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Re: Request for Information on the on Public and Private Sector Uses of Biometric Technologies

Access Now appreciates the opportunity to submit comments to the White House's Office of Science and Technology Policy (OSTP) Request for Information (RFI)on Public and Private Sector Uses of Biometric Technologies.[1]

Access Now provides thought leadership and policy recommendations to the public and private sectors by offering a digital rights perspective to ensure the internet's continued openness and the protection of human rights.[2] We have special consultative status at the United Nations. Access Now also leads the **Ban Biometric Surveillance** campaign, which calls for a prohibition on uses of facial recognition and remote biometric recognition technologies that enable mass surveillance and discriminatory targeted surveillance, and which has been signed by 193 civil society organisations from 63 countries around the world.[3] In Europe, Access Now is part of the **Reclaim Your Face** campaign which launched a formal petition to ban biometric mass surveillance in the European Union.[4] We also launched a campaign with All Out, a global LGBT+ organization to expose the threat of automated gender "recognition" and the use of AI systems to predict sexual orientation. In addition,

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[1]https://www.federalregister.gov/documents/2021/10/08/2021-21975/notice-of-request-for-information-rfi-on-public-and-private-sector-uses-of-biometric-technologies.

[2] https://www.accessnow.org/.

[3] https://www.accessnow.org/ban-biometric-surveillance/.

[4] https://reclaimyourface.eu/.

we facilitate the **#WhyID** community to ensure that digital identity programs respect the rights of people around the world.[5]

With the rising investments in and expansion of automated technologies, the global biometric industry is projected to grow around USD84.27 billion by 2026.[6] The United States must therefore enforce and develop the highest human rights compliance standards for biometric technologies designed, developed, or deployed in the United States. While strong regulation and safeguards can mitigate certain harms, certain biometric technologies are incompatible with the protection of human rights. Accordingly, we believe that these uses of biometric technology deserve greater scrutiny.

Introduction

The Request for Information (RFI) seeks answers on a variety of questions. These comments focus on the use of biometrics to infer emotion, gender and other attributes as well as the use of biometric recognition in mandatory digital ID programs and biometric mass surveillance. This submission provides information in response to question four of the RFI (the exhibited and potential harms of a particular biometric technology), namely (I) what emotion recognition technology is (II) the unreliability and discriminatory nature of emotion recognition technology, (III) how emotion recognition undermines the rights to freedom of thought and privacy, (IV) how mandatory digital identity programs using biometric recognition leads to exclusionary outcomes, (V) how biometric recognition is predicated on mass surveillance, and (VI) our recommendations to the OSTP.

I. What is Emotion Recognition Technology ?

The term 'emotion recognition' covers a range of technologies that claim to infer someone's emotional state from data collected about that person.[7] Emotion recognition systems can be used in job interviews claiming to tell how enthusiastic or honest you are.[8] Airport security systems use emotion recognition to analyze your facial expressions for bad intent,[9] and if you are a defendant on trial, policing programs claim to detect deception.[10]

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[5] https://www.accessnow.org/whyid/.

[6] Global $84.27 *Ban Biometrics Markets, Competition, Forecast & Opportunities*, Yahoo News (Nov. 22, 2021) https://www.yahoo.com/now/global-84-27-bn-biometrics-163200622.html.

[7] Jay Stanley, Experts Say 'Emotion Recognition' Lacks Scientific Foundation, ACLU (July 18, 2019), https://www.aclu.org/blog/privacy-technology/surveillance-technologies/experts-say-emotion-recognition-lacks-scientific.

[8] Angela Chen and Karen Hao, *Emotion AI researchers say overblown claims give their work a bad name*, MIT Technology Review (Feb. 14, 2020), https://www.technologyreview.com/2020/02/14/844765/ai-emotion-recognition-affective-computing-hirevue-regulation-ethics/.

[9] Emotion recognition at the airport, Felena, https://felenasoft.com/xeoma/en/articles/emotion_recognition_in_airport/.

[10] Sebastien Krier, *Facing Affect Recognition*, (Sept. 18, 2020)https://asiasociety.org/sites/default/files/inline-files/Affect%20Final.pdf; https://emojify.info/ ;

Many 'face-based' emotion recognition applications rely on the assumption that everyone expresses emotion in the same way, relying on Paul Eckman's controversial 'basic emotions' theory, which posits 'universal categories' of human emotion and claims to describe how these can be read from facial expressions.[11] Furthermore, these systems often have the implicit or express intention of manipulating our thoughts by tailoring content to our emotional state.[12]

II.   Emotion Recognition is Unreliable and Racially Biased

A prominent study by researchers in the science of emotion concluded that despite "[t]echnology companies [...] investing tremendous resources to figure out how to objectively "read" emotions in people by detecting their presumed facial expressions [...] **the science of emotion is ill-equipped to support any of these initiatives**".[13] Further, devastating criticism of the entire project of emotion recognition has been voiced from numerous quarters, with even Paul Eckman, whose theories underlie the majority of face-based emotion recognition systems, stating that "**[m]ost of what I was seeing was what I would call pseudoscience**" in emotion recognition technology.[14]

The relationship between facial expressions and a person's emotional state is a lot more complex than it may appear because **people express their emotions considerably differently across cultures, ethnicities, and circumstances**. This is corroborated by researchers from the University of Glasgow, which found that culture shapes the perception of emotions.[15] Facial expressions are filtered through culture to gain meaning and our culture and societal attitudes fundamentally shape our emotions.[16] In

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[11] *Id*; see also Oscar Schwartz, *Don't look now: why you should be worried about machines reading your emotions*, The Guardian (Mar. 6, 2019), https://www.theguardian.com/technology/2019/mar/06/facial-recognition-software-emotional-science.

[12] See, for example, this case taken by the Brazilian consumer organization, IDEC, where such a system was used in a metro line in São Paulo. Access Now intervened, submitting an expert opinion, and the judge ultimately ruled in favor of IDEC: https://www.accessnow.org/sao-paulo-court-bans-facial-recognition-cameras-in-metro/

[13] Lisa Feldman Barrett, et al, *Emotional Expressions Reconsidered: Challenges to Inferring Emotion From Human Facial Movements*, Psychological Science in the Public Interest, vol. 20, no. 1, July 2019, pp. 1–68, https://journals.sagepub.com/doi/10.1177/1529100619832930.

[14] Madhumita Murgia, *Emotion recognition: can AI detect human feelings from a face?* The Financial Times (May 12, 2021),https://www.ft.com/content/c0b03d1d-f72f-48a8-b342-b4a926109452; see also Luke Stark and Jevan Hutson, *Physiognomic Artificial Intelligence* (September 20, 2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3927300.

[15] Chaona Chen et al., *Distinct Facial Expressions Represent Pain and Pleasure Across Cultures*, Proceedings of the National Academy of Sciences of the United States of America, vol. 115, no. 43, 2018, pp. E10013–E10021, https://www.pnas.org/content/115/43/E10013.

[16] Michael Price, *Facial Expressions – Including Fear – May Not Be As Universal As We Thought*, Science (Oct. 17, 2016),https://www.science.org/content/article/facial-expressions-including-fear-may-not-be-universal-we-thought ; see also Carlos Crivelli et al., *The Fear Gasping Face as a Thread Display in a Melanesian Society*, Proceedings of the National Academy of Sciences of the United States of America (Oct. 17, 2016) ,https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5098662/.

addition, facial expressions do not always reflect our inner emotions because people often mask or suppress their emotions.[17]

Researchers from the University of Cambridge who designed a game that attempt to identify emotions from facial expressions concluded "that **the software's readings are far from accurate, often interpreting even exaggerated expressions as 'neutral.'**"[18] The game, emojify.info, challenges you to produce six emotions (happiness, sadness, fear, surprise, disgust, and anger), which the system will "read" by your computer via your webcam and attempt to identify.[19] This study demonstrates that **"the basic premise underlying much emotion recognition tech: that facial movements are intrinsically linked to changes in feeling, is flawed."[20]**

Emotion recognition technology is also racially biased. Research shows that some **emotion recognition technology has trouble identifying the emotions of darker-skinned faces**. In one study, emotion recognition systems assigned more negative emotions to black men's faces when compared to white men's faces. These systems **read the faces of black men as angrier than the faces of white men**, no matter their expression.[21]

The use of emotion recognition systems in hiring interviews,[22] schools,[23] and other settings have also caused great concern.[24] In China, emotion recognition has been used by teachers to monitor students' emotions as they study at home and gauge how they respond to classwork.[25] As they study, the system collects specific biometric information (like the muscle points on their faces) through the camera on their computer or tablet.[26] The system then attempts to identify emotions such as happiness, sadness, anger, surprise and fear.[27]

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[17] Miho Iwasaki and Yasuki Noguchi, *Hiding true emotions: Micro-expressions in eyes retrospectively concealed by mouth movements*, Scientific Reports. 2016, https://www.nature.com/articles/srep22049.
[18] James Vincent, *Discover the stupidity of AI emotion recognition with this little browser game*, The Verge (Apr. 6, 2021),
https://www.theverge.com/2021/4/6/22369698/ai-emotion-recognition-unscientific-emojify-web-browser-game;
see also Emojify, https://emojify.info/
[19] *Id.*
[20] James Vincent, *Discover the stupidity of AI emotion recognition with this little browser game*.
[21] Lauren Rhue, *Emotion-reading tech fails the racial bias test*, The Conversation (Jan 3, 2019),
https://theconversation.com/emotion-reading-tech-fails-the-racial-bias-test-108404.
[22] Sheridan Wallar and Schellmann*, We tested AI interview tools. Here's what we found*, MIT Technology Review (July 7, 2021), https://www.technologyreview.com/2021/07/07/1027916/we-tested-ai-interview-tools/.
[23] Milly Chan, *This AI reads children's emotions as they learn*, CNN Business (Feb. 17, 2021),
https://www.cnn.com/2021/02/16/tech/emotion-recognition-ai-education-spc-intl-hnk/index.html ;
https://restofworld.org/2021/chinas-emotion-recognition-tech/.
[24] Cheryl Teh, *'Every smile you fake' — an AI emotion-recognition system can assess how 'happy' China's workers are in the office*, Insider (Jun. 15, 2021),
 https://www.insider.com/ai-emotion-recognition-system-tracks-how-happy-chinas-workers-are-2021-6.
[25] Chan, *This AI reads children's emotions as they learn.*
[26] *Id.*
[27] *Id.*

This technology presents real harms to marginalized communities.[28] The use of **emotion recognition systems in education could further exacerbate existing oppressive dynamics**. For instance, it is common knowledge that black students experience more suspensions and other disciplinary actions than white students, often for the same behavior.[29] Another study exploring racialized perception of emotions and bias among prospective teachers concluded that the **teachers are more likely to interpret the facial expressions of black boys and girls as being angry**, even when they are not.[30] If racially biased emotion recognition technology is deployed in these already problematic situations, existing inequalities and oppression could be magnified.

III.   Emotion Recognition undermines the Right to Privacy, Freedom of Thought and Expression

Inferences about our emotional state represents an unacceptable intrusion into our private mental life, and erodes our right to privacy and freedom of thought.[31] The right to freedom of thought includes the right to keep our thoughts and opinions private, the right not to have our thoughts and opinions manipulated, and the right not to be penalized for our thoughts and opinions.[32]

As Article 19 pointed out, emotion recognition applications are a highly invasive form of surveillance that tracks, monitors, and profiles individuals through overt collection of sensitive personal data [33] In her 2021 annual report on *The Right to Privacy in the Digital Age*, the UN High Commissioner for Human Rights notes that the "the use of emotion recognition systems by public authorities, for instance for singling out individuals for police stops or arrests or to assess the veracity of statements during interrogations, **risks undermining human rights, such as the rights to privacy, to liberty and to a fair trial**" and that a "risk-proportionate approach to legislation and regulation will require the

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[28] Abeba Birhane, *The Impossibility of Automating Ambiguity,* Artificial Life (June 11, 2021) https://direct.mit.edu/artl/article-abstract/27/1/44/101872/The-Impossibility-of-Automating-Ambiguity?redirectedFrom=fulltext.
[29] Travis Riddle and Stacey Sinclair, *Racial disparities in school-based disciplinary actions are associated with county-level rates of racial bias*, Princeton University (Apr. 2, 2019), https://www.pnas.org/content/116/17/8255.
[30] Amy G. Halberstadt et al., *Racialized Emotion Recognition Accuracy and Anger Bias of Children's Faces*, American Psychological Association (2020), https://www.apa.org/pubs/journals/releases/emo-emo0000756.pdf; see also
Amy Halberstadt and Matt Shipman*, Future Teachers More Likely to View Black Children as Angry, Even When They Are Not*, NC State University (July 6, 2020), https://news.ncsu.edu/2020/07/race-anger-bias-kids/
[31] Access Now submission to the UN Special Rapporteur on Freedom of Religion or Belief
Call for Inputs: Report to the UN General Assembly 76th Session on
Respecting, Protecting and Fulfilling the Right to Freedom of Thought (Jun. 30, 2021), https://www.accessnow.org/cms/assets/uploads/2021/11/UN-Special-Rapporteur-on-Freedom-of-Religion-or-Belief_-Consultation-on-freedom-of-thought-technology.pdf.
[32] Susie Alegre, *Protecting Freedom of Thought in the Digital Age*, Centre for International Governance Innovation (May 2021), https://www.cigionline.org/static/documents/PB_no.165.pdf.
[33] *Emotional Entanglement: China's emotion recognition market and its implications for human rights*, Article 19 (Jan. 2021), https://www.article19.org/wp-content/uploads/2021/01/ER-Tech-China-Report.pdf.

prohibition of certain AI technologies, applications or use cases, where they would create potential or actual impacts that are not justified under international human rights law, including those that fail the necessity and proportionality tests."[34]

Similarly, in their Joint Opinion on the European Union's Artificial Intelligence Act, the European Data Protection Board (EDPB) and European Data Protection Supervisor (EDPS) state that the "use of AI to infer emotions of a natural person is highly undesirable and should be prohibited."[35] While the EDPB-EDPS statement further notes that exceptions should be made for "certain well-specified use-cases, namely for health or research purposes," **the fact that these systems are based on flawed scientific premises suggests that they should not be allowed in sensitive domains such as health**.[36]

A particularly acute risk to human rights occurs if emotion recognition systems are used to detect potentially dangerous or aggressive protests, leading to the arrest of these people before they have committed any aggressive act.[37] In such a case it wouldn't matter whether the inference was unreliable or not; the consequences of being arrested are real and would undermine our rights to freedom of expression and freedom of assembly.

IV.   Automated Recognition of Gender and Sexual Orientation is a threat to LGBT+ people

Automatic Gender Recognition (AGR) aims to infer the gender of individuals from data collected about them. AGR uses information, like a legal name or the bone structure of your face, to infer your gender identity, often reducing it to a simplistic binary.[38]

Studies have shown that **women of color, particularly black and trans people are at a higher risk of misgendering.**[39] Furthermore, inferring gender on a binary scale erases the existence of non-binary people and has real world consequences. AGR not only fails to reflect any objective or scientific understanding of gender but it **indirectly symbolizes a form of erasure for people who are trans or**

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[34]UN High Commissioner for Human Rights, *The Right to Privacy in the Digital Age: Report of the United Nations High Commissioner for Human Rights*, A/HRC/48/31, UN Human Rights Council, 48th Session (Sept. 13, 2021), https://www.ohchr.org/EN/Issues/DigitalAge/Pages/DigitalReports.aspx.
[35] Natasha Lomas, *EU's data protection adviser latest to call for ban on tracking ads*, TechCrunch (Nov. 19, 2021), https://techcrunch.com/2021/11/19/edpb-call-to-ban-tracking-ads/.
[36] *Id.*
[37] Thomas Macaulay, *British police to trial facial recognition system that detects your mood,* TNW News (Aug. 17, 2020) https://thenextweb.com/news/british-police-to-trial-facial-recognition-system-that-detects-your-mood
[38] OS Keyes, *The Misgendering Machines: Trans/HCI Implications of Automatic Gender Recognition*, Proceedings of the ACM on Human-Computer Interaction (Nov. 2018), https://ironholds.org/resources/papers/agr_paper.pdf.
[39] http://gendershades.org.

non-binary. Simply put: when you and your community are systematically misrepresented, your ability to advocate effectively for your human rights and freedoms are crippled.[40]

In 2021, hundreds of human rights groups, recording artists, and academics penned an open letter to Spotify, requesting that the company not use their recently patented technology to listen to users' conversations and recommend content based on their perceived emotions.[41] Spotify's speech-recognition patent[42] claims to be able to detect,[43] among other things, "emotional state, gender, age, or accent" to better recommend music. In other words, Spotify's technology uses emotion recognition and gender recognition to make inferences about what emotion a person is experiencing and what gender they are in order to recommend a song. According to the patent, the device would stay on all the time, constantly monitoring, processing voice data, and likely collecting sensitive information.[44] It would even be able to detect the number of people in a room.

Automated recognition of gender and sexual orientation can cause several harms to LGBT+ people. You could be interrogated at the airport if the system determines you don't match the gender marker in your passport. A trans person could be prohibited from access to gender-specific spaces like bathrooms and locker rooms. Authorities in repressive countries could analyze security camera footage or social media profiles to track down individuals they believe to be LGBT+ and arrest them.[45]

When biometric technology is used to infer gender it limits the ability of a person to self-identify[46] and puts companies in a dangerous position of power in relation to people using the service.[47] Spotify, for example, has an incentive to manipulate a person's emotions in a way that encourages them to continue listening to content on its platform — which could look like playing on a person's depression to keep them depressed.[48]

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[40] Daniel Leufer, *Computers are binary, people are not: how AI systems undermine LGBTQ identity*, Access Now (Apr. 6, 2021), https://www.accessnow.org/how-ai-systems-undermine-lgbtq-identity/.

[41] Todd Feathers, *Artists Are Telling Spotify To Never Use 'Emotion Recognition,'* VICE News (May 5, 2021), https://www.vice.com/en/article/7kvvka/artists-are-telling-spotify-to-never-use-emotion-recognition.

[42] *Identification of taste attributes from an audio signal*, Justia (Feb. 21, 2018), https://patents.justia.com/patent/10891948.

[43] Mark Savage,*Spotify wants to suggest songs based on your emotions*, BBC News (Jan. 28, 2021) https://www.bbc.com/news/entertainment-arts-55839655.

[44] *Identification of taste attributes from an audio signal*, Justia (Feb. 21, 2018), https://patents.justia.com/patent/10891948.

[45] https://campaigns.allout.org/ban-AGSR.

[46] Veronica Arroyo and Daniel Leufer, *Facial recognition on trial: emotion and gender "detection" under scrutiny in a court case in Brazi*l, Access Now (June 29, 2020), https://www.accessnow.org/facial-recognition-on-trial-emotion-and-gender-detection-under-scrutiny-in-a-court-case-in-brazil/; see also Petition to Ban Automated Recognition of Gender and Sexual Orientation, Access Now, https://act.accessnow.org/page/79916/action/1.

[47] *Dear Spotify: don't manipulate our emotions*, Access Now (Apr. 15, 2021) https://www.accessnow.org/spotify-tech-emotion-manipulation/.

[48] *Id*.

V. Mandatory Digital Identity Programs using Biometric Recognition lead to Exclusionary Outcomes

Governments and companies around the world are leveraging biometric technologies to identify and authenticate ill-considered, badly designed, and poorly implemented digital identity programs.[49] Often, these digital identity programs are mandatory.[50] Most of these enrollment systems capture personal information along with biometrics. The introduction of such a program jeopardizes human rights, particularly for political and religious minorities, and exposes them to threats from third parties.[51] In many places, populations including refugees, transgender people, and those affected by HIV are forced to register in digital identity programs as a pre-condition to receiving aid.[52]

There are also many privacy concerns related to these digital identity programs. For example, a few months ago the Intercept[53] reported that **an Afghanistan Automated Biometric Identification System[54] maintained by the Afghan Ministry of the Interior *with* support from the U.S. government was seized by the Taliban**. The devices, known as HIIDE, for Handheld Interagency Identity Detection Equipment, collected sensitive biometric data (such as iris scans, fingerprints, and other biographical information) on Afghan criminals, terrorists and those who assisted the U.S. (or worked with the military).

VI. Biometric Recognition is Predicated on Mass Surveillance

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[49] https://www.accessnow.org/whyid/; see also Veronica Arroyo and Donna Wentworth, *We need to talk about digital ID: why the World Bank must recognize the harm in Afghanistan and beyond*, Access Now (Oct. 14, 2021), https://www.accessnow.org/digital-id-world-bank/

[50] *National Digital Identity Programmes: What's Next?*, Access Now (May 2018), https://www.accessnow.org/cms/assets/uploads/2019/11/Digital-Identity-Paper-Nov-2019.pdf.; see also *Mandatory National IDs and Biometric Databases*, Electronic Frontier Foundation, https://www.eff.org/issues/national-ids.

[51] *Busting The Dangerous Myths Of Big Id Programs:Cautionary Lessons from India*, Access Now (Oct. 2021), https://www.accessnow.org/cms/assets/uploads/2021/10/BigID-Mythbuster.pdf; see Carolyn Tackett and Naman M. Aggarwal, *Government responses to COVID-19 reinforce the need to ask — #WhyID?,* Access Now (Apr. 29, 2020) https://www.accessnow.org/government-responses-to-covid-19-reinforce-the-need-to-ask-whyid/; see also *Civil society organizations call for a full integration of human rights in the deployment of digital identification systems,* Access Now (Dec. 17, 2020), https://www.accessnow.org/civil-society-call-for-human-rights-in-digital-identification-systems/; *#WhyID: Digital health certificates are not immune from violating users' rights*, Access Now (July 22, 2020), https://www.accessnow.org/whyid-digital-health-certificates-are-not-immune-from-violating-users-rights/.

[52] *Iris scanning of refugees is disproportionate and dangerous — What's happening behind IrisGuard's closed doors?* Access Now (Apr. 12, 2021), https://www.accessnow.org/irisguard-refugees-jordan/.

[53] Ken Klippenstein and Sara Sirota,*The Taliban Have Seized U.S. Military Biometrics Devices*, The Intercept (Aug. 17, 2021), https://theintercept.com/2021/08/17/afghanistan-taliban-military-biometrics/.

[54] Mission Afghanistan: Biometrics, FBI (Apr. 29, 2011), https://www.fbi.gov/news/stories/mission-afghanistan-biometrics.

Biometric recognition systems have the capacity to identify, follow, single out, and track people everywhere they go, undermining our human rights and civil liberties — including the rights to privacy and data protection, the right to freedom of expression, the right to free assembly and association (leading to the criminalization of protest and causing a chilling effect), and the rights to equality and non-discrimination..[55]

Still, many governments are eagerly purchasing the dangerous technology and ramping up implementation — even as the movement to ban facial recognition and remote biometric recognition technologies that enable mass surveillance and discriminatory targeted surveillance gains traction worldwide. [56] Biometric recognition technologies have already enabled a litany of human rights abuses including the right to privacy and right to free assembly and association not only in the United States, but China, Russia, England, Kenya, Slovenia, Myanmar, Israel, India, and the United Arab Emirates.[57]

Wrongful arrests, in the United States, as well as in Argentina, and Brazil have undermined people's right to privacy and their rights to due process and freedom of movement. So far, three black men have been wrongfully arrested based on flawed facial recognition in the United States.[58] Similarly, the surveillance of ethnic and religious minorities and other marginalized and oppressed people in China, Thailand, and Italy have violated people's right to privacy and their rights to equality and non-discrimination.[59]

Access Now, along with 193 civil society organizations from 63 countries around the world, call for a ban on the use of these technologies in publicly accessible spaces because even though a moratorium could put a temporary stop to the development and use of these technologies, and buy time to gather evidence and organize democratic discussion, it is already clear that these investigations and discussions will only further demonstrate that the use of these technologies in publicly accessible spaces is incompatible with our human rights and civil liberties and must be banned outright and for good.

Facial recognition and remote biometric recognition technologies have significant technical flaws in

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[55] *Open letter calling for a global ban on biometric recognition technologies that enable mass and discriminatory surveillance*, Access Now (Jun. 7, 2021), https://www.accessnow.org/cms/assets/uploads/2021/06/BanBS-Statement-English.pdf.

[56] *Id*; see also Veronica Arroyo and Gaspar Pisanu, *Surveillance Tech in Latin America: Made Abroad, Deployed at Home*, Access Now (Aug. 8, 2021), https://www.accessnow.org/surveillance-tech-in-latin-america-made-abroad-deployed-at-home/.

[57] *See Open letter calling for a global ban on biometric recognition technologies that enable mass and discriminatory surveillance*.

[58] Kashmir Hill, *Another Arrest, and Jail Time, Due to a Bad Facial Recognition Match*, New York Times (Jan 6, 2021), https://www.nytimes.com/2020/12/29/technology/facial-recognition-misidentify-jail.html.

[59] *Id*.; See also *Alibaba facial recognition tech specifically picks out Uighur minority*, Reuters (Dec. 17, 2020) https://www.reuters.com/article/us-alibaba-surveillance-idUKKBN28R0IR; Laura Carrer, Riccardo Coluccini, Philip Di Salvo, *Perché Como è diventata una delle prime città in Italia a usare il riconoscimento facciale*, WIRED (Sept. 9, 2020), https://www.wired.it/internet/regole/2020/06/09/riconoscimento-facciale-como/?refresh_ce=.

their current forms, including, for example, facial recognition systems that reflect racial bias and are less accurate for people with darker skin tones. However, technical improvements to these systems will not eliminate the threat they pose to our human rights and civil liberties.

While adding more diverse training data or taking other measures to improve accuracy may address some current issues with these systems, this will ultimately only perfect them as instruments of surveillance and make them more effective at undermining our rights.

Recommendations to the OSTP

Human rights harms are inevitable when we allow companies to sell flawed technology. Without a robust process to validate the claims made by corporations selling these systems, we risk a proliferation of pseudoscientific technologies, damaging consumer confidence and public trust. For all these reasons**, we encourage the White House to use its *full* authority to protect persons against biometric systems**. This includes urging companies to stop the use of these technologies in public spaces, publicly-accessible spaces, and places of public accommodation, where such use could enable mass surveillance or discriminatory targeted surveillance, including but not limited to their use in parks, schools, libraries, workplaces, transport hubs, sports stadiums, and housing developments. **Some biometric technologies must be banned outright, such as automated gender recognition and AI-based "detection" of sexual orientation.** These systems cannot be fixed by simply introducing more diverse training data, increasing accuracy, or applying technical methods to reduce bias; the fundamental aim of these systems is incompatible with human rights.

Respectfully Submitted,

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