Research Essay #2

Racism in Technology

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Racism's Uncertain Future

In recent history, humanity has made incredible strides to reduce racism and its effects around the world. In the last century, America alone, has seen the desegregation of public schools, the passing of the Civil Rights Act of 1964, and its first African American president. These achievements would imply a bleak future for racism amidst our rapidly advancing global society; However, technology may be hindering the progress of popular anti-racism efforts, leaving the future of prejudice and racism uncertain.

It may be hard for most people to identify the inadvertent racism in modern technology. Most people use services like Siri and Alexa without a second thought about how its functionality may be hindered by dialect, local color, and common accents. The problem with racism in technology is not just limited to user functionality. Individuals and groups with malicious intent have found use in the rising popularity of online messaging and communication. Lastly, emerging facial recognition technology presents a multifaceted issue for the multi-cultural community as it can be used to track down individuals and/or falsely incriminate them. This inadvertent combination of technology with biased functionality, platforms for extremists and racists to organize, and tools that enable harmful, targeted attacks is an unprecedented threat to global cultural diversity.

Technology and Racism

Artificial intelligence (AI) is one of the most influential emerging technologies today. AI optimizes our search engines, solves complex problems, and allows for voice recognition in our phones and other devices. Voice recognition is quickly becoming one of the most important consumer uses of AI as tablets, computers, and most smart devices have voice recognition features integrated within them. As well, devices such as lights, fridges, and even garage doors

are becoming compatible with voice commands. This becomes a problem when AI, the driving

mechanism for voice recognition, has a quantifiable bias towards males without accents. This

becomes an even larger issue when voice recognition is used for more official purposes, such as

a citizenship test. In an article by the Harvard Business Review, the story of an Irish woman

attempting to immigrate to Australia is told. Despite being well-educated and a native-born

English speaker, she failed her oral fluency test, graded by AI voice recognition (Bajorek, 2019).

While completely unfair, there is a logical explanation for why this happens. AI learns

from information provided to it. Many AI voice recognition programs have large amounts of data

on male voices without accents. Furthermore, since voice recognition works well for males

without accents, this demographic tends to use voice recognition more often. This further

reinforces the AI's bias, making it more difficult to correct the issue. Strides have been made in

the positive direction; However, tech companies understand that equal functionality among all

demographics is not only an advantageous methodology for public appearance, but it is

financially wise as well. Many voice recognition AIs can now be calibrated to specific accents,

speech volume, and other speech patterns. Advancing these accessibility features will be key if

tech companies want their consumer base to remain diverse and equally represented.

AI's role in reinforcing racism is not just limited to voice recognition. In fact, AI's most

consequential role regarding discrimination in unsurprisingly found within the functionality and

use of facial recognition. Facial recognition is commonplace for many people in 2020. People

most commonly use facial recognition to unlock their phones, which is innocent enough.

However, police and government agencies around the world use emerging facial recognition in

ways that range from morally questionable, to morally reprehensible. On the morally

questionable side of the table, law enforcement in the United States had deployed facial

recognition to aid in the apprehension of suspects. With black and dark skin individuals across America already being stopped and investigated at a disproportionately high rate, the inaccuracy of AI facial recognition is adding fuel to an already hot fire. Facial recognition relies heavily on light contrast to determine a person's features, and consequentially, uniquely identify them. As a result, AI has a much more difficult time uniquely mapping dark skin as opposed to light skin. Since facial recognition AI used by police departments only has access to individuals within their own criminal database, it is also logically impossible for it to correctly identify an innocent man who exists outside their database (Bacchini & Lorusso, 2019). Due to the combination of disproportional police searches among black and dark-skinned men, AI facial recognition relying heavily on light contrast, and police database limitations, the implementation of AI facial recognition among America's law enforcement has been extremely questionable.

Now to the morally reprehensible. Currently in China, Uighur citizens (an ethnic minority of Muslims within China) are being abducted, tortured, beaten, and possibly even killed by the Chinese government. As of this year, the BBC is still uncovering more Chinese re-education camps, most of which are surrounded by watched towers and high barbed wire fences (BBC News, 2020). Independently, Vice News uncovered many mysterious "schools" where young Uighur children were being held away from their families. These schools did not allow children to leave, did not allow visitors, did not allow any journalist questions or filming, and were also surrounded by high fences and other security measures (VICE News, 2019). From the combined reporting it is obvious that these facilities are designed to covert Uighur citizens into Chinese nationalists, with a stated effort of preventing crime before it happens. These early stage thought police have an extremely easy job ahead of them with emerging facial recognition technology. With cameras already deployed in major cities and densely populated areas, facial recognition

can be integrated by the Chinese government to identify and track Uighur people. As well, this

system of discrimination unfortunately is much better suited for AI since it is easier for a

program to identify a person's race rather than verifying their identity. It is hard to say whether

the Chinese government has already employed facial recognition to detain Uighur people, but it

would not be surprising given the methods they already utilize.

     AI is far from the only technology that is enabling targeted, organized racism. The

widespread popularity of the internet combined with the proliferation cell phones and mobile

devices has brought racists closer together in cyber space. Rob Eschmann writes his sentiments

regarding online racism in an article published by The Brink:

> But for anyone who has ever read comments under a YouTube video or online news
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> article, it is clear that not all racism in today's digital age is subtle. Some online spaces,
>
> particularly anonymous ones, provide opportunities for people to be openly racist without
>
> social consequences. (Eschmann, 2019)

     It is clear anonymity in chat rooms and comment sections lends itself to open racism not

present in many other venues. Many racists use anonymity to be openly hateful and threatening.

While YouTube is mentioned in this article, Facebook, Twitter, and online games are also

prevailing avenues for behavior like this. Facebook has been an especially useful tool for

individual racists to organize. Facebook's interface allows for private events to be scheduled,

private groups to be formed, and essentially provides a private pseudo-website for any

individual, regardless of technological literacy. Additionally, Facebook contains a mix of real

and fake accounts. Most Facebook users only have one account, and they represent themselves

with photos, thoughts, and other information. A minority of users maliciously create multiple

accounts that do not represent them personally. While these fake accounts may represent the

thoughts of their creator, they seek to hide behind a layer of anonymity, and attempt to remain

unlinked to the identity of the individual operating them. These fake accounts are another easily

obtainable method for those with little technological literacy to participate in organized, targeted,

anonymous racism on the internet.

All is not lost however when it comes to anti-racist efforts in technology. Large tech

companies are beginning to put resources into combatting the new trend of open hatred on the

internet. Facebook as of this year has begun censoring posts involving misinformation and hate

speech, such as Holocaust denial. While it should be noted that this effort is positive, it was not

organically organized from within the company. Many advertisers threatened to pull from

Facebook if they continued to platform racists, extremists, and propaganda circulators (Guynn,

2020). With America currently in a state of racial tension and turmoil, advertisers stepped up to

deconstruct one of racism's safe spaces. Twitter has made more organic strides to protect against

racism and disinformation. Twitter's terms of service clearly lays out that all hate speech is

forbidden, all threats to groups and individuals is forbidden, and knowingly false information is

forbidden. While this is just a generalization of the specifics laid out in the Twitter terms of

service, these three general rules are enough to keep racism from embedding itself further into

social media sites. Video game companies have also done their fair share over the last decade to

help combat racism including engineering comprehensive chat filters, report systems, AI

moderation, systems to block other players, and much more. Admittedly, a lot is to be desired,

but these are positive efforts and should not be discredited.

Potential Futures for Cultural Diversity in Technology

The future for cultural diversity in technology is far from certain. With the technology

industry rapidly expanding, and the spectrum of projects expanding alongside it, uncertainty

expands in kind. Unfortunately, the responsibility of making sure the platforms computer

engineers create do not prop up racism is left up to corporations and their executives. National

governments attempt to monitor, and censor information being produced from within their own

country, yet it seems nearly impossible in most instances for a government to impartially balance

the line between moderation and censorship. This is the main reason why companies need to step

up and put resources into moderation. Having a website that is safe for minority groups is not

only the morally correct approach to running an online corporation, but also the economically

correct approach as well. When a website becomes a meeting place for hate groups, an avenue

for racist speech, and a safe area for false information, business owners and leaders need to step

up to ensure they are not playing a vital role in enabling toxic behaviors.

        AI has a very uncertain future as well in terms of cultural diversity. AI has as much of an

ability to help cultural diversity as it does to harm it. People and organizations who wish to

deploy AI on a large scale need to understand its current limitations. In the case of law

enforcement, currently AI facial recognition is an impractical and dangerous solution to

identifying criminals. A comprehensive and accurate AI for police would need access to photo

identification of every person inside the United States. It would need multiple accurate, high

quality, up-to-date photos of every American to correctly identify innocent suspects and

detainees. Additionally, facial recognition would need to be improved to raise the accuracy for

identifying individuals of color. Currently however, the processing power and technology needed

for this solution is nonexistent and therefore facial recognition should not be used in any capacity

for identifying suspects.

        Ironically, AI could be the solution for many of the problems technology brings to the

table for cultural diversity. AI can be engineered to moderate websites and enforce the website's

terms of service. AI can also be engineered to do miraculous things like locate potential Uighur

re-education camps on Google Maps and identify those being held captive in them. Currently,

IBM is using AI to combat and end human trafficking around the world (IBM, 2019). The

possibilities for the positive influence AI can have among humanity are practically endless. A

push in the right direction is all that is needed for companies to take on AI projects that

disempower racists, fight false facts, and allow an advancement of global cultural diversity.

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