

DISCUSSION

Previous research studies have investigated search engines and algorithms that can discriminate, creating a significant gap in digital inclusion and disparities for people of color (See Appendix E). This continues to show that browsers such as Google and Yahoo unevenly represent Black individuals, as well as other races. Following the legacy of computer browsers, artificial intelligence tools such as ChatGPT follow a similar pathway. More critically, default outputs to prompts were majority White individuals, which flags a gap in racial inclusion (See Appendix B). When results did depict a Black individual, responses often reflected racial bias or stereotypical role assignment. For example, a Black person was portrayed as a school principal (see Appendix C, Prompt Set 4: Institutional Power, Figure 7), but rarely as wealthy, a CEO, or a president. Prompts written as neutrally as possible, with no race specified, were run multiple times. Roughly 95% of default responses depicted White individuals. In several instances, it took three or more attempts or an application refresh before we were able to observe Black and other people of color in positions of power. It is crucial to educate communities of color about this issue, as well as to investigate the level of knowledge individuals have about it. As part of educating our communities, it is essential to dismantle the ideology of *technochauvinism*, which is crucial to advancing new technologies. The idea of technology being neutral has been exposed in this investigation as we observed in different scenarios how the preferences of one race are more predominant than others. For example, Appendix D shows across multiple beauty-apps try-on ads, Black Women and other women of color are largely absent. Very few apps let users try on hairstyles designed for curly or afro textured hair. Promoting accurate

representation across BIPOC groups, and pursuing methods that advance digital fairness, is necessary. Yet technology corporations aren't investing the time to fix these inequities, instead, they mislabel them as glitches. AI-based beauty tools for hairstyle try-ons are mostly based on the appearance of White individuals, leaving out individuals with darker skin tones and curly and afro hair types. This leaves a gap for people with different hair textures and skin colors.

Noble (2018) found images of sexualized Black women after typing “black girl” in the Google search box. While this has been corrected now, we have found that when typing neutral prompts, such as *beautiful women* without race as a variable, significant representational disparities persist on the web. A search for *beautiful women* returned mostly White women, with far fewer Black women shown (see Appendix D). In addition, we found that when typing “three black teenagers” in the search box, the output does not show criminals but joyful teenagers. Although this has been fixed, disparities continue, which lead us to think that more work needs to be invested in changing the narrative of oppression.

In addition, artificial intelligence tools such as ChatGPT can generate images of Black individuals. However, when inserting the photo of a Black woman, we encountered high levels of misrepresentation. This supports Yang's (2025) study, which argues that artificial intelligence tools often misrepresent women with dark skin tones at their highest rate. After inserting our black woman image into ChatGPT, we noticed a drastic change in facial features and body complexity, resulting in a larger woman. This confirms that biased rates of accuracy for black women are still present.

Additional findings suggest that corporations such as Google color-code terms,

such as digital racism encapsulated in broad terms such as bullying or hate speech. We observed the Google Government Request of Removal database, located in the Google Transparency Report section on their website, spanning 2009 to 2025. Labels for content removal did not include specific categories such as racism, digital racism, or discrimination. This makes it difficult to document racial biases and discrimination on the web, as broad label categories leave Google exposed to how little they care about inclusion and racial equity on the web.

Although authors such as Broussard (2023) argue that Big Tech corporations must be held accountable and that harmful technologies should be rebooted, there is so much more to discuss regarding accountability. Policymakers and governmental administrations continue to neglect this issue, permitting corporations to utilize technologies that put racialized communities in danger. Policymakers and government officers must hold tech corporations accountable for providing remedies to society, such as annual funding to develop equity-oriented technologies, for example, organizations like AfrofeminasGPT, and artificial intelligence tools driven by equitable education and access to learning.

Limitations

This investigation faced two main limitations: limited access to corporations' internal decision-making processes, and limited insight into how they test usability for people with darker skin tones. In addition, there is limited ability to study whether decisions made by a racially diverse group are capable of identifying biases in a product before it launches. How are software developers/product designers determining if a product may contain racial biases? Are there conversations around equitable usability toward BIPOC populations? For instance, Google's workforce is disproportionately non-diverse. Asians

and White employees are the majority, while Latino employees represent 7.5%, and Black employees 5.7%. Could the employee body makeup affect user experience as developers and designers are not providing enough spaces to test products on diverse groups?

Another limitation in our research is the constraints on testing medical equipment tools that pose a high risk of bias. Similarly, we have no access to policing tools such as Predpol, which, as we know from previous research, contain racial biases by operating on outdated probability models based on old data.

Lastly, this research was conducted with a small sample of participants, which, if some individuals alter their responses, could affect the outcomes of our data. That said, potential opportunities to expand this research would allow us to gather more information with a bigger sample of participants.