

# TRIBES AND AI: POSSIBILITIES FOR TRIBAL SOVEREIGNTY

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## ABSTRACT

*Artificial Intelligence (AI) has permeated every facet of modern existence. Governments across the globe are exploring its applications and attempting to establish regulatory frameworks. Numerous scholars have proffered recommendations for governing AI at the local, national, and international levels. However, as is often the case, Indian tribes have been neglected in AI policy discussions. This oversight is significant because the 574 federally recognized tribes are sovereigns with their own judicial, education, and healthcare systems. Due to their relatively small populations and geographic isolation, tribes stand to benefit significantly from the services AI can perform. Moreover, tribes are uniquely well-suited to implement AI. This is the first law review article dedicated to exploring how AI can enhance tribal sovereignty.*

*This article begins with a history of tribal sovereignty and then provides an overview of AI. Subsequent sections delve into the ways AI can augment tribal legal systems, healthcare, education, cultural preservation endeavors, economic development, and administrative capacity. By illuminating the intersection of AI and tribal sovereignty, this article seeks to foster a more inclusive discussion of AI.*

## INTRODUCTION

Artificial intelligence (AI) is rapidly infiltrating every aspect of society. Anyone with a smart phone and Internet connection can access it. Once a person accesses AI, the possibilities are virtually limitless.<sup>1</sup> Governments are struggling to find ways to regulate AI. Congress has proposed the Creating Resources for Every American To Experiment with Artificial Intelligence Act of 2023,<sup>2</sup> and the White House has proposed an AI Bill of Rights.<sup>3</sup> States have passed numerous

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<sup>1</sup> See generally HENRY A. KISSINGER, ERIC SCHMIDT, & DANIEL HUTTENLOCHER, *THE AGE OF AI: AND OUR HUMAN FUTURE* (2022); MUSTAFA SULEYMAN & MICHAEL BHASKAR, *THE COMING WAVE: TECHNOLOGY, POWER, AND THE TWENTY-FIRST CENTURY'S GREATEST DILEMMA* (2023).

<sup>2</sup> Creating Resources for Every American To Experiment with Artificial Intelligence Act of 2023, S. 2714, 118th Cong. (2023); Creating Resources for Every American To Experiment with Artificial Intelligence Act of 2023, H.R. 5077, 118th Cong. (2023).

<sup>3</sup> WHITE HOUSE OFF. OF SCI. & TECH. POL'Y, *BLUEPRINT FOR AN AI BILL OF RIGHTS: MAKING AUTOMATED SYSTEMS WORK FOR THE AMERICAN PEOPLE* (2022),

laws addressing AI.<sup>4</sup> Municipalities are engaging with AI.<sup>5</sup> Other countries are attempting to regulate AI too.<sup>6</sup> Heaps of articles address AI in these governments,<sup>7</sup> but as usual, tribes have been ignored.

There are 574 federally recognized tribes.<sup>8</sup> Each is a sovereign with a direct government-to-government relationship with the United States.<sup>9</sup> Tribes have many of the same concerns as other governments, such as education and public safety. Nevertheless, tribes face several unique challenges. For example, people tend to believe state and federal courts are generally fair while reflexively assuming tribal courts are biased.<sup>10</sup> In addition to questions about tribal institutional capacity, tribes are subjected to unparalleled levels of federal bureaucracy.<sup>11</sup> These obstacles have long hindered tribes' ability to self-govern.<sup>12</sup>

AI can revolutionize tribal governance. With AI, tribes can enhance their governance capacity and overcome doubts about their institutional effectiveness. Increased tribal capacity means the federal government's rationale for restricting tribal sovereignty will dissipate. When this occurs, the federal government will be left with the choice of treating tribes as bona fide governments or continuing

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<https://www.whitehouse.gov/wp-content/uploads/2022/10/Blueprint-for-an-AI-Bill-of-Rights.pdf> [<https://perma.cc/Z8QQ-NSR4>].

<sup>4</sup> *Artificial Intelligence 2023 Legislation*, NAT'L CONF. OF STATE LEGISLATURES (last updated Jan. 12, 2024), <https://www.ncsl.org/technology-and-communication/artificial-intelligence-2023-legislation> [<https://perma.cc/6YSE-3DQA>].

<sup>5</sup> Todd Feathers, *AI Chatbots Are Invading Your Local Government—and Making Everyone Nervous*, WIRED (Sept. 11, 2023, 7:00 AM), <https://www.wired.com/story/local-governments-generative-ai/> [<https://perma.cc/D6XQ-MFU4>]; Lindsay Pica-Alfano, *Pittsburgh, PA Reduces Traffic Congestion With AI*, GOVLAUNCH, <https://govlaunch.com/stories/pittsburgh-pa-reduces-traffic-congestion-with-ai> [<https://perma.cc/K9YW-J2EM>].

<sup>6</sup> Anthony Faiola, Cat Zakrzewski, & Beatriz Ríos, *E.U. Reaches Deal on Landmark AI Bill, Racing Ahead of U.S.*, WASH. POST (last updated Dec. 8, 2023, 8:45 PM), [https://www.washingtonpost.com/technology/2023/12/08/ai-act-regulation-eu/?utm\\_source=alert&utm\\_medium=email&utm\\_campaign=wp\\_news\\_alert\\_revere&location=alert](https://www.washingtonpost.com/technology/2023/12/08/ai-act-regulation-eu/?utm_source=alert&utm_medium=email&utm_campaign=wp_news_alert_revere&location=alert) [<https://perma.cc/R5QV-UXG2>].

<sup>7</sup> *E.g.*, Emily Berman, *A Government of Laws and Not of Machines*, 98 B.U. L. REV. 1277 (2018); Kate Crawford & Jason Schultz, *AI Systems As State Actors*, 119 COLUM. L. REV. 1941 (2019); Aram A. Gavoor, *The Impending Judicial Regulation of Artificial Intelligence in the Administrative State*, 97 NOTRE DAME L. REV. 180 (2022).

<sup>8</sup> *Indian Entities Recognized by and Eligible to Receive Services from the United States Bureau of Indian Affairs*, 87 Fed. Reg. 4636 (Jan. 28, 2022).

<sup>9</sup> *Id.*

<sup>10</sup> Adam Crepelle, *An Intertribal Business Court*, 60 AM. BUS. L.J. 61, 63–64 (2023).

<sup>11</sup> Adam Crepelle, *White Tape and Indian Wards: Removing the Federal Bureaucracy to Empower Tribal Economies and Self-Government*, 54 U. MICH. J.L. REF. 563, 565 (2021).

<sup>12</sup> *Id.* at 567–68.

to restrict their sovereignty based upon racist ideology.<sup>13</sup> Moreover, wielding AI can help tribes overcome the notion that using technology is contrary to Indigenous cultures.<sup>14</sup> As the Nez Perce Tribe's former wildlife program director noted, "The Nez Perce have traditionally adopted the best tools and methods to accomplish tasks; whether it was for hunting, fishing or battle, the people were always on the lookout for the best means to do the work."<sup>15</sup> AI is a new tool for tribes to achieve their governance goals.

This is the first law review article to explore how AI can enhance tribal sovereignty. The field of Indigenous data sovereignty is burgeoning,<sup>16</sup> and there is growing interest in the relationship between technology and tribal sovereignty.<sup>17</sup> This Article contributes to both fields. Furthermore, this Article

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<sup>13</sup> ROBERT A. WILLIAMS, JR., *LIKE A LOADED WEAPON: THE REHNQUIST COURT, INDIAN RIGHTS, AND THE LEGAL HISTORY OF RACISM IN AMERICA* xxv (2005); Adam Creppelle, *Lies, Damn Lies, and Federal Indian Law: The Ethics of Citing Racist Precedent in Contemporary Federal Indian Law*, 44 N.Y.U. REV. L. & SOC. CHANGE 529, 532 (2021).

<sup>14</sup> Gavin Clarkson, *Tribal Bonds: Statutory Shackles and Regulatory Restraints on Tribal Economic Development*, 85 N.C. L. REV. 1009, 1029–30 (2007) ("Many tribes pride themselves on their ability to adapt: the Navajos developed a thriving weaving industry using wool from sheep brought over by Europeans [and] the Plains Indians incorporated European horses into their culture...").

<sup>15</sup> Renee Meyers, *Technology Serves Traditional Values: The Nez Perce Tribe is Applying Contemporary Science and Technology to Managing its Natura*, CULTURAL SURVIVAL (Mar. 16, 2010), <https://www.culturalsurvival.org/publications/cultural-survival-quarterly/technology-serves-traditional-values-nez-perce-tribe> [<https://perma.cc/VJG9-M3ZD>].

<sup>16</sup> See, e.g., *Indigenous Data Sovereignty & Governance*, UNIV. OF ARIZ. NATIVE NATIONS INST., <https://nni.arizona.edu/our-work/research-policy-analysis/indigenous-data-sovereignty-governance> [<https://perma.cc/XS2N-3MC2>].

<sup>17</sup> E.g., Logan Blackmore, *Internet Gaming On & Off Tribal Lands*, 43 AM. INDIAN L. REV. 389 (2019); Darrah Blackwater, *Broadband Internet Access: A Solution to Tribal Economic Development Challenges*, 2020 INDIGENOUS PEOPLES' J. L., CULTURE & RESISTANCE 93 (2020); Myranda Buiquy, *The Digital Isolation of Indigenous Communities*, 11 AM. INDIAN L.J. 1 (2022); Gavin Clarkson, Katherine A. Spilde, & Carma M. Claw, *Online Sovereignty: The Law and Economics of Tribal Electronic Commerce*, 19 VAND. J. OF ENT. & TECH. L. 1 (2016); Adam Creppelle, *Getting Smart About Tribal Commercial Law: How Smart Contracts Can Transform Tribal Economies*, 46 DEL. J. OF CORP. L. 469 (2022); Adam Creppelle, *Legal Issues in Tribal E-Commerce*, 10 AM. UNIV. BUS. L. REV. 383 (2022); Emily Siess Donnellan, *No Connection: The Issue of Internet on the Reservation*, 5 AM. INDIAN L.J. 346 (2017); William M. Haney, *Protecting Tribal Skies: Why Indian Tribes Possess the Sovereign Authority to Regulate Tribal Airspace*, 40 AM. INDIAN L. REV. 1 (2016); Karina V. Korostelina & Jocelyn Barrett, *Bridging the Digital Divide for Native American Tribes: Roadblocks to Broadband and Community Resilience*, 15 POL'Y & INTERNET 306 (2023).

adds to the rapidly expanding body of legal literature on AI.<sup>18</sup>

The remainder of this article proceeds as follows. Part I provides background on the historical evolution of tribal sovereignty, and Part II presents an overview of AI. Next, Part III imagines how tribes can benefit from AI. Part III examines AI's potential to enhance tribal legal systems, healthcare, education, and economies. The Article then considers obstacles to tribal AI implementation.

### I. HISTORY OF TRIBAL SOVEREIGNTY

North America's Indigenous Peoples are usually presented as unsophisticated, disconnected bands of hunter-gatherers prior to European arrival on the continent.<sup>19</sup> This is inaccurate. Over 3,000 years ago, the Indigenous Peoples at Poverty Point—located in what is today northern Louisiana—had sophisticated governance institutions.<sup>20</sup> There is no other way for people to construct earthen mounds over 70 feet tall, over 700 feet long, and over 600 feet wide with Stone Age tools and no written plans.<sup>21</sup> Other examples of complex pre-contact North American Indigenous societies include Moundville, Cahokia, Chaco, and Sinagua.<sup>22</sup> While these societies may not have had Western-style

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<sup>18</sup> E.g., Amy B. Cyphert, *Human Being Wrote This Law Review Article: GPT-3 and the Practice of Law*, 55 U.C. DAVIS L. REV. 401 (2021); Margot E. Kaminski & Jennifer M. Urban, *The Right to Contest AI*, 121 COLUM. L. REV. 1957 (2021); Frank Fagan & Saul Levmore, *The Impact of Artificial Intelligence on Rules, Standards, and Judicial Discretion*, 93 S. CAL. L. REV. 1 (2019); Ryan McCarl, *The Limits of Law and AI*, 90 UNIV. CIN. L. REV. 923 (2022); Haochen Sun, *Redesigning Copyright Protection in the Era of Artificial Intelligence*, 107 IOWA L. REV. 1213 (2022); Harry Surden, *Artificial Intelligence and Law: An Overview*, 35 GA. ST. UNIV. L. REV. 1305 (2019).

<sup>19</sup> Adam Crepelle, *The Time Trap: Addressing the Stereotypes That Undermine Tribal Sovereignty*, 53 COLUM. HUM. RTS. L. REV. 189, 194 (2021) (“People assume Indian cultures are static—suspended in time while the rest of the world turns”).

<sup>20</sup> For a discussion of the complexities of society at Poverty Point, see JON L. GIBSON, *THE ANCIENT MOUNDS OF POVERTY POINT: PLACE OF RINGS* 43, 194–215 (2001); TIMOTHY R. PAUKETAT & KENNETH E. SASSAMAN, *THE ARCHAEOLOGY OF ANCIENT NORTH AMERICA* 332, 336–44 (2020); *Poverty Point*, NEW WORLD ENCYC., [https://www.newworldencyclopedia.org/entry/Poverty\\_Point](https://www.newworldencyclopedia.org/entry/Poverty_Point) [https://perma.cc/2DFZ-NR2D]. See also COHEN'S HANDBOOK OF FEDERAL INDIAN LAW § 4.05[1] (Nell Jessup Newton et al. eds., 2012 ed.) (“Native American tribes have always had systems of law to regulate social behavior and resolve disputes”).

<sup>21</sup> ADAM CREPELLE, *BECOMING NATIONS AGAIN: IN PURSUIT OF TRIBAL SELF-DETERMINATION* (forthcoming) (manuscript at 5–7) (on file with author).

<sup>22</sup> *Sinagua*, U.S. NAT'L PARK SERV., <https://www.nps.gov/moca/learn/historyculture/sinagua.htm> [https://perma.cc/YQ23-9QWD]; *Cahokia*, <https://cahokiamounds.org/explore/> [https://perma.cc/7S47-9FA6]; Joshua Mark, *Moundville*, WORLD HIST. ENCYCLOPEDIA (Apr. 27, 2021), [https://www.worldhistory.org/moundville/#google\\_vignette](https://www.worldhistory.org/moundville/#google_vignette) [https://perma.cc/48KC-ARL5]; *Chaco Canyon*, U.S. NAT'L PARK SERV.,

bureaucracies, each developed institutions to ensure rules were enforced.<sup>23</sup> Consequently, tribes were able to develop robust economies,<sup>24</sup> and their citizens were healthy.<sup>25</sup>

European arrival drastically impacted Indigenous governments. Many tribes were subjugated, and countless Indigenous Peoples died from Old World diseases.<sup>26</sup> Indigenous governance became more decentralized, and the size of Indigenous nations decreased in response to these stimuli.<sup>27</sup> Additionally, Europeans brought previously unknown things, such as horses, guns, and metal tools.<sup>28</sup> Tribes quickly realized the benefits new technologies offered, so tribes restructured their economies to obtain them.<sup>29</sup> For example, Europeans wanted furs.<sup>30</sup> Thus, tribes shifted from farming to hunting.<sup>31</sup> The furs Indians<sup>32</sup> obtained were then exchanged for Western goods.<sup>33</sup> When hunting depleted game, tribes developed rules to ensure the survival of the species.<sup>34</sup> Tribes were not merely acquiring European items but assimilating them into their cultures, such as

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<https://www.nps.gov/museum/exhibits/chcu/index5.html> [https://perma.cc/Z2NK-XV5K].

<sup>23</sup> Adam Crepelle, *Tribal Law: It's Not That Scary*, 72 BUFFALO L. REV. (forthcoming in 2024) (manuscript at 7–8) (on file with author).

<sup>24</sup> ROBERT J. MILLER, RESERVATION “CAPITALISM:” ECONOMIC DEVELOPMENT IN INDIAN COUNTRY 96 (2012).

<sup>25</sup> *Id.* at 29.

<sup>26</sup> See COLIN G. CALLOWAY, NEW WORLDS FOR ALL: INDIANS, EUROPEANS, AND THE REMAKING OF EARLY AMERICA 33–41 (2d ed. 2013).

<sup>27</sup> CREPELLE, BECOMING NATIONS AGAIN, *supra* note 21 (manuscript at 33–34).

<sup>28</sup> See CALLOWAY, *supra* note 26, at 41–50; MILLER, *supra* note 24, at 163.

<sup>29</sup> CREPELLE, BECOMING NATIONS AGAIN, *supra* note 21 (manuscript at 47–50).

<sup>30</sup> *Id.* (manuscript at 40).

<sup>31</sup> *Id.*

<sup>32</sup> This Article uses the term “Indian” rather than “Native American” to denote the Indigenous Peoples of present-day North America because it is the legal designation used in the U.S. Code. See 25 U.S.C. It is also in the official title of many Native Nations. See, e.g., LITTLE SHELL TRIBE OF CHIPPEWA INDIANS, <https://www.montanalittleshelltribe.org/> [https://perma.cc/RC5R-TLET]; NARRAGANSETT INDIAN NATION, <https://narragansettindiannation.org/> [https://perma.cc/3SAW-KA48]; POARCH BAND OF CREEK INDIANS, <https://pci-nsn.gov/> [https://perma.cc/XHH2-5H4G]; QUINAULT INDIAN NATION, <http://www.quinaultindiannation.com/> [https://perma.cc/QEN3-3EXR].

<sup>33</sup> See CALLOWAY, *supra* note 26, at 45–47.

<sup>34</sup> See, e.g., William H. Rodgers, Jr., *Treatment as Tribe, Treatment as State: The Penobscot Indians and the Clean Water Act*, 55 ALA. L. REV. 815, 827 (2004) (recounting the Penobscot Nation practices to protect the beaver population).

incorporating firearms into sacred ceremonies.<sup>35</sup>

After the American Revolution, tribes retained their sovereignty. The Constitution recognized tribes as separate, distinct governments,<sup>36</sup> and the United States entered treaties—nation-to-nation agreements—with them.<sup>37</sup> In fact, American citizens were required to obtain passports prior to entering tribal land.<sup>38</sup> Several tribes thrived, and the Cherokee Nation is an exemplar. The Cherokee absorbed many Western cultural traits and were recognized as “civilized.”<sup>39</sup> The Cherokee developed a robust agricultural economy,<sup>40</sup> a Western-style constitution,<sup>41</sup> and had a Supreme Court before the surrounding state of

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<sup>35</sup> DAVID J. SILVERMAN, THUNDERSTICKS 31 (2016) (noting the Iroquois were including guns in ceremonies by the 1640s).

<sup>36</sup> See U.S. CONST. art. I, § 2, cl. 3 (“Representatives and direct Taxes shall be apportioned among the several States . . . excluding Indians not taxed. . . .”); U.S. CONST. art. I, § 8, cl. 3 (“The Congress shall have power . . . To regulate commerce . . . with the Indian Tribes”).

<sup>37</sup> *Worcester v. Georgia*, 31 U.S. (6 Pet.) 515, 519 (1832) (“The words ‘treaty’ and ‘nation’ are words of our own language, selected in our diplomatic and legislative proceedings, by ourselves, having each a definite and well understood meaning. We have applied them to Indians, as we have applied them to the other nations of the earth. They are applied to all in the same sense.”); THE FEDERALIST NO. 75 (Alexander Hamilton) (“They are not rules prescribed by the sovereign to the subject, but agreements between sovereign and sovereign.”); Rory Taylor, *6 Native Leaders on What It Would Look Like if the US Kept Its Promises*, VOX (Sept. 23, 2019, 8:30 AM), <https://www.vox.com/first-person/2019/9/23/20872713/native-american-indian-treaties> [<https://perma.cc/5MQTX5U2>] (“The US has signed hundreds of treaties with Indigenous peoples”).

<sup>38</sup> See Treaty with the Creek, Art. VII, Aug. 7, 1790, 7 Stat. 35, 37 (“No citizen . . . of the United States shall . . . go into the Creek country, without a passport. . . .”); Treaty with the Cherokee Nation, Art. IX, July 2, 1791, 7 Stat. 39, 40.

<sup>39</sup> THE CHEROKEE REMOVAL: A BRIEF HISTORY WITH DOCUMENTS 11–14 (Theda Perdue & Michael D. Green eds., 1995).

<sup>40</sup> DAVID H. GETCHES ET AL., CASES AND MATERIALS ON FEDERAL INDIAN LAW 119 (7th ed. 2017).

<sup>41</sup> *Id.*; CHEROKEE NATION CONST. OF 1827, CHEROKEE PHOENIX, <https://www.wcu.edu/library/DigitalCollections/CherokeePhoenix/Vol1/no01/constitution-of-the-chokeee-nation-page-1-column-2a-page-2-column-3a.html> [<https://perma.cc/TU4H-J9A3>].

Georgia.<sup>42</sup> The Cherokee Nation also had a higher literacy rate than Georgia.<sup>43</sup>

Envious of Cherokee land and success, Georgia enacted legislation annexing the Cherokee Nation.<sup>44</sup> The Cherokee Nation contested the Georgia law by filing an original action in the United States Supreme Court.<sup>45</sup> However, the Court refused to address the merits of the action on procedural grounds.<sup>46</sup> Although the Cherokee Nation argued it qualified as a foreign state entitled to original jurisdiction under Article III of the United States Constitution, the Court held the Cherokee Nation was a “domestic dependent nation[] . . . they are in a state of pupilage. Their relation to the United States resembles that of a ward to his guardian.”<sup>47</sup> Nevertheless, white plaintiffs brought suit on behalf of the

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<sup>42</sup> J. MATTHEW MARTIN, *THE CHEROKEE SUPREME COURT: 1823-1835* 7 (2021) (examining the work of the Cherokee Supreme Court that operated from 1823-1835). In contrast, Georgia did not establish a Supreme Court until 1845. *See The Supreme Court of Georgia History*, SUP. CT. OF GA., <https://www.gasupreme.us/court-information/history/> [<https://perma.cc/22WZ-6LHM>].

<sup>43</sup> Michelle Cyca, *How a Cherokee Leader Ensured His People’s Language Survived*, HIST. (updated Nov. 6, 2023), <https://www.history.com/news/chokeee-sequoyah-written-language> [<https://perma.cc/5LKT-N8VU>] (“As many as 90 Percent of the Cherokee were literate by the 1830s, a far higher literacy rate than among the white settlers of America.”); *Cherokee History*, INTER-TRIBAL COUNCIL OF THE FIVE CIVILIZED TRIBES, <https://www.fivecivilizedtribes.org/Cherokee.html> [<https://perma.cc/ZH78-KGSU>] (“Other bilingual materials, which had been made possible by Sequoyah’s syllabary in 1821, led the Cherokee people to a level of literacy higher than their white counterparts . . . .”); *Resistance*, NATIVE KNOWLEDGE 360°, SMITHSONIAN NAT’L MUSEUM OF THE AM. INDIAN, <https://americanindian.si.edu/nk360/removal-chokeee/transcripts/resistance.html> [<https://perma.cc/6KC9-CN5X>].

<sup>44</sup> *See* ACTS OF THE GENERAL ASSEMBLY OF THE STATE OF GEORGIA, RESOLUTIONS WHICH ORIGINATED IN THE SENATE, Dec. 4, 1826, at 206–08 (adopting resolutions aimed at extinguishing title to Cherokee lands); ACTS OF THE GENERAL ASSEMBLY OF THE STATE OF GEORGIA, Dec. 27, 1827, at 249 (“That all the lands appropriated and unappropriated, which lie within the conventional limits of Georgia, belong to her absolutely; that the title is in her; that the Indians are tenants at her will, and that she may at any time she pleases, determine that tenancy, by taking possession of the premises – and that Georgia has the right to extend her authority and laws over her whole territory, and to coerce obedience to them from all descriptions of people, be them white, red or black, who may reside within her limits.”); ACTS OF THE GENERAL ASSEMBLY OF THE STATE OF GEORGIA, Dec. 20, 1828, at 89 (“That all laws, usages, and customs made, established and in force, in the said territory, by the said Cherokee Indians be, and the same are hereby on, and after the first June, 1830, declared null and void.”); AN ACT TO ADD THE TERRITORY LYING WITHIN THE LIMITS OF THIS STATE . . . , Sec. 9, ACTS OF THE GENERAL ASSEMBLY OF THE STATE OF GEORGIA, Dec. 20, 1828, at 88–89.

<sup>45</sup> *Cherokee Nation v. Georgia*, 30 U.S. (5 Pet.) 1 (1831).

<sup>46</sup> *Id.* at 19–20 (holding the court had no jurisdiction because there was not “a proper case with proper parties”).

<sup>47</sup> *Id.* at 17.

Cherokee Nation a year later, thereby granting the Court jurisdiction.<sup>48</sup> Jurisdiction enabled the Court to invalidate Georgia's law, declaring "the laws of Georgia can have no force, and which the citizens of Georgia have no right to enter, but with the assent of the Cherokees themselves, or in conformity with treaties, and with the acts of Congress."<sup>49</sup> The Cherokee victory was empty because President Jackson refused to enforce it, leading to the Trail of Tears.<sup>50</sup>

The Cherokee were one of many tribes forced upon reservations by the mid-1800s. Tribes were promised autonomy on reservations,<sup>51</sup> but instead, the United States used reservations to destroy tribal culture.<sup>52</sup> Federal reservation superintendents exercised unbridled power over Indians.<sup>53</sup> The federal government created Courts of Indian Offenses to criminalize tribal culture,<sup>54</sup> and Congress enacted the Major Crimes Act (MCA), allowing the federal government

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<sup>48</sup> *Worcester v. Georgia*, 31 U.S. (6 Pet.) 515 (1832).

<sup>49</sup> *Id.* at 561.

<sup>50</sup> See Ellen Holmes Pearson, *A Trail of 4,000 Tears*, TEACHINGHISTORY.ORG, <https://teachinghistory.org/history-content/ask-a-historian/25652> [<https://perma.cc/5GYZ-LEWG>]; *The Trail of Tears*, PBS, <https://www.pbs.org/wgbh/aia/part4/4h1567.html> [<https://perma.cc/M4PY-ER78>]; *The Trail of Tears—The Indian Removals*, U.S. HIST., <http://www.ushistory.org/us/24f.asp> [<https://perma.cc/JSY8-SKPS>].

<sup>51</sup> *McGirt v. Oklahoma*, 591 U.S. 894, 929(2020) ("And in many treaties, like those now before us, the federal government promised Indian Tribes the right to continue to govern themselves."); *First Annual Message, Andrew Jackson* (Dec. 8, 1829), AM. PRESIDENCY PROJECT, <https://www.presidency.ucsb.edu/documents/first-annual-message-3> [<https://perma.cc/8MUV-EXBW>] ("As a means of effecting this end I suggest for your consideration the propriety of setting apart an ample district west of the Mississippi, and without the limits of any state or territory now formed, to be guaranteed to the Indian tribes as long as they shall occupy it, each tribe having a distinct control over the portion designated for its use. There they may be secured in the enjoyment of governments of their own choice, subject to no other control from the United States than such as may be necessary to preserve peace on the frontier and between the several tribes").

<sup>52</sup> *United States v. Clapox*, 35 F. 575, 577 (D. Or. 1888) ("In fact, the reservation itself is in the nature of a school, and the Indians are gathered there, under the charge of an agent, for the purpose of acquiring the habits, ideas, and aspirations which distinguish the civilized from the uncivilized man").

<sup>53</sup> Adam Crepelle, *How Federal Indian Law Prevents Business Development in Indian Country*, 23 U. PA. J. BUS. L. 683, 697 (2021) ("Accordingly, reservation superintendents had tyrannical control over their Indian wards").

<sup>54</sup> See *Denezpi v. United States*, 596 U.S. 591, 606 (2022) (Gorsuch, J., dissenting); Brief of *Amici Curiae* Federal Indian Law Scholars and Historians in Support of Respondent at 1, *Denezpi v. United States*, 596 U.S. 591 (2022) (No. 20-7622); WILCOMB E. WASHBURN, *RED MAN'S LAND, WHITE MAN'S LAW* 169–70 (2d ed. 1995) (describing how H.M. Teller, Secretary of the Interior, wanted to eliminate cultural practices and worked with Hiram Price, Commissioner of Indian Affairs, to establish the Court of Indian Offenses).



to punish reservation crimes involving only Indians.<sup>55</sup> By 1887, the federal government began allotting reservations en masse, dividing reservations into 160-acre parcels for Indians and transferring the remaining lands to whites.<sup>56</sup> Though tribes challenged federal imperialism, the Supreme Court offered them no succor. In *United States v. Kagama*, the Court authorized Congress to enact extraconstitutional legislation designed to erase tribal culture because of Indians' dependent status.<sup>57</sup> And in *Lone Wolf v. Hitchcock*, the Court ruled that Congress possessed absolute power over tribal land despite treaties to the contrary.<sup>58</sup> Federal policies robbed tribes of ninety million acres of land,<sup>59</sup> cast tribes in poverty, and caused cultural turmoil.<sup>60</sup>

Federal policy changed course with the Indian Reorganization Act of 1934 (IRA).<sup>61</sup> Unlike federal policies before it, the IRA was designed to preserve tribal existence.<sup>62</sup> Notwithstanding, tribes had little say in their political structure as the federal government coerced tribes into adopting Western-style governments, complete with Western-style constitutions.<sup>63</sup> Federally-designed IRA tribal constitutions contained a provision granting the Secretary of the

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<sup>55</sup> Major Crimes Act of 1885, ch. 341, § 9, 23 Stat. 385 (codified as amended at 18 U.S.C. § 1153 (2018)).

<sup>56</sup> See General Allotment Act of Feb. 8, 1887, Pub. L. No. 49–105, ch. 119, 24 Stat. 388, *repealed by* Act of June 18, 1934, Pub. L. No. 73–383, ch. 576, 48 Stat. 984, Act of Nov. 7, 2000, Pub. L. No. 106–462, Title I, § 106(a)(1), 114 Stat. 1991, 2007 (codified as amended at 25 U.S.C. §§ 2201–2221 (2018)); *South Dakota v. Yankton Sioux Tribe*, 522 U.S. 329, 336 (1998) (“In accordance with the Dawes Act, each member of the Yankton Tribe received a 160-acre tract from the existing reservation, held in trust by the United States for 25 years.”); *Squire v. Capoman*, 351 U.S. 1, 3 (1956).

<sup>57</sup> *United States v. Kagama*, 118 U.S. 375 (1886).

<sup>58</sup> *Lone Wolf v. Hitchcock*, 187 U.S. 553 (1903).

<sup>59</sup> See S. REP. NO. 112–66, at 4 (2012) (“The federal allotment policy resulted in the loss of over 100 million acres of tribal homelands.”); WILLIAM CANBY, JR., *AMERICAN INDIAN LAW IN A NUTSHELL* 26 (7th ed. 2020); Frank Pommersheim, *Land into Trust: An Inquiry into Law, Policy, and History*, 49 *IDAHO L. REV.* 519, 525 (2013); *Land Tenure Issues*, INDIAN LAND TENURE FOUND., <https://iltf.org/land-issues/issues/> [https://perma.cc/4P8Q-CW29]; *General Allotment Act*, AM. EXPERIENCE, PBS, <https://www.pbs.org/wgbh/americanexperience/features/1900-allotment-act/> [https://perma.cc/DY2G-3KPF].

<sup>60</sup> LEWIS MERIAM, INST. FOR GOV'T RSCH., *THE PROBLEM OF INDIAN ADMINISTRATION* 3 (1928).

<sup>61</sup> Indian Reorganization Act of 1934, Pub. L. No. 73–383, ch. 576, 48 Stat. 984 (codified as amended at 25 U.S.C. §§ 5101–5144 (2018)).

<sup>62</sup> CANBY, *supra* note 59, at 27 (“The Indian Reorganization Act was based on the assumption . . . that the tribes not only would be in existence for an indefinite period, but that they *should* be”).

<sup>63</sup> *Id.* at 29.

Interior veto power over tribal laws.<sup>64</sup> Though the IRA was ostensibly about empowering tribal self-governance,<sup>65</sup> it ultimately benefited bureaucrats more than Indians by ensuring the Bureau of Indian Affairs (BIA) would always exist.<sup>66</sup> Indeed, the federal government assumed tribes were incapable of managing their own affairs.<sup>67</sup> Secretary of the Interior Harold Ickes, who served during the IRA's implementation, asserted, "The whites can take care of themselves, but the Indians need some one [sic] to protect them from exploitation."<sup>68</sup>

Congressional opposition to the IRA began to percolate within a decade of its enactment.<sup>69</sup> By 1953, the United States had abandoned the idea of tribal self-government in favor of a policy of eliminating tribes "at the earliest possible time."<sup>70</sup> Thus, the tribal termination era was born. During the termination era, the United States legislatively and administratively terminated the existence of over one hundred tribes.<sup>71</sup> Terminating tribes meant reservation resources were

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<sup>64</sup> *Id.* at 28–29; COHEN'S HANDBOOK, *supra* note 20, at § 1.05.

<sup>65</sup> *Morton v. Mancari*, 417 U.S. 535, 542 (1974) ("The overriding purpose of that particular Act was to establish machinery whereby Indian tribes would be able to assume a greater degree of self-government, both politically and economically."); *Mescalero Apache Tribe v. Jones*, 411 U.S. 145, 152 (1973) ("The intent and purpose of the Reorganization Act was 'to rehabilitate the Indian's economic life and to give him a chance to develop the initiative destroyed by a century of oppression and paternalism'" (quoting H.R. Rep. No. 1804, 73d Cong., 2d Sess., 6 (1934)).

<sup>66</sup> See Russel Lawrence Barsh, *The BIA Reorganization Follies of 1978: A Lesson in Bureaucratic Self-Defense*, 7 AM. INDIAN L. REV. 1, 12 (1979) ("This added a new layer of permanent administration to the agency, while all staff and activities established by the General Allotment Act were continued for the benefit of the remaining allottees."); Fred S. McChesney, *Government as Definer of Property Rights: Indian Lands, Ethnic Externalities, and Bureaucratic Budgets*, 19 J. LEGAL STUD. 297, 325 (1990) ("Ending allotments and freezing ownership for allottees still under federal trusteeship guaranteed that bureaucratic control would continue").

<sup>67</sup> William Morrow Stoddart, *Whose Deal? Burton K. Wheeler and the Indian Reorganization Act* 41 (1996) (M.A. thesis, Mont. State Univ.), <https://scholarworks.montana.edu/xmlui/bitstream/handle/1/7514/31762102404264.pdf> [<https://perma.cc/6JBY-KPFF>] ("The report concluded that the work of the bureau must account for diversity among individual Indian people but 'in every activity of the Indian Service the primary question should be, how is the Indian to be trained so that he will do this for himself' despite the fact that, in general, Indian people were assumed childlike in their capacity to manage property" (quoting Meriam, *supra* note 60)).

<sup>68</sup> FRANCIS PAUL PRUCHA, *THE GREAT FATHER: THE UNITED STATES GOVERNMENT AND THE AMERICAN INDIANS* 317 (abr. ed. 1986).

<sup>69</sup> COHEN'S HANDBOOK, *supra* note 20, at § 1.06.

<sup>70</sup> H.R. Con. Res. 108, 83d Cong., 67 Stat. B132 (1953).

<sup>71</sup> LAURIE ARNOLD, *BARTERING WITH THE BONES OF THEIR DEAD: THE COLVILLE CONFEDERATED TRIBES AND TERMINATION XI* (2012); DONALD L. FIXICO, *TERMINATION AND RELOCATION: FEDERAL INDIAN POLICY, 1945–1960* 183 (1986)

removed from trust status and opened to market exploitation.<sup>72</sup> Tribes that were not terminated had their citizens coerced into leaving their reservations for major metropolitan areas via the Indian Relocation Act of 1956.<sup>73</sup> And Indians who remained on their reservations were often subjected to state criminal law and civil adjudicatory jurisdiction by legislation such as Public Law 83-280.<sup>74</sup> Despite the expansion of state authority, reservation Indians were simultaneously subjected to additional federal bureaucratic oversight during the termination era.<sup>75</sup>

By 1960, the termination era began to give way to a federal policy of tribal self-determination.<sup>76</sup> President Richard Nixon formally ended termination, declaring, “The time has come to break decisively with the past and to create the conditions for a new era in which the Indian future is determined by Indian acts and Indian decisions.”<sup>77</sup> Nixon took actions to strengthen tribal sovereignty, and Congress formally adopted a policy of tribal self-governance in 1975 with the passage of the Indian Self-Determination and Education Assistance Act.<sup>78</sup> Every president and Congress since has supported tribal self-government.<sup>79</sup>

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(“Between 1945 and 1960 the government processed 109 cases of termination affecting 1,369,000 acres of Indian land.”).

<sup>72</sup> For instance, white citizens of Oregon feared the Klamath’s timber resources would glut the market upon termination. See FIXICO, *supra* note 71, at 123–25.

<sup>73</sup> Indian Relocation Act of 1956, Pub. L. No. 84–959, ch. 930, 70 Stat. 986.

<sup>74</sup> Act of August 15, 1953, Pub. L. No. 83-280, 67 Stat. 588 (codified as amended at 18 U.S.C. § 1162, 25 U.S.C. §§ 1321–1326, 28 U.S.C. § 1360 (2018)).

<sup>75</sup> Adam Crepelle, *Holding the United States Liable for Indian Country Crime*, 31 KAN. J.L. & PUB. POL’Y 223, 239 (2022).

<sup>76</sup> COHEN’S HANDBOOK, *supra* note 20, at § 1.07.

<sup>77</sup> Special Message to the Congress on Indian Affairs, 1 PUB. PAPERS 564, 565 (July 8, 1970).

<sup>78</sup> See Indian Self-Determination and Education Assistance Act of 1975, Pub. L. No. 93-638, 88 Stat. 2203 (codified as amended at 25 U.S.C. §§ 5301–5423).

<sup>79</sup> Statement on Signing the Indian Self-Determination Assistance Act Amendments of 1988, 2 PUB. PAPERS 1284–85 (Oct. 5, 1988); Statement Reaffirming the Government-to-Government Relationship Between the Federal Government and Indian Tribal Governments, 1 PUB. PAPERS 662–63 (June 14, 1991); Exec. Order No. 13175, 65 Fed. Reg. 67249 (Nov. 6, 2000); Statement on Signing the Executive Order on Consultation and Coordination with Indian Tribal Governments, 3 PUB. PAPERS 2487 (Nov. 6, 2000); Memorandum on Government-to-Government Relationship With Tribal Governments, 2 PUB. PAPERS 2177 (Sep. 23, 2004); EXEC. OFF. OF THE PRES., 2016 WHITE HOUSE TRIBAL NATIONS CONF. PROGRESS REP., A RENEWED ERA OF FEDERAL-TRIBAL RELATIONS (2017),

[https://obamawhitehouse.archives.gov/sites/default/files/docs/whncaa\\_report.pdf](https://obamawhitehouse.archives.gov/sites/default/files/docs/whncaa_report.pdf) [<https://perma.cc/439W-2QWH>]; Memorandum on Tribal Consultation and Strengthening Nation-to-Nation Relationships, 2021 DAILY COMP. PRES. DOC. NO. 00091 (Jan. 26, 2021); Alysa Landry, *Jimmy Carter: Signed ICWA into Law*, INDIAN COUNTRY TODAY (Sep. 12, 2017), <https://newsmaven.io/indiancountrytoday/archive/jimmy-carter->

Although federally recognized tribes are bona fide governments, many people remain skeptical of tribes.<sup>80</sup> For example, the Supreme Court assumes tribes are incapable of treating non-Indians fairly.<sup>81</sup> Similarly, the Supreme Court is leery of tribal economies, believing tribes only engage in arbitrage.<sup>82</sup> As a result, states are allowed to tax tribal commerce.<sup>83</sup> State taxes effectively bar tribal taxation, meaning tribes are forced to start businesses and apply for grants to pay for government operations.<sup>84</sup> Success in business and the grant application process is uncertain, so many tribal governments struggle for funding.<sup>85</sup> Inadequate funding raises questions about tribal government capacity.<sup>86</sup> Further exacerbating tribal self-governance struggles, tribal attempts to use modern technology to enhance the lives of their citizens often prompt non-Indian inquiries into tribal legitimacy.<sup>87</sup>

Tribes have risen to the challenges they continue to face. Tribal self-determination has resulted in substantial socioeconomic improvements for tribes.<sup>88</sup> Studies have consistently shown tribes outperform the federal

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signed-icwainto-law-GtsQUN5tRkG1iNzMVHJP8g/ [https://perma.cc/X4HS-9FDQ] (“During his presidential campaign in 1976, Carter’s staff reached out to the National Congress of American Indians and the National Tribal Chairmen’s Association. Carter met briefly with some leaders and his staff drafted a position paper that endorsed Indian self-determination policy, already in force.”).

<sup>80</sup> See, e.g., Video, Indian Bummer, Full Frontal with Samantha Bee (2016), <https://www.youtube.com/watch?v=kD7TGp8XML4> [https://perma.cc/2PX3-PM7L] (visiting the \$26 million “barely new municipal sweat lodge” of the Eastern Band of Cherokee Indians and learning about their “charmingly backwoods justice system” to demonstrate biases against tribal courts).

<sup>81</sup> *United States v. Lara*, 541 U.S. 193, 214 (2004) (Kennedy, J., concurring) (“The political freedom guaranteed to citizens by the federal structure is a liberty both distinct from and every bit as important as those freedoms guaranteed by the Bill of Rights.”); *Duro v. Reina*, 495 U.S. 676, 688 (1990).

<sup>82</sup> *Washington v. Confederated Tribes of the Colville Indian Reservation*, 447 U.S. 134 (1980).

<sup>83</sup> *Id.*; See *Cotton Petrol. Corp. v. New Mexico*, 490 U.S. 163 (1989).

<sup>84</sup> Adam Crepelle, *It Shouldn't Be This Hard: The Law and Economics of Business in Indian Country*, 2023 UTAH L. REV. 1117, 1121–22 (2023).

<sup>85</sup> *Funding for Tribes in the Inflation Reduction Act*, WHITE HOUSE (updated Sept. 21, 2023), <https://www.whitehouse.gov/cleanenergy/tribes/> [https://perma.cc/WW5S-KKDW] (“Native communities have faced chronic underinvestment for generations . . .”).

<sup>86</sup> *United States v. Cavanaugh*, 643 F.3d 592, 595 (8th Cir. 2011) (mentioning the impact of the lack of funding of tribal justice systems as noted by the district court).

<sup>87</sup> Crepelle, *Time Trap*, *supra* note 19, at 193–94, 215–16.

<sup>88</sup> Stephen Cornell & Joseph P. Kalt, *American Indian Self-Determination: The Political Economy of a Policy That Works* 12–13 (Harv. Kennedy Sch., Fac. Rsch., Working Paper No.10-043, 2010); Joseph Kalt & Joseph William Singer, *Myths and Realities of Tribal*

government when they engage in self-governance contracts.<sup>89</sup> Likewise, tribes have shown they are capable of building better institutions than states.<sup>90</sup> Tribes have also transformed industries, such as gaming and e-commerce.<sup>91</sup> Tribes are currently blazing a path in the clean energy industry<sup>92</sup> and addressing climate change.<sup>93</sup> Tribes have welcomed the opportunities afforded by modern technologies to improve their lives and preserve their cultures.<sup>94</sup>

## II. ARTIFICIAL INTELLIGENCE 101

Consensus has not been reached on the definition of AI, but it generally means using machines to perform activities that require intelligence or rational action.<sup>95</sup> Rationality should not be confused with complexity as many insects and

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*Sovereignty: The Law and Economics of Indian Self Rule* 1–2 (Native Issues Res. Symp., Harv. Univ., Working Paper No. RWP04-016, 2004).

<sup>89</sup> Kevin K. Washburn, *What the Future Holds: The Changing Landscape of Federal Indian Policy*, 130 HARV. L. REV. F. 200, 201 (2017) (“As tribal governmental powers have increased and tribes have entered contracts to perform more federal functions, tribal governments have proven more institutionally competent than the federal government in serving Indian people”).

<sup>90</sup> Kirsten Matoy Carlson, *Bringing Congress and Indians Back into Federal Indian Law: The Restatement of the Law of American Indians*, 97 WASH. L. REV. 725, 747 (2022) (“Moreover, tribal governments often govern more effectively than the neighboring state and local governments.”); *Honoring and Fostering Innovation in Indian Country*, ASH CTR. FOR DEMOCRATIC GOVERNANCE & INNOVATION, HARV. KENNEDY SCH. (Nov. 10, 2021), <https://ash.harvard.edu/honoring-and-fostering-innovation-indian-country> [https://perma.cc/4PBX-R36V].

<sup>91</sup> See Frank Legato, *Tribes and Tech*, TRIBAL GOV’T GAMING (2023), <https://tribalgovernmentgaming.com/article/tribes-and-tech/> [https://perma.cc/P3L3-AHMP].

<sup>92</sup> Michael Maruca, *From Exploitation To Equity: Building Native-Owned Renewable Energy Generation In Indian Country*, 43 WM. & MARY ENVTL. L. & POL’Y REV. 391, 459 (2019); Lisa Sharp, *Native American Tribes Lead the Clean Energy Revolution*, MOMS CLEAN AIR FORCE (July 23, 2019), <https://www.momscleanairforce.org/native-tribes-renewable-energy/> [https://perma.cc/PFF7-XLQL].

<sup>93</sup> Nicola Jones, *How Native Tribes Are Taking the Lead on Planning for Climate Change*, YALE ENV’T 360 (Feb. 11, 2020), <https://e360.yale.edu/features/how-native-tribes-are-taking-the-lead-on-planning-for-climate-change> [https://perma.cc/Y7FT-A5ZD]; *Welcome to the ITEP Tribes & Climate Change Program*, N. ARIZ. UNIV. <https://www7.nau.edu/itep/main/tcc/Home/> [https://perma.cc/S6C2-4ZRZ].

<sup>94</sup> Meyers, *supra* note 15; Sara Reardon, *Native Americans Use Technology to Keep Traditions, Language Alive During Pandemic*, PBS NEWSHOUR (Feb. 9, 2021, 2:00 PM), <https://www.pbs.org/newshour/health/native-americans-use-technology-to-keep-traditions-language-alive-during-pandemic> [https://perma.cc/Z2YM-ELWC].

<sup>95</sup> Ryan McCarl, *The Limits of Law and AI*, 90 U. CIN. L. REV. 923, 925 (2022) (“While there is no generally accepted definition of AI, AI traditionally focuses on the construction of *rational agents*: computer agents (or software programs) that work to

machines have sophisticated behaviors.<sup>96</sup> In the case of insects, their behavior is raw instinct.<sup>97</sup> Intelligence requires the ability to adjust to new stimuli.<sup>98</sup> Hence, AI refers to inorganic entities with the capacity to learn, reason, and adapt to new circumstances.<sup>99</sup>

AI is typically divided into two categories, narrow AI and general AI.<sup>100</sup> Narrow AI can perform a single task in a similar fashion to a human,<sup>101</sup> and examples are ubiquitous.<sup>102</sup> Siri™, self-driving cars, Netflix™ recommendations, and chess robots are all examples of narrow AI.<sup>103</sup> Narrow AI can excel at the task it is designed to perform—often exceeding human performance.<sup>104</sup> However, narrow AI is completely useless outside of the field it is designed to perform. For example, narrow AI can obliterate the world’s greatest chess player but may be unable to distinguish between a tiger and an apple.<sup>105</sup>

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achieve the best expected outcome according to a performance measure.”) (emphasis in original); Francesca Rossi, *Artificial Intelligence: Potential Benefits and Ethical Considerations*, EUR. PARL. DOC. (PE 571.380) 1 (2016), [https://www.europarl.europa.eu/RegData/etudes/BRIE/2016/571380/IPOL\\_BRI\(2016\)571380\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2016/571380/IPOL_BRI(2016)571380_EN.pdf) [<https://perma.cc/EEX9-PLU3>] (“AI is usually defined as the **capability of a computer program to perform tasks or reasoning processes** that we usually associate to intelligence in a human being.”) (emphasis in original).

<sup>96</sup> B.J. Copeland, *Artificial Intelligence*, BRITANNICA (Dec. 27, 2023), <https://www.britannica.com/technology/artificial-intelligence> [<https://perma.cc/H8DD-YL39>].

<sup>97</sup> *Id.*

<sup>98</sup> *Id.*

<sup>99</sup> Karen Hao, *What is AI? We Drew You a Flowchart to Work It Out*, MIT TECH. REV. (Nov. 10, 2018), <https://www.technologyreview.com/2018/11/10/139137/is-this-ai-we-drew-you-a-flowchart-to-work-it-out/> [<https://perma.cc/VJM9-ABKD>].

<sup>100</sup> These are also often referred to as strong AI and weak AI.

<sup>101</sup> Alyssa Schroer, *Artificial Intelligence. What is Artificial Intelligence (AI)? How Does AI Work?*, BUILT IN (Feb 16, 2024), <https://builtin.com/artificial-intelligence> [<https://perma.cc/T3SF-9FTM>] (“Weak AI, sometimes referred to as narrow AI or specialized AI, operates within a limited context and is a simulation of human intelligence applied to a narrowly defined problem”).

<sup>102</sup> Rossi, *supra* note 95, at 2 (“There are many examples of the presence of AI in our current life, that we don’t even know of”).

<sup>103</sup> Bernard Marr, *What is Weak (Narrow) AI? Here Are 8 Practical Examples*, BERNARD MARR & CO., <https://bernardmarr.com/what-is-weak-narrow-ai-here-are-8-practical-examples/> [<https://perma.cc/3PB6-T4BM>]; Narrow AI, ENVISIONING, <https://www.envisioning.io/vocab/narrow-ai> [<https://perma.cc/853Z-LFRK>].

<sup>104</sup> Maggie Harrison Dupré, *AI Pilot Crushes Human Dogfight Rival in 90 Seconds*, THE BYTE (Mar. 5, 2023), <https://futurism.com/the-byte/ai-pilot-crushes-human-dogfight> [<https://perma.cc/ZMY9-MR5G>].

<sup>105</sup> Hao, *supra* note 99 (“AI may have mastered Go, but in other ways it is still much dumber than a toddler.”); Louise Matsakis, *Researchers Fooled a Google AI Into*

On the other hand, general AI is essentially the equivalent of the human mind—it can adapt to any new events.<sup>106</sup> What degree of performance satisfies human level plasticity is increasingly debated.<sup>107</sup> Nonetheless, there is consensus that general AI does not exist yet, and some believe it never will.<sup>108</sup> Recent Hollywood examples of general AI include *Her*, *Ex Machina*, and *WALL-E*.

Machine learning is the engine behind most AI.<sup>109</sup> It operates by applying algorithms to find patterns in data.<sup>110</sup> Thus, data is the fuel powering AI.<sup>111</sup> Once

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*Thinking a Rifle Was a Helicopter*, WIRED (Dec. 28, 2017, 12:07 PM), <https://www.wired.com/story/researcher-fooled-a-google-ai-into-thinking-a-rifle-was-a-helicopter/> [<https://perma.cc/857M-8LTT>].

<sup>106</sup> Jeremy Baum & John Villasenor, *How Close Are We to AI That Surpasses Human Intelligence?*, BROOKINGS (July 18, 2023), <https://www.brookings.edu/articles/how-close-are-we-to-ai-that-surpasses-human-intelligence/> [<https://perma.cc/5JKF-WHH3>] (“Common to all of the definitions, either explicitly or implicitly, is the concept that an AGI system can perform tasks across many domains, adapt to the changes in its environment, and solve new problems—not only the ones in its training data.”); *What is Strong AI?*, IBM, <https://www.ibm.com/topics/strong-ai> [<https://perma.cc/PGR5-GUX9>].

<sup>107</sup> Baum & Villasenor, *supra* note 106 (“There is no single, formally recognized definition of AGI—rather, there is a range of definitions that include the following . . . .”); Will Douglas Heaven, *Google DeepMind Wants to Define What Counts as Artificial General Intelligence*, MIT TECH. REV. (Nov. 16, 2023), <https://www.technologyreview.com/2023/11/16/1083498/google-deepmind-what-is-artificial-general-intelligence-agi/> [<https://perma.cc/AJ5A-KFF4>] (“In broad terms, AGI typically means artificial intelligence that matches (or outmatches) humans on a range of tasks. But specifics about what counts as human-like, what tasks, and how many all tend to get waved away.”).

<sup>108</sup> *What is Strong AI?*, *supra* note 106 (“While AI researchers in both academia and private sectors are invested in the creation of artificial general intelligence (AGI), it only exists today as a theoretical concept versus a tangible reality. While some individuals . . . have been quoted as being overly optimistic in what we could accomplish in a few decades in the field of AI; others would say that Strong AI systems cannot even be developed.”).

<sup>109</sup> Karen Hao, *What is Machine Learning?*, MIT TECH. REV. (Nov. 17, 2018), <https://www.technologyreview.com/2018/11/17/103781/what-is-machine-learning-we-drew-you-another-flowchart/> [<https://perma.cc/6BEJ-SSJW>] (“Machine-learning algorithms are responsible for the vast majority of the artificial intelligence advancements and applications you hear about.”).

<sup>110</sup> *Id.*

<sup>111</sup> Christian Ehl, *Data — The Fuel for Artificial Intelligence*, MEDIUM (Jan. 14, 2018), <https://medium.com/@cehl/data-the-fuel-for-artificial-intelligence-ed90bf141372> [<https://perma.cc/7Z53-TEMK>].

the desired pattern is detected, AI uses the pattern to make predictions.<sup>112</sup> Basic machine learning requires human assistance to structure data in order for the AI to “learn.”<sup>113</sup> Deep learning is a subfield of machine learning.<sup>114</sup> Deep learning can detect patterns in unstructured data, which means it can use larger datasets and requires less human intervention than standard machine learning.<sup>115</sup> Karen Hao, the senior AI editor at the *MIT Technology Review*, says, “Deep learning is machine learning on steroids: it uses a technique that gives machines an enhanced ability to find—and amplify—even the smallest patterns.”<sup>116</sup>

AI is currently being employed by governments and businesses around the globe. Companies are using AI to improve customer service, streamline processes, and discover new products.<sup>117</sup> For example, AI has increased the accuracy of protein folding from forty to over eighty percent.<sup>118</sup> This has significantly enhanced biologists and chemists’ ability to study pathogens and other natural phenomena.<sup>119</sup> Governments are using AI in a wide range of spheres, from traffic control<sup>120</sup> to the courtroom.<sup>121</sup> In the coming years, AI is expected to revolutionize both the public and private sectors, potentially

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<sup>112</sup> Hao, *supra* note 109 (“Frankly, this process is quite basic: find the pattern, apply the pattern.”); *What is Machine Learning?*, GEEKSFORGEEKS (May 8, 2023), <https://www.geeksforgeeks.org/ml-machine-learning/> [https://perma.cc/U8PR-CY9V].

<sup>113</sup> *What is Machine Learning?*, IBM, <https://www.ibm.com/topics/machine-learning> [https://perma.cc/S42B-S2LS] (“Classical, or ‘non-deep’, machine learning is more dependent on human intervention to learn”).

<sup>114</sup> *Id.* (“Machine learning, deep learning, and neural networks are all sub-fields of artificial intelligence. However, neural networks is actually a sub-field of machine learning, and deep learning is a sub-field of neural networks.”).

<sup>115</sup> *Id.* (“The deep learning process can ingest unstructured data in its raw form (e.g., text or images), and it can automatically determine the set of features which distinguish different categories of data from one another. This eliminates some of the human intervention required and enables the use of large amounts of data.”).

<sup>116</sup> Hao, *supra* note 109.

<sup>117</sup> *How Do Businesses Use Artificial Intelligence?*, WHARTON ONLINE (Jan. 19, 2022), <https://online.wharton.upenn.edu/blog/how-do-businesses-use-artificial-intelligence/> [https://perma.cc/H75F-S9TT].

<sup>118</sup> KISSINGER ET AL., *supra* note 1, at 189.

<sup>119</sup> *Id.*

<sup>120</sup> Anne Baldrige, *Are AI-Powered Traffic Lights the Future of Efficient Commuting?*, NEWS CTR. MAINE (updated July 25, 2023, 12:41 PM), <https://www.newscentermaine.com/article/traffic/ai-powered-traffic-lights-is-it-the-future-of-efficient-commuting-traffic-maine-route-1-scarborough/97-9597d02c-d8a9-4a32-a0b6-89fd54341313> [https://perma.cc/PMH8-A4KJ].

<sup>121</sup> Aamir Khan, *AI-Powered Indian Judiciary: A Step Forward or Cause for Concern?*, BAR & BENCH (June 5, 2023, 11:28 PM), <https://www.barandbench.com/columns/litigation-columns/ai-powered-indian-judiciary-a-step-forward-cause-concern> [https://perma.cc/RB8K-ZPL2].



increasing global gross domestic product by over \$4 trillion annually.<sup>122</sup>

However, AI is not without perils. AI requires copious amounts of data to operate, and companies in the AI sphere claim that using “public data is necessary to train systems.”<sup>123</sup> The use of individuals’ personal data raises serious concerns about privacy.<sup>124</sup> In addition to data privacy concerns, the data and algorithms underpinning AI contain biases.<sup>125</sup> Hence, AI has been shown to discriminate against marginalized communities in numerous areas, including hiring decisions, loan applications, and criminal justice.<sup>126</sup> AI is also prone to

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<sup>122</sup> Michael Chui et al., *The Economic Potential of Generative AI: The Next Productivity Frontier*, MCKINSEY DIG. (June 14, 2023), <https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-economic-potential-of-generative-ai-the-next-productivity-frontier#key-insights> [<https://perma.cc/MY5K-Z8J2>] (“Our latest research estimates that generative AI could add the equivalent of \$2.6 trillion to \$4.4 trillion annually across the 63 use cases we analyzed—by comparison, the United Kingdom’s entire GDP in 2021 was \$3.1 trillion.”).

<sup>123</sup> Blake Brittain, *Google Says Data-Scraping Lawsuit Would Take ‘Sledgehammer’ to Generative AI*, REUTERS (Oct 17, 2023, 10:54 AM), <https://www.reuters.com/legal/litigation/google-says-data-scraping-lawsuit-would-take-sledgehammer-generative-ai-2023-10-17/> [<https://perma.cc/NC25-QW63>]; Dylan Walsh, *The Legal Issues Presented By Generative AI*, MIT MGMT. SLOAN SCH. (Aug. 28, 2023), <https://mitsloan.mit.edu/ideas-made-to-matter/legal-issues-presented-generative-ai> [<https://perma.cc/RG94-9WLP>] (“Most lawsuits about generative AI center on data use . . . ‘which is not surprising, given these systems consume huge, huge amounts of data from all corners of the world.’”).

<sup>124</sup> *AI and Privacy: The Privacy Concerns Surrounding AI, Its Potential Impact on Personal Data*, ECON. TIMES (updated Apr. 25, 2023, 8:31 PM IST), <https://economictimes.indiatimes.com/news/how-to/ai-and-privacy-the-privacy-concerns-surrounding-ai-its-potential-impact-on-personal-data/articleshow/99738234.cms> [<https://perma.cc/HT4Z-E8WE>] (“As Artificial Intelligence (AI) continues to advance, it has brought about a myriad of concerns regarding personal data privacy.”).

<sup>125</sup> A.W. Ohlheiser, *AI Automated Discrimination. Here’s How to Spot It*, VOX (updated June 14, 2023, 6:36 AM), <https://www.vox.com/technology/23738987/racism-ai-automated-bias-discrimination-algorithm> [<https://perma.cc/T5QJ-TYVH>] (“Humans created computers, and they design and train the systems that make modern technology work. As these systems are created, the biases of their human creators are reflected in them.”).

<sup>126</sup> *Id.* (“Researchers and users have identified anti-Black biases in AI applications ranging from hiring to robots to loans.”); Julia Angwin et al., *Machine Bias*, PROPUBLICA (May 23, 2016), <https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing> [<https://perma.cc/PE33-4B92>]; Thaddeus L. Johnson & Natasha N. Johnson, *Police Facial Recognition Technology Can’t Tell Black People Apart*, SCI. AM. (May 18, 2023), <https://www.scientificamerican.com/article/police-facial-recognition-technology-cant-tell-black-people->

hallucination—making stuff up.<sup>127</sup> Hallucinations can be dangerous when people rely on AI for accurate information, such as in a medical diagnosis, or if the hallucination propagates “fake news.”<sup>128</sup> AI presents numerous other issues too, such as potential job displacement.<sup>129</sup>

### III. TRIBES AND AI

Tribes can leverage AI to strengthen their sovereignty. Tribes are governments and can use AI for the same purposes as other governments. However, the potential gains for tribes are likely greater than those for other governments. One reason is tribal governments are often located in remote areas.<sup>130</sup> Distance presents an obstacle for workforce development and access to services. AI can serve as a substitute for humans in many instances, so it can perform roles that tribes have been struggling to find qualified personnel to fill. AI can also help tribes overcome stereotypes about Indigenous culture. Even well into the twenty-first century, many people assume tribal cultures have not evolved beyond the teepee.<sup>131</sup> By leading the way in AI, tribes can show their cultures are dynamic and able to excel in the modern world.

AI’s potential to benefit tribes has a notable obstacle—Internet infrastructure. To achieve full effect, AI requires the Internet, and Indian country

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apart/#:~:text=Algorithms%20learn%20to%20compare%20images, commonly%20used%20by%20law%20enforcement [https://perma.cc/2642-9SUQ].

<sup>127</sup> *What are AI Hallucinations?*, IBM, <https://www.ibm.com/topics/ai-hallucinations> [https://perma.cc/MU6D-Z2Q7].

<sup>128</sup> *Id.* (“For example, a healthcare AI model might incorrectly identify a benign skin lesion as malignant, leading to unnecessary medical interventions. AI hallucination problems can also contribute to the spread of misinformation.”).

<sup>129</sup> Elizabeth Napolitano, *AI Eliminated Nearly 4,000 Jobs in May, Report Says*, CBS NEWS (June 2, 2023, 5:59 PM), <https://www.cbsnews.com/news/ai-job-losses-artificial-intelligence-challenger-report/> [https://perma.cc/PY9Q-FKZU].

<sup>130</sup> See SARAH DEWEES & BENJAMIN MARKS, FIRST NATIONS DEV. INST., RESEARCH NOTE: TWICE INVISIBLE: UNDERSTANDING RURAL NATIVE AMERICA 1 (2017), <https://www.usetinc.org/wp-content/uploads/bvenuti/WWS/2017/May%202017/May%208/ Twice%20Invisible%20-%20Research%20Note.pdf> [https://perma.cc/47HA-N99D] (noting reservations are “the most misunderstood rural areas” where “a majority of [American Indian and Alaska Native] people live”); TROY A. EID ET AL., INDIAN LAW AND ORDER COMM’N, A ROADMAP FOR MAKING NATIVE AMERICA SAFER 35 (2013) (“Many of the 229 federally recognized tribes are villages located off the road system and ‘more closely resemble villages in developing countries’ than small towns in the lower 48.”); *Id.* at 73, 125. See also *infra* note 174 and accompanying text.

<sup>131</sup> See Creppelle, *Time Trap*, *supra* note 19, at 191, 193–95; see Samantha Bee’s tongue-in-cheek interview cited *supra* note 80.

lags far behind the rest of the United States in Internet access.<sup>132</sup> Approximately 20 percent of Indian country residents lack access to Internet,<sup>133</sup> and Internet speed is significantly slower in Indian country.<sup>134</sup> Some tribes do not even have stable electricity.<sup>135</sup> While these problems are serious, they are improving.<sup>136</sup>

### A. Tribal Legal Systems

Tribal courts adjudicate a variety of claims involving both Indians and non-Indians.<sup>137</sup> Inquiries into the veracity of tribal courts have consistently shown they are neutral arbiters of justice.<sup>138</sup> Nevertheless, many people have negative

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<sup>132</sup> U.S. GOV'T ACCOUNTABILITY OFF., GAO-22-104421, TRIBAL BROADBAND: NATIONAL STRATEGY AND COORDINATION FRAMEWORK NEEDED TO INCREASE ACCESS 9 (2022) (“[P]eople living on tribal lands remain among the most underserved populations in the nation.”).

<sup>133</sup> *Id.* at 17–18.

<sup>134</sup> *Id.* at 18.

<sup>135</sup> *The Future of Tribal Energy Development: Implementation of the Inflation Reduction Act and the Bipartisan Infrastructure Law: Hearing Before the S. Comm. on Indian Affs.*, 118th Cong. (2023) (“In 2000, the Energy Information Administration issued a report which estimated that 14 percent of households on Native American reservations had no access to electricity, this was 10 times higher than the national average. In 2022 the Department of Energy Office of Indian Energy issued a report citing that 16,805 total Tribal homes were unelectrified with most being in the Southwest region and Alaska. Specifically, 21% of Navajo Nation homes and 35% of Hopi Indian Tribe homes are unelectrified.”) (statement of Hon. Bryan Newland, Assistant Sec’y, Indian Affs.); Adam Crepelle, *Tribes, Vaccines, and COVID-19: A Look at Tribal Responses to the Pandemic*, 49 *FORDHAM URB. L.J.* 31, 47–48 (2021).

<sup>136</sup> See *S. Hearing, The Future of Tribal Energy Development*, *supra* note 135. (“The Department commends the work of Congress to enact the IRA and BIL with historic funding and we look forward to continuing our work with Tribes, our federal partners, and the Committee to ensure the energy needs of Tribes are met.”) (statement of Hon. Bryan Newland, Assistant Sec’y-Indian Affs.); *Tribal Broadband Connectivity Program*, BROADBANDUSA, NAT’L TELECOMM. & INFO. ADMIN., <https://broadbandusa.ntia.doc.gov/funding-programs/tribal-broadband-connectivity> [https://perma.cc/68T8-QSCE].

<sup>137</sup> 25 U.S.C. § 3601(6) (2018); *Santa Clara Pueblo v. Martinez*, 436 U.S. 49, 65 (1978) (“Tribal courts have repeatedly been recognized as appropriate forums for the exclusive adjudication of disputes affecting important personal and property interests of both Indians and non-Indians.”); Crepelle, *An Intertribal Business Court*, *supra* note 10, at 77.

<sup>138</sup> *Tribal Courts and the Administration of Justice in Indian Country: Hearing Before the S. Comm. on Indian Affs.*, 110th Cong. 28 (2008) (statement of Hon. Theresa M. Pouley, Chief Judge, Tulalip Tribal Court); Brief for the States of Miss. et al, as Amici Curiae in Support of Respondents at 15, *Dollar Gen. Corp. v. Mississippi Band of Choctaw Indians*, 579 U.S. 545 (2016) (No. 13-1496) (“Based on its experience, Mississippi has confidence in the Choctaw courts.”); Bethany Berger, *Justice and the Outsider: Jurisdiction Over Nonmembers in Tribal Legal Systems*, 37 *ARIZ. ST. L.J.* 1047, 1067 (2005); Crepelle, *An Intertribal Business Court*, *supra* note 10, at 77; Nell Jessup

perceptions of tribal courts predicated on the notion that tribal courts and their laws are mysterious.<sup>139</sup> Additionally, some people assume tribal courts are incapable of equitably administering justice.<sup>140</sup> One federal court has asserted, “[T]he tribal courts are overwhelmed by problems arising out of a lack of adequate funding, a lack of adequately trained personnel, and a lack of true judicial independence. . . . In short, many tribal courts are so short of resources and personnel that they constitute a national embarrassment.”<sup>141</sup> Lack of resources can lead to case backlogs which compel tribal citizens to pursue their cases in state or federal court.<sup>142</sup> Negative perceptions of tribal legal systems have caused the Supreme Court to place severe constraints on tribal jurisdiction.<sup>143</sup>

Tribal justice systems stand to benefit significantly from AI. Courts are using AI to transcribe proceedings.<sup>144</sup> Judges around the world are already using AI to expedite legal research and writing.<sup>145</sup> Judges are also using AI to support

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Newton, *Tribal Court Praxis: One Year in the Life of Twenty Indian Tribal Courts*, 22 AM. INDIAN L. REV. 285, 352 (1998).

<sup>139</sup> *United States v. Cooley*, 593 U.S. 345, 352–53 (2021) (“We also note that our prior cases denying tribal jurisdiction over the activities of non-Indians on a reservation have rested in part upon the fact that full tribal jurisdiction would require the application of tribal laws to non-Indians who do not belong to the tribe and consequently had no say in creating the laws that would be applied to them.”); *Nevada v. Hicks*, 533 U.S. 353, 384 (2001) (Souter, J., concurring); *Strate v. A-1 Contractors*, 520 U.S. 438, 443 (1997); Crepelle, *Tribal Law*, *supra* note 23 (manuscript at 1, 27).

<sup>140</sup> Mark Zuckerberg, FACEBOOK (July 16, 2017), <https://www.facebook.com/zuck/posts/10103892215949831> (“[Outside businesses] find the courts always rule in favor of tribal members”).

<sup>141</sup> *United States v. Cavanaugh*, 680 F.Supp.2d 1062, 1072 (D.N.D. 2009) *rev’d*, 643 F.3d 592 (8th Cir. 2011). *See also* *WMAT Tribal Courts Staffing*, BUREAU OF JUST. ASSISTANCE, U.S. DEP’T OF JUST. (Sept. 21, 2022), <https://bja.ojp.gov/funding/awards/15pbja-22-gg-02008-trib> [<https://perma.cc/64J8-EPP2>] (“Like the Tribe itself, the Tribal Court is in a precarious condition on many levels including being drastically understaffed, and having serious safety and security deficiencies.”).

<sup>142</sup> *S. Hearing, Tribal Courts and the Administration of Justice*, *supra* note 138, at 108 (“But, because our dockets have become so backlogged, we have actually had members try to file civil cases in non-Indian courts, simply because they feared that we could not resolve their matter fast enough to meet their needs.”) (statement of Alberta Iron Cloud Miller, Chief Prosecutor, Oglala Sioux Tribal Court).

<sup>143</sup> *See United States v. Cooley*, 593 U.S. 345, 351–52 (2021).

<sup>144</sup> Khan, *supra* note 121.

<sup>145</sup> *Id.* (“The objections to the use of AI in the Supreme Court system . . . were ‘totally unwarranted’ as the system was designed to aid a judge with facts in writing verdicts and using their own intelligence with a sense of right and wrong.”); Janus Rose, *A Judge Just Used ChatGPT to Make a Court Decision*, VICE (Feb. 3, 2023, 9:28 AM), <https://www.vice.com/en/article/k7bdmv/judge-used-chatgpt-to-make-court-decision> [<https://perma.cc/J9JU-PD2B>].

their decisions.<sup>146</sup> China has allowed AI to decide cases in lieu of human judges, primarily in “simple financial disputes” but also in tort and criminal cases.<sup>147</sup> In fact, if Chinese judges disagree with an AI’s decision, human judges must explain their reason for overruling the AI.<sup>148</sup> China estimates AI has lightened the workload of its human judges by approximately thirty percent, and saved the Chinese judiciary an estimated \$45 billion between 2019 to 2021.<sup>149</sup> While AI has not been openly used by judges in the United States yet, two federal courts have issued rules on AI use by lawyers.<sup>150</sup> State courts are considering AI too.<sup>151</sup>

AI has the potential to uniquely benefit tribal courts. If AI can fill vacant courthouse positions, this will allow tribal courts to process cases more quickly and effectively.<sup>152</sup> More efficient case administration will encourage people to pursue remedies in tribal court, thereby strengthening tribal sovereignty.<sup>153</sup> It also

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<sup>146</sup> Adam Smith et al., *Are AI Chatbots in Courts Putting Justice at Risk?*, REUTERS (May 4, 2023, 9:01 AM), <https://www.reuters.com/article/global-tech-justice/feature-are-ai-chatbots-in-courts-putting-justice-at-risk-idINL8N36V3QL/> [https://perma.cc/D7S3-FDTB] (“Indian High Court judge Anoop Chitkara has ruled over thousands of cases. But when he refused bail to a man accused of assault and murder, he turned to ChatGPT to help justify his reasoning.”).

<sup>147</sup> Alena Zhabina, *How China’s AI is Automating the Legal System*, DEUTSCHE WELLE (Jan. 20, 2023), <https://www.dw.com/en/how-chinas-ai-is-automating-the-legal-system/a-64465988#:~:text=Xiao%20Baogong%20Intelligent%20Sentencing%20Prediction,prior%20judgments%20from%20similar%20cases> [https://perma.cc/T2J2-Y4KL] (“Xiao Zhi 3.0 is mainly used in cases involving simple financial disputes. However, similar technology has been applied by a court in Suzhou to settle disputes over traffic accidents. AI examined evidence and wrote the verdicts, sparing the judge’s time.”).

<sup>148</sup> Ben Wodecki, *AI Helps Judges Decide Court Cases in China*, AI BUSINESS (July 18, 2022), <https://aibusiness.com/verticals/ai-helps-judges-decide-court-cases-in-china> [https://perma.cc/HX7S-J38R] (“Today, if a judge disagrees with the findings of the system, they are required to provide a written explanation.”).

<sup>149</sup> *Id.*

<sup>150</sup> *Note to Counsel #2: Order on Artificial Intelligence, Judge Stephen Alexander Vaden*, U.S. CT. OF INT’L TRADE, <https://www.cit.uscourts.gov/content/judge-stephen-alexander-vaden> [https://perma.cc/P6EP-TWV8]; *Judge Brantley Starr*, U.S. DIST. CT., N. DIST. OF TEX., <https://www.txnd.uscourts.gov/judge/judge-brantley-starr> [https://perma.cc/5RBK-XDR3].

<sup>151</sup> *Experts Delve Into the Evolving World of AI*, NAT’L CTR. FOR STATE CTS. (Sept. 13, 2023), <https://www.ncsc.org/newsroom/at-the-center/2023/experts-delve-into-the-evolving-world-of-ai2> [https://perma.cc/4TZL-J3W7].

<sup>152</sup> *WMAT Tribal Courts Staffing*, *supra* note 141 (“The Court’s staffing shortage creates problems that reverberate across the entire tribal justice system. As the Court struggles to support its over-burdened backlog of cases, and as the volume of cases continue to increase, so too does the delay from one stage of the criminal process to the other.”).

<sup>153</sup> *Iowa Mut. Ins. Co. v. LaPlante*, 480 U.S. 9, 18 (1987) (“Tribal authority over the activities of non-Indians on reservation lands is an important part of tribal sovereignty.”).

means courts can sanction criminals more quickly,<sup>154</sup> and this is important because the swift imposition of penalties is more important to deterring criminal behavior than the severity of the sanction.<sup>155</sup> Furthermore, AI-enhanced judiciaries undermine the stereotypes used to constrain tribal jurisdiction over non-Indians. Using AI in a judicial capacity may alleviate non-Indian concerns about bias in tribal court. Though AI currently has biases, AI will hopefully eliminate its prejudices one day, mitigating concerns about treating non-Indians unfairly. Similarly, if tribal judges are relying on the same AI as state and federal judges, the AI should be just as valid in tribal court as it is in other forums. Consequently, AI can enfeeble tropes about tribal court capacity and fairness. This can result in greater tribal jurisdiction and sovereignty.

Apart from strengthening tribal courts, AI can improve access to legal services in Indian country. Finding lawyers can be challenging on remote, impoverished reservations and lack of legal representation can seriously impede individuals' ability to exercise their rights. Without lawyers, people can find it exceedingly difficult to navigate the criminal justice system and child custody disputes.<sup>156</sup> AI is not ready to completely replace lawyers yet; nevertheless, AI currently scores in the ninetieth percentile on the bar exam.<sup>157</sup> It can draft and review contracts,<sup>158</sup> discovery requests, and other legal documents.<sup>159</sup> While AI

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<sup>154</sup> *WMAT Tribal Courts Staffing*, *supra* note 141 (“Improving current conditions of staff shortages will take offenders off the street, close unresolved cases that have been pending for far too long, and access revenue-generation strategies that will help sustain new staff positions.”).

<sup>155</sup> Adam Creppelle, *The Law and Economics of Crime in Indian Country*, 110 *GEO. L. J.* 569, 588 (2022) (“Economists have found that the swiftness and certainty of the penalty are more important crime deterrents than the severity of the punishment.”).

<sup>156</sup> In fact, even experienced lawyers can find it challenging to navigate an area of the law they are unfamiliar with.

<sup>157</sup> John Koetsier, *GPT-4 Beats 90% of Lawyers Trying To Pass The Bar*, *FORBES* (Mar. 14, 2023, 6:40 PM), <https://www.forbes.com/sites/johnkoetsier/2023/03/14/gpt-4-beats-90-of-lawyers-trying-to-pass-the-bar/?sh=387cc68b3027> [https://perma.cc/8DUW-K98Y]; Jay Reeves, *AI Beats Law Grads on Bar Exam*, *LAW. MUT.* (Apr. 28, 2023), <https://www.lawyersmutualnc.com/blog/ai-beats-law-grads-on-bar-exam> [https://perma.cc/9U3L-BY3D].

<sup>158</sup> Jack Shepherd, *Chat GPT for Contract Drafting: AI v. Templates*, *MEDIUM* (Feb. 9, 2023), <https://jackwshepherd.medium.com/chat-gpt-for-contract-drafting-ai-v-templates-50ec8fd42f44> [https://perma.cc/2B8N-777P]; *How AI Contract Review Technology Can Ease the Headache of Tedious Tasks*, *THOMSON REUTERS* (Aug. 15, 2023), <https://legal.thomsonreuters.com/blog/how-ai-enabled-tech-can-ease-the-headache-of-contract-review/> [https://perma.cc/CK58-UELK].

<sup>159</sup> Zain Kalson, *The Implications of ChatGPT and Artificial Intelligence in Family Law*, *FAM. LAW. MAG.* (updated Dec. 14, 2022), <https://familylawyermagazine.com/chatgpt-and-artificial-intelligence-in-family-law/> [https://perma.cc/N9GL-H9M9].

has not been allowed to litigate a case in the United States yet,<sup>160</sup> it has proven itself successful at defeating parking tickets and minor customer disputes in non-judicial proceedings.<sup>161</sup> Access to AI legal services can empower individuals unable to afford a lawyer to assert their rights.<sup>162</sup> As a result, AI can “democratize access to legalize services”<sup>163</sup> and help reservation residents find justice.

Additionally, AI can help tribes promulgate codes and ordinances. Many tribal codes are not fully developed, so tribal codes often borrow laws from other jurisdictions. This usually works because many laws are universal.<sup>164</sup> However, a major reason that all tribes have not drafted their own codes is cost,<sup>165</sup> and AI can remove this barrier. Though using AI to write legislation may seem odd, software programs have been aiding American legislators for years.<sup>166</sup> AI-empowered tribal legal systems can strengthen tribal sovereignty.

### B. Healthcare

The United States has treaty and statutory obligations to provide Indians with healthcare.<sup>167</sup> Nevertheless, Indians have the worst health statistics in the

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<sup>160</sup> *Id.* (“Backlash from lawyers against [using a ‘robot’ lawyer in court] . . . suggests that those in the legal profession have concerns over AI-powered chatbots usurping their jobs.”).

<sup>161</sup> Megan Cerullo, *AI-Powered “Robot” Lawyer Won’t Argue in Court After Jail Threats*, CBS NEWS (updated Jan. 26, 2023, 1:08 PM), <https://www.cbsnews.com/news/robot-lawyer-wont-argue-court-jail-threats-do-not-pay/> [<https://perma.cc/8TJV-4N5U>] (“DoNotPay has already used AI-generated form letters and chatbots to help people secure refunds for in-flight Wifi that didn’t work, as well as to lower bills and dispute parking tickets . . .”).

<sup>162</sup> Ashwin Telang, *The Promise and Peril of AI Legal Services to Equalize Justice*, HARV. J.L. & TECH. (Mar. 14, 2023), <https://jolt.law.harvard.edu/digest/the-promise-and-peril-of-ai-legal-services-to-equalize-justice> [<https://perma.cc/5DHG-SHCF>] (“Self-help chatbots empower low-income individuals to take their civil issues to court by providing immediate legal information about their specific case or situation.”).

<sup>163</sup> *Id.*

<sup>164</sup> Crepelle, *Tribal Law*, *supra* note 23 (manuscript at 5).

<sup>165</sup> *Id.* (manuscript at 24).

<sup>166</sup> Mohar Chatterjee, *Machines That Draft Laws: They’re Heeere*, POLITICO (Feb. 14, 2023, 4:20 PM), <https://www.politico.com/newsletters/digital-future-daily/2023/02/14/machines-that-draft-laws-theyre-heeere-00082858> [<https://perma.cc/2A5Z-GCGK>] (“For years — longer than you may think — legislative offices have used software to help draft bill amendments and also to understand what new versions of a law actually do. More legislative bodies adopt such software every year. Even the U.S. House of Representatives uses it.”).

<sup>167</sup> 25 U.S.C. § 1601 (2018); U.S. COMM’N ON C.R., *BROKEN PROMISES: CONTINUING FEDERAL FUNDING SHORTFALL FOR NATIVE AMERICANS* 61 (2018), <https://www.usccr.gov/files/pubs/2018/12-20-Broken-Promises.pdf> [<https://perma.cc/ZZ74-AR9Z>] (“Treaties between the United States and tribal nations

United States.<sup>168</sup> Lack of access to medical care is a major reason why. The Indian Health Services (IHS) has a twenty-five percent shortage of healthcare providers.<sup>169</sup> IHS providers are paid less than other public health providers,<sup>170</sup> and low pay makes being a medical provider in Indian country less desirable than higher-paying jurisdictions. The Indian country physician shortage means more patients per doctor. Not only may doctors be subjected to a higher caseload and lower pay, IHS facilities often lack medical equipment such as MRI machines.<sup>171</sup> In fact, IHS facilities may not have stable electricity.<sup>172</sup> IHS providers often have difficulty accessing patient medical data too.<sup>173</sup> Furthermore, Indian country is often located in rural areas with limited housing, as well as career and recreational opportunities for families.<sup>174</sup> These factors contribute to burnout and deter individuals from working at the IHS.<sup>175</sup>

Although AI is likely years away (if ever) from replacing human healthcare providers, AI is already showing tremendous potential in medicine.<sup>176</sup>

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provide the original legal foundation for the federal government's obligation to provide health care for Native Americans.”).

<sup>168</sup> Disparities, INDIAN HEALTH SERV. (Oct. 2019), <https://www.ihs.gov/newsroom/factsheets/disparities/> [<https://perma.cc/EN8W-U54U>]. See *infra* notes 169–75 and accompanying text for a discussion of the disparities and their causes.

<sup>169</sup> U.S. GOV'T ACCOUNTABILITY OFF., GAO-18-580, INDIAN HEALTH SERVICE: AGENCY FACES ONGOING CHALLENGES FILLING PROVIDER VACANCIES 9 (2018).

<sup>170</sup> Andrew Siddons, *The Never-Ending Crisis at the Indian Health Service*, ROLL CALL (Mar. 5, 2018, 5:04 AM), <https://rollcall.com/2018/03/05/the-never-ending-crisis-at-the-indian-health-service/> [<https://perma.cc/T94B-HQ3W>] (“Because of small appropriations the salaries for the personnel in health work are materially below those paid by the government in its other activities concerned with public health and medical relief.”).

<sup>171</sup> Misha Friedman, *For Native Americans, Health Care is a Long, Hard Road Away*, NPR (Apr. 13, 2016, 7:30 AM), <https://www.npr.org/sections/health-shots/2016/04/13/473848341/health-care-s-hard-realities-on-the-reservation-a-photo-essay> [<https://perma.cc/MM3W-KTRP>] (“On the reservation, IHS facilities often don't have services that people elsewhere expect, such as emergency departments or MRI machines.”).

<sup>172</sup> Crepelle, *Tribes, Vaccines, and COVID-19*, *supra* note 135, at 47–48.

<sup>173</sup> Friedman, *supra* note 171 (“Each clinic has its own records, and patients who don't keep up with their own records often have to repeat immunizations or lab work.”).

<sup>174</sup> GAO-18-580, AGENCY FACES ONGOING CHALLENGES, *supra* note 169, at 17 (“According to IHS officials, the rural locations and geographic isolation of some IHS facilities create recruitment and retention difficulties.”); Siddons, *supra* note 170 (“Since the hospitals tend to be in remote areas, recruiting health professionals is a challenge.”).

<sup>175</sup> GAO-18-580, AGENCY FACES ONGOING CHALLENGES, *supra* note 169, at 29.

<sup>176</sup> See generally PETER LEE, CAREY GOLDBERG & ISAAC KOHANE, THE AI REVOLUTION IN MEDICINE: GPT-4 AND BEYOND (2023); see also Scott Gottlieb, *Gottlieb Says A.I. May Take On Doctors' Roles Sooner Rather Than Later*, CNBC (updated July 31, 2023, 10:14



Multiple AI models have passed the United States Medical Licensing Examination.<sup>177</sup> AI has already proven itself able to expertly diagnose several diseases.<sup>178</sup> For example, AI can diagnose Type 2 diabetes based upon a ten-second voice recording with nearly ninety-percent accuracy.<sup>179</sup> AI can predict a person's chances of developing diseases<sup>180</sup> and has the potential to tailor

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AM), <https://www.cnn.com/2023/07/31/op-ed-ai-may-take-on-doctors-roles-sooner-than-later.html> [<https://perma.cc/PB8W-VCND>] (“Even if the current stage of development isn’t quite ready to completely remove doctors from the decision-making loop, these tools will increasingly enhance the productivity of providers and, in many cases, begin to substitute for them.”); Ted A. James, *How Artificial Intelligence is Disrupting Medicine and What it Means for Physicians*, HARV. MED. SCH. (Apr. 13, 2023), <https://postgraduateeducation.hms.harvard.edu/trends-medicine/how-artificial-intelligence-disrupting-medicine-what-means-physicians> [<https://perma.cc/E6TP-TJQG>] (“Artificial Intelligence (AI) has the potential to transform health care and disrupt the field of medicine in significant ways. It has shown remarkable progress in tasks such as diagnostics, data analysis and precision medicine and is already being applied in areas ranging from patient triage to cancer detection.”).

<sup>177</sup> *OpenEvidence AI Becomes the First AI in History to Score Above 90% on the United States Medical Licensing Examination (USMLE)*, PR NEWswire (July 14, 2023, 6:00 AM), <https://www.prnewswire.com/news-releases/openevidence-ai-becomes-the-first-ai-in-history-to-score-above-90-on-the-united-states-medical-licensing-examination-usmle-301877056.html> [<https://perma.cc/V3NZ-7GHR>] (“OpenEvidence, a generative Artificial Intelligence (AI) company working on aligning Large Language Models (LLMs) to the medical domain, announced today that **OpenEvidence AI has become the first AI in history to score above 90% on the United States Medical Licensing Examination (USMLE)**. Previously, AIs such as ChatGPT and Google’s Med-PaLM 2 have reported scores of 59% and 86%, respectively.”) (emphasis in original).

<sup>178</sup> U.S. GOV’T ACCOUNTABILITY OFF., GAO-22-104629, TECHNOLOGY ASSESSMENT: ARTIFICIAL INTELLIGENCE IN HEALTH CARE 9–11 (2022); Jack Guy, *AI May Be As Effective As Medical Specialists At Diagnosing Disease*, CNN HEALTH (Sept. 25, 2019, 7:23 AM), <https://www.cnn.com/2019/09/25/health/ai-disease-diagnosis-scli-intl/index.html> [<https://perma.cc/6T6A-BZT4>].

<sup>179</sup> Robby Berman, *AI Could Help Diagnose Diabetes in 10 Seconds Through Voice Analysis*, MED. NEWS TODAY (updated Oct. 24, 2023), <https://www.medicalnewstoday.com/articles/ai-10-second-voice-clip-help-diabetes-diagnosis> [<https://perma.cc/68WN-NW9B>] (“**Researchers from Klick Applied Sciences have developed a tool they say can diagnose type 2 diabetes in women and men, respectively, with up to 0.89 and 0.86 accuracy** . . . For women, the telltale characteristics turned out to be related to pitch, while for men, changes in strength or amplitude delivered a type 2 diabetes diagnosis.”) (emphasis in original).

<sup>180</sup> *AI Fast-Tracks Disease Risk Predictions*, NEUROSCIENCE NEWS (July 17, 2023), <https://neurosciencenews.com/ai-health-prediction-23646/#:~:text=Summary%3A%20Researchers%20developed%20AI%20software,a%20predictor%20of%20these%20conditions> [<https://perma.cc/5YY7-CNJU>] (“**Thanks to artificial intelligence, we will soon be able to predict our risk of developing serious health conditions later in life, at the press of a button.**”) (emphasis in original).

prescriptions to each patient's unique biochemistry.<sup>181</sup> Surgeons assert AI can improve the way they operate.<sup>182</sup> Robots have already improved surgical outcomes, so it is possible that AI-powered robots will independently conduct surgeries in the future.<sup>183</sup> AI is only growing more powerful by the day. Thus, Dr. Scott Gottlieb, former Food and Drug Administration Commissioner, asserts, "The inevitable question isn't so much if but when these artificial intelligence devices can step into the shoes of doctors."<sup>184</sup>

Given the abysmal level of access to healthcare in Indian country, reservation residents have much to gain from AI medicine.<sup>185</sup> First of all, AI can provide reservation residents with immediate access to healthcare information—including disease diagnosis and individualized treatment plans.<sup>186</sup> At the very least, AI can expand the quantity and quality of information rural physicians have access to, thereby enhancing their ability to treat patients.<sup>187</sup> In the not-too-distant

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<sup>181</sup> See Nicholas J. Schork, *Artificial Intelligence and Personalized Medicine*, in PRECISION MEDICINE IN CANCER THERAPY 265 (Daniel D. Von Hoff & Haiyong Han eds., 2019).

<sup>182</sup> Jim McCartney, *AI is Poised to "Revolutionize" Surgery*, AM. C. OF SURGEONS (June 7, 2023), <https://www.facs.org/for-medical-professionals/news-publications/news-and-articles/bulletin/2023/june-2023-volume-108-issue-6/ai-is-poised-to-revolutionize-surgery/> ("I'm genuinely concerned about the rapid adaptation of AI into our daily lives . . . [b]ut with respect to application of AI to medicine and surgery, we're not moving fast enough.").

<sup>183</sup> Sam Daley, *Artificial Intelligence in Healthcare: 39 Examples of Improving the Future of Medicine*, BUILT IN (updated Mar. 24, 2023), <https://builtin.com/artificial-intelligence/artificial-intelligence-healthcare> [<https://perma.cc/2XUK-S7E8>] ("Examples of AI in Robotic Surgery").

<sup>184</sup> Gottlieb, *supra* note 176.

<sup>185</sup> LEE ET AL., *supra* note 176, at 122 ("Let's look first at the population that has the most to gain: people with little or no access to healthcare now."); Jonathan Guo & Bin Li, *The Application of Medical Artificial Intelligence Technology in Rural Areas of Developing Countries*, 2 HEALTH EQUITY 174, 177–80 (2018).

<sup>186</sup> Rebecca Love, *The Role of AI In Democratizing Healthcare: From Diagnosis To Access*, FORBES (Nov. 2, 2023, 10:15 AM), <https://www.forbes.com/sites/forbesbusinesscouncil/2023/11/02/the-role-of-ai-in-democratizing-healthcare-from-diagnosis-to-access/?sh=24b6a1e31010> [<https://perma.cc/2CSD-GGG4>] ("In some cases, depending on the healthcare issue, the only requirement is that the patient has access to a smartphone to capture the data for diagnosis.").

<sup>187</sup> Cody MacKay, *AI Will Be Critical for the Future of Rural Health Care in Canada, Experts Say*, CBC NEWS (Oct. 16, 2023), <https://www.cbc.ca/news/canada/prince-edward-island/pei-artificial-intelligence-1.6994961> [<https://perma.cc/EAE5-2TFL>]; *Leveraging AI to Provide a Rural 'Retail Medicine' Experience*, AM. HOSP. ASS'N, <https://www.aha.org/aha-center-health-innovation-market-scan/2020-02-10-leveraging-ai-provide-rural-retail-medicine> [<https://perma.cc/DB6X-QTBP>] ("Artificial

future, AI, in conjunction with other technologies, may be able to deliver full patient care and largely replace human physicians.<sup>188</sup> AI is currently prone to biases, but so are human healthcare providers.<sup>189</sup> AI developers and federal agencies are currently working to eliminate racial prejudices in medicine<sup>190</sup> while simultaneously acknowledging genetic differences present in Indian populations.<sup>191</sup> AI is unlikely to achieve medical perfection;<sup>192</sup> nevertheless, AI can be a boon for tribal medical sovereignty.

Even the nonmedical aspects of healthcare can benefit from AI. AI can substantially reduce the time physicians spend on completing bureaucratic tasks,

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intelligence-enabled technology can help clinicians make better diagnostic and treatment decisions while improving access and quality.”).

<sup>188</sup> MATT BURNS, *Forward Health Launches CarePods, a Self-Contained, AI-Powered Doctor’s Office*, TECHCRUNCH (Nov. 15, 2023, 6:00 AM), <https://techcrunch.com/2023/11/15/forward-health-carepod-ai-doctor/> [<https://perma.cc/QK3B-S27T>] (“Basically, what I’m doing is slowly migrating every single thing from a doctor and nurse to hardware and software. . . . We don’t even believe a doctor’s office should exist. We think that it’s a thing of the past.”).

<sup>189</sup> See generally Michelle Tong & Samantha Artiga, *Use of Race in Clinical Diagnosis and Decision Making: Overview and Implications*, KFF (Dec. 9, 2021), <https://www.kff.org/racial-equity-and-health-policy/issue-brief/use-of-race-in-clinical-diagnosis-and-decision-making-overview-and-implications/> [<https://perma.cc/LT7H-TFS3>].

<sup>190</sup> Caleb J. Colón-Rodríguez, *Shedding Light on Healthcare Algorithmic and Artificial Intelligence Bias*, U.S. DEP’T OF HEALTH AND HUM. SER. OFF. OF MINORITY HEALTH (July 12, 2023), <https://minorityhealth.hhs.gov/news/shedding-light-healthcare-algorithmic-and-artificial-intelligence-bias#:~:text=Impact%20of%20Artificial%20Intelligence%20in%20Contemporary%20Medicine&text=However%2C%20using%20healthcare%20algorithms%20and,not%20work%20well%20for%20others> [<https://perma.cc/MK6C-XJDZ>] (“The Office of Minority Health (OMH) is focused on helping to reduce differences in health outcomes, known as health disparities, for racial and ethnic minority populations and American Indian and Alaska Native communities. By encouraging equity in the lifecycle of algorithms and AI, OMH and other federal agencies aim to lower the risk of bias and improve healthcare outcomes for everyone.”).

<sup>191</sup> Crepelle, *Tribes, Vaccines, and COVID-19*, *supra* note 135, at 44 (“Including Indians in medical experiments and clinical trials is vitally important because genetic variations between Indians and the general population result in different reactions to treatments.”).

<sup>192</sup> Aaron Mok, *AI Doctor’s Offices at the Mall and Gym Will Let You Test Your Own Blood – With No Trained Medics Onsite*, BUS. INSIDER (Dec 9, 2023, 1:51 AM), <https://www.businessinsider.com/ai-doctor-pods-allow-public-check-blood-mall-gym-2023-12> [<https://perma.cc/2VUG-7EK5>] (“And AI is still prone to spitting out errors. A recent study found that OpenAI’s ChatGPT generated cancer treatment plans full of incorrect information. Another study found that the AI chatbot provides false answers to medical-related questions about drugs.”).

such as patient summaries.<sup>193</sup> Less time on administrative matters means more time is available for treating patients.<sup>194</sup> Plus, minimizing paperwork will reduce the rate of physician burnout.<sup>195</sup> Medical facilities are using AI to decide staffing levels, monitor equipment maintenance, and track inventory.<sup>196</sup> By using AI to schedule medical procedures, studies have shown physicians get more time off, which improves physician quality of life.<sup>197</sup> AI can automate billing and patient registration.<sup>198</sup> When patients have questions, AI chatbots can provide an immediate response.<sup>199</sup> Improving administrative efficiency should result in

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<sup>193</sup> MacKay, *supra* note 187 (“The degree of documentation and reporting that clinicians have to undergo everyday is overwhelming . . . so they spend way more than half their time on writing summaries, producing discharge reports . . . creating medical reports.”).

<sup>194</sup> LEE ET AL., *supra* note 176, at 204 (“The help that GPT-4 could bring with paperwork could be called ‘productivity gains,’ but functionally, it means that doctors and nurses will be able to spend more of their time on care and much less on filling out forms.”).

<sup>195</sup> *Id.* at 173; *Stress From Using Electronic Health Records is Linked to Physician Burnout*, BROWN UNIV. (Dec. 5, 2018), <https://www.brown.edu/news/2018-12-05/burnout> [[https:// perma.cc/9CQK-3YB6](https://perma.cc/9CQK-3YB6)] (“The researchers found that doctors with insufficient time for documentation while at work had 2.8 times the odds of burnout symptoms compared to doctors without that pressure.”); Roger Collier, *Electronic Health Records Contributing to Physician Burnout*, 189 CMAJ E1405, E1405 (2017) (“The clerical burden introduced by [electronic health records] has become a leading cause of physician burnout.”); Mandy Oaklander, *Doctors Are Burned Out by Busywork: Study*, TIME (June 27, 2016, 2:34 PM), <https://time.com/4383979/doctor-burnout-electronic-health-records/> [[https://perma.cc/ 5NWB-UH7N](https://perma.cc/5NWB-UH7N)].

<sup>196</sup> Jacob Kupietzky, *The AI Revolution Reaches Healthcare Administration*, NEWSWEEK (Sept. 18, 2023, 9:10 AM), <https://www.newsweek.com/ai-revolution-reaches-healthcare-administration-1827401> [<https://perma.cc/LB6S-MKRM>] (“By analyzing historical data and real-time information, AI systems can help administrators make informed decisions about staffing levels, equipment maintenance schedules, and inventory management.”).

<sup>197</sup> Kat Jercich, *AI-Powered Scheduling Can Boost Clinician Engagement, Reduce Burnout*, HEALTHCARE IT NEWS (Feb. 4, 2022, 12:38 PM), <https://www.healthcareitnews.com/news/ai-powered-scheduling-can-boost-clinician-engagement-reduce-burnout> [[https://perma.cc/ MKS6-WCPV](https://perma.cc/MKS6-WCPV)] (“On average, the scheduling allows our anesthesiologists to have one or two mornings and one or two afternoons off a month to allow for increased work-life balance so they are better able to attend events important to them.”).

<sup>198</sup> Kupietzky, *supra* note 196 (“AI can automate routine administrative tasks, such as appointment scheduling, patient registration, and billing, which could reduce burnout and free up doctors and their staff to spend more time with patients.”).

<sup>199</sup> *Id.* (“ChatGPT can be employed to answer general inquiries, provide appointment reminders, offer medication reminders, and give basic health advice to patients. This can help reduce the burden on administrative staff and ensure patients receive prompt and accurate information.”); Daniel Payne, *AI Has Arrived in Your Doctor’s Office. Washington Doesn’t Know What to Do About It*, POLITICO (updated Nov. 1, 2023, 1:55

substantially lower healthcare costs.<sup>200</sup> Lower costs will make healthcare more accessible in Indian country.

### C. Language Preservation

Language is an integral part of culture.<sup>201</sup> As part of its effort to eradicate Indigenous culture, the United States went to great lengths to exterminate Indigenous languages<sup>202</sup>—though, ironically, it simultaneously relied on Indigenous languages to prevail in World War I and World War II.<sup>203</sup> Since 1990, the United States has sought to “preserve, protect, and promote” Indigenous languages.<sup>204</sup> However, past colonial policies have already destroyed most Native languages.<sup>205</sup> Today, ninety-nine percent of Native American languages are on

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PM), <https://www.politico.com/news/2023/10/28/ai-doctors-healthcare-regulation-00124051> [<https://perma.cc/5CTA-44RF>].

<sup>200</sup> Gottlieb, *supra* note 176 (“When the technology becomes the doctor, however, it can be a cure for Baumol’s cost disease.”).

<sup>201</sup> Fatiha Guessabi, *Blurring the Line Between Language and Culture*, LANGUAGE MAG. <https://www.languagemagazine.com/blurring-the-line-between-language-and-culture/> [<https://perma.cc/SC4D-95Q9>] (“The meanings of a particular language represent the culture of a particular social group. To interact with a language means to do so with the culture which is its reference point. We could not understand a culture without having direct access to its language because of their intimate connection.”); Nick Martin, *What’s Lost When a Language Disappears*, NEW REPUBLIC (Dec. 12, 2019), <https://newrepublic.com/article/155913/native-american-languages-disappearing-reauthorization-act-congress> [<https://perma.cc/R93F-3DSR>] (“The cultural practices and locales that define the hundreds of Native communities dotting the North American landscape are grounded in languages.”).

<sup>202</sup> Martin, *supra* note 201 (“The American government, for part of the nineteenth and twentieth centuries, attempted to eliminate any and all Native languages through federally funded boarding schools, where Native children were compelled to act as American citizens and nothing else.”).

<sup>203</sup> CREPELLE, *BECOMING NATIONS AGAIN*, *supra* note 21 (manuscript at 157–58).

<sup>204</sup> 25 U.S.C. § 2903(1) (2018).

<sup>205</sup> See Daryl Wade Baldwin, *How Indigenous Languages Can Be Preserved, and Why Those Efforts Help Revitalize Culture*, PBS NEWS HOUR (Oct. 10, 2022, 4:40 PM), <https://www.pbs.org/newshour/nation/analysis-how-indigenous-languages-can-be-preserved-and-why-those-efforts-help-revitalize-culture> [<https://perma.cc/AX4X-DU4X>] (“Linguists have estimated that prior to European settlement, there were 300 Indigenous languages spoken in what is now the United States.”); Amy M. Gantt, *Native Language Revitalization: Keeping the Languages Alive and Thriving*, <https://www.se.edu/native-american/wp-content/uploads/sites/49/2019/09/AAA-NAS-2015-Proceedings-Gantt.pdf> [<https://perma.cc/G6J4-WL5S>] (“Before the arrival of the European colonists, North America was home to around 300 distinct languages. Approximately 155 indigenous languages are spoken in North America today, with 135 of those languages only spoken by elders. Currently, at least 50 of the languages still spoken have fewer than ten speakers each.”); *Id.* (“[L]anguage loss started due to European colonization, was perpetuated by boarding schools, and continues today due to

the precipice of extinction.<sup>206</sup> Language loss is impacting Indigenous Peoples across the globe as the United Nations estimates two Indigenous languages die every month.<sup>207</sup>

Indigenous Peoples are turning to AI to preserve their languages.<sup>208</sup> At its most elemental level, AI is premised on pattern recognition.<sup>209</sup> Hence, AI can detect patterns in languages.<sup>210</sup> AI also has the ability to transcribe the conversations it hears.<sup>211</sup> Another benefit of AI for language preservation is its potential to “restore the native sound of the language” as most modern learners

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globalization and indifference.”); Rebecca Nagle, *The U.S. Has Spent More Money Erasing Native Languages Than Saving Them*, HIGH COUNTRY NEWS (Nov. 5, 2019), <https://www.hcn.org/issues/51.21-22/indigenous-affairs-the-u-s-has-spent-more-money-erasing-native-languages-than-saving-them> [<https://perma.cc/72SE-AYTX>].

<sup>206</sup> *99% of Native American Languages Are In Danger of Going Extinct*, TAKEAWAY (Nov. 20, 2019), <https://www.wnycstudios.org/podcasts/takeaway/segments/native-american-languages> [<https://perma.cc/QJ3A-Z2PY>].

<sup>207</sup> *Indigenous Languages*, U.N. PERMANENT F. ON INDIGENOUS ISSUES, <https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/04/Indigenous-Languages.pdf> [<https://perma.cc/N68Y-ZGPU>] (“The majority of the languages that are under threat are Indigenous languages. It is estimated that one Indigenous language dies every two weeks”).

<sup>208</sup> Elizabeth Gray, *AI and Indigenous Language Preservation*, MEDIUM (Sept. 7, 2023), <https://medium.com/aimonks/ai-and-indigenous-language-preservation-3005d3567ab0> [<https://perma.cc/M7JQ-P6RN>] (“In a rapidly changing technological landscape, artificial intelligence (AI) is emerging as an unexpected yet powerful ally in the preservation and revitalization of endangered Indigenous languages.”).

<sup>209</sup> Gaudenz Boesch, *What is Pattern Recognition? A Gentle Introduction (2024)*, VISO.AI, <https://viso.ai/deep-learning/pattern-recognition/> [<https://perma.cc/Z76N-8WZB>] (“Pattern recognition is the ability of machines to identify patterns in data, and then use those patterns to make decisions or predictions using computer algorithms. It’s a vital component of modern artificial intelligence (AI) systems.”).

<sup>210</sup> Adam Zewe, *AI That Can Learn the Patterns of Human Language*, MIT NEWS (Aug. 30, 2022), <https://news.mit.edu/2022/ai-learn-patterns-language-0830> [<https://perma.cc/RXX3-W6JB>] (“They have demonstrated an artificial intelligence system that can learn the rules and patterns of human languages on its own.”).

<sup>211</sup> Erin Kalejs, *How AI is Helping Indigenous Languages Survive and Thrive*, AI FOR GOOD BLOG (Aug. 9, 2022), <https://aiforgood.itu.int/how-ai-is-helping-indigenous-languages-survive-and-thrive/> [<https://perma.cc/2KZ2-NFPD>] (“‘Unfortunately, we had way more interviews than people who were able to transcribe. That’s really what started us thinking about speech to text’ and prompted the team to think ‘how could we accelerate the way in which we could transcribe our archives, making them useful for educational purposes?’ That was the moment they decided to take on the challenge and teach computers how to speak Māori.”).

of American Indian languages speak English as their first language.<sup>212</sup> Thus, AI can help revitalize traditional pronunciation of Indigenous words.<sup>213</sup> AI can further buttress its linguistic teaching ability by incorporating videos of elders and culturally significant items.<sup>214</sup> By helping tribes preserve their languages, AI can bolster tribal sovereignty.<sup>215</sup>

#### D. Education

The United States has been involved in Indian education for over two centuries.<sup>216</sup> Originally, federal Indian education policies were overtly ethnocidal, premised on the mantra of “Kill the Indian, Save the Man.”<sup>217</sup> Contemporary federal Indian education efforts are not maleficent, but the statistics reveal the federal government is falling far short of its treaty and statutory obligations.<sup>218</sup> As the United States Commission on Civil Rights noted

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<sup>212</sup> *How AI is Helping Revitalize Indigenous Languages*, ITU (Aug. 9, 2022), <https://www.itu.int/hub/2022/08/ai-indigenous-languages-maori-te-reo/> [<https://perma.cc/WAA5-PHHU>].

<sup>213</sup> *Id.* (“Among the project’s latest achievements is its Rongo application for practising Te Reo Māori pronunciation.”).

<sup>214</sup> Gray, *supra* note 208 (“These archives encompass not only text but also audio and video recordings, providing a rich and immersive resource for future generations.”).

<sup>215</sup> U.N. PERMANENT F. ON INDIGENOUS ISSUES, *supra* note 207 (“They are central to the identity of indigenous people, the preservation of their cultures, worldviews and visions and an expression of self-determination. When indigenous languages are under threat, so too are indigenous people themselves.”).

<sup>216</sup> See Indian Civilization Act of 1819, ch. 85, 3 Stat. 516 (“The President authorized to employ capable persons to instruct Indians in agriculture, and to teach Indian children reading, writing and arithmetic . . .”); S. REP. NO. 48-95, at 163 (1888) (“The first general appropriation of Indian education was made March 3, 1819, when an act was passed . . .”).

<sup>217</sup> This was a U.S. policy articulated in a paper presented by Richard Pratt. See Richard H. Pratt, *The Advantages of Mingling Indians with Whites*, in PROCEEDINGS OF THE NAT’L CONF. OF CHARITIES & CORRECTION AT THE NINETEENTH ANN. SESSION HELD IN DENVER, COLO., JUNE 23-29, 1892, at 46 (Isabel C. Barrows ed., 1892) (“A great general has said that the only good Indian is a dead one. . . . In a sense, I agree with the sentiment, but only in this: that all the Indian there is in the race should be dead. Kill the Indian in him, and save the man.”). See also NAT’L NATIVE AM. BOARDING SCH. HEALING COALITION, HEALING VOICES VOL. 1: A PRIMER ON AMERICAN INDIAN AND ALASKA NATIVE BOARDING SCHOOLS IN THE U.S. 1 (2d ed., 2020), <https://secureservercdn.net/198.71.233.187/ee8.a33.myftpupload.com/wp-content/uploads/2021/09/NABS-Newsletter-2020-7-1-spreads.pdf> [<https://perma.cc/KX4U-7TGV>].

<sup>218</sup> BROKEN PROMISES, *supra* note 167, at 95 (“As a part of its trust responsibilities, the federal government has an obligation to provide financial assistance for providing educational services to Native Americans in order to promote educational opportunity. The trust relationship obligations stem from treaties and statutes in which education is

in 2018, “Educational attainment rates for Native American students are the lowest of any racial or ethnic group in the U.S.”<sup>219</sup> Indian students have low test scores and drop out of high school at higher rates than any other racial or ethnic group.<sup>220</sup> Less than twenty percent of Indian students enroll in college “compared to 62 percent of all students nationwide.”<sup>221</sup>

Access is a major reason why. The majority of Indian children between three and four years old are not enrolled in preschool programs, and Indian students are the least likely of any students to attend a high school that offers Advanced Placement courses.<sup>222</sup> Plus, Indian reservations struggle to recruit qualified teachers due to their rural locations.<sup>223</sup> Difficulty recruiting qualified teachers to rural reservation schools is likely to increase as the United States as a whole suffers from an increasing teacher shortage.<sup>224</sup> The teacher shortage is so severe that some tribes are recruiting teachers from overseas to fill vacancies in their classrooms.<sup>225</sup>

AI can improve educational opportunities in Indian country. AI can amplify teacher capacity. It can develop personalized lesson plans for students.

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promised.”).

<sup>219</sup> *Id.* at 114.

<sup>220</sup> *Id.* at 114–15.

<sup>221</sup> *Id.* at 115.

<sup>222</sup> *Id.* at 118.

<sup>223</sup> Tom Lutey, *Native Americans Struggle to Bring Teachers to Reservation Schools*, IMDIVERSITY (July 1, 2014), <https://imdiversity.com/diversity-news/native-americans-struggle-bring-teachers-reservation-schools/> [<https://perma.cc/56JM-L6V9>] (“Both state and federal governments have tried to sweeten the pot for teachers willing to work in rural American Indian schools, but superintendents . . . say not all hurdles can be overcome with incentives.”).

<sup>224</sup> Annette Choi, *Teachers Are Calling It Quits Amid Rising School Violence, Burnout and Stagnating Salaries*, CNN (May 31, 2023, 7:33 AM), <https://www.cnn.com/2023/05/31/us/teachers-quitting-shortage-stress-burnout-dg/index.html> [<https://perma.cc/7SRL-2RW2>] (“With school shootings on the rise and pandemic-disrupted learning taking a toll on teachers who feel increasingly burned out, public education is struggling to attract – and retain – qualified school staff . . .”); Gabe Cohen, *Doubling Up On Classrooms, Using Online Teachers and Turning to Support Staff: How Schools are Dealing With the Ongoing Teacher Shortage*, CNN (Sept. 11, 2023: 10:23 AM), <https://www.cnn.com/2023/09/11/us/ongoing-teacher-shortage-creative-solutions/index.html> [<https://perma.cc/F26U-EABF>]; Erica Pandey, *America’s Empty Classrooms*, AXIOS (Aug. 19, 2023), <https://www.axios.com/2023/08/19/teacher-shortage-schools-education-salaries-training> [<https://perma.cc/LY9G-39AY>] (“The teaching profession faces an existential crisis. Turnover rates are high, and not enough young people want to become teachers.”).

<sup>225</sup> *Teacher Shortages Present International Opportunities*, LAKOTA TIMES (May 10, 2023), <https://www.lakotatimes.com/articles/teacher-shortages-present-international-opportunities/> [<https://perma.cc/KCW4-SC4R>].



Moreover, AI can speedily grade examinations and assist teachers with administrative tasks.<sup>226</sup> Grading and bureaucratic matters zap teacher zest and contribute to burnout, so by reducing these burdens, AI can help Indian country schools retain teachers.<sup>227</sup> In addition to reducing teacher administrative workloads, AI will make it easier for teachers to stay up-to-date on pedagogical methods and new developments across the curriculum.<sup>228</sup> Significantly, AI can help tribes and other rural areas have access to the same learning opportunities as children in urban areas.<sup>229</sup> The future is already here as AI is currently boosting rural student performance.<sup>230</sup> AI-powered curricula can help level the academic playing field for Indian students.

#### E. “Value-Added” Taxation

Taxation is one of the most complex issues in Indian country. Tribes possess the inherent sovereign right to tax transactions occurring on their land;<sup>231</sup> however, the Supreme Court permits states to tax reservation commerce.<sup>232</sup> Consequently, transactions on reservations are subject to tribal and state taxation

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<sup>226</sup> Virat Virat, *Transforming rural Education: Unleashing the Potential of AI*, MEDIUM (July 18, 2023), <https://medium.com/@viratviratv2/transforming-rural-education-unleashing-the-potential-of-ai-8fd4aea78d6f> [https://perma.cc/44VV-MDGS] (“AI can assist teachers by automating administrative tasks, grading assignments, and identifying areas where individual students may need additional attention.”).

<sup>227</sup> Jing Liu et al., *AI Can Make Education More Personal (Yes, Really)*, ED. WEEK (Aug. 14, 2023), <https://www.edweek.org/leadership/opinion-ai-can-make-education-more-personal-yes-really/2023/08> [https://perma.cc/2CQ4-5WMQ] (“At a time when teachers are being burnt out, new AI tools need to help teachers free up their time and foster meaningful relationships with students.”).

<sup>228</sup> Claire Chen, *AI Will Transform Teaching and Learning. Let’s Get It Right.*, STAN. UNIV. HUM.-CENTERED ARTIFICIAL INTELLIGENCE (Mar. 9, 2023), <https://hai.stanford.edu/news/ai-will-transform-teaching-and-learning-lets-get-it-right> [https://perma.cc/BQ7M-RFU8].

<sup>229</sup> Virat, *supra* note 226 (“In rural areas where access to quality education is limited, AI can bridge the gap. Virtual classrooms, online courses, and interactive learning platforms can be made accessible to remote locations, breaking the geographical barriers to education.”).

<sup>230</sup> See *Results and Benefits, Empowering Personalized Learning for a Rural Educational Institute With AI Virtual Assistants*, FUTURISM, <https://www.futurismtechnologies.com/aiml-casestudy/empowering-personalized-learning-paths-for-a-rural-educational-institute-with-ai-powered-virtual-assistants/> [https://perma.cc/XB2U-HEET].

<sup>231</sup> *Merrion v. Jicarilla Apache Tribe*, 455 U.S. 130, 137 (1982) (“The power to tax is an essential attribute of Indian sovereignty . . . [and] it derives from the tribe’s general authority, as sovereign, to control economic activity within its jurisdiction. . .”).

<sup>232</sup> *Cotton Petrol. Corp. v. New Mexico*, 490 U.S. 163, 185–87 (1989); Adam Creppelle, *Taxes, Theft, and Indian Tribes: Seeking an Equitable Solution to State Taxation of Indian Country Commerce*, 122 W. VA. L. REV. 999, 1007, 1023 (2020).

while transactions occurring off reservation are only subject to state taxation.<sup>233</sup> Most people would rather pay one tax than two, so dual taxation presents tribes a dilemma—assess a tax and make reservation commerce comparatively more expensive or forego taxing and not have funds for roads, police, and courts.<sup>234</sup> The specter of dual taxation is a substantial impediment to tribal economic development.<sup>235</sup>

Though rare, federal courts occasionally rule that a state tax of tribal commerce has been preempted. The preemption test requires balancing the tribal, state, and federal interests involved in the activity.<sup>236</sup> The test's outcome usually depends on whether the state can *claim* to provide any value to the reservation.<sup>237</sup> If yes, the courts uphold the tax.<sup>238</sup> However, tribes have a chance of preempting the tax by adding value on their reservation.<sup>239</sup> The less non-tribal involvement, the stronger the tribe's claim for preemption. AI may be able to help tribes cut out nontribal actors.

AI's ability to add value and eliminate nontribal involvement seems like something out of a science fiction novel, but it could work like this. The process would start by having the tribe procure an AI. The tribe can then use this AI to develop its own AI suited specifically to the tribe's needs—a task AI is currently

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<sup>233</sup> Crepelle, *Taxes, Theft, and Indian Tribes*, *supra* note 232, at 1014–18.

<sup>234</sup> *Id.* at 1017–18.

<sup>235</sup> *Wagon v. Prairie Band Potawatomi Nation*, 546 U.S. 95, 116 (2005) (Ginsburg, J., dissenting) (“As a practical matter, however, the two tolls cannot coexist. If the Nation imposes its tax on top of Kansas’ tax, then unless the Nation operates the Nation Station at a substantial loss, scarcely anyone will fill up at its pumps. Effectively double-taxed, the Nation Station must operate as an unprofitable venture, or not at all.”) (internal citation omitted); SUBCOMM. ON DUAL TAXATION, TREASURY TRIBAL ADVISORY COMM., SUBCOMMITTEE ON DUAL TAXATION REPORT 3 (2020), <https://home.treasury.gov/system/files/136/TTAC-Subcommittee-on-Dual-Taxation-Report-1292020.pdf> [<https://perma.cc/Z5SH-6PAB>] (“Dual taxation fundamentally is state taxation on Indian lands. This situation creates additional costs on tribal land-based business and economic activity.”).

<sup>236</sup> *See White Mountain Apache Tribe v. Bracker*, 448 U.S. 136 (1980).

<sup>237</sup> *Cotton Petrol. Corp.*, 490 U.S. at 189 (“Cotton’s most persuasive argument is based on the evidence that tax payments by reservation lessees far exceed the value of services provided by the State to the lessees, or more generally, to the reservation as a whole.”) (internal citations omitted).

<sup>238</sup> *See, e.g., Flandreau Santee Sioux Tribe v. Houdyshell*, 50 F.4th 662 (8th Cir. 2022); *Mashantucket Pequot Tribe v. Town of Ledyard*, 722 F.3d 457 (2d Cir. 2013); *Tulalip Tribes v. Washington*, 349 F. Supp. 3d 1046 (W.D. Wash. 2018).

<sup>239</sup> *See, e.g., California v. Cabazon Band of Mission Indians*, 480 U.S. 202, 204 (1987); *Washington v. Confederated Tribes of the Colville Indian Reservation*, 447 U.S. 134 (1980).

able to perform.<sup>240</sup> Thus, the “tribal AI” would be developed on the reservation with exclusively tribal input. The tribal AI could then execute the task desired by the tribe, and the number of jobs AI can perform will increase as robotics technology improves.<sup>241</sup> Robots are already capable of numerous tasks, from cleaning to warehouse work to manufacturing.<sup>242</sup> Many projects will still currently require the importation of materials from off reservation, but AI has shown remarkable proficiency at discovering new materials, meaning tribes may be able to produce items without any off-reservation materials.<sup>243</sup> A tribal AI will likely be able to handle the management aspects of the tribal enterprise independently too.<sup>244</sup> As AI and robotics allow tribes to perform more activities on their reservations, the tribal interest in the activity will substantially rise while the state interest in taxing will fall.

Assuming the preemption analysis holds, AI can prevent tribes from losing billions of dollars in tax revenue to states.<sup>245</sup> Tax revenue will enable tribes to fund roads, courts, education, and other essential government services.

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<sup>240</sup> Anil Ananthaswamy, *Researchers Build AI That Builds AI*, QUANTA MAG. (Jan. 25, 2022), <https://www.quantamagazine.org/researchers-build-ai-that-builds-ai-20220125/> [https://perma.cc/6EW8-WMZQ]; Dom Galeon, *Google’s Artificial Intelligence Built an AI That Outperforms Any Made By Humans*, FUTURISM (updated Feb. 19, 2018), <https://futurism.com/google-artificial-intelligence-built-ai> [https://perma.cc/5B8G-M2J4]; Jon Michael Raasch, *AI Gives Birth to AI: Scientists Say Machine Intelligence Now Capable of Replicating Without Humans*, FOX NEWS (Dec. 15, 2023, 4:00 PM), <https://www.foxnews.com/science/ai-gives-birth-ai-scientists-say-machine-intelligence-capable-replicating-without-humans> [https://perma.cc/6NZ7-KS49].

<sup>241</sup> SULEYMAN & BHASKAR, *supra* note 1, at 97 (“AIs are products of bits and code, existing within simulations and servers. Robots are their bridge, their interface with the real world.”).

<sup>242</sup> Alana Semuels, *Millions of Americans Have Lost Jobs in the Pandemic—And Robots and AI Are Replacing Them Faster Than Ever*, TIME (Aug. 6, 2020, 6:22 AM), <https://time.com/5876604/machines-jobs-coronavirus/> [https://perma.cc/XTH6-WFC].

<sup>243</sup> June Kim, *Google DeepMind’s new AI tool helped create more than 700 new materials*, MIT TECH. REV. (Nov. 29, 2023), <https://www.technologyreview.com/2023/11/29/1084061/deepmind-ai-tool-for-new-materials-discovery/> [https://perma.cc/677M-P5GD].

<sup>244</sup> Seán Earley & Sparky Zivin, *The Rise of the AI CEO*, CHIEF EXEC., <https://chiefexecutive.net/the-rise-of-the-ai-ceo/> [https://perma.cc/5BM7-2AKU]; Orianna Rosa Royle, *Nearly Half of CEOs Believe That AI Not Only Could—But Should—Replace Their Own Jobs*, FORTUNE (Oct. 3, 2023, 8:12 AM), <https://fortune.com/2023/10/03/ceo-artificial-intelligence-replace-jobs/> [https://perma.cc/5KM4-PB4C].

<sup>245</sup> May Srikrishnan et al., *Tribes Need Tax Revenue. States keep Taking It.*, CTR. FOR PUB. INTEGRITY (Dec. 20, 2022), <https://publicintegrity.org/podcasts/integrity-out-loud/tribes-need-tax-revenue-states-keep-taking-it/#:~:text=need%20tax%20revenue-.States%20keep%20taking%20it.,fund%20services%20for%20their%20citizens> [https://perma.cc/K6FQ-VVB8].

Additionally, the ability to levy their own taxes will enable tribes to become less reliant on the federal government for funding. Although tribes have legitimate claims to federal funds through treaties, the federal government persistently underfunds tribes.<sup>246</sup> The federal government can also leverage its financial power to control tribes.<sup>247</sup> Fiscal independence brought about by AI can transform tribal sovereignty.

#### F. Sovereign Immunity

Like other sovereigns, tribes possess immunity from lawsuits.<sup>248</sup> Sovereign immunity serves two primary purposes for tribes. One is protecting tribes from often hostile state actions.<sup>249</sup> The other is preserving tribal funds.<sup>250</sup>

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<sup>246</sup> See Honoring Promises to Native Nations Act, H.R.9439, 117th Cong. (2022); Honoring Promises to Native Nations Act, S.5186, 117th Cong. (2022); BROKEN PROMISES, *supra* note 167, at 1–2; U.S. COMM’N ON C.R., A QUIET CRISIS: FEDERAL FUNDING AND UNMET NEEDS IN INDIAN COUNTRY 51 (2003), <http://www.usccr.gov/pubs/commission.php> [<https://perma.cc/8L7Y-NM59>]; Representative Kilmer, Senator Warren Unveil Historic Legislation to Address Chronic Underfunding and Barriers to Sovereignty in Indian Country, DEREK KILMER (Dec. 6, 2022), <https://kilmer.house.gov/media/press-releases/representative-kilmer-senator-warren-unveil-historic-legislation-to-address-chronic-underfunding-and-barriers-to-sovereignty-in-indian-country> [<https://perma.cc/WLC8-XVR2>].

<sup>247</sup> See Danny Bradbury, *Mazacoin Aims to be Sovereign Altcoin for Native Americans*, COINDESK (updated Dec. 12, 2022, 4:47 AM), <https://www.coindesk.com/mazacoin-sovereign-altcoin-native-americans> [<https://perma.cc/9WXS-T45X>] (“An independent crypto currency would eliminate the State/Federal ability to freeze accounts and tamper with lawful tax revenues . . . .”); see also, Lance Gumbs, *Free Indian Country From Operation Choke Point*, HILL (Jan. 7, 2015, 7:22 PM), <https://thehill.com/opinion/op-ed/228844-free-indian-country-from-operation-choke-point> [<https://perma.cc/NHF9-W3BK>] (“The alarming actions outlined in the [House Comm. on Oversight & Gov’t Reform] report, which were undertaken as part of a larger government program called Operation Choke Point, exposed a pattern of FDIC conduct that specifically targeted businesses owned and operated by Native American tribal governments.”).

<sup>248</sup> See COHEN’S HANDBOOK, *supra* note 20, at § 7.05[1].

<sup>249</sup> *Kiowa Tribe of Oklahoma v. Mfg. Techs., Inc.*, 523 U.S. 751, 758 (1998) (“At one time, the doctrine of tribal immunity from suit might have been thought necessary to protect nascent tribal governments from encroachments by States.”); Nathalie Martin & Joshua Schwartz, *The Alliance Between Payday Lenders and Tribes: Are Both Tribal Sovereignty and Consumer Protection at Risk?*, 69 WASH. & LEE L. REV. 751, 753 (2012) (“Sovereign immunity is a corollary of tribal sovereignty, and protects tribes from enforcement of state law.”).

<sup>250</sup> *Thebo v. Choctaw Tribe of Indians*, 66 F. 372, 376 (1895) (“As rich as the Choctaw Nation is said to be in lands and money, it would soon be impoverished if it was subject to the jurisdiction of the courts, and required to respond to all the demands which private parties chose to prefer against it.”); Christopher B. Phillips, *Patently Unjust: Tribal Sovereign Immunity at the U.S. Patent Office*, 92 S. CAL. L. REV. 703, 722 (2019) (“While the protection of sovereign funds has been mostly abandoned as a reason to protect states

Sovereign immunity can also foster tribal economic development and sovereignty.<sup>251</sup> This immunity extends to tribal commercial activity, occurring both on and off the reservation.<sup>252</sup> Sovereign immunity also cloaks entities that operate as arms of the tribe.<sup>253</sup>

To determine whether an entity qualifies as an arm of the tribe, courts look at various factors.<sup>254</sup> These factors typically include:

- (1) the method of creation of the economic entities; (2) their purpose; (3) their structure, ownership, and management, including the amount of control the tribe has over the entities; (4) the tribe's intent with respect to the sharing of its sovereign immunity; and (5) the financial relationship between the tribe and the entities.<sup>255</sup>

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and the federal government via sovereign immunity, it still provides a normative basis for tribal sovereign immunity.”).

<sup>251</sup> *Kiowa Tribe of Oklahoma*, 523 U.S. at 757 (“Congress had failed to abrogate [tribal sovereign immunity] in order to promote economic development and tribal self-sufficiency.”); *Okla. Tax Comm’n v. Citizen Band Potawatomi Indian Tribe*, 498 U.S. 505, 510 (1991) (acknowledging legislative acts that “reflect Congress’ desire to promote the ‘goal of Indian self-government,’ including its ‘overriding goal’ of encouraging tribal self-sufficiency and economic development.”); CONF. W. ATT’YS GEN., *AMERICAN INDIAN LAW DESKBOOK* § 7:20 (2023) (“The key consideration, although not determinative, is generally the extent to which any judgment may impact the tribe’s treasury.”); Gregory J. Wong, *Intent Matters: Assessing Sovereign Immunity for Tribal Entities*, 82 WASH. L. REV. 205, 211–12 (2007) (“[T]he doctrine of tribal sovereign immunity has been consistently acknowledged and approved of by Congress as a means to promote tribal self-sufficiency, economic development and self-government.”).

<sup>252</sup> *Kiowa Tribe of Oklahoma*, 523 U.S. at 760 (“Tribes enjoy immunity from suits on contracts, whether those contracts involve governmental or commercial activities and whether they were made on or off a reservation.”).

<sup>253</sup> *Inyo Cnty. v. Paiute-Shoshone Indians of the Bishop Cmty. of the Bishop Colony*, 538 U.S. 701, 705 n.1 (2003) (“The United States maintains, and the County does not dispute, that the Corporation is an ‘arm’ of the Tribe for sovereign immunity purposes.”); *Allen v. Gold Country Casino*, 464 F.3d 1044, 1046 (9th Cir. 2006) (“When the tribe establishes an entity to conduct certain activities, the entity is immune if it functions as an arm of the tribe.”).

<sup>254</sup> See Bree R. Black Horse, *The Risks and Benefits of Tribal Payday Lending to Tribal Sovereign Immunity: Tribal Payday Lending Enterprises Are Immune Under a Proposed Universal Arm of the Tribe Test*, 2 AM. INDIAN L.J. 388, 400 (2013) (“Each of the federal courts of appeals applies a unique arm of the tribe test, taking numerous and varied factors into consideration when determining which entities are entitled to tribal sovereign immunity.”).

<sup>255</sup> *Breakthrough Mgmt. Grp., Inc. v. Chukchansi Gold Casino & Resort*, 629 F.3d 1173, 1187 (10th Cir. 2010).

The factors are not exclusive,<sup>256</sup> and courts have wide latitude when interpreting the factors.<sup>257</sup> Nonetheless, the two factors most likely to defeat tribal sovereign immunity are the degree of tribal control and the percent of revenue the tribe retains. These factors predominate because some claim tribes are leasing their sovereignty to non-Indians, thereby enabling non-Indians to profit from tribal sovereignty.<sup>258</sup>

AI helps tribes overcome these concerns by enabling tribes to manage their corporations without the assistance of non-Indian actors. For example, many tribal lenders employ non-Indians to design their lending regimes and work in call centers. AI has the ability to develop lending rules and regulations. AI can also adjudicate lending disputes. Moreover, AI can replace call center workers.<sup>259</sup> Companies are already experimenting with AI CEOs,<sup>260</sup> so it is plausible that every aspect of tribal enterprises can be managed exclusively on the tribe's

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<sup>256</sup> AMERICAN INDIAN LAW DESKBOOK, *supra* note 251, at § 7:20 (listing additional factors courts could consider when determining whether an entity has sovereign immunity).

<sup>257</sup> Crepelle, *Legal Issues*, *supra* note 17, at 410 (“Although courts consider similar factors to determine sovereign immunity, some of the factors are malleable.”); Adam Crepelle, *Tribal Lending and Tribal Sovereignty*, 66 DRAKE L. REV. 1, 24–25 (2018) (detailing how courts in California and Colorado fashion different tests to determine what is an arm of the tribe).

<sup>258</sup> *Brice v. Plain Green, LLC.*, 372 F. Supp. 3d 955, 962 (N.D. Cal. 2019) (“The . . . defendants, along with other parties, allegedly helped design, fluid, and run this ‘rent-a-tribe’ scheme using the two ‘Native American tribal entities as the conduit to ostensibly cloak the loans in tribal sovereign immunity . . . established with the intent of evading state usury laws.”); James Williams Jr., ‘Rent-a-Tribe’ Slur Seeks to Diminish Our Success, TIMES HERALD (Aug. 28, 2018, 11:02 AM), <https://www.thetimesherald.com/story/opinion/columnists/2018/08/28/rent-tribe-slur-seeks-diminish-success/37632337/> [<https://perma.cc/Q9VV-L7NS>]; LVD Chairman: “Rent-a-Tribe” is an Offensive Slur That Should Be Retired Permanently, NATIVE AM. FIN. SERV. ASS’N (Aug. 29, 2018), <https://nativefinance.org/news/lvd-chairman-rent-a-tribe-is-an-offensive-slur-that-should-be-retired-permanently/> [<https://perma.cc/RM99-2MPE>].

<sup>259</sup> Emma Goldberg, ‘Training My Replacement’: Inside a Call Center Worker’s Battle With A.I., N.Y. TIMES (updated July 22, 2023), <https://www.nytimes.com/2023/07/19/business/call-center-workers-battle-with-ai.html> [<https://perma.cc/M8GP-TXXU>].

<sup>260</sup> Grace Kay, *A Video Game Company Made a Bot the CEO, and Its Stock Climbed*, BUS. INSIDER (Mar. 15, 2023, 11:15 AM), <https://www.businessinsider.com/video-game-company-made-bot-its-ceo-stock-climbed-2023-3?r=US&IR=T> [<https://perma.cc/49DK-DC2L>] (“While it may be the first company to appoint a bot as CEO, Alibaba founder Jack Ma predicted in 2017 that ‘a robot will likely be on the cover of Time magazine as the best CEO in 30 years . . . .’”); Victor Tangermann, *Company Appoints AI-Powered Robot as CEO*, BYTE (Nov. 6, 2023), <https://futurism.com/the-byte/company-appoints-ai-powered-robot-ceo> [<https://perma.cc/Y5U3-GRNR>].

reservation through a tribally owned and controlled AI. If this occurs, a tribal enterprise should clearly be entitled to sovereign immunity.

### G. Bureaucracy

The BIA, known by various names over the years, has long been a driving force in federal Indian policy.<sup>261</sup> Established in 1824, the BIA is one of the oldest regulatory agencies in the United States<sup>262</sup> and has a very dark history.<sup>263</sup> The BIA has been a model of inefficiency since its inception.<sup>264</sup> A decade after its creation, a U.S. House of Representatives report on the BIA described it as “expensive, inefficient, and irresponsible.”<sup>265</sup> The BIA’s agents actively stole from the Indians they were supposed to serve during the nineteenth century,<sup>266</sup> a habit which continued well into the end of the twentieth century.<sup>267</sup> In the 1970s, social change led the United States to adopt a policy of tribal self-

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<sup>261</sup> *Mission Statement*, BUREAU OF INDIAN AFFAIRS (BIA), U.S. DEP’T OF THE INTERIOR INDIAN AFFS., <https://www.bia.gov/bia> [<https://perma.cc/X36Z-Y7Y4>] (“Since its inception in 1824, the Bureau of Indian Affairs has been both a witness to and a principal player in the relationship between the Federal Government and Indian tribes and Alaska Native villages.”).

<sup>262</sup> Barsh, *supra* note 66, at 2 (“The Bureau of Indian Affairs is one of the nation’s oldest regulatory agencies”).

<sup>263</sup> Kevin Gover, Remarks at the Ceremony Acknowledging the 175th Anniversary of the BIA (Sept. 8, 2000), [http://www.tribal-institute.org/lists/kevin\\_gover.htm](http://www.tribal-institute.org/lists/kevin_gover.htm) [<https://perma.cc/HXC5-G6FH>] (“After the devastation of tribal economies and the deliberate creation of tribal dependence on the services provided by this agency, this agency set out to destroy all things Indian.”).

<sup>264</sup> Chris Edwards, *Indian Lands, Indian Subsidies, and the Bureau of Indian Affairs*, DOWNSIZING THE FED. GOV’T (Feb. 1, 2012), [https://www.downsizinggovernment.org/interior/indian-lands-indian-subsidies#\\_ednref155](https://www.downsizinggovernment.org/interior/indian-lands-indian-subsidies#_ednref155) [<https://perma.cc/J2Q2-SHLW>] (“Only four years after the 1824 creation of the BIA, the noted Indian expert H. R. Schoolcraft said: ‘The derangements in the fiscal affairs of the Indian department are in the extreme. One would think that appropriations had been handled with a pitchfork . . . there is a screw loose in the public machinery somewhere.’”).

<sup>265</sup> *Id.*

<sup>266</sup> *Id.* (“The *New York Times* railed against the ‘dishonesty which pervades the whole Bureau.’ And the newspaper argued that “the condition of the Indian service is simply shameful. It has long been notorious that rascally agents and contractors have connived to cheat the Indians. . . . It now appears that a ring has long existed in the Indian Bureau at Washington for the express purpose of covering up these frauds and facilitating others.”).

<sup>267</sup> See Cobell v. Norton, 240 F.3d 1081 (D.C. Cir. 2001); Keith Harper, Cobell v. Norton: *Redressing a Century of Malfeasance*, AM. BAR ASS’N (Apr. 1, 2006), [https://www.americanbar.org/groups/crsj/publications/human\\_rights\\_magazine\\_home/human\\_rights\\_vol33\\_2006/spring2006/hr\\_spring06\\_harper/](https://www.americanbar.org/groups/crsj/publications/human_rights_magazine_home/human_rights_vol33_2006/spring2006/hr_spring06_harper/) [<https://perma.cc/5YD5-X6K2>].

determination.<sup>268</sup> Nevertheless, the BIA arduously resisted efforts to empower tribes.<sup>269</sup>

While tribes can assume many federal functions thanks to federal self-determination legislation,<sup>270</sup> complex BIA bureaucracy still thwarts tribal self-governance and economic development.<sup>271</sup> A 2011 report from the Office of the Inspector General “identified gross program inefficiencies at many levels of Indian Affairs and in tribal management of Federal funds.”<sup>272</sup> Leasing trust land is one example of inefficiency. Executing a trust land lease requires BIA approval,<sup>273</sup> and obtaining BIA authorization for a mortgage takes well over a year.<sup>274</sup> Completing the BIA’s procedures can also be very costly.<sup>275</sup> The BIA has attempted to streamline some of its regulations; nevertheless, complex and inefficient procedures often result from reforms.<sup>276</sup> Developing new regulations

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<sup>268</sup> See Special Message to the Congress on Indian Affairs, 1 PUB. PAPERS 564 (July 8, 1970); Indian Self-Determination and Education Assistance Act of 1975, Pub. L. No. 93-638, 88 Stat. 2203 (codified as amended at 25 U.S.C. §§ 5301—5423 (2018)).

<sup>269</sup> Statement on Indian Policy, 1 PUB. PAPERS 96, 96 (Jan. 24, 1983) (“Excessive regulation and self-perpetuating bureaucracy have stifled local decisionmaking [sic], thwarted Indian control of Indian resources, and promoted dependency rather than self-sufficiency.”); Barsh, *supra* note 66, at 22 (“The Indian Self-Determination Act had been ‘designed . . . to transfer power from the Bureau to the Indian tribes . . .’ but the Bureau had been ‘increasing its personnel rather than decreasing it. . . using Public law 93-638 as an excuse for the increase.’”); Kevin K. Washburn, *Facilitating Tribal Co-Management of Federal Public Lands*, 2022 WIS. L. REV. 263, 273–75 (2022).

<sup>270</sup> See, e.g., Indian Self-Determination and Education Assistance Act of 1975, Pub. L. No. 93-638, 88 Stat. 2203 (codified as amended at 25 U.S.C. §§ 5301—5423 (2018)).

<sup>271</sup> Crepelle, *It Shouldn’t Be This Hard*, *supra* note 84, at 1127–33, 1146, 1148–52.

<sup>272</sup> *Regulatory Barriers to American Indian Job Creation: Hearing Before the H. Subcomm. on Tech., Info. Pol’y, Intergovernmental Relations & Procurement Reform*, 112th Cong. 5 (2011) (statement of Mary L. Kendall, Acting Inspector Gen., Dep’t of the Interior).

<sup>273</sup> U.S. GOV’T ACCOUNTABILITY OFF., GAO-24-105875, TRIBAL ISSUES: BUREAU OF INDIAN AFFAIRS SHOULD TAKE ADDITIONAL STEPS TO IMPROVE TIMELY DELIVERY OF REAL ESTATE SERVICES 1–2 (2023) (“For example, before a tribal citizen can obtain a mortgage to purchase a home on their trust or restricted fee lands, they generally must use BIA services and obtain BIA approval”).

<sup>274</sup> *Id.* at 2 (“For example, it can take a tribal citizen as long as 2 years or more to obtain a mortgage on trust land, largely due to BIA’s review process, according to testimony provided by the Governor of the Pueblo of Isleta to the Senate Committee on Indian Affairs at a 2019 hearing”).

<sup>275</sup> Crepelle, *It Shouldn’t Be This Hard*, *supra* note 84, at 1129–30.

<sup>276</sup> KEVIN WASHBURN & JODY CUMMINGS, EXPLAINING THE MODERNIZED LEASING AND RIGHT-OF-WAY REGULATIONS FOR INDIAN LANDS 31–32 (2017), [https://digitalrepository.unm.edu/cgi/viewcontent.cgi?article=1554&context=law\\_faculty\\_scholarship](https://digitalrepository.unm.edu/cgi/viewcontent.cgi?article=1554&context=law_faculty_scholarship) [<https://perma.cc/8U9H-R9Y4>] (“Although the current regulations may arguably have been in need of some updates and ‘modernization,’ the Final Rule will



can take the BIA over a decade, too.<sup>277</sup> Poor BIA administration has resulted in the misuse and abuse of federal funds owed to tribes<sup>278</sup> as well as disappearance of tribal money.<sup>279</sup>

The BIA is a bureaucracy, and AI is currently revolutionizing the way bureaucracies operate. AI can provide instant customer service, reduce paperwork, and increase processing time while simultaneously lowering operating costs. Hence, numerous federal agencies are using AI.<sup>280</sup> In the Department of Health and Human Services, AI is being used to detect Medicare fraud.<sup>281</sup> The Food and Drug Administration is experimenting with AI to monitor the safety and effectiveness of post-market drugs.<sup>282</sup> Agencies such as the Consumer Financial Protection Bureau and Federal Communications Commission are using AI to improve interactions with those seeking their services.<sup>283</sup> Other countries are experimenting with AI in a variety of contexts.<sup>284</sup>

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likely create far more confusion, chaos, and litigation than what the Department of the Interior ever contemplated.”); Adam Creppelle, *Finding Ways to Empower Tribal Oil Production*, 22 WYO. L. REV. 25, 38–39 (2022).

<sup>277</sup> Shannon Shaw Duty, *Nearly 12 Years After Historic Osage Trust Settlement, BIA Proposes New Regulations*, OSAGE NEWS (Jan. 13, 2023), <https://osagenews.org/nearly-12-years-after-historic-osage-trust-settlement-bia-proposes-new-regulations/> [<https://perma.cc/Y69J-CV4F>].

<sup>278</sup> H. Hearing, *Regulatory Barriers to American Indian Job Creation*, *supra* note 272, at 5–6, 11.

<sup>279</sup> *BIA Cannot Account for \$2.4 Billion Audit Documents Tribes’ Fears that Bureau Severely Mismanaged Trust Funds From 1973-1992*, SPOKESMAN-REV. (Apr. 14, 1996), <https://www.spokesman.com/stories/1996/apr/14/bia-cannot-account-for-24-billion-audit-documents/> [<https://perma.cc/G93S-Z78C>].

<sup>280</sup> See DAVID FREEMAN ENGSTROM ET AL., ADMIN. CONF. OF THE U.S., GOVERNMENT BY ALGORITHM: ARTIFICIAL INTELLIGENCE IN FEDERAL ADMINISTRATIVE AGENCIES (2020); Madison Alder & Rebecca Heilweil, *U.S. Government Discloses More Than 700 AI Use Cases as Biden Administration Promises Regulation*, FEDSCOOP (Oct. 13, 2023), <https://fedcoop.com/u-s-government-discloses-more-than-700-ai-use-cases-as-biden-administration-promises-regulation/> [<https://perma.cc/ZHJ9-5SC5>]; *The Government is Using AI to Better Serve the Public*, AI.GOV, <https://ai.gov/ai-use-cases/> [<https://perma.cc/2R3J-9HW6>].

<sup>281</sup> FREEMAN ENGSTROM ET AL., *supra* note 280, at 16; Jayla Whitfield, *How Health Tech Leaders Use AI to Combat Fraud*, GOVCIO MEDIA & RSCH. (May 22, 2023, 13:17), <https://governmentciomedia.com/how-health-tech-leaders-use-ai-combat-fraud> [<https://perma.cc/F7VV-H47K>].

<sup>282</sup> FREEMAN ENGSTROM ET AL., *supra* note 280, at 55–56.

<sup>283</sup> *Id.* at 59.

<sup>284</sup> *Exploring Artificial Intelligence for Anti-Corruption*, U4 ANTI-CORRUPTION RESOURCE CTR., CMI, <https://www.u4.no/publications/artificial-intelligence-a-promising-anti-corruption-tool-in-development-settings/shortversion> [<https://perma.cc/HL8V-ULUA>].

Countless applications exist, including land administration.<sup>285</sup> If AI improves land registration, this will stimulate economic growth in developing countries.<sup>286</sup>

Tribes already outperform the federal government in many administrative domains,<sup>287</sup> and AI will take tribal self-governance to new heights. For example, tribes often spend significant sums overseeing grants and other financial matters.<sup>288</sup> Money management is a prime task for AI.<sup>289</sup> In addition to being able to perform calculations quickly and at lower costs than human accountants, AI is less likely to make a mathematical error.<sup>290</sup> Moreover, AI can

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<sup>285</sup> *IOT and Artificial Intelligence in Land Administration*, GEOSPATIAL WORLD F. (Apr 7-9, 2020), <https://geospatialworldforum.org/speaker/presentations2018/IOTAI-Disruption-in-Land-Administration-WillyGovender-iot.pdf> [<https://perma.cc/LA78-HBUZ>].

<sup>286</sup> *Registering Property*, WORLD BANK, <https://subnational.doingbusiness.org/en/data/exploretopics/registering-property/reforms> [<https://perma.cc/42W5-KM8X>] (“Valid property rights are necessary to support investment, productivity, and economic growth. Evidence from economies around the world suggests that property owners with registered titles are more likely to invest. They also have a better chance of getting credit when using their property as collateral. Likewise, having reliable, up-to-date information in cadasters and land registries is essential for governments to assess and collect property taxes correctly.”); *Land Registration*, INNOVATIONS FOR SUCCESSFUL SOCIETIES, PRINCETON UNIV., <https://successfultopics.princeton.edu/critical-tasks/land-registration> [<https://perma.cc/V3FQ-GGND>] (“For the estimated 70% of the world population that lives on property without a formal land title, life can be precarious. The absence of ownership documentation raises families’ vulnerability to forced eviction and conflict; it precludes the use of the property to access financial services and other economic benefits; and it diminishes the value of property by restricting its transfer to an informal, opaque market”).

<sup>287</sup> Washburn, *What the Future Holds*, *supra* note 89, at 207; *Sovereignty Matters: The Future of Nation Building*, HARV. KENNEDY SCH. PROJECT ON INDIGENOUS GOVERNANCE & DEV., <https://indigenousgov.hks.harvard.edu/> [<https://perma.cc/WAF4-VRFU>] (“When Native nations make their own decisions about what development approaches to take, they consistently out-perform external decision makers—on matters as diverse as governmental form, natural resource management, economic development, health care and social service provision.”).

<sup>288</sup> *See* Northern Arapaho Tribe v. Becerra, 61 F.4th 810 (10th Cir. 2023), *cert. granted*, Becerra v. Northern Arapaho Tribe, 144 S. Ct. 419 (2023); San Carlos Apache Tribe v. Becerra, 53 F.4th 1236 (9th Cir. 2022), *cert. granted*, Becerra v. San Carlos Apache Tribe, 144 S. Ct. 418 (2023).

<sup>289</sup> *What is AI in Finance?*, ORACLE, <https://www.oracle.com/erp/ai-financials/what-is-ai-in-finance/> [<https://perma.cc/WQ9Z-JJDX>] (“At the same time, many financial processes are consistent and well defined, making them ideal targets for automation with AI.”).

<sup>290</sup> *Id.* (“High volume, mundane processes, such as invoice entry, can lead to fatigue, burnout, and error in humans. Computers, however, don’t have these same limitations.”).

eliminate the BIA's role in trust land management.<sup>291</sup> The immense data processing power of AI may even help tribes overcome long-running BIA administrative problems, such as fractionated interests in trust land.<sup>292</sup> Improving trust land management will encourage more tribal citizens to reside in Indian country and catalyze tribal economies.<sup>293</sup>

Once AI enhances tribal bureaucratic capacity, the BIA's existence may be called into question. The agency's purpose is to provide services to tribes and to administer the land and natural resources within Indian country.<sup>294</sup> Presumably, the BIA will start using AI to perform these functions.<sup>295</sup> If this happens, why not just transfer the AI to the tribes themselves? Obtaining the BIA's administrative AI would mean tribes could perform the same exact functions as the BIA and act more responsively to their citizenry. Additionally, eliminating the BIA means its budget can be transferred directly to tribes. This would radically transform tribal sovereignty and allow tribes to operate as nations.<sup>296</sup>

#### IV. CHALLENGES FOR TRIBAL AI IMPLEMENTATION

AI holds much promise for tribes, but the benefits are not without risks. Tribal AI will be subject to the same perils as AI in society at large. Thus, AI in Indian country can hallucinate and discriminate. These problems are particularly acute for tribes. For example, a hallucination could propagate a false historical

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They can also process drastically higher volumes of transactions in a given period. The end result is better data to work with and more time for the finance team to focus on putting that data to use.”).

<sup>291</sup> *Office of Trust Services*, U.S. DEP'T OF THE INTERIOR INDIAN AFFS., <https://www.bia.gov/bia/ots> [<https://perma.cc/48F9-5K4R>] (“The Bureau of Indian Affairs (BIA) Office of Trust Services (OTS) . . . assists Tribal governments and allottees in managing, protecting, and developing their trust lands and natural resources”).

<sup>292</sup> *See Hodel v. Irving*, 481 U.S. 704, 712–13 (1987) (discussing the issue of “extreme fractionation”); *History of Indian Land Consolidation*, U.S. DEP'T OF THE INTERIOR INDIAN AFFS., <https://www.bia.gov/guide/history-indian-land-consolidation> [<https://perma.cc/5ZfZ-Y8ES>]; *Fractionated Ownership of Indian Lands*, TRIBAL CT. CLEARINGHOUSE, [https://www.tribal-institute.org/lists/fractionated\\_ownership.htm](https://www.tribal-institute.org/lists/fractionated_ownership.htm) [<https://perma.cc/ECJ9-MPG8>].

<sup>293</sup> GAO-24-105875, TRIBAL ISSUES, *supra* note 273, at 2–3.

<sup>294</sup> *About Us*, U.S. DEP'T OF THE INTERIOR, INDIAN AFFS., <https://www.bia.gov/about-us> [<https://perma.cc/NSG8-75DT>] (“Indian Affairs (IA) currently provides services (directly or through contracts, grants, or compacts) to approximately 1.9 million American Indians and Alaska Natives.”); *Id.* (“Established in 1824, it is responsible for the administration and management of 55 million surface acres and 57 million acres of subsurface minerals estates held in trust by the United States for American Indian, Indian tribes, and Alaska Natives.”).

<sup>295</sup> Other federal agencies already are. *See* sources cited *supra* note 280.

<sup>296</sup> CREPPELLE, BECOMING NATIONS AGAIN, *supra* note 21 (manuscript at 265–360).

episode that gets mistaken for *authentic* tribal history. All misinformation has the potential to be harmful as it can serve as the impetus for human action.<sup>297</sup> However, history is particularly vital to tribal sovereignty.<sup>298</sup> Rewriting history could drastically impact contemporary tribal rights. Furthermore, a hallucination based upon biased data could exacerbate racial stereotypes about tribes.<sup>299</sup> Hallucinations and bias are reasons why Indigenous data sovereignty is important.

Indigenous data sovereignty is generally understood as the ability of Indigenous Peoples and communities to control the data they have created<sup>300</sup> and is embedded in international law.<sup>301</sup> Federally recognized tribes have the right “to make their own laws and be ruled by them.”<sup>302</sup> Accordingly, tribes have the ability to enact their own laws regulating data use.<sup>303</sup> The laws are not just pieces of paper, as individuals and entities violating tribal data rules can be deemed

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<sup>297</sup> Some believe misinformation contributed to the events on January 6. See Craig Silverman et al., *Facebook Hosted Surge of Misinformation and Insurrection Threats in Months Leading Up to Jan. 6 Attack, Records Show*, PROPUBLICA (Jan. 4, 2022, 8:00 AM), <https://www.propublica.org/article/facebook-hosted-surge-of-misinformation-and-insurrection-threats-in-months-leading-up-to-jan-6-attack-records-show> [<https://perma.cc/FA9S-VG48>].

<sup>298</sup> COHEN’S HANDBOOK, *supra* note 20, at § 1.01; CREPELLE, *BECOMING NATIONS AGAIN*, *supra* note 21 (manuscript at Part I); LINDA TUHIWAI SMITH, *DECOLONIZING METHODOLOGIES: RESEARCH AND INDIGENOUS PEOPLES* 32–35 (3d ed., 2021); see generally CHARLES F. WILKINSON, *AMERICAN INDIANS, TIME, AND THE LAW: NATIVE SOCIETIES IN A MODERN CONSTITUTIONAL DEMOCRACY* (1987).

<sup>299</sup> *What are AI Hallucinations?*, IBM, <https://www.ibm.com/topics/ai-hallucinations#:~:text=If%20an%20AI%20model%20is,subtly%20tweaking%20the%20input%20data> [<https://perma.cc/4KKJ-7Q4K>] (“If an AI model is trained on a dataset comprising biased or unrepresentative data, it may hallucinate patterns or features that reflect these biases”).

<sup>300</sup> See Cindy Tian, *Classification of Indigenous Data Sovereignty and Data Privacy: Indigenous and Common Law Patterns*, 47 *TECH. SERVS. L. LIBR.* 1, 1 (2022) (“Indigenous data sovereignty is the right of a nation to govern the collection, ownership, and application of its own data.”); *Indigenous Data Sovereignty*, UNIV. TORONTO LIBR. RSCH. GUIDES, <https://guides.library.utoronto.ca/indigenoustudies/datasovereignty> [<https://perma.cc/BE83-42BK>].

<sup>301</sup> G.A. Res. 61/295, Declaration on the Rights of Indigenous Peoples, at Art. 31 (Oct. 2, 2007).

<sup>302</sup> *Williams v. Lee*, 358 U.S. 217, 220 (1959).

<sup>303</sup> Rebecca Tsosie, *Tribal Data Governance and Informational Privacy: Constructing “Indigenous Data Sovereignty,”* 80 *MONT. L. REV.* 229, 244 (2019) (“Accordingly, the Cheyenne River Sioux Nation has the ability to regulate data differently than the Rosebud Sioux Nation or the Oglala Lakota Nation, even though all of these tribal governments are part of the Lakota people”).

civilly liable in tribal court.<sup>304</sup>

Governments across the globe are struggling to enact AI laws. Nevertheless, multiple states have enacted AI rules that can serve as tribal models.<sup>305</sup> California has enacted legislation restricting the use of data in AI applications.<sup>306</sup> Colorado, Connecticut, and others have already enacted rules protecting their citizens' privacy.<sup>307</sup> A few states have enacted laws regulating AI in the hiring process<sup>308</sup> and in gambling.<sup>309</sup> Private companies have prohibited AI in the workplace out of fear that employee AI use can jeopardize sensitive information.<sup>310</sup> Regardless of how tribes choose to approach AI data sovereignty, the decision to promulgate rules is an assertion of tribal sovereignty.

Another issue for tribal AI use is cost. Many tribal economies are stagnant because of federal laws creating jurisdictional confusion, permitting dual taxation, and adding heaps of bureaucracy to Indian country.<sup>311</sup> Although

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<sup>304</sup> See *Montana v. United States*, 450 U.S. 544, 565–66 (1981) (“A tribe may regulate, through taxation, licensing, or other means, the activities of nonmembers who enter consensual relationships with the tribe or its members, through commercial dealing, contracts, leases, or other arrangements. A tribe may also retain inherent power to exercise civil authority over the conduct of non-Indians on fee lands within its reservation when that conduct threatens or has some direct effect on the political integrity, the economic security, or the health or welfare of the tribe.”) (internal citations omitted).

<sup>305</sup> See Katrina Zhu, *The State of State AI Laws: 2023*, ELEC. PRIVACY INFO CTR. (Aug. 3, 2023), <https://epic.org/the-state-of-state-ai-laws-2023/> [<https://perma.cc/SD9S-VH57>].

<sup>306</sup> *Id.*

<sup>307</sup> *Id.*

<sup>308</sup> See, e.g., *Id.* for the states of New York and Illinois.

<sup>309</sup> See, e.g., *Id.* for the states of Illinois and Rhode Island.

<sup>310</sup> Aaron Mok, *Amazon, Apple, and 12 Other Major Companies That Have Restricted Employees From Using ChatGPT*, BUS. INSIDER (July 11, 2023, 8:38 AM), <https://www.businessinsider.com/chatgpt-companies-issued-bans-restrictions-openai-ai-amazon-apple-2023-7#:~:text=Amazon%2C%20Apple%2C%20and%2012%20other,restricted%20employees%20from%20using%20ChatGPT&text=Some%20major%20corporations%20are%20limiting,at%2Drisk%20of%20data%20leaks> [<https://perma.cc/NPH7-CCDB>].

<sup>311</sup> Crepelle, *It Shouldn't Be This Hard*, *supra* note 84, at 1127–40.

several AIs are currently available at no cost,<sup>312</sup> some AIs are not free.<sup>313</sup> Moreover, designing a custom AI can easily cost in the hundreds of thousands of dollars.<sup>314</sup> AI requires quality computing hardware too, which can be expensive.<sup>315</sup> Tribes will need human employees to operate AI for the foreseeable future, and data scientist salaries exceed \$100,000.<sup>316</sup> Many tribes suffer from severe resource constraints as a consequence of federal policies, so AI may be beyond their grasp. Nevertheless, even financially limited tribes may be able to partner with private firms or public universities to acquire an AI. Federal funds could also be used for tribal AI procurement.

These concerns are not unique to tribes. New technologies are often disruptive and require periods of regulatory adjustment. Tribes have long

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<sup>312</sup> While “free” AI models do not come with financial bills, they have other costs. See Kunal Agarwal, *The Hidden Costs of AI Models*, FAST CO. (Oct. 2, 2023), <https://www.fastcompany.com/90959824/the-hidden-costs-of-ai-models#:~:text=THE%20HIDDEN%20COSTS%20OF%20DATA,the%20course%20of%20a%20year> [<https://perma.cc/K7L7-NUV5>]; *What are the Hidden Costs of Implementing Enterprise AI In-House?*, MEDIUM (Nov. 25, 2023), <https://medium.com/@logycco/what-are-the-hidden-costs-of-implementing-enterprise-ai-in-house-9c22bdbcff56> [<https://perma.cc/6LMK-C9F2>].

<sup>313</sup> *What are the Hidden Costs*, *supra* note 312; see also Allie Funk et al., *The Repressive Power of Artificial Intelligence*, FREEDOM HOUSE, <https://freedomhouse.org/report/freedom-net/2023/repressive-power-artificial-intelligence> [<https://perma.cc/NHV9-TWJ7>].

<sup>314</sup> A. Smith, *How Much Does It Cost to Build Artificial Intelligence Software in 2024*, MEDIUM (Oct. 12, 2023), <https://web-and-mobile-development.medium.com/how-much-does-it-cost-to-build-artificial-intelligence-software-in-2024-fcc2fe11fde5#:~:text=AI%20Project%20on%20a%20Medium,from%20%24500%2C000%20to%20%249%2C00%2C000> [<https://perma.cc/RRT7-XWDL>]; Rebecca Torrence, *Notable Nabs \$100M to Automate Administrative Tasks in Healthcare, Boosts Valuation to \$600M*, FIERCE HEALTHCARE (Nov. 3, 2021, 11:02 AM), <https://www.fiercehealthcare.com/digital-health/notable-nabs-100m-to-automate-administrative-tasks-healthcare> [<https://perma.cc/X659-RWL6>] (“Notable, a software company that uses intelligent automation to simplify administrative healthcare tasks, has raised \$100 million in its series B funding round, increasing its valuation to \$600 million.”).

<sup>315</sup> Jon Reilly, *A Cost Breakdown of Artificial Intelligence in 2023*, AKKIO (Nov. 24, 2023), <https://www.akkio.com/post/a-cost-breakdown-of-artificial-intelligence-in-2023> [<https://perma.cc/7KF3-FS76>] (“To run AI algorithms efficiently, specialized hardware is needed that can handle the high volume of data and computations involved. This hardware is generally more expensive than standard computer hardware, and so the cost of setting up and running an AI system can be significant.”).

<sup>316</sup> *Id.* (“In the United States, the average base salary for a data scientist is over \$102,000 (according to Indeed). A machine learning engineer can expect to earn a salary of \$112,421. And a software developer can expect to earn a salary of \$110,140 (according to US News).”).

histories of adapting to drastic, sudden technological and culture changes.<sup>317</sup> Tribes' comparatively small size may make them better candidates for AI innovation.

### CONCLUSION

AI is a revolutionary technology.<sup>318</sup> It will continue to change the world for years to come. While AI is not without risks, AI offers immense promise for Indian tribes. It can make their governments more efficient and boost their economies. Likewise, AI can increase access to medical care and education in Indian country. Endangered elements of tribal culture, such as language, can be preserved, and even restored, with AI. The possibilities for tribal sovereignty are limitless.

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<sup>317</sup> Clarkson, *Tribal Bonds*, *supra* note 14 (“Many tribes pride themselves on their ability to adapt: the Navajos developed a thriving weaving industry using wool from sheep brought over by Europeans [and] the Plains Indians incorporated European horses into their culture.”); Tim Giago, *Indian Country Can’t Forget the Indian Reorganization Act*, INDIANZ (Aug. 8, 2016), <https://indianz.com/News/2016/08/08/tim-giago-indian-country-cant-forget-the.asp> [<https://perma.cc/7YMA-9GCT>] (“After all, the Indians were not and are not fools; we are always ready to improve our condition.”) (quoting Cahuilla historian Rupert Costo); Shane Lief, *Singing, Shaking, and Parading at the Birth of New Orleans*, JAZZ ARCHIVIST, 2015, at 15, 18, [https://www.researchgate.net/publication/287204530\\_Singing\\_Shaking\\_and\\_Parading\\_at\\_the\\_Birth\\_of\\_New\\_Orleans](https://www.researchgate.net/publication/287204530_Singing_Shaking_and_Parading_at_the_Birth_of_New_Orleans) [<https://perma.cc/S8SR-JXXM>] (noting Jesuit missionary Father Pierre de Charlevoix’s description of the Tunica Chief he encountered in the early 1700s as “dressed in the French fashion [and] carries on trade with the French, supplying them with horses and poultry, and is very expert at business. . . .”); Bill Yellowtail, *Indian Sovereignty*, PROP. & ENV’T RSCH. CTR. (June 1, 2006), <https://www.perc.org/2006/06/01/indian-sovereignty/> [<https://perma.cc/9HW3-9C46>] (“Lewis and Clark reported to President Thomas Jefferson that native inhabitants throughout the Louisiana Territory were a thoroughly independent, businesslike lot—sharp entrepreneurs and shrewd dealers. The point to be extracted is that American Indians never have been strangers to the American entrepreneurial spirit.”).

<sup>318</sup> Hope Reese, *How to Survive the A.I. Revolution*, STAN. GRADUATE SCH. BUS. (Oct. 14, 2022), <https://www.gsb.stanford.edu/insights/how-survive-artificial-intelligence-revolution> [<https://perma.cc/9UH6-SGYS>]; Mustafa Suleyman, *How the AI Revolution Will Reshape the World*, TIME (Sept. 1, 2023, 7:05 AM), <https://time.com/6310115/ai-revolution-reshape-the-world/> [<https://perma.cc/R55P-2ATW>]; Mike Thomas, *The Future of AI: How Artificial Intelligence Will Change the World*, BUILT IN (Mar. 3, 2023), <https://builtin.com/artificial-intelligence/artificial-intelligence-future> [<https://perma.cc/4Q3N-DXHD>].