

Digital Discrimination: Exploring Race and Technology Through Critical Race Theory

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Abstract: *This essay uses Critical Race Theory (CRT) to discuss the relationship between race and technology, revealing how digital technologies, often seen as neutral, systematically maintain racial prejudices. It maintains that facial recognition, predictive policing, and digital advertising are racist by default due to their biased algorithmic decision-making and non-representative training data. The article employs CRT principles to argue against the so-called objectivity of these digital tools, which necessitates immediate reconsideration of technological advancements. With specific cases of technological discrimination in mind, it critically examines those structures facilitating such biases, such as all-white design teams and unquestioned data sources towards advocating for inclusive design practices, periodic data equity audits, wholesale regulatory reforms and community-led approaches, among others. Consequently, it proposes greater cooperation between civil society organisations, academia, industry and government to drive systemic changes toward more just digital environments. By integrating CRT, this analysis provides a framework for addressing digital disparities, urging a transformative approach to technology development that ensures justice and equity and prevents the perpetuation of racial inequalities in the digital age.*

Key Words: *Critical Race Theory (CRT), Digital Discrimination, Racial Bias in Technology, Digital Ethics, Intersectionality, Systemic Racism, Social Justice in Technology*

1. INTRODUCTION :

In the contemporary digital era, the pervasive influence of technology extends far beyond simple utility, embedding itself into the very fabric of social interaction and identity formation. Critical Race Theory (CRT), initially seen as an academic framework for analysing law and racial disparities, is a masterstroke in demonstrating that racial prejudices are not only there but are constitutive aspects of digital technologies. The claim made by scholars like Safiya Noble and Ruha Benjamin is that these technologies, despite their apparent objectivity and impartiality, reinforce, normalise, or even worsen social inequalities that exist along racial lines (Noble 55); (Benjamin 107). The various forms of digital discrimination include partiality in judicial sentencing software algorithms and racial profiling taking place through face recognition. Such technologies are driven by colourblind data that often ignores the racialised contexts from which it originates. For instance, it has been found that facial recognition technology is biased against people with dark skin and women (Buolamwini et al 78). This discrepancy can be traced back to the absence of diverse data sets and testing methodologies that do not take into consideration non-white populations (Buolamwini et al 81-91). However, these implications go beyond mere technical challenges to real life injustices that are more likely to affect some communities than others.

CRT's critique of digital discrimination goes beyond revealing biases but is also interested in the systems that facilitate and maintain these disparities. It challenges the belief that technology is neutral, instead suggesting that it mirrors the inequality within society. This view is important for explaining why some racial biases continue to operate in digital forms and the ways in which they can be systematically tackled. For instance, CRT argues that predictive policing algorithms may result in a criminalization-perpetuating cycle with implications for Blacks and Latinos (Eubanks 112). By applying CRT to digital technologies, this paper will show how racial inequity has become part of many digital platforms not as a flaw but as an aspect of design. The study will analyse social and ethical aspects emerging from these technologies and strategies grounded on CRT as a means of reforming them.

2. RACE AND DIGITAL SPACE :

The incorporation of digital technologies into our everyday lives has brought about various transformations in society, ranging from how people communicate and transact businesses to governance and law enforcement. However, the architectural frameworks of digital spaces often mirror and magnify the racial biases found in the physical world. Scholars who are proponents of CRT argue that these biases are automatically reproduced on online platforms without conscious efforts (Benjamin 150).

In particular, algorithmic decision-making is an important aspect of digital technologies where racial bias is clearly evident. Algorithms thought to be neutral or objective may perpetuate or even escalate racial prejudices if they are built on biased datasets or prejudiced assumptions. For example, facial recognition technology, which is extensively used in security systems as well as by law enforcement agencies, has been shown to have higher misidentification rates for black people compared to white people. This is mostly due to the fact that training datasets are mainly made up of light-skinned faces, resulting in algorithms that have a higher margin of error on people with darker skin shades (Buolamwini et al 77). Consequently, these errors go beyond technicalities, and can result into wrongful arrests as well as surveillance which heavily targets particular racial minorities. Digital discrimination is also common in the area of predictive policing. These systems utilise data-driven approaches to detect possible locations for crimes or persons who may commit them. However, such predictions mostly rely on the biased historical racial profiling by policing authorities, hence perpetuating it in another new form of digital technology. This leads to more suspicion against people of colour communities by reinforcing stereotypes before police forces develop slight relationships (Eubanks 199).

In addition to law enforcement, digital advertising platforms also reflect racial prejudices. Studies have shown that algorithms used in online ads serve job and housing advertisements differently depending on the perceived race of the user, an act which can lead to discriminatory results. For instance, minority users are shown fewer high-paying job advertisements compared to their white counterparts, a pattern termed digital redlining that restricts economic opportunities for already disadvantaged communities (Sweeney 44-54). The critical analysis of these technologies based on CRT highlights that digital spaces are not yet post-racial hubs by any measure. In fact, they are active places where racial biases exist and become realities through the engineering process. Addressing these concerns requires recognising that digital technologies operate within social contexts which shape their design and application as well. These systems must be dismantled to ensure more inclusive and equitable digital spaces as well as rethinking how such technologies should be developed and rolled out for them become truly such spaces.

3. CRITICAL RACE THEORY'S APPROACH TO TECHNOLOGICAL BIAS :

Technology critical race theory (CRT) is an important perspective that helps us appreciate the racial prejudices embedded in technology, arguing that these stereotypes are not accidental but rather systemic, originating from the same societal biases that influence other aspects of life. CRT contests the commonly held notion of technological neutrality and demonstrates how digital tools and systems can perpetuate racial inequality and injustice (Benjamin 165).

3.1 *Deconstructing Neutrality in Technology*

The idea of neutral technology suggests that machines and algorithms operate without favoritism. However, CRT does away with this fiction by revealing how technologies are conceived within a racially stratified society. Developers who predominantly belong to similar demographics – mostly white males – implant their conscious or unconscious prejudices into their codes. This kind of cultural unvariedness makes for technological products blind to diversity and disproportionately misaligned with the needs and realities of racial minorities.

3.2 *Racial Bias in Algorithmic Design and Data Usage*

The Critical Race Theory (CRT) also examines the data sources as well that inform algorithmic choices, pointing out that if you start with biased input data, then expect a biased output. In machine learning and artificial intelligence (AI), this criticism is most pertinent, where algorithms are 'trained' on historical data. If this historical data reflects historical inequalities present in employment, policing or lending practices, these resulting algorithms will probably perpetuate those injustices under the cover of an idea of objectivity that is mathematical.

3.3 *CRT's Call for Reflexive Technology Development*

To address biases, CRT calls for a more reflective approach to technology development. This means questioning and adjusting the criteria and datasets used in algorithmic decision-making throughout. This implies the inclusion of different voices and perspectives through the development process, especially from communities most affected by technological biases. Not only does this improve the fairness and efficiency of technologies, but it also aligns their development with ethical practices that respect and uphold social justice (Costanza-Chock 102)

3.4 *Legal and Ethical Frameworks*

Furthermore, CRT stresses the importance of robust legal and ethical frameworks to govern the deployment of technologies. It calls for regulations that require transparency and accountability in algorithmic decision-making,

ensuring that these technologies can be audited for bias and that their impacts on different communities are systematically assessed and addressed.

4. STRATEGIES FOR COMBATING DIGITAL DISCRIMINATION :

CRT is not just about identifying and criticising racial biases in technology; it also provides a ground for combating them by making substantial changes to policy, practices, and ideology. In this regard, strategies are outlined for strategic interventions that may be made in order to minimise digital discrimination and foster equity in technological advancements.

One of the key ways of mitigating digital discrimination encompasses embedding inclusivity in technology design and development. This means involving diverse groups in the production and testing stages of technological products so that they can prioritise all users' needs rather than those of the majority. For instance, if communities of colour take part in developing facial recognition technologies, they can help identify and then correct some biases perpetuated by these systems against such groups (Costanza-Chock 117).

Regular audits of data sets and algorithms are critical to identifying and mitigating embedded biases. These audits should be conducted by independent parties and include analyses of how data is collected, processed, and used in decision-making processes. Implementing such audits can help ensure that algorithms do not replicate or exacerbate existing racial disparities (Benjamin 182). Legal frameworks need to be adapted to address the challenges posed by digital technologies. This includes enacting legislation that requires transparency in algorithmic decision-making and accountability for discriminatory outcomes. For instance, laws could mandate that companies disclose the criteria algorithms use to make decisions, particularly in critical areas like employment, healthcare, and law enforcement, and allow for recourse if these systems cause harm. Empowering communities affected by digital discrimination is crucial. This involves not only advocacy and education about the rights and risks associated with digital technologies but also supporting community-led initiatives to develop their own technological solutions. By fostering technological literacy and innovation within marginalised communities, they can better advocate for their needs and interests in the digital.

Finally, combating digital discrimination requires collaboration across sectors. Partnerships between civil society, academia, industry, and government can facilitate the exchange of ideas and resources necessary to develop more equitable technologies. These partnerships can also advocate for systemic changes that reduce biases within the broader technological landscape.

By implementing these strategies, stakeholders can work towards a digital environment that upholds the principles of equity and justice. Critical Race Theory provides the theoretical backbone for these interventions, emphasising that technology must be developed and deployed in ways that do not reinforce historical injustices but rather help dismantle them.

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