

“It’s Complicated”: Negotiating Accessibility and (Mis)Representation in Image Descriptions of Race, Gender, and Disability

Cynthia L. Bennett

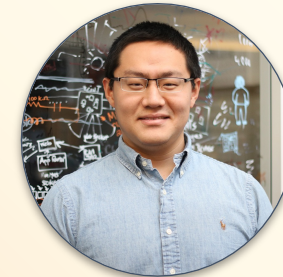
Cole Gleason

Morgan Klaus Scheuerman

Jeffrey P. Bigham

Anhong Guo

Alexandra To

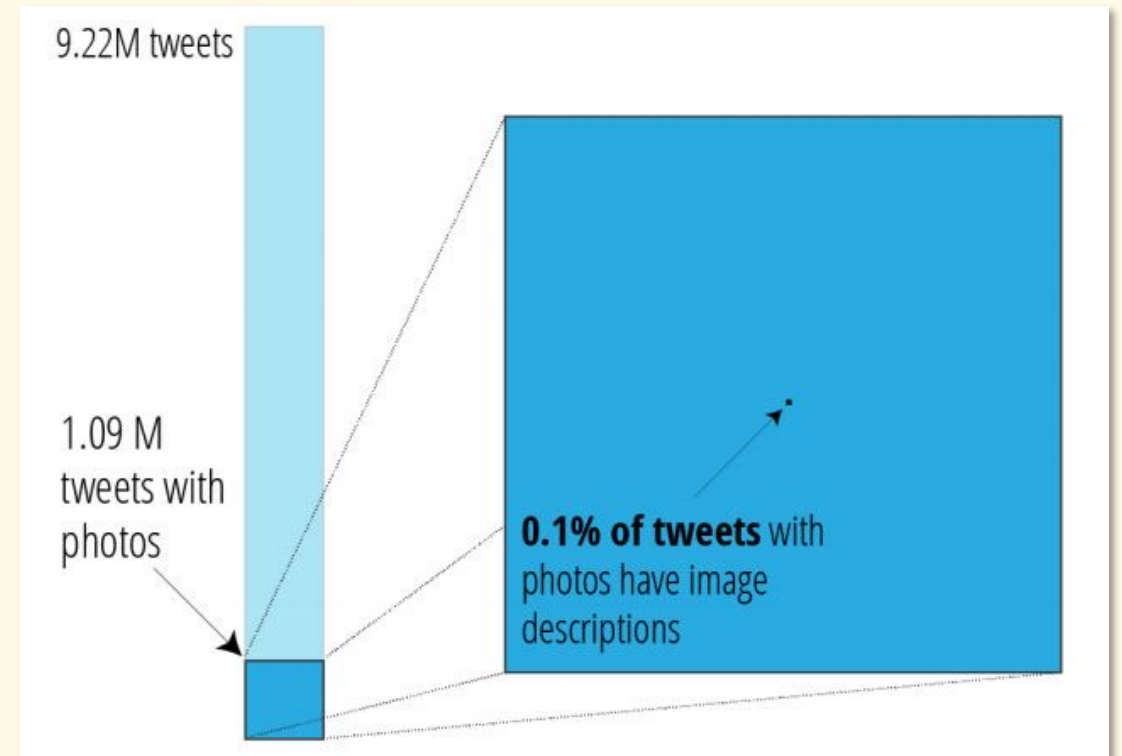


Background on Image Descriptions

Web accessibility best practices prescribe that images include text descriptions for blind people who cannot see them [Morris *et al.* 2017, Stangl *et al.* 2020, WCAG].

But most images aren't described; in 2019, less than 1% of Twitter images had alt text. [Gleason *et al.* 2019]

AI may proliferate image descriptions [Guinness *et al.* 2018, Gleason *et al.* 2020, Salisbury *et al.* 2017].



AI Has Known Biases

Race and gender are classified narrowly (e.g., leaving out non-binary people) [Buolamwini and Gebru 2018, Keyes 2019, Scheuerman 2020].

Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification*

Joy Buolamwini

MIT Media Lab 75 Amherst St. Cambridge, MA 02139

JOYAB@MIT.EDU

Timnit Gebru

Microsoft Research 641 Avenue of the Americas, New York, NY 10011

TIMNIT.GEBRU@MICROSOFT.COM

Editors: Sorelle A. Friedler and Christo Wilson

Abstract

Recent studies demonstrate that machine learning algorithms can discriminate based on classes like race and gender. In this

who is hired, fired, granted a loan, or how long an individual spends in prison, decisions that have traditionally been performed by humans are rapidly made by algorithms (O'Neil, 2017; Citron

Interviewed Blind People who are also BIPOC, Non-Binary & Transgender

1. Image posting, browsing behavior on social media.
2. How they describe their race, gender, disabilities.
3. Experiences being misrepresented in real life and through image descriptions.
4. Preferences for image descriptions by people who know them and strangers/AI.
5. Preferences/concerns around AI describing appearance.

Appearance/Identity Description Desired in Some Contexts but Not 100%

1. Encountering unknown people for first time.
2. Discussions of identity.
3. 'Read' a (Virtual) room.
4. Understand Representation in the media.
5. Seeking specific perspectives (authors, business owners, etc.).

Use Photographee's Preferred Language

“[A Black, disabled, nonbinary person] with a filtering face mask walks down a neighborhood street with one hand in their pocket and the other hand on their cane. They have a short mohawk and are wearing a jacket, shorts, tennis shoes and glasses.”

[Image: [Disabled and Here](#) (CC-BY)]



Use Photographee's Preferred Language

“[A person with darker skin] with a filtering face mask walks down a neighborhood street with one hand in their pocket and the other hand on their cane. They have a short mohawk and are wearing a jacket, shorts, tennis shoes and glasses.”

[Image: [Disabled and Here](#) (CC-BY)]



Preferences & Concerns of AI-Generated Appearance Descriptions

Preference: AI appearance descriptions should be opt-in and editable.

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—Parker, white trans man

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—Tracey, white transfeminine person

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“The people that are impacted are people that are often already bearing the brunt of so much other stuff (anti-Black messaging on social media) would just be compounded if AI is giving me biased information”

—*Yvonne, Black cis woman*

Recommendations

- Disambiguate appearance from interpretations when analyzing images in HCI research.
- Intentionally recruit diversity of people, engage them on potential benefits and harms. [Rankin 2020, Ogbonnaya-Ogburu *et al.* 2020].
- Conduct intersectional ethical review of accessibility research.



Thank You!

Takeaway: AI might scale, but it doesn't know everything you do about your photos. Describe your photos!

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Twitter: [@clb5590](https://twitter.com/clb5590)

Paper: <https://tinyurl.com/chi2021imagedescriptions>