there is no AI exemption
> from the laws on the books." According to the FTC,
> the use of a digital replica that mimics an individual's
> voice and likeness might qualify as an unfair method
> of competition or an unfair or deceptive practice,
> particularly if it "deceives consumers, exploits a
> creator's reputation or diminishes the value of her
> existing or future works, reveals private information,
> or otherwise causes substantial injury to consumers.[45]

In January 2025, the Copyright Office issued its *Copyright and Artificial
Intelligence, Part 2: Digital Copyrightability Report* which updated the
number of responses to the NOI in the Preface:

> [W]e received more than 10,000 comments
> representing a broad range of perspectives, including
> from authors and composers, performers and artists,
> publishers and producers, lawyers and academics,
> technology companies, libraries, sports leagues, trade
> groups and public interest organizations, and even a
> class of middle school students. Comments came from

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[42] U.S. COPYRIGHT OFFICE, *Foreword* to COPYRIGHT AND ARTIFICIAL INTELLIGENCE
PART 1: DIGITAL REPLICAS, (2024) [hereinafter *Digital Replicas*].
[43] *Id.* at 6.
[44] *Id.* at 18 n.110.
[45] *Id.* at 18.

all 50 states and from 67 countries. That valuable and extensive input, supplemented by additional Office research and information received from other agencies, forms the basis for the discussion and recommendations in this Report.[46]

The *Copyright and Artificial Intelligence, Part 2: Digital Copyrightability* Report focuses on AI and "addresses the copyrightability of outputs generated by AI systems. It analyzes the type and level of human contribution sufficient to bring these outputs within the scope of copyright protection in the United States[]" since:

> . . . of the more than 10,000 comments the Office received in response to its Notice of Inquiry ("NOI"), approximately half addressed copyrightability. The vast majority of commenters agreed that existing law is adequate in this area and that material generated wholly by AI is not copyrightable.
>
> Commenters differed, however, as to protection for generative AI outputs that involve some form of human contribution. They expressed divergent views on what types and amounts of contribution could constitute authorship under existing law. Many also stressed the desirability of greater clarity in this area, including with respect to the use of AI as a tool in the creative process.[47]

The *Digital Copyrightability* Report also highlights the definition of copyrightability under the 1976 Copyright Act while outlining the Copyright Office's future priorities regarding AI and copyright.

B. Copyright AI Lawsuits

The *Copyright and Artificial Intelligence, Part 1: Digital Replicas Report* explained in the Introduction:

> In April of 2023, a new song featuring the voices of Drake and The Weeknd drew over fifteen million views on social media and six hundred thousand listens on Spotify. Footnote 3 Yet neither artist was

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[46] U.S. COPYRIGHT OFFICE, *Preface* to COPYRIGHT AND ARTIFICIAL INTELLIGENCE PART 2: COPYRIGHTABILITY, (2025) [hereinafter *Copyrightability*].

[47] *Id.* at ii.

aware of the song before its release, because the vocals were unauthorized, AI-generated replicas.

The viral hit "Heart on My Sleeve," commonly referred to as the "Fake Drake" song, is a high-profile example of a burgeoning subgenre of sound recordings using generative AI systems to create vocals that can pass for those of a favorite artist. Vocal tracks are merely one form of increasingly realistic replicas of individuals' voices, images, and artistic styles. In a short period of time, generative AI technology has become so sophisticated, and so accessible, that minimal expertise is required to rapidly produce such replicas. On social media and other internet platforms, their volume has skyrocketed.[48]

The *Copyright and Artificial Intelligence, Part 2: Digital Copyrightability Report* states:

For a work created using AI, like those created without it, a determination of copyrightability requires fact-specific consideration of the work and the circumstances of its creation. Where AI merely assists an author in the creative process, its use does not change the copyrightability of the output. [] At the other extreme, if content is entirely generated by AI, it cannot be protected by copyright.[49]

Of course, there are many other cases in federal court challenging AI and Copyright laws, but these cases cited in the Reports highlight key ongoing litigation.[50]

C. U.S. House of Representatives

On December 1, 2024, the Speaker of the United States House of Representatives issued its 273-page *House Bipartisan Task Force on Artificial Intelligence*,[51] which includes much more than just intellectual property law, but also AI issues in these fourteen areas:

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[48] *Digital Replicas*, *supra* note 42, at 1 (report citing other sources in its footnotes).
[49] *Copyrightability*, *supra* note 46, at 2 (report citing other sources in its footnotes).
[50] *Id.* at 7–11; *Digital Replicas*, *supra* note 42, at 8–21.
[51] 118TH CONG., BIPARTISAN TASK FORCE REPORT ON ARTIFICIAL INTELLIGENCE (2024).

1. Government Use
2. Federal Preemption of State Law
3. Data Privacy
4. National Security
5. Research, Development, and Standards
6. Civil Rights and Civil Liberties
7. Education and Workforce
8. Intellectual Property
9. Content Authenticity
10. Open and Closed Systems
11. Energy Usage and Data Centers
12. Small Business
13. Agriculture
14. Healthcare
15. Financial Services[52]

Of course, the *House Bipartisan Task Force on Artificial Intelligence* is not a report on laws that are guaranteed to be enacted, given the legislative process of the United States Congress, but rather on what legal issues about AI the United States Congress should consider.[53]

III.   Conclusion

Of course, it is anyone's best guess what Congress will do about creating new AI laws regarding copyright, but whatever the new laws are, they will be presented to the United States Federal District judges first. Appeals from those district judges will be appealed to the United States Circuit Courts of Appeal in the future and, at some point, the United States Supreme Court. However, no one knows how the United States Courts will deal with the new AI copyright laws.

In 2023, the think tank of the United States Supreme Court, also known as the Federal Judicial Center, issued *An Introduction to Artificial Intelligence for Federal Judges*.[54] The report opens with the "Four Questions Every Judge Should Ask About AI" and the sentiment that "AI is not a single piece of hardware or software, but rather, a constellation of technologies that gives a computer system the ability to solve problems and to perform tasks that would otherwise require human intelligence."[55]

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[52] *Id.*

[53] *Id.* at v.

[54] JAMES E. BAKER ET AL., FED. JUD. CTR., AN INTRODUCTION TO ARTIFICIAL INTELLIGENCE FOR FEDERAL JUDGES, at 1 (2023).

[55] *Id.* at 5.

Here are the Four Questions:

> Judges must understand how AI works, its applications, its implications for the fact-finding process, and its risks. They should be able to answer the following four questions in context:

> 1. How is AI being used in court or to inform judicial decisions?
> 2. Does the fact finder understand the AI's strengths, limitations, and risks, such as bias?
> 3. Is the AI application authentic, relevant, reliable, and material to the issue at hand, and is its use or admission consistent with the Constitution, statutes, and the Rules of Evidence?
> 4. Has an AI algorithm, a human, or some combination of the two made "the judicial decision," and, in all cases, has that decision been documented in an appropriate and transparent manner allowing for judicial review and appeal?[56]

Only time will tell, so it is critical that the courts are ready for AI in future copyright laws.

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[56] *Id.* at 6.

The following is a supplementary infographic for *Why New AI Laws May Not Change United States Copyright Laws in the Future Since AI Has Been in Widespread Use in Software Systems For 30+ Years* created to promote legal comprehension.

WHY U.S. COPYRIGHT LAW MAY NOT CHANGE MUCH DESPITE THE RISE OF ARTIFICIAL INTELLIGENCE (AI)

Defining Copyright Law and Artificial Intelligence

Copyright law protects an author's original creative works as long as those works are captured in a form that can be seen, heard, or touched--like a document, recording, or video.[1]

Think of artificial intelligence (AI) as a machine that can think on its own.[2] AI tools like OpenAI's ChatGPT can follow instructions given in plain, conversational language.[3] Users can then prompt AI to generate outputs that resemble creative works.[4]

Artificial Intelligence ≠ New Tech

- AI has powered search engines and software since the 1950s.[5]
- Machine learning, which is a type of AI that allows computers to improve their performance by analyzing data, was used long before ChatGPT.[6]
- Many users were simply unaware that AI was used in software before the launch of ChatGPT.

Human Authorship Is Still The Rule

- Copyright law protects human creativity--not computer output[7]
- If AI generates 100% of the content, it's likely not protected[8]
- But if AI is used solely as a tool to assist in the creative process, it may qualify for copyright protection[9]
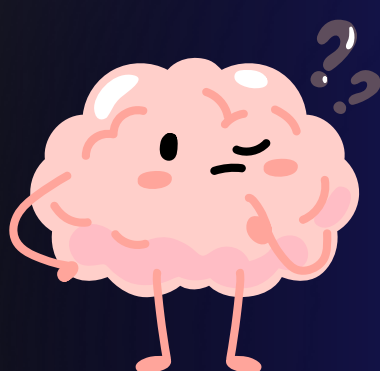
No Major Shift... Yet

Even after reports and investigations on the matter, the courts and the Copyright Office still say:

- Fully AI-generated content = not copyrightable[10]
- Human-AI hybrids = decided case-by-case[11]

The "Fake Drake" Example of a Fully AI-Generated Creative Work

In 2023, an AI-generated song using fake voices of Drake & The Weeknd went viral with 15 million views.[12]

But the artists never recorded it. Thus, no human creativity = no copyright protection.[13]

Three Key Takeaways

1. AI is evolving fast but U.S. copyright law already draws a clear line:
   - No human = No protection[14]
2. While the law may evolve to address new iterations of technology, the requirement of human creativity is unlikely to change.
3. When a human plays a meaningful role in the creation of a work, it is more likely to qualify for copyright protection.

Source: *Why New AI Laws May Not Change United States Copyright Laws In The Future Since AI Has Been In Widespread Use In Software Systems For 30+ Years* by Peter S. Vogel. Infographic created by Frank Brown, Staff Reporter (3E).

References:
[1] 17 U.S.C. § 102 (a).
[2] Tim Mucci, *The History Of Artificial Intelligence*, IBM (Oct. 21, 2024), https://www.ibm.com/think/topics/history-of-artificial-intelligence.
[3] *Id.*
[4] *Id.*
[5] *Id.*
[6] *Id.*
[7] U.S. Copyright Off., *Preface* to COPYRIGHT AND ARTIFICIAL INTELLIGENCE PART 2: COPYRIGHTABILITY, (2025) [hereinafter *Copyrightability*].
[8] *Id.* at 2.
[9] *Id.*
[10] *See* Thaler v. Perlmutter, 687 F. Supp. 3d 140, 148 (D.D.C. 2023).
[11] *Copyrightability*, supra note 7, at 2.
[12] U.S. Copyright Off., *Foreword* to COPYRIGHT AND ARTIFICIAL INTELLIGENCE PART 1: DIGITAL REPLICAS, (2024).
[13] *See Thaler*, 687 F. Supp. 3d at 148.
[14] *Id.*

<u>The Industry and Public Policy Context of the Texas</u>
<u>Responsible Artificial Intelligence Governance Act</u>

Nicole Hinson

Artificial Intelligence (AI) is a significant technological advancement that has transformed many different industries from national security to transportation.[57] What once was an idea in futuristic television shows and movies has now become integrated into many parts of everyday life, namely, the workplace.[58] Despite the fast-growing development and use of AI in employment, virtually no guidelines or regulations exist on how AI can be used.[59] That is, until December 23, 2024, when Texas House Bill 1709, also known as the Texas Responsible Artificial Intelligence Governance Act (hereinafter referred to as "the Bill"), was introduced to the Texas House of Representatives.[60] The purpose of the Bill is to encourage responsible development of AI programs, protect people from the risks of using AI, and promote transparency and notice about the usage of AI.[61] The Bill addresses the growing concerns with "high-risk artificial intelligence systems."[62]

This Bill does not come as a surprise, though. Texas has taken many small steps over the past few years to research and monitor the use of AI. In 2023, Governor Greg Abbott established the Artificial Intelligence Advisory Council.[63] While this council was not in charge of any policymaking, their efforts largely impacted the decision to create the Bill.[64] The author of the Bill, House Representative

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[57] Darrell M. West & John R. Allen, How artificial intelligence is transforming the world (Brookings, 2018).

[58] *AI In The Workplace – Important Considerations And Things Employers Need To Do Now*, Buchanan (Jan. 30, 2024), https://www.bipc.com/ai-in-the-workplace-important-considerations-and-things-employers-need-to-do-now.

[59] Matthew U. Scherer, *Regulating Intelligence Systems: Risks, Challenges, Competencies, and Strategies*, 29 Harv. J. Law & Tech. 354, 356 (2016).

[60] Tex. H.B. 1709, 89th Leg., R.S. (2024).

[61] *Id.* at § 551.101.

[62] Alonzo Martinez, *Texas HB 1709: The AI Law Every Employer Needs to Know About*, Forbes (Jan. 17, 2025, 8:00 AM), https://www.forbes.com/sites/alonzomartinez/2025/01/17/texas-hb-1709-the-ai-law-every-employer-needs-to-know-about/.

[63] Press Release, Office of the Texas Governor, Governor Abbott Establishes New Artificial Intelligence Advisory Council (Jun. 13, 2023) (on file with author).

[64] *Id.*

Giovanni Capriglione, was also the council's chairman.[65] In their final report in November 2024, the council made twenty recommendations on policy changes and new legislation that should be passed to regulate AI.[66]

Has similar legislation been enacted?

Despite the lack of regulation, Texas is not the first state to join the party. Almost 41 states have tried to enact similar legislation.[67] Even with the uptick in states recognizing the importance of AI regulation, only half have successfully passed legislation.[68] Colorado, California, Illinois, and Utah were some of the first.[69] The common theme among the passed and proposed bills is that AI use must be fair and transparent.[70]

Has there been opposition to the Texas bill?

Despite nationwide legislation, the bills do not come unopposed. In Texas, many legislators and citizens are against such stringent regulations on the use of AI. The main concerns arise from the cost of potential compliance, ambiguities within the frameworks, and worries that "heavy-handed" regulation could lead to a lack of innovation and growth.[71] Instead, many AI regulation bill opponents seek "narrowly tailored" or sector-specific policies.[72]

What are the main concerns of using AI in the workplace?

Businesses use AI in the workplace in various ways, including hiring and recruitment, performance monitoring, analytics, and the

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[65] Keaton Peters, *More than a third of state agencies are using AI. Texas is beginning to examine its potential impact*, TEX. TRIBUNE, Jan. 2, 2024, https://www.texastribune.org/2024/01/02/texas-government-artificial-intelligence/.

[66] HOUSE COMM. ON ARTIFICIAL INTELLIGENCE & EMERGING TECH., A REPORT TO THE HOUSE OF REPRESENTATIVE 89TH TEXAS LEGISLATURE, 88TH TEX. LEG., at 33–34 (2024).

[67] *The Evolving Landscape of AI Employment Laws: What Employers Should Know in 2025*, HUNTON (Feb. 12, 2025), https://www.hunton.com/insights/publications/the-evolving-landscape-of-ai-employment-laws-what-employers-should-know-in-2025?utm_source=chatgpt.com#socialShare.

[68] *Id.*

[69] *Id.*

[70] *Id.*

[71] Oliver Roberts, *Overbroad Texas AI Bill Threatens Innovation and Economic Growth*, BLOOMBERG LAW (Jan. 6, 2025, 3:30 AM), https://news.bloomberglaw.com/us-law-week/overbroad-texas-ai-bill-threatens-innovation-and-economic-growth.

[72] *Id.*

company's essential decision-making.[73] Despite the wide use of AI to increase productivity and efficiency, there are still privacy and discrimination concerns.[74]

1. Privacy

Employee data collection and surveillance are at the forefront of issues regarding any type of AI usage.[75] AI systems can monitor employee performance and communications and analyze their behavior patterns in the workplace.[76] Additionally, businesses can collect sensitive data without proper consent from employees.[77] Despite the argument that this tool increases productivity, constant monitoring can lead to the feeling that "big brother" is watching, eroding the trust employees have in their employer.[78]

Further, AI systems rely on input to function, which can raise concerns about how data is stored, protected, and shared.[79] Without clear communication, employees may be unaware of how their data is used or who can access it.[80] Without extensive guidelines and oversight, these systems could expose sensitive information.[81]

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[73] Amanda McCloskey, *Keepin' It Real: Considerations for Employers Using Artificial Intelligence*, TROUTMAN PEPPER LOCKE (Feb. 28, 2024), https://www.troutman.com/insights/keepin-it-real-considerations-for-employers-using-artificial-intelligence.html.

[74] Margot E. Kaminski, *Regulating the Risks of AI*, 103 B.U.L. Rev. 1347, 1378 (2023).

[75] MERVE HICKOK & NESTOR MASLEJ, A POLICY PRIMER AND ROADMAP ON AI WORKER SURVEILLANCE AND PRODUCTIVITY SCORING TOOLS 673 (Springer Nature Switzerland AG, 2023), https://pmc.ncbi.nlm.nih.gov/articles/PMC10026198/.

[76] Marguerita Lane & Morgan Williams, *Defining and classifying AI in the workplace* 21 (Org. for Econ. Coop. and Dev., Working Paper No. 290, 2023) [hereinafter *Lane*].

[77] *Id.* at 21–22.

[78] Samantha Murphy Kelly, *Your company probably knows you're reading this story at work*, CNN (Mar. 4, 2024, 7:51 AM), https://www.cnn.com/2024/03/04/tech/ai-companies-monitor-employees-at-work.

[79] Lane, *supra* note 20, at 18.

[80] Joseph J. Lazzarotti & Damon W. Silver, *Happy Privacy Day: Emerging Issues in Privacy, Cybersecurity, and AI in the Workplace*, NATIONAL L. REV. (Jan. 29, 2025), https://natlawreview.com/article/happy-privacy-day-emerging-issues-privacy-cybersecurity-and-ai-workplace.

[81] John K. Waters, *1 in 10 Prompts Could Expose Sensitive Data*, THE JOURNAL (Jan. 22, 2025), https://thejournal.com/Articles/2025/01/22/1-in-10-AI-Prompts-Could-Expose-Sensitive-Data.aspx.

2. Discrimination

Moreover, the use of AI also raises a host of concerns about workplace discrimination.[82] AI systems are "trained" using historical data, which can reflect centuries of biases in hiring and promoting.[83] Studies have shown that AI systems put women and minorities at a disadvantage due to biased data training.[84] Without a human's touch, AI-made employment decisions can actually lead to more workplace discrimination.[85]

What steps would employers need to take to comply with the Bill?

The Bill places strenuous policies on the usage of AI in the workplace and is one of the strictest proposed bills by any state regulating AI.[86] Employer compliance with the proposed guidelines would require many steps but could alleviate future trouble if the Bill is enacted.[87]

1. Human oversight and evaluations

The most prominent theme throughout the Bill is ensuring human oversight and strict assessment protocols to monitor the AI systems used.[88] What would this look like for employers who use AI in essential decisions? Under the proposed law, businesses would be required to conduct annual reviews of their AI systems to ensure there are no algorithmic biases leading to discrimination.[89] Additionally, companies must conduct semi-annual system evaluations when significantly modifying their system.[90] The Bill drafters deemed evaluations necessary to ensure fairness and accuracy within the systems and how they make their decisions.[91]

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[82] Olga Akselrod & Cody Venzke, *How Artificial Intelligence Might Prevent You From Getting Hired*, ACLU (Aug. 23, 2023), https://www.aclu.org/news/racial-justice/how-artificial-intelligence-might-prevent-you-from-getting-hired.

[83] *Id.*

[84] *Id.*

[85] *Id.*

[86] James Broughel, *Texas' Left Turn on AI Regulation*, FORBES (Jan. 26, 2025, 6:00 AM), https://www.forbes.com/sites/jamesbroughel/2025/01/26/texass-left-turn-on-ai-regulation/.

[87] Martinez, *supra* note 6.

[88] Shelly Womack, *Big Country Politics: Tackling AI Regulation with House Bill 1709*, BIG COUNTRY (Jan. 5, 2025, 3:29 PM), https://www.bigcountryhomepage.com/big-country-politics/big-country-politics-tackling-ai-regulation-with-house-bill-1709/.

[89] Tex. H.B. 1709 § 551.006(a); Martinez, *supra* note 6.

[90] Tex. H.B. 1709 § 551.006(a).

[91] Martinez, *supra* note 6.

2. Transparency and disclosures

Another important theme throughout the Bill is employee and candidate transparency.[92] The Bill requires businesses to disclose to clients and employers alike their AI usage.[93] This disclosure must include the purpose, the nature of its capabilities, and the potential impact of its outputs.[94] Businesses must also provide contact information for those who oversee the AI systems, so individuals can seek clarification or question decisions driven by these systems.[95] By enacting these guidelines, the Bill aims to help individuals challenge unfair AI systems and increase accountability amongst employers.[96]

Conclusion

While the Texas Legislature has not yet passed the Bill, employers can be proactive by preparing for compliance. Employers can get ahead of the curve by familiarizing employees with their AI systems, enacting regular evaluations, and training those who use the systems for essential decisions.[97] By establishing compliance strategies, businesses will be better equipped to transition if the Bill is enacted.[98] Regardless of the Bill's legislative outcome, the Texas Legislature has taken a big step in recognizing the growing importance of AI's role in the workplace while also understanding that checks must be in place to keep the systems fair and reliable.[99]

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[92] Womack, *supra* note 32.

[93] Tex. H.B. 1709 § 551.007.

[94] *Id.*

[95] *Id.*

[96] Martinez, *supra* note 6.

[97] Martinez, *supra* note 6.

[98] Martinez, *supra* note 6.

[99] Martinez, *supra* note 6.

A CARETAKER'S GUIDE TO POWER OF ATTORNEY: ESSENTIAL LEGAL PROTECTION FOR IMMIGRANT FAMILIES IN TEXAS

Ashley Juárez

In the first week of his second term, President Donald Trump signed ten executive orders on immigration, fulfilling his campaign promises of mass deportations and validating the fears that immigrant communities had long expressed.[1] As the administration implements their policies, courts and civil rights advocates across the country are pushing back.[2] Most recently, the Supreme Court's decision in *Noem v. Abrego Garcia* ordered the administration to "facilitate" the return of Kilmar Armando Abrego Garcia, an immigrant father who was sent to El Salvador and remains in custody there.[3] Immigration policies remain up in the air: while courts review Trump's executive orders, his administration is advancing new initiatives, including plans to expand family detention centers and expediting deportation processes.[4] This rapid evolution of policies in January alone has created uncertainty for many immigrant families as they fear mass deportations and expedited removal programs.

In response to this uncertainty, nonprofits and advocates across the country have mobilized to educate immigrant communities about their constitutional rights during encounters with Immigration and Customs Enforcement (ICE) agents.[5] These "Know Your Rights" workshops help spread awareness to immigrant communities, many of which are unable to afford legal counsel.[6] Equally critical is the need for immigrant caretakers to establish legal safeguards for their

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[1] Carrie Hoffman et al., *President Trump's Inauguration Day Immigration Executive Orders*, MONDAQ (Jan. 24, 2025), https://www.mondaq.com/unitedstates/general-immigration/1574346/president-trumps-inauguration-day-immigration-executive-orders.

[2] Washington v. Trump, No. C25-0127-JCC, 2025 U.S. Dist. LEXIS 12121, at *3 (W.D. Wash. Jan. 28, 2025) (issuing a temporary restraining order to prohibit enforcement of an executive order that would restrict birthright citizenship protections).

[3] Noem v. Abrego Garcia, No. 24A949, 2025 U.S. Dist. LEXIS 1456, at *5 (U.S. Apr. 10, 2025).

[4] Julia Ainsley, *Trump administration preparing to restart immigrant family detention*, NBC NEWS (Feb. 7, 2025, 4:36 PM), https://www.nbcnews.com/politics/national-security/trump-administration-preparing-restart-immigrant-family-detention-rcna191230.

[5] *Know Your Rights: Prepare For Trump's Mass Deportation Threats*, NAT'L IMMIGRANT JUST. CTR. (Dec. 2024), https://immigrantjustice.org/know-your-rights/mass-deportation-threats.

[6] *Access To Counsel*, NAT'L IMMIGRANT JUST. CTR., https://immigrantjustice.org/issues/access-counsel (last visited Apr. 14, 2025).

children before any potential family separation occurs. This article provides immigrant caretakers with two practical tools: (1) a safety plan checklist to protect their children's immediate well-being, and (2) a step-by-step guide to creating and executing a Statutory Durable Power of Attorney ("Power of Attorney")—a legal document that ensures trusted individuals can make crucial decisions for children if their parents become unavailable.

What should I include in my Safety Plan Checklist?

As a caretaker, the following is a list of items that you can do without the need for an attorney:[7]

- Identify emergency contacts and memorize their phone numbers.
- Provide your child's school or daycare with an emergency contact to pick up your child.
- Make sure your loved ones know they can use ICE's online detainee locator to find you if you are detained: https://locator.ice.gov/odls/#/search.[8]
- Keep your identity information and financial information in a safe location.
- Make sure your emergency contact can access all your documents.
- Ask for copies of everything you sign.

What is a "Power of Attorney"?

A Power of Attorney is a legal document that allows an individual (the "principal") to designate another person (the "agent") to act on the principal's behalf in financial, medical, and legal matters.[9] In Texas, a Power of Attorney remains effective even if the principal becomes incapacitated.[10] The document may define "incapacity" to

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[7] For a comprehensive list on what you should include in your Safety Plan Checklist, please visit https://www.acluct.org/sites/default/files/field_documents/0918_immigrants_rights_kyr_guide.pdf.

[8] To search for an individual, you will need either their alien registration number (A-Number) or their biographical information (first name, last name, country of birth, and birth date). *Online Detainee Locator System*, U.S. IMMIGR. & CUSTOMS ENF'T, https://locator.ice.gov/odls/#/search (last visited Apr. 14, 2025).

[9] *Powers of Attorney*, TEX. STATE L. LIBR., https://guides.sll.texas.gov/powers-of-attorney (last updated Apr. 8, 2025, 4:39 PM).

[10] *See* Tex. Est. Code Ann. § 751.131.

include a forced separation through deportation where a parent is unable to make the important decisions for their children.[11]

Therefore, immigrant parents can use a Power of Attorney to designate a trusted family member or friend who will have the authority to make crucial decisions if deportation forces family separation.

What happens if you are deported without having created a Power of Attorney?

Without an established Power of Attorney, caregivers face significant obstacles in making essential decisions for children of deported parents. Appointing a legal guardian without a Power of Attorney is often a costly and lengthy process.[12] Beyond the delays caused by court proceedings, the caretaker faces complex legal requirements, including proving that guardianship serves the child's best interests, notifying all potential caregivers, and potentially being required to testify in court proceedings.[13] The caretaker will need an attorney to help navigate this process, which can leave children in an uncertain legal situation while the court makes its determination.[14]

However, a properly executed Power of Attorney, accompanied by a letter expressing the parent's wishes for custody in case of deportation, gives the caregiver the authority to take immediate action and prevent delays in crucial decisions about the child's education, healthcare, and daily needs.

How do you draft a valid Power of Attorney for your children?

Any adult who is at least eighteen years old and mentally competent can create a Power of Attorney.[15] The Texas Estates Code requires four essential elements for validity:

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[11] Tex. Est. Code Ann. § 751.00201 (defining "incapacitated" under a SDPOA: "Unless otherwise defined [in the Power of Attorney], an individual is considered . . . incapacitated . . . if a physician certifies . . . the individual is determined mentally incapable of managing the individual's financial affairs.").

[12] TEX. HEALTH & HUM. SERVS., A TEX. GUIDE TO ADULT GUARDIANSHIP 3, www.huntcounty.net/upload/page/10448/docs/A%20Texas%20Guide%20to%20Adult%20Guardianships.pdf (last visited Apr. 14, 2025).

[13] Tex. Est. Code Ann. § 1101.151(a); Texas RioGrande Legal Aid, *Guardianship*, TEX. L. HELP, https://texaslawhelp.org/article/guardianship (last updated Sept. 5, 2023, 4:21 PM).

[14] *Id.*

[15] Tex. Est. Code Ann. § 751.0021(a)(2).

(1) **Written Record**: The document must be in writing and clearly designate an agent to act on behalf of the parent (the principal), though it need not explicitly use the term "power of attorney."

(2) **Signed**: The parent must sign the document or direct another adult to sign on their behalf.

(3) **Language:** The document must include specific language about durability, meaning it remains effective even if the parent becomes unable to act. This can be accomplished by including language from at least one of the following:

- "This Power of Attorney is not affected by subsequent disability or incapacity of the principal.";
- "This Power of Attorney becomes effective on the disability or incapacity of the principal."; or
- Similar language that clearly conveys the caretaker's authority will continue despite the parent's removal.

(4) **Notarized**: The document must be acknowledged before a notary public. The document must only be filed for real estate transactions.[16]

In some situations, documents created in other states with similar durability provisions may also qualify as valid under Texas law.[17] Because the Power of Attorney does not need to be filed with the county, it is highly recommended to store the document with the caretaker in case it needs to be produced in an emergency.[18]

What decisions can caretakers make?

The Texas statutory Power of Attorney form allows parents to authorize their chosen agent to handle a broad range of decisions crucial for their children's well-being. While the statutory form lists fourteen categories of authority, parents can customize these powers to meet their family's specific needs.[19] For immigrant families preparing for potential separation, several categories deserve special attention, including: personal and family maintenance powers,

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[16] Tex. Est. Code Ann. § 751.0021(a).

[17] Tex. Est. Code Ann. § 751.0021(b).

[18] *See* Legal Hotline for Texans, *Powers of Attorney*, TEX. L. HELP, https://texaslawhelp.org/article/powers-of-attorney (last updated Jan. 2, 2023).

[19] Tex. Est. Code Ann. §§ 752.051–.052.

financial powers, government benefits, and legal and administrative matters.

Can you terminate the power of attorney?

A Power of Attorney will automatically terminate in specific situations: upon the death of either the parent or caretaker, when its specified purpose is completed, on its expiration date (if one exists), or if the agent becomes incapacitated or resigns.[20] The document also terminates if a court appoints a permanent guardian.[21]

While parents have the right to revoke the Power of Attorney even after deportation, there are steps the parents would have to take for an effective revocation. The Texas Estates Code does not list a process for revocation; however, keep in mind that a revocation or modified Power of Attorney will not affect third parties who do not have actual knowledge of it.[22] Therefore, it is important and necessary for the parent to notify all relevant parties—including schools, healthcare providers, and financial institutions—about the termination of the agent's authority. If the Power of Attorney has been filed, the parent should file revocations to ensure there are no issues in the future. Maintaining clear documentation and establishing reliable communication channels for potential revocation is essential.

Where can you get help?

If you're planning to make these arrangements for your family, it would be beneficial to consult an immigration or family-law attorney to ensure accuracy and comprehensive coverage.

If you are unable to afford legal representation, there are still several options available. Your local bar association can connect you with attorneys who provide pro bono (free) services.[23] Additionally, numerous legal aid organizations in Texas specialize in immigration matters, including American Gateways, Catholic Charities, Border Immigration Law & Justice Center, Justice for All Immigrants, Justice for Our Neighbors North Central Texas, Austin Region Justice for

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[20] Tex. Est. Code Ann. § 751.131.

[21] Tex. Est. Code Ann. § 751.131(6).

[22] Tex. Est. Code Ann. § 751.134.

[23] You can find your Bar Associations across Texas through the Texas State Law Library: https://guides.sll.texas.gov/find-a-lawyer/bar-associations.

Our Neighbors, and RAICES (Refugee and Immigrant Center for Education and Legal Services).[24]

Furthermore, foreign consulates offer assistance to their citizens facing legal challenges in the United States. Contact your country's nearest consulate or embassy to inquire about available resources, legal referrals, or other support services. For example, the Mexican Consulate has developed an app called "Consul App Contigo," which is designed to provide support during potential immigration enforcement raids.[25]

Conclusion

Planning ahead for possible family separation is difficult, but it will help protect your children. Having a Power of Attorney ready, along with a safety plan, ensures that people you trust can take care of your children's needs if you can't be there. While paperwork and legal documents may seem scary, remember that you have help available. Taking these steps now can help keep your children safe and give you more peace of mind.

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[24] You can find local services by using 211 Texas, a database for community-based services. You only need to include a service term and your zip code: https://www.211texas.org/.

[25] *Aplicación móvil "ConsulApp Contigo,"* CONSULADO GEN. DE MEX. EN BOS., https://consulmex.sre.gob.mx/boston/index.php/todos-los-avisos/272-aplicacion-movil-consulapp-contigo (last visited Feb. 9, 2025).