

# **FINDINGS: Exploring the Impact of AI**

National Artificial Intelligence Advisory Committee (NAIAC)

**November 2023**

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### Stakeholders' Points of View

The National Artificial Intelligence Advisory Committee (Committee) held a series of virtual briefing sessions June 20-27, 2023, for leaders of marginalized communities to brief the Committee on topics of interest related to year-two efforts.<sup>1</sup> The briefing sessions provided an opportunity for invited experts to share their respective priorities and how these priorities may relate to AI.<sup>2</sup> Attendees included leaders from civil society, leaders from disabilities, worker unions, human rights, and diverse AI leaders representing LatinX in AI, Black in AI, Queer in AI, Indigenous in AI, and Women in AI. The following compilation from the virtual briefing sessions highlight the perspectives of these leaders and their delivered comments, as well as key research on AI's impact on these communities.

Listed here are the expert briefings that informed this collection of findings:

- Maria Town, President and CEO, American Association for People with Disabilities
- Emily Chi, Senior Director of Telecommunications, Technology, and Media, Asian Americans Advancing Justice
- JudeAnne Heath, National Programs Director, Hispanic Technology and Telecommunications Partnership
- Patrice Willoughby, Vice President, Policy and Legislative Affairs, National Association for the Advancement of Colored People
- Lisa Rice, President and CEO, National Fair Housing Alliance
- Frank Torres, Civil Rights Technology Fellow, Leadership Conference on Civil and Human Rights
- Olga Akselrod, Senior Staff Attorney, American Civil Liberties Union
- Quinn Anex-Rios, Policy Associate, Lawyers Committee for Civil Rights under Law
- Alexandra Givens, Center for Democracy and Technology
- Vinhcent Le, Senior Legal Counsel, Greenlining Institute
- Tawana Petty, Director of Policy and Advocacy, Algorithmic Justice League
- Hannah Sassaman, Executive Director, Peoples Tech Project
- Amalea Smirniotopoulos, Senior Policy Counsel, National Association for the Advancement for Colored People
- Laura Montoya, Founder and Managing Partner, LatinX in AI
- Yang Cheung, Women in AI
- Mason Grimshaw, Director, Indigenous in AI
- Bhuva Shakti, Global Ethics & Culture Officer and Regional Head of Americas, Women in AI
- Arjun Subramonian, Core Organizer, Queer in AI
- Gelyn Watkins, CEO, Black in AI

<sup>1</sup> National Artificial Intelligence Initiative Office. (n.d.). The National AI Advisory Committee (NAIAC). National Artificial Intelligence Initiative. <https://www.ai.gov/naiac/>

<sup>2</sup> 88 FR 37208

These findings reflect perspectives from the expert briefings and extensive research that addresses AI's impact on historically marginalized communities.

NAIAC is committed to continuing a dialogue with key stakeholders throughout its term to ensure all voices are reflected in the Findings and/or Recommendations submitted to the White House per its charter.

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## EXECUTIVE SUMMARY

As artificial intelligence (AI) becomes more pervasive, all communities in the U.S. are being impacted by this technology.

NAIAC recently examined how AI is affecting seven specific communities: American women, Asian Americans, Black Americans, Disabled Americans, Indigenous Americans, Latinx Americans, and LGBTQ+ Americans. The committee heard directly from leaders representing these communities.

Each of these communities — and the smaller communities within them — has a unique relationship with AI. But there are commonalities across groups. For example, AI has the potential to benefit these communities through economic opportunities, innovation, and other means — but only if these communities have equal access to relevant resources. Alternatively, AI can also harm these communities, often by amplifying existing societal biases.

Our findings detail these opportunities and harms.

## AI'S IMPACT ON ASIAN COMMUNITIES

### **Finding 1:**

#### **Historically, Asian Americans have been excluded from important, AI-related data sets.**

In consequential data sets that inform everything from medical research to facial recognition, Asian Americans, Native Hawaiians, and Pacific Islanders are often drastically underrepresented.<sup>3, 4</sup>

Even when individuals from these communities are included, they are more likely to be English-proficient individuals.<sup>5</sup> Given that some Asian American communities are around 50% non-English proficient, this means some of the most vulnerable are eliminated from influential data sets and overlooked by AI.<sup>6</sup>

This has serious consequences in a world where AI makes decisions about immigration, healthcare, job opportunities, and more.

Further, this inherent discrimination in the data sets can lead to issues with content moderation: Social media algorithms can fail to remove hateful or harmful content because they lack context about Asian American culture or languages.<sup>7</sup>

Lastly, when Asian Americans are represented in data sets, the data often isn't disaggregated — reducing a diverse set of communities into a single, monolithic one.<sup>8</sup>

<sup>3</sup> Patrick Grother, Mei Ngan, and Kayee Hanaoka, "Face Recognition Vendor Test (FRVT) Part 3: Demographic Effects," National Institute of Standards and Technology, Department of Commerce December 2019, <https://nvlpubs.nist.gov/nistpubs/ir/2019/NIST.IR.8280.pdf>.

<sup>4</sup> Hong-An T. Nguyen, Amy Zheng, Abigail Gugel, and Caroline J. Kistin, "Asians and Asian Subgroups Are Underrepresented in Medical Research Studies Published in High-Impact Generalist Journals," *Journal of Immigrant and Minority Health*, vol. 23 (January 2021): <https://doi.org/10.1007/s10903-021-01142-6>

<sup>5</sup> Amy Yee, "COVID's Outsize Impact on Asian Americans Is Being Ignored," *Scientific American*, May 6, 2021, <https://www.scientificamerican.com/article/covids-outsize-impact-on-asian-americans-is-being-ignored/>

<sup>6</sup> Abby Budiman and Neil G. Ruiz, "Key facts about Asian Americans, a diverse and growing population," Pew Research Center, April 29, 2021, <https://www.pewresearch.org/short-reads/2021/04/29/key-facts-about-asian-americans/>.

<sup>7</sup> Sam McNeil, Victoria Milko, "Hate speech in Myanmar continues to thrive on Facebook," Associated Press, November 18, 2021, <https://apnews.com/article/technology-business-middle-east-religion-europe-a38da3ccd40ffae7e4caa450c374f796>.

<sup>8</sup> "Executive Order 14031 of May 28, 2021, "Advancing Equity, Justice, and Opportunity for Asian Americans, Native Hawaiians, and Pacific Islanders," Code of Federal Regulations, title 3: 29675-29681, <https://www.federalregister.gov/documents/2021/06/03/2021-11792/advancing-equity-justice-and-opportunity-for-asian-americans-native-hawaiians-and-pacific-islanders>.

**Finding 2:****There is a need to study the impact of this exclusion.**

Emily Chi's testimony at NAIAC's June 2023 public listening sessions highlighted that it is imperative for the U.S. government to better understand the scale and impact of this exclusion. This entails engaging with individuals and communities who are the most vulnerable and oppressed and learning how these technologies affect their day-to-day lived experiences.<sup>9</sup>

**Finding 3:****Give meaningful access, understanding, and power to affected communities.**

The U.S. government can take steps to mitigate this exclusion. This entails not only ensuring Asian American communities are included in original data sets, but also including these communities in the user testing process (especially those with non-English proficiency). Emily Chi recommended that the U.S. government should consult with communities about how their data is being used so there is an opportunity for correction — and an opportunity to opt out of any system they don't wish to be a part of.<sup>10</sup>

**AI'S IMPACT ON BLACK COMMUNITIES****Finding 1:****AI can hinder opportunity and equity for Black communities.**

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<sup>9</sup> Emily Chi, NAIAC briefing, June 20, 2023.

<sup>10</sup> Emily Chi.

In critical areas, from housing<sup>11</sup>, to financial services<sup>12</sup>, employment and hiring<sup>13</sup>, and education,<sup>14</sup> examples abound of public and private use of AI acting as a barrier to opportunity and equitable treatment for Black communities. While AI and data-centered systems have the potential to uplift Black communities<sup>15</sup>, that potential is diminished by the history and role of data to enact and perpetuate targeted discriminatory practices.<sup>16</sup> For example, an AI system that uses zip codes to decide whom to provide services and on what terms could lead to discrimination against Black and other customers of color due to the history of redlining and

<sup>11</sup> Heather Smith and Erin Vogell, “How Your Shadow Credit Score Could Decide Whether You Get an Apartment,” ProPublica, March 29, 2022, <https://www.propublica.org/article/how-your-shadow-credit-score-could-decide-whether-you-get-an-apartment>.

<sup>12</sup> “Past Imperfect: How Credit Scores and Other Analytics ‘Bake In’ and Perpetuate Past Discrimination,” The National Consumer Law Center, 2016, [https://www.nclc.org/wp-content/uploads/2022/09/Past\\_Imperfect.pdf](https://www.nclc.org/wp-content/uploads/2022/09/Past_Imperfect.pdf); Hadi Elzayn et al., “Measuring and Mitigating Racial Disparities in Tax Audits,” Stanford Institute for Economic Policy Research, January 2023, <https://siepr.stanford.edu/publications/working-paper/measuring-and-mitigating-racial-disparities-tax-audits>; Emmanuel Martinez and Lauren Kirchner, “The Secret Bias Hidden in Mortgage-Approval Algorithms,” The Markup, August 25, 2021, <https://themarkup.org/denied/2021/08/25/the-secret-bias-hidden-in-mortgage-approval-algorithms>; “Fair Lending Monitorship of Upstart Network’s Lending Model,” Relman Colfax PLLC, April 14, 2021: 3, [https://www.relmanlaw.com/media/cases/1088\\_Upstart%20Initial%20Report%20-%20Final.pdf](https://www.relmanlaw.com/media/cases/1088_Upstart%20Initial%20Report%20-%20Final.pdf).

<sup>13</sup> Rangita de Silva de Alwis, “The Elephant in AI: A Toolbox for Those in the AI Ecosystem to Identify and Mitigate Bias in Recruiting and Hiring Platforms,” University of Pennsylvania Law School Policy Lab on AI and Implicit Bias, March 2021, <https://www.law.upenn.edu/live/files/11567-the-elephant-in-ai>; Alina Köchling and Marius Claus Wehner, “Discriminated by an algorithm: a systematic review of discrimination and fairness by algorithmic decision-making in the context of HR recruitment and HR development,” *Business Research* 795 (2020): 13, <https://doi.org/10.1007/s40685-020-00134-w>; Danielle Abril and Drew Harwell, “Keystroke tracking, screenshots, and facial recognition: The boss may be watching long after the pandemic ends,” *Washington Post*, September 24, 2021, <https://www.washingtonpost.com/technology/2021/09/24/remote-work-from-home-surveillance/>.

<sup>14</sup> Colin Lecher and Maddy Varner, “NYC’s School Algorithms Cement Segregation. This Data Shows How,” The Markup, May 26, 2021, <https://themarkup.org/machine-learning/2021/05/26/nycs-school-algorithms-cement-segregation-this-data-shows-how>; Alex Engler, “Enrollment algorithms are contributing to the crises of higher education,” Brookings, September 14, 2021, <https://www.brookings.edu/research/enrollment-algorithms-are-contributing-to-the-crisis-of-higher-education/>; Elizabeth Laird et al., “Hidden Harms: The Misleading Promise of Monitoring Students Online,” Center for Democracy & Tech, August 3, 2022, <https://cdt.org/insights/re-port-hidden-harms-the-misleading-promise-of-monitoring-students-online/>; Todd Feathers, “Facial Recognition Company Lied to School District About its Racist Tech,” VICE Motherboard, December 1, 2020, <https://www.vice.com/en/article/qjpkmx/facial-recognition-company-lied-to-school-district-about-its-racist-tech>; Jack Gillum and Jeff Kao, “Aggression Detectors: The Unproven, Invasive Surveillance Technology Schools Are Using to Monitor Students,” ProPublica, June 25, 2019, <https://features.propublica.org/aggression-detector/the-unproven-invasive-surveillance-technology-schools-are-using-to-monitor-students/>.

<sup>15</sup> “What Is Data for Black Lives?” Data for Black Lives, accessed September 18, 2023, <https://d4bl.org/videos/55-what-is-data-for-black-lives>; “Beneath the Surface,” Invisible Institute, 2014, <https://invisible.institute/beneath-the-surface>; Trina Reynolds-Tyler and Tarak Shah, “The Community Built a Model: Using Participatory AI to Analyze Chicago Police Data,” FAcCT keynote, 2023, <https://www.youtube.com/watch?v=kbPXUq-sVpQ&list=PLXA0IWa3BpHnCuwH8lq1GJW0wezMzMOZI&index=8>.

<sup>16</sup> “Data Capitalism,” Data for Black Lives, <https://datacapitalism.d4bl.org/>.

ongoing residential segregation.<sup>17</sup> Lenders that use borrowers' educational data, including their SAT scores, in their model may also reify historical discriminatory practices due to bias embedded in SAT tests.<sup>18</sup>

## **Finding 2:**

### **The use of AI in law enforcement can harm Black communities.**

The results of law enforcement use of AI and data-centric technologies also perpetuate discriminatory practices against Black people.<sup>19</sup> For example, researchers have found that predictive policing tools reinforce the over policing of Black communities and discriminatory policing practices instead of predicting crime.<sup>20</sup> Black communities can also suffer from law enforcement use of AI, such as facial recognition technology, that struggle to accurately recognize Black people, particularly darker skinned Black women.<sup>21</sup> In addition to disparities in accuracy, law enforcement use of facial recognition contributes to the already heightened

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<sup>17</sup> Tom Shapiro et al., "The Black-White Racial Wealth Gap," Thurgood Marshall Institute and The Heller School for Social Policy and Management, 2019, <https://tminstituteldf.org/wp-content/uploads/2019/11/FINAL-RWG-Brief-v1.pdf>; Bruce Mitchell and Juan Franco, "HOLC "Redlining" Maps: The Persistent Structure Of Segregation And Economic Inequality," 2018, <https://ncrc.org/holc/>.

<sup>18</sup> Letter from LDF & Student Borrower Protection Center to Dave Girouard, CEO of Upstart Network, Inc., July 30, 2020, <https://www.naacpldf.org/wp-content/uploads/2020-07-30-FINAL-Demand-Letter.pdf>.

<sup>19</sup> DeAnza Cook and Elizabeth Hinton, "The Mass Criminalization of Black Americans: A Historical Overview," *Annual Review of Criminology*, 4 (2020): 1, <https://doi.org/10.1146/annurev-criminol-060520-033306>; Aaron Chalfin, Benjamin Hansen, Emily K. Weisburst, and Morgan C. Williams, 2022. "Police Force Size and Civilian Race," *American Economic Review: Insights*, vol 4, no. 2 (June 2022): 139-158, <https://www.aeaweb.org/articles?id=10.1257/aeri.20200792>; "What 100 Years of History Tells Us about Racism in Policing," American Civil Liberties Union, December 11, 2020, <https://www.aclu.org/news/criminal-law-reform/what-100-years-of-history-tells-us-about-racism-in-policing>; Rashawn Ray, "400 Years of Chains: The Over-Policing of Black Bodies and the Devaluing of Black Pain," Interdisciplinary Association for Population Health Science, December 9, 2019, <https://iaphs.org/400-years-of-chains-the-over-policing-of-black-bodies-and-the-devaluing-of-black-pain>; Frank Edwards, Hedwig Lee, and Michael Esposito, "Risk of Being Killed by Police Use of Force in the United States by Age, Race–Ethnicity, and Sex," *Proceedings of the National Academy of Sciences* 116, 34 (2019): 16793–98, <https://doi.org/10.1073/pnas.1821204116>.

<sup>20</sup> Caroline Haskins, "Academics Confirm Major Predictive Policing Algorithm is Fundamentally Flawed," VICE, February 14, 2019, <https://www.vice.com/en/article/xwbag4/academics-confirm-major-predictive-policing-algorithm-is-fundamentally-flawed>; Will Douglas Heaven, "Predictive policing algorithms are racist. They need to be dismantled," MIT Tech Review, July 17, 2020, <https://www.technologyreview.com/2020/07/17/1005396/predictive-policing-algorithms-racist-dismantled-machine-learning-bias-criminal-justice/>; Dorothy E. Roberts, "Digitizing the Carceral State," review of *Automating Inequality*, by Virginia Eubanks, *Harvard Law Review*, 132 (2019): 1695, [https://harvardlawreview.org/wp-content/uploads/2019/04/1695-1728\\_Online.pdf](https://harvardlawreview.org/wp-content/uploads/2019/04/1695-1728_Online.pdf).

<sup>21</sup> Joy Buolamwini, Timnit Gebru, Sorelle Friedler, and Christo Wilson, "Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification\*," *Proceedings of Machine Learning Research*, 81 (2019): 1–15, <https://proceedings.mlr.press/v81/buolamwini18a/buolamwini18a.pdf>.



surveillance of Black communities.<sup>22</sup> It also has false positives leading to wrongful arrests.<sup>23</sup> Due to a lack of transparency and diminished means of redress for criminal defendants accused by an algorithm,<sup>24</sup> AI systems may weaken constitutional norms of due process,<sup>25</sup> which is particularly alarming for people who already face suspicion of criminality.<sup>26</sup>

### **Finding 3:**

#### **Black communities have been excluded from AI development.**

In addition to AI often being built by discriminatory data points, Black people were historically excluded from the technological development of AI and the development of the social purpose and role of AI, leading to AI being developed without the interests, desires, and benefits of Black communities in mind.<sup>27</sup> Examples of generative AI systems associating lighter skin with high-paying jobs and darker skin with low-paying jobs<sup>28</sup> and other racist stereotypes and lack of representation<sup>29</sup>

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<sup>22</sup> Teresa Wiltz, "How Atlanta Became a City I Barely Recognize," POLITICO, September 16, 2022, <https://www.politico.com/news/magazine/2022/09/16/atlanta-black-mecca-inequality-00055390>; Jurgita Lapienyte, "This is the most heavily surveilled city in the US: 50 CCTV cameras per 1,000 citizens," Cybernews, September 28, 2021, <https://cybernews.com/editorial/this-is-the-most-heavily-surveilled-city-in-the-us-50-cctv-cameras-per-1000-citizens>.

<sup>23</sup> Kashmir Hill, "Wrongfully Accused by an Algorithm," *The New York Times*, June 24, 2020, <https://www.nytimes.com/2020/06/24/technology/facial-recognition-arrest.html>; Elisha Anderson, "Controversial Detroit Facial Recognition Got Him Arrested for a Crime He Didn't Commit," Detroit Free Press, July 10, 2020, <https://www.freep.com/story/news/local/michigan/detroit/2020/07/10/facial-recognition-detroit-michael-oliver-robert-williams/5392166002/>; Kashmir Hill, "Eight Months Pregnant and Arrested after False Facial Recognition Match," *The New York Times*, August 6, 2023, <https://www.nytimes.com/2023/08/06/business/facial-recognition-false-arrest.html>; Kari Johnson, "Face Recognition Software Led to His Arrest. It Was Dead Wrong," *WIRED*, February 28, 2023, <https://www.wired.com/story/face-recognition-software-led-to-his-arrest-it-was-dead-wrong/>; Kashmir Hill and Ryan Mac, "'Thousands of Dollars for Something I Didn't Do,'" *The New York Times*, March 31, 2023, <https://www.nytimes.com/2023/03/31/technology/facial-recognition-false-arrests.html>.

<sup>24</sup> Rebecca Wexler, "Life, Liberty, and Trade Secrets: Intellectual Property in the Criminal Justice System," *Stanford Law Review*, volume 70, issue 5 (May 2018), <https://www.stanfordlawreview.org/print/article/life-liberty-and-trade-secrets/>.

<sup>25</sup> Danielle Keats Citron, "Technological Due Process," *Washington University Law Review Archive*, 85 (2008): 1249, [https://openscholarship.wustl.edu/law\\_lawreview/vol85/iss6/2](https://openscholarship.wustl.edu/law_lawreview/vol85/iss6/2)

<sup>26</sup> Sarah Brayne, "Big Data Surveillance: The Case of Policing," *American Sociological Review*, volume 82, issue 5 (August 29, 2017), <https://doi.org/10.1177/00031224177258>.

<sup>27</sup> Charlton D. McIlwain, *Black Software: The Internet and Racial Justice, from the AfroNet to Black Lives Matter*, (New York, NY: Oxford University Press, 2020); James E. Dobson, *The Birth of Computer Vision*, (U of Minnesota Press, 2023); Gelyn Watkins, NAIAC briefing, June 27, 2023.

<sup>28</sup> Leonardo Nicoletti and Dina Bass, "Humans Are Biased. Generative AI Is Even Worse," *Bloomberg*, 2023, <https://www.bloomberg.com/graphics/2023-generative-ai-bias/>.

<sup>29</sup> Zachary Small, "Black Artists Say A.I. Shows Bias, with Algorithms Erasing Their History," *The New York Times*, July 4, 2023, <https://www.nytimes.com/2023/07/04/arts/design/black-artists-bias-ai.html>; "Generating Harms: Generative AI's Impact and Paths Forward," Electronic Privacy Information Center, 2023, <https://epic.org/wp-content/uploads/2023/05/EPIC-Generative-AI-White-Paper-May2023.pdf>.

exhibit that the benefits of AI development and integration in society are not inherently equal.

#### **Finding 4:**

#### **AI poses particular dangers to Black Americans with multiple marginalized identities.**

AI harms are compounded for Black people who have multiple marginalized identities— such as Black women and girls (particularly darker skinned Black women and girls), Black members of the LGBTQ+ community, and Black people with disabilities. Black women and girls are uniquely vulnerable to social media abuse<sup>30</sup>, face negative biases in search engines<sup>31</sup>, being falsely accused of cheating by automated tools<sup>32</sup>, and being mis- or wrongfully identified by facial recognition technology.<sup>33</sup> In addition, facial recognition technologies and other AI system’s being built off of binary gender data further marginalizes Black trans and nonbinary people and makes them more likely to be racially profiled, misgendered, or put in physical danger.<sup>34</sup>

### **AI’S IMPACT ON DISABLED COMMUNITIES**

#### **Finding 1:**

#### **AI poses risks in employment for disabled Americans.**

<sup>30</sup> “Amnesty and Element AI Release Largest Ever Study into Abuse against Women on Twitter,” Amnesty International, December 18, 2018, <https://www.amnesty.org/en/latest/press-release/2018/12/crowdsourced-twitter-study-reveals-shocking-scale-of-online-abuse-against-women/>.

<sup>31</sup> Safiya Umoja Noble, *Algorithms of Oppression: How Search Engines Reinforce Racism* (New York: New York University Press, 2018).

<sup>32</sup> Kashmir Hill, “Accused of Cheating by an Algorithm, and a Professor She Had Never Met,” *New York Times*, May 27, 2022, <https://www.nytimes.com/2022/05/27/technology/college-students-cheating-software-honorlock.html>.

<sup>33</sup> Joy Buolamwini, Timnit Gebru, Sorelle Friedler, and Christo Wilson, “Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification\*,” *Proceedings of Machine Learning Research*, 81(2018): 1–15. <https://proceedings.mlr.press/v81/buolamwini18a/buolamwini18a.pdf>.

<sup>34</sup> Dean Spade, *Normal Life : Administrative Violence, Critical Trans Politics, and the Limits of Law* (Durham, North Carolina: Duke University Press, 2015); Anna James Wipfler, “Identity Crisis: The Limitations of Expanding Government Recognition of Gender Identity and the Possibility of Genderless Identity Documents,” *Harvard Journal of Law and Gender*, volume 39 (2016):,491, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2763740](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2763740);

Employers use a variety of AI tools to evaluate job candidates, including resume screeners that reproduce patterns in previously selected workers' resumes,<sup>35</sup> gamified assessments that analyze candidates' responses to measure certain aptitudes or personality traits,<sup>36</sup> and video interview analysis software that purports to assess personality traits based on speech and facial expressions.<sup>37</sup> By comparing how candidates exhibit certain qualities to what is prevalent among current employees, these tools may unfairly, or even illegally, screen out qualified candidates based on disability.<sup>38</sup> AI tools are also used in the workplace to track workers' productivity and performance, which can increase risks of physical or mental health injury for disabled workers by enforcing rigid productivity quotas or performance metrics.<sup>39</sup>

## **Finding 2:**

### **AI poses risks in education for disabled Americans.**

Schools use a range of tools that purport to detect academic misconduct and threats to student safety and well-being. One example is automated proctoring software that matches test-takers' faces to their IDs and monitors their activity to detect cheating.<sup>40</sup> Black and brown students have had to direct bright lights on their faces for the duration of exams for the software to recognize them, which can trigger light

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<sup>35</sup> Hilke Schellmann, "Finding it Hard to Get a New Job? Robot Recruiters Might Be to Blame," *The Guardian*, May 11, 2022, <https://www.theguardian.com/us-news/2022/may/11/artificial-intelligence-job-applications-screen-robot-recruiters>.

<sup>36</sup> Manish Raghavan, Solon Barocas, Jon Kleinberg, and Karen Levy, "Mitigating Bias in Algorithmic Hiring: Evaluating Claims and Practices," Proceedings of the 2020 Conference on Fairness, Accountability, and Transparency (2020), <https://arxiv.org/pdf/1906.09208.pdf>.

<sup>37</sup> Drew Harwell, "A Face-Scanning Algorithm Increasingly Decides Whether You Deserve the Job," *Washington Post*, Nov. 6, 2019, <https://www.washingtonpost.com/technology/2019/10/22/ai-hiring-face-scanning-algorithm-increasingly-decides-whether-you-deserve-job/>.

<sup>38</sup> "Algorithm-Driven Hiring Tools: Innovative Recruitment or Expedited Disability Discrimination?" Center for Democracy & Technology, 2020, <https://cdt.org/insights/report-algorithm-driven-hiring-tools-innovative-recruitment-or-expedited-disability-discrimination/>.

<sup>39</sup> Jodi Kantor et al., "Workplace Productivity: Are You Being Tracked?" *New York Times*, August 16, 2022, <https://www.nytimes.com/interactive/2022/08/14/business/worker-productivity-tracking.html>; Deborah Berkowitz, "Packaging Pain: Workplace Injuries in Amazon's Empire," National Employment Law Project, 2020, <https://www.nelp.org/publication/packaging-pain-workplace-injuries-amazons-empire/>.

<sup>40</sup> Elizabeth Laird, "Remote Proctoring of Exams is an Invasive Tool Without Clear Security Protections. States & Districts Should Avoid Rushing In," *The 74*, May 18, 2021, <https://www.the74million.org/article/laird-remote-proctoring-of-exams-is-an-invasive-tool-without-clear-security-protections-states-districts-should-avoid-rushing-in/>.

sensitivity and cause migraines and other pain.<sup>41</sup> The software also does not always support use of testing accommodations or assistive devices.<sup>42</sup> Schools also use social media monitoring software that may misinterpret word choice and software that monitors students' activity on school-issued devices, including their access to resources such as mental health support.<sup>43</sup> In addition, schools use facial recognition that may misinterpret movements, and aggression detection that may incorrectly flag vocal tone, tics, or loud or atypical speech.<sup>44</sup> As a result, students with disabilities are more likely to be flagged as threats, even more when they are Black, Latine, or Muslim students who are more frequently profiled.<sup>45</sup>

### **Finding 3:**

#### **AI poses risks in housing for disabled Americans.**

Landlords use tenant screening algorithms to, for example, perform background checks on rental applicants. Much of the data that tenant screening algorithms review can lead to unfair denials of housing. For instance, some algorithms consider factors such as medical debt, which does not indicate whether an applicant is likely to mistreat other tenants or damage the rental property, or whether they lack the

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<sup>41</sup> Khari Johnson, "Examsoft's Remote Bar Exam Sparks Privacy and Facial Recognition Concerns," VentureBeat, September 29, 2020, <https://venturebeat.com/business/examsofts-remote-bar-exam-sparks-privacy-and-facial-recognition-concerns/>.

<sup>42</sup> "Report on Concerns Regarding Online Administration of Bar Exams," National Disabled Law Students Association, 2020, [https://ndlsa.org/wp-content/uploads/2020/08/NDLSA\\_Online-Exam-Concerns-Report1.pdf](https://ndlsa.org/wp-content/uploads/2020/08/NDLSA_Online-Exam-Concerns-Report1.pdf).

<sup>43</sup> Elizabeth Laird, et al., "Hidden Harms: The Misleading Promise of Monitoring Students Online," Center for Democracy & Technology, 2022, <https://cdt.org/insights/report-hidden-harms-the-misleading-promise-of-monitoring-students-online/>; Hannah Quay-de la Vallee, "The Chilling Effect of Student Monitoring: Disproportionate Impacts and Mental Health Risks," Center for Democracy & Technology, 2022, <https://cdt.org/insights/the-chilling-effect-of-student-monitoring-disproportionate-impacts-and-mental-health-risks/>.

<sup>44</sup> Alfred Ng, "Facial Recognition in Schools: Even Supporters Say It Won't Stop Shootings," CNET, January 24, 2020), <https://www.cnet.com/news/politics/features/facial-recognition-in-schools-even-supporters-say-it-wont-stop-shootings/>; Jack Gillum and Jeff Kao, "Aggression Detectors: The Unproven, Invasive Surveillance Technology Schools Are Using to Monitor Students," ProPublica, June 25, 2019, <https://features.propublica.org/aggression-detector/the-unproven-invasive-surveillance-technology-schools-are-using-to-monitor-students/>.

<sup>45</sup> Ike Swetlitz, "When Kids Are Threats: The Assessments Unfairly Targeting Students With Disabilities," *The Guardian*, October 15, 2019, <https://www.theguardian.com/us-news/2019/oct/14/when-kids-are-threats-the-assessments-unfairly-targeting-students-with-disabilities>; "Misabeled: The Impact of School Bullying and Discrimination on California Muslim Students," The Council on American-Islamic Relations (CAIR) California, 2015, <https://ca.cair.com/sfba/wp-content/uploads/sites/10/2018/04/CAIR-CA-2015-Bullying-Report-Web.pdf>.

income to pay rent.<sup>46</sup> A disabled person's medical debt is often related to their disability, and it could cause their rental application to be rejected even if they are able to fulfill lease obligations. Another concern is the extent to which tenant screening relies on court records to predict that an applicant poses a risk to other tenants or property. For example, when tenant screening algorithms reject applicants due to eviction records,<sup>47</sup> they do not take into account eviction records that are due to frequent police calls responding to domestic violence, which disabled people are more likely to make given they are more likely to experience domestic violence and have greater difficulty leaving abusive relationships.<sup>48</sup>

#### **Finding 4:**

#### **AI poses risks in healthcare for disabled Americans.**

Diagnostic tools are often trained on data that does not adequately represent people who have been less likely to obtain, or even prevented from accessing, formal diagnosis and treatment, because of historical biases and mistreatment of marginalized people in the study and practice of medicine.<sup>49</sup> When AI trained on this data is used to diagnose and to allocate resources for treatment, it can further prevent marginalized people from accessing supports, treatments, and accommodations that are based on their actual needs. For example, facial analysis may be used to diagnose pain in people who are nonverbal, and facial and behavioral analysis have been used to diagnose certain developmental and cognitive disabilities.<sup>50</sup> However, facial and behavioral analysis can be inaccurate for certain groups when the underlying training data reflects racial and gender norms that affect how disabilities present, are masked, and are acknowledged.<sup>51</sup>

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<sup>46</sup> Erin Smith and Heather Vogell, "How Your Shadow Credit Score Could Decide Whether You Get an Apartment," ProPublica, March 29, 2022, <https://www.propublica.org/article/how-your-shadow-credit-score-coulddecide-whether-you-get-an-apartment>.

<sup>47</sup> Jerusalem Demsas, "Why People Are Getting Evicted for Calling 911," Vox, March 15, 2021, <https://www.vox.com/22307509/crime-free-evictions-for-calling-911>.

<sup>48</sup> Alisha Jarwala and Sejal Singh, "When Your Emergency is a 'Nuisance,'" Slate, July 9, 2019, <https://slate.com/news-and-politics/2019/07/nuisance-ordinances-study-disabilities-domestic-violence-eviction.html>.

<sup>49</sup> Cynthia L. Bennett and Os Keyes, "What is the Point of Fairness? Disability, AI, and the Complexity of Justice," *Accessibility and Computing* (2019), <https://arxiv.org/pdf/1908.01024.pdf>; Daniel Young, "Black, Disabled, and Uncounted," *National Health Law Program*, August 7, 2020, <https://healthlaw.org/black-disabled-and-uncounted/>.

<sup>50</sup> Gioacchino D. DeSario et al., "Using AI to Detect Pain Through Facial Expressions: A Review," *Bioengineering*, 10, 5 (2023): 548, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10215219/>; Mohammad-Parsa Hosseini et al., "Deep Learning for Autism Diagnosis and Facial Analysis in Children," *Frontiers in Computational Neuroscience*, volume 15 (2021), <https://www.frontiersin.org/articles/10.3389/fncom.2021.789998/full>.

<sup>51</sup> Cynthia L. Bennett and Os Keyes, "What is the Point of Fairness? Disability, AI, and the Complexity of Justice," *Accessibility and Computing* (2019), <https://arxiv.org/pdf/1908.01024.pdf>; Daniel Young, "Black,

**Finding 5:****AI poses risks in benefits determinations for disabled Americans.**

Many government agencies rely on algorithmic tools to determine benefits eligibility and allocation, and to detect fraud.<sup>52</sup> In numerous cases, these tools have impeded people's access to benefits and infringed on their due process rights because of poor design and implementation.<sup>53</sup> Algorithmic barriers to public benefits particularly harm disabled people, for whom the poverty rate is approximately 27 percent overall and even higher for disabled Black people.<sup>54</sup> For people with disabilities that require home- and community-based services (HCBS), for example, algorithmic tools that were used to calculate the hours of care a person needs to perform activities of daily living have arbitrarily reduced or terminated people's HCBS benefits, putting disabled beneficiaries at risk of being isolated in nursing facilities because they could not afford to receive care at home.<sup>55</sup>

**Finding 6:****AI poses risks in the criminal legal system for disabled Americans.**

Predictive policing systems help law enforcement decide which neighborhoods to direct resources to. Some of these systems identify people deemed more likely to be involved in criminalized activity based on data such as school academic and disciplinary records, arrest records, social networks, and parole or probation status.<sup>56</sup> Risk assessment algorithms make a similar analysis, informing pretrial detention and sentencing decisions by predicting risk of failure to appear before a court if bail is set,

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Disabled, and Uncounted," *National Health Law Program*, August 7, 2020, <https://healthlaw.org/black-disabled-and-uncounted/>.

<sup>52</sup> Benefits Tech Advocacy Hub, <https://www.btah.org/>.

<sup>53</sup> Lydia X.Z. Brown et al., "Challenging the Use of Algorithm-Driven Decision-Making in Benefits Determinations Affecting People With Disabilities," Center for Democracy & Technology, 2020, <https://cdt.org/insights/report-challenging-the-use-of-algorithm-driven-decision-making-in-benefits-determinations-affecting-people-with-disabilities/>.

<sup>54</sup> Nanette Goodman et al., "Financial Inequality: Disability, Race, and Poverty in America," National Disability Institute, 2019: 12, <https://www.nationaldisabilityinstitute.org/wp-content/uploads/2019/02/disability-race-poverty-in-america.pdf>.

<sup>55</sup> Lydia X.Z. Brown et al., "Challenging the Use of Algorithm-Driven Decision-Making in Benefits Determinations Affecting People With Disabilities," Center for Democracy & Technology, 2020, <https://cdt.org/insights/report-challenging-the-use-of-algorithm-driven-decision-making-in-benefits-determinations-affecting-people-with-disabilities/>.

<sup>56</sup> Lydia X.Z. Brown and Ridhi Shetty, "Critical Scrutiny of Predictive Policing is a Step to Reducing Disability Discrimination," Center for Democracy & Technology, July 23, 2020, <https://cdt.org/insights/critical-scrutiny-of-predictive-policing-is-a-step-to-reducing-disability-discrimination/>.

or risk of recidivism if a person is released on parole.<sup>57</sup> The data that these algorithms evaluate may include education level, employment status and income, residence and housing stability, social connections and isolation, criminal records, substance addiction, and personality traits. These factors are far more predictive of the need for community support than of threats to public safety. For instance, arrest records can be a result of law enforcement responding punitively instead of supportively to deaf people, people with intellectual or developmental disabilities, or people in a mental health crisis.<sup>58</sup>

## AI'S IMPACT ON LATINX COMMUNITIES

### **Finding 1:**

#### **The Latinx community is underrepresented in the AI sector (and STEM fields more broadly).**

The U.S. Hispanic population reached over 63 million in 2022, constituting 19% of all Americans.<sup>59</sup>

This community makes up 17% of the U.S. workforce, but only 8% of STEM jobs.<sup>60</sup> This is despite Latinx Americans having high entrepreneurship rates<sup>61</sup> and frequently being early technology adopters.<sup>62</sup>

<sup>57</sup> Julia Angwin et al., "Machine Bias," ProPublica, May 23, 2016,

<https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing>.

<sup>58</sup> Jamelia N. Morgan, "Policing Under Disability Law," *Stanford Law Review*, vol. 73 (June 2021): 1401, <https://review.law.stanford.edu/wp-content/uploads/sites/3/2021/06/Morgan-73-Stan.-L.-Rev.-1401.pdf>.

<sup>59</sup> Jens Manuel Krogstad et al., "Key facts about U.S. Latinos for National Hispanic Heritage Month," Pew Research Center, September 22, 2023, <https://www.pewresearch.org/short-reads/2023/09/22/key-facts-about-us-latinos-for-national-hispanic-heritage-month/#:~:text=The%20U.S.%20Hispanic%20population%20reached,increase%20in%20the%20Asian%20population>.

<sup>60</sup> Cary Funk and Mark Hugo Lopez, "Hispanic Americans' Trust in and Engagement with Science: Many Hispanic Americans see more representation, visibility as helpful for increasing diversity in science," Pew Research Center, June 14, 2023,

<https://www.pewresearch.org/science/2022/06/14/many-hispanic-americans-see-more-representation-visibility-as-helpful-for-increasing-diversity-in-science/#:~:text=Hispanic%20Americans%20continue%20to%20be,8%25%20of%20all%20STEM%20workers>.

<sup>61</sup> "What makes the US Latino population an untapped engine for growth?" McKinsey & Company, December 10, 2021,

<https://www.mckinsey.com/about-us/new-at-mckinsey-blog/what-makes-the-us-latino-population-an-engine-for-growth>.

<sup>62</sup> Laura Montoya, NAIAC briefing, June 27, 2023.

U.S. resident Latinx and non-white Hispanic individuals made up just 3.2% of AI PhD graduates in 2019. There has been a slight increase in this number over the years, but the percentage is still lacking.<sup>63</sup>

### **Finding 2:**

**Latinx communities face barriers to entering the AI sector (and STEM fields more broadly).**

Latinx researchers and startups currently lack access to the capital, mentorship, data, and computational power necessary to succeed in the global market.<sup>64</sup>

Many Latinx individuals feel there is a lack of mentors and role models in the AI and STEM spaces — and that they would be more likely to pursue professions in computer science and AI if there were more examples.<sup>65</sup>

### **Finding 3:**

**English language-centered AI systems can adversely affect Spanish-language speakers (and the non English-language speaking world more broadly).**

Many AI systems are trained on only English-language data sets.<sup>66</sup> This can lead to several harms for Spanish-language speakers. These AI systems' outputs can reinforce stereotypes, exclude Latinx communities, and flatten the diversity of Latinx communities (e.g., Afro-Latinos, Asian-Latinos, and other Latino ethnic subgroups).<sup>67</sup> Algorithms may also struggle to surface relevant Spanish-language news, which can

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<sup>63</sup> “Artificial Intelligence Index Report 2021,” Stanford University Human-Centered Artificial Intelligence, 2021, <https://aiindex.stanford.edu/ai-index-report-2021/>; Laura Montoya.

<sup>64</sup> Janice Bitters Turi, “VC Funding To Early-Stage Latine-Founded Startups In The US Has Stalled. Here's Why That Matters,” Crunchbase News, January 26, 2022, <https://news.crunchbase.com/startups/latinx-startup-founders-vc-funding-something-ventured/>; Laura Montoya.

<sup>65</sup> Cary Funk and Mark Hugo Lopez, “Hispanic Americans' Trust in and Engagement with Science: Many Hispanic Americans see more representation, visibility as helpful for increasing diversity in science,” Pew Research Center, June 14, 2023, <https://www.pewresearch.org/science/2022/06/14/many-hispanic-americans-see-more-representation-visibility-as-helpful-for-increasing-diversity-in-science/#:~:text=Hispanic%20Americans%20continue%20to%20be,8%25%20of%20all%20STEM%20workers.>

<sup>66</sup> Paresch Dave, “ChatGPT Is Cutting Non-English Languages Out of the AI Revolution,” WIRED, May 31, 2023, <https://www.wired.com/story/chatgpt-non-english-languages-ai-revolution/>.

<sup>67</sup> David Vélez Mejía, “Watch out marketers, AI tends to default to Latino stereotypes,” The Drum, March 2, 2023, <https://www.thedrum.com/opinion/2023/03/02/watch-out-marketers-ai-tends-default-latino-stereotypes>



lead to difficulty accessing public services or voting information for Latinx communities.<sup>68</sup>

#### **Finding 4:**

#### **AI systems can adversely affect Latinx communities in the context of immigration.**

The use of AI systems (like facial recognition) at southern border zones can heighten surveillance, infringe on civil liberties, and often has limited regulation.<sup>69</sup>

### **AI'S IMPACT ON LGBTQ+ COMMUNITIES**

#### **Finding 1:**

#### **AI can amplify hate speech against LGBTQ+ communities.**

Queer people disproportionately experience societal harms including violence, stigma, discrimination, and erasure.<sup>70</sup> In the absence of intentional design to encourage inclusive participation, AI development poses risks to the civil rights, civil liberties, and opportunities of queer individuals.<sup>71</sup>

Large language models are trained on data that contain queerphobic hate speech and lack queer-affirmative language and representation of diverse identities.<sup>72</sup>

<sup>68</sup> Christian Paz, "Latino voters are being flooded with even more misinformation in 2022," September 20, 2022, <https://www.vox.com/the-highlight/23329139/latino-voters-misinformation-2022>.

<sup>69</sup> Hannah Tyler, "The Increasing Use of Artificial Intelligence in Border Zones Prompts Privacy Questions," Migration Policy Institute, February 2, 2022, <https://www.migrationpolicy.org/article/artificial-intelligence-border-zones-privacy>.

<sup>70</sup> J. A. Puckett et al., "Systems of cissexism and the daily production of stress for transgender and gender diverse people," *International journal of transgender health*, 24, 1 (2021): 113–126. <https://doi.org/10.1080/26895269.2021.1937437>; Dean Spade, *Normal Life Administrative Violence, Critical Trans Politics, and the Limits of Law* (Duke University Press, 2015); Micah Rajunov and Scott Duane, *Nonbinary Memoirs of Gender and Identity* (New York; Chichester, West Sussex Columbia University Press, 2019).

<sup>71</sup> Organizers Of Queerinaï et al., "Queer in AI: A Case Study in Community-Led Participatory AI," Proceedings of the 2023 ACM Conference on Fairness, Accountability, and Transparency (June 2023): 1882–1895, <https://doi.org/10.1145/3593013.3594134>.

<sup>72</sup> Jesse Dodge et al., "Documenting Large Webtext Corpora: A Case Study on the Colossal Clean Crawled Corpus," Proceedings of the 2021 Conference on Empirical Methods in Natural Language Processing (2021): 1286–1305, <https://aclanthology.org/2021.emnlp-main.98/>; Sunipa Dev et al., "Harms of Gender Exclusivity and Challenges in Non-Binary Representation in Language Technologies," Proceedings of the 2021 Conference on Empirical Methods in Natural Language Processing (2021): 1968–1994, <https://aclanthology.org/2021.emnlp-main.150/>; Anaelia Ovalle et al., "'I'm fully who I am': Towards Centering Transgender and Non-Binary Voices to Measure Biases in Open Language Generation," Proceedings of the 2023 ACM Conference on Fairness, Accountability, and Transparency (2023): 1246–1266, <https://dl.acm.org/doi/10.1145/3593013.3594078>.

Hence, LLMs produce stereotypes and harmful narratives about queer people, contributing to their misgendering (i.e., using gender non-affirming names or pronouns), alienation, and erasure. These models also learn static or incorrect information about people, generating outdated or wrong information about them with little recourse.<sup>73</sup>

In addition, AI that is deployed to moderate content often fails to flag queerphobic hate speech<sup>74</sup>, yet frequently classifies queer content as harmful and censors it.<sup>75</sup> For example, queer sexual education content and coming-out statements like "I'm queer" are often marked as inappropriate or "toxic" and automatically removed.<sup>76</sup>

Furthermore, AI has been used to identify queer people<sup>77</sup> and infer gender from faces,<sup>78</sup> reifying societal stereotypes.

## **Finding 2:**

### **AI can misidentify LGBTQ+ communities.**

Because the government collects sex and gender data that often are binary — male or female, man or woman — trans and non-binary people face unique challenges to correct identification, particularly as government agencies turn to AI trained on

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<sup>73</sup> Tamanna Hossain, Sunipa Dev, and Sameer Singh, "Misgendered: Limits of Large Language Models in Understanding Pronouns," Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics, Volume 1: Long Papers (2023): pages 5352–5367; Anaelia Ovalle et al., "'I'm fully who I am': Towards Centering Transgender and Non-Binary Voices to Measure Biases in Open Language Generation," Proceedings of the 2023 ACM Conference on Fairness, Accountability, and Transparency (2023): 1246–1266, <https://doi.org/10.1145/3593013.3594078>.

<sup>74</sup> Alexander Monea, *The Digital Closet: How the Internet Became Straight* (Cambridge, Massachusetts: The MIT Press, 2022).

<sup>75</sup> Tom Simonite, "AI and the List of Dirty, Naughty, Obscene, and Otherwise Bad Words," WIRED, February 4, 2021, <https://www.wired.com/story/ai-list-dirty-naughty-obscene-bad-words/>; "Censorship of Marginalized Communities on Instagram, 2021," Salty World, January 13, 2022, <https://saltyworld.net/exclusive-report-censorship-of-marginalized-communities-on-instagram-2021-pdf-download/#:~:text=document%20in%20full,->

<sup>76</sup> Tom Simonite, "AI and the List of Dirty, Naughty, Obscene, and Otherwise Bad Words," WIRED, February 4, 2021, <https://www.wired.com/story/ai-list-dirty-naughty-obscene-bad-words/>.

<sup>77</sup> Blaise Agüera Arcas, "Do Algorithms Reveal Sexual Orientation or Just Expose Our Stereotypes?" Medium, January 18, 2018, <https://medium.com/@blaisea/do-algorithms-reveal-sexual-orientation-or-just-expose-our-stereotypes-d998fafdf477>; Luke Stark and Jevan Hutson, "Physiognomic Artificial Intelligence," Fordham Intellectual Property Law Journal, volume 32, no. 4 (2022): <https://ir.lawnet.fordham.edu/iplj/vol32/iss4/2>.

<sup>78</sup> Os Keyes, "The Misgendering Machines," Proceedings of the ACM on Human-Computer Interaction, 2 (2018): 1–22, <https://doi.org/10.1145/3274357>; Foad Hamidi, Morgan Klaus Scheuerman, and Stacy M. Branham, "Gender Recognition or Gender Reductionism?" Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems (2018), <https://doi.org/10.1145/3173574.3173582>; Morgan Klaus Scheuerman, Madeleine Pape, and Alex Hanna, "Auto-Essentialization: Gender in Automated Facial Analysis as Extended Colonial Project," *Big Data & Society* vol. 8, no. 2 (2021): <https://doi.org/10.1177/20539517211053712>.

binary gender data.<sup>79</sup> As agencies apply AI analytics to their sex and gender data, they risk classifying trans people as anomalies due to perceived inconsistencies in the data. Incorrect identification can have severe consequences, such as the denial of health insurance<sup>80</sup> and increased contact with law enforcement.<sup>81</sup>

Furthermore, because biometric data typically is static and unchanging, they do not work well for trans and non-binary people who physically transition.<sup>82</sup> Therefore, the deployment of biometrics to verify identity or detect fraud can (1) out trans people and cause them gender dysphoria<sup>83</sup>; (2) incorrectly classify gender minorities as security risks<sup>84</sup>; and (3) discriminate against gender minorities trying to enter the U.S. or access essential health, employment, and housing services. Moreover, as the NAIAC Year 1 Report<sup>85</sup> states, “information asymmetries” make it difficult to prove claims of algorithmic discrimination; trans people may never know why or how the use of biometric data discriminated against them, and thus fail to get redress.

## AI'S IMPACT ON NATIVE AMERICAN COMMUNITIES

### **Finding 1:**

#### **AI is being developed without Native American voices.**

Native American communities in the U.S. have one of the highest poverty rates and among the most limited employment opportunities — up to 40% of some communities live in poverty.<sup>86</sup>

<sup>79</sup> Dean Spade, *Normal Life : Administrative Violence, Critical Trans Politics, and the Limits of Law* (Durham, North Carolina: Duke University Press, 2015); Anna James (AJ) Wipfler, “Identity Crisis: The Limitations of Expanding Government Recognition of Gender Identity and the Possibility of Genderless Identity Documents,” *Harvard Journal of Law and Gender*, Vol. 39 (2016): 491, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2763740](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2763740).

<sup>80</sup> Ari Ezra Waldman, “Gender Data in the Automated Administrative State,” *Columbia Law Review*, vol. 124. (February 14, 2023): <https://doi.org/10.2139/ssrn.4358437>.

<sup>81</sup> Dean Spade, *Normal Life : Administrative Violence, Critical Trans Politics, and the Limits of Law* (Durham, North Carolina: Duke University Press, 2015).

<sup>82</sup> Os Keyes, “The Misgendering Machines,” *Proceedings of the ACM on Human-Computer Interaction 2* (November 2018): 1–22, <https://doi.org/10.1145/3274357>.

<sup>83</sup> Paisley Currah and Tara Mulqueen. “Securitizing Gender: Identity, Biometrics, and Transgender Bodies at the Airport,” CUNY Academic Works (2011): [https://academicworks.cuny.edu/gc\\_pubs/306/](https://academicworks.cuny.edu/gc_pubs/306/); Julia Serano, “Julia Serano’s Trans, Gender, Sexuality, & Activism Glossary,” <https://www.juliaserano.com/terminology.html>.

<sup>84</sup> Jessica Jung and Sonia Katyal, “The Gender Panopticon: Artificial Intelligence, Gender, and Design Justice,” *UCLA Law Review* (February 2021), <https://doi.org/10.2139/ssrn.3760098>.

<sup>85</sup> “National AI Advisory Year 1 Committee Report,” National AI Advisory Committee, May 2023, <https://www.ai.gov/wp-content/uploads/2023/05/NAIAC-Report-Year1.pdf>.

<sup>86</sup> Randall Akee, “How does measuring poverty and welfare affect American Indian children?” Brookings Institution, March 12, 2019, <https://www.brookings.edu/articles/how-does-measuring-poverty-and-welfare-affect-american-indian-children/#:~:text=Given%20the%20best%20available%20data,almost%20the%20past%2030%20years>.

This disparity also manifests in access to technology: More than 18% of individuals living on tribal lands lack broadband access.<sup>87</sup> Currently, many Native American-serving schools lack the ability to teach computer science.<sup>88</sup> And in North America in 2022, only three indigenous people were awarded PhDs in computer science out of a total of 1,700.<sup>89</sup>

### **Finding 2:**

#### **As a result, AI doesn't serve Native American communities.**

Because Native Americans lack the access and resources to meaningfully participate online, AI tools are developed without their input and needs in mind. Indeed, Natural Language Processing frameworks can't model most indigenous languages in North America.<sup>90</sup> This excludes the full Native American population from realizing the potential of AI tools. It also fails to preserve these languages at a time when the vast majority of them are going, or already have gone, extinct.<sup>91</sup>

This exclusion also has serious consequences for tribal economies, preventing them from benefiting from the innovation and economic opportunities that AI can provide.

### **Finding 3:**

#### **AI must be built by and for Native Americans.**

Addressing this exclusion requires pathways for indigenous communities to directly engage with the design, deployment, and governance of AI systems. The U.S. government can provide funding and resources that help Native American talent participate in computer science, AI, and machine learning. The U.S. government can

<sup>87</sup> "Tribal Broadband: National Strategy and Coordination Framework Needed to Increase Access," Reports & Testimonials, U.S. Government Accountability Office, June 22, 2022, <https://www.gao.gov/products/gao-22-104421>.

<sup>88</sup> "2021 State of Computer Science Education," Code.org, January, 2022, [https://advocacy.code.org/2021\\_state\\_of\\_cs.pdf](https://advocacy.code.org/2021_state_of_cs.pdf).

<sup>89</sup> Stuart Zweben and Betsy Bizot, "2022 Taulbee Survey Record Doctoral Degree Production; More Increases in Undergrad Enrollment Despite Increased Degree Production," Computing Research Association, May 2023, <https://cra.org/crn/wp-content/uploads/sites/7/2023/05/2022-Taulbee-Survey-Final.pdf>.

<sup>90</sup> Annalee Newitz, "How artificial intelligence is helping keep Indigenous languages alive," *New Scientist*, September 27, 2023, <https://www.newscientist.com/article/0-how-artificial-intelligence-is-helping-keep-indigenous-language-s-alive/>.

<sup>91</sup> Lillian Sparks, "Preserving Native Languages: No Time to Waste," Administration for Native Americans, U.S. Department of Health & Human Services, <https://www.acf.hhs.gov/ana/preserving-native-languages-article>.

also provide funding and resources for AI research into indigenous language reclamation and revitalization, making AI more inclusive and preserving cultural heritage. Public and private institutions in the AI space can also prioritize working with (and compensating) indigenous individuals and communities with relevant expertise.<sup>92</sup>

The U.S. government can also prioritize indigenous data sovereignty. This might entail policies or education initiatives that help Native American communities control their data and avoid exploitation by AI research projects.<sup>93</sup>

Lastly, during the NAIAC June 2023 public listening sessions Mason Grimshaw noted that it is imperative that any solutions account for the diversity of indigenous communities in the U.S., each with their own language and culture.<sup>94</sup>

## AI'S IMPACT ON WOMEN

### **Finding 1:**

#### **AI must be examined through the lens of gender.**

The increasing prevalence of AI in society intersects with issues that have long faced women like bias, exclusion, inaccessibility, and socioeconomic injustice.

For this reason, a gender-conscious lens is useful when addressing AI, to ensure the technology mitigates these issues rather than exacerbating them.

Unfortunately, there are already several cases of the latter. Women currently have limited representation in the AI industry.<sup>95</sup> Further, AI systems are often trained using data sets that reinforce gender biases, leading to outcomes like credit approval algorithms that unfairly deny loans to women.<sup>96</sup> And as AI systems become more sophisticated, data privacy becomes more challenging to uphold — leaving women vulnerable to data breaches and hyper targeting online.<sup>97</sup>

<sup>92</sup> Mason Grimshaw, NAIAC briefing, June 27, 2023.

<sup>93</sup> Mason Grimshaw.

<sup>94</sup> Mason Grimshaw.

<sup>95</sup> “Women in AI,” Deloitte AI Institute, published 2021, <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/deloitte-analytics/us-consulting-women-in-ai.pdf>.

<sup>96</sup> Ryan Browne and MacKenzie Sigalos, “A.I. has a discrimination problem. In banking, the consequences can be severe,” CNBC.com, published June 23, 2023, <https://www.cnbc.com/2023/06/23/ai-has-a-discrimination-problem-in-banking-that-can-be-devastating.html>.

<sup>97</sup> Byron Tau and Patience Haggin, “Antiabortion Group Used Cellphone Data to Target Ads to Planned Parenthood Visitors,” The Wall Street Journal, May 18, 2023,

**Finding 2:****Women need more representation in the AI industry.**

During the June 2023 NAIAC public listening sessions Buva Shakti recommended steps the U.S. government can take to ensure that women play an equal role in shaping AI technologies.

The U.S. government can support female founders, female executives, and women-owned businesses through public and private financing partnerships. This is especially important when it comes to women of color, differently-abled women, and non-binary individuals. Grants and other incentives can help standardize inclusion, eliminate gender discrimination, and increase women's psychological safety.<sup>98</sup>

The U.S. government can also promote free educational access and experiential learning opportunities for girls at the high school level, equipping the next generation of female leaders with critical AI skills.<sup>99</sup>

**Finding 3:****The U.S. government can help prevent AI from marginalizing women.**

Buva Shakti also highlighted regulatory steps the U.S. government can take to ensure that AI doesn't inherently marginalize women.

The U.S. government can pass and enforce regulations that ensure AI training data sets are devoid of gender bias. This can be done using methods like regression testing on AI models.<sup>100</sup>

The government can also democratize access to generative AI tools for individuals and businesses, ensuring women in the workforce can benefit from these tools equally. It can ensure the economic benefits of AI outweigh the negative impacts on the workforce. And the U.S. government can mandate responsible AI training for middle-level managers, which is where the next generation of AI leaders — including women — are currently situated.<sup>101</sup>

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<https://www.wsj.com/articles/antiabortion-group-used-cellphone-data-to-target-ads-to-planned-parent-hood-visitors-446c1212>.

<sup>98</sup> Buva Shakti, NAIAC briefing, June 27, 2023.

<sup>99</sup> Buva Shakti.

<sup>100</sup> Buva Shakti.

<sup>101</sup> Buva Shakti.

The U.S. government can also provide more comprehensive, federal oversight and enforcement of privacy protections, in order to better secure women’s data.<sup>102</sup>

## ACKNOWLEDGEMENTS

Thank you to the following individuals for their remarks, research, and support in creating this document: Yang Cheung, Emily Chi, Mason Grimshaw, JudeAnne Heath, Laura Montoya, Serena Oduro, Bhuva Shakti, Ridhi Shetty, Arjun Subramonian, Maria Towns, Gelyn Watkins, and Patrice Willoughby.

All contributions made by non-Members have been performed under the supervision of a NAIAC Member.

## ABOUT NAIAC

The National Artificial Intelligence Advisory Committee (NAIAC) advises the President and the White House National AI Initiative Office (NAIIO) on the intersection of AI and innovation, competition, societal issues, the economy, law, international relations, and other areas that can and will be impacted by AI in the near and long term. Their work guides the U.S. government in leveraging AI in a uniquely American way — one that prioritizes democratic values and civil liberties, while also increasing opportunity.

NAIAC was established in April 2022 by the William M. (Mac) Thornberry National Defense Authorization Act. It first convened in May 2022. It consists of leading experts in AI across a wide range of domains, from industry to academia to civil society.

<https://www.ai.gov/naiac/>

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<sup>102</sup> Yang Cheung, NAIAC briefing, June 27, 2023.